As filed with the Securities and Exchange Commission on September 23, 2022.

Registration No. 333–

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Prime Medicine, Inc.
(Exact name of registrant as specified in its charter)

Delaware	2836	84-3097762
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

Prime Medicine, Inc.
21 Erie Street
Cambridge, MA 02139
(617) 564-0013
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Keith Gottesdiener, M.D.
President and Chief Executive Officer
Prime Medicine, Inc.
21 Erie Street
Cambridge, MA 02139
(617) 465-0013
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Kingsley L. Taft **Marishka DeToy** **Goodwin Procter LLP** **100 Northern Avenue** **Boston, Massachusetts 02210** **(617) 570-1000**	**Richard D. Truesdell, Jr.** **Roshni Banker Cariello** **Davis Polk & Wardwell LLP** **450 Lexington Avenue** **New York, New York 10017** **(212) 450-4000**

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended, check the following box. o

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Securities Exchange Act of 1934.

Large Accelerated filer	o	Accelerated filer	o
Non-accelerated filer	x	Smaller reporting company	x
		Emerging growth company	x

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. o

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant files a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the Securities and Exchange Commission declares our registration statement effective. This preliminary prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated September 23, 2022

Preliminary prospectus

Shares

Common stock

This is an initial public offering of shares of common stock by Prime Medicine, Inc. We are offering shares of common stock. We expect that the initial public offering price will be between $ and $ per share.

Prior to this offering, there has been no public market for our shares. We have applied to list our common stock on The Nasdaq Global Market under the symbol "PRME."

We are an "emerging growth company" and a "smaller reporting company" under the federal securities laws and, as such, we have elected to comply with certain reduced public company reporting requirements for this prospectus and for future filings.

	Per share	Total
Initial public offering price	$	$
Underwriting discounts and commissions[1]	$	$
Proceeds, before expenses, to Prime Medicine, Inc.	$	$

(1) See "Underwriting" beginning on page 270 of this prospectus for additional information regarding underwriting compensation.

We have granted the underwriters an option for a period of 30 days to purchase an additional shares of our common stock from us at the initial public offering price, less underwriting discounts and commissions.

Investing in our common stock involves a high degree of risk. Before buying any shares, you should read carefully the discussion of the material risks of investing in our common stock under the heading "Risk Factors" starting on page 17 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities, or passed upon the adequacy or accuracy of this prospectus . Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares of common stock to the purchasers on or about , 2022.

J.P. Morgan **Goldman Sachs & Co. LLC** **Morgan Stanley** **Jefferies**

, 2022

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We have not, and the underwriters have not, authorized anyone to provide any information or to make any representation other than those contained in this prospectus, any amendment or supplement to this prospectus or any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares of common stock offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus, any amendment or supplement to this prospectus or any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

For investors outside the United States: We have not, and the underwriters have not, done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside the United States.

Market data and certain other statistical information used throughout this prospectus are based on independent industry publications, governmental publications, reports by market research firms, or other independent sources that we believe to be reliable sources. Industry publications and third-party research, surveys, and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. We are responsible for all of the disclosure contained in this prospectus, and we believe that these sources are reliable; however, we have not independently verified the

information contained in such publications. While we are not aware of any misstatements regarding any third-party information presented in this prospectus, their estimates, in particular, as they relate to projections, involve numerous assumptions, are subject to risks and uncertainties, and are subject to change based on various factors, including those discussed under the section entitled "Risk Factors" and elsewhere in this prospectus. Some data are also based on our good faith estimates.

We intend to apply for various trademarks that we use in connection with the operation of our business. This prospectus may also contain trademarks, service marks and trade names of third parties, which are the property of their respective owners. Our use or display of third parties' trademarks, service marks, trade names or products in this prospectus is not intended to, and does not imply a relationship with, or endorsement or sponsorship by us. Solely for convenience, the trademarks, service marks and trade names referred to in this prospectus may appear without the TM or SM symbols, but the omission of such references is not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the right of the applicable owner of these trademarks, service marks and trade names.

Through and including , 2022 (25 days after the date of this prospectus), all dealers that buy, sell or trade our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the obligation of dealers to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

PROSPECTUS SUMMARY

This summary highlights information contained in greater detail elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus, including our consolidated financial statements and the related notes thereto included elsewhere in this prospectus. You should also consider, among other things, the information set forth under the sections entitled "Risk Factors," "Special Note Regarding Forward-Looking Statements," and "Management's Discussion and Analysis of Financial Condition and Results of Operations," in each case included elsewhere in this prospectus. Unless the context otherwise requires, we use the terms "Prime Medicine," the "Company," "we," "us," "our," and similar designations in this prospectus to refer to Prime Medicine, Inc. and, where appropriate, our subsidiary.

Overview

We are a biotechnology company committed to delivering a new class of differentiated one-time curative genetic therapies, Prime Editors, to address the widest spectrum of diseases by deploying our Prime Editing technology, which we believe is a versatile, precise, efficient and broad gene editing technology.

Genetic mutations implicated in disease are diverse and can range from errors of a single base, known as point mutations, to errors that extend beyond a single base, such as insertions, deletions, duplications, or combinations thereof. We believe the ability to alter the human genome at the foundational level may confer the greatest therapeutic impact on human disease.

Gene editing, including platforms such as Prime Editing, is a novel technology that is not yet clinically validated for human therapeutic use. Over the last decade, the field of genetic medicine has evolved tremendously, with groundbreaking advances in gene therapy, cell therapy, RNA therapy, and, more recently, gene editing. These technologies represent dramatic advancements for genetic therapies, but lack the versatility to precisely and efficiently correct the diverse range of mutations or DNA alterations implicated in disease.

Prime Medicine was co-founded by a world-renowned leader in the field of gene editing, David Liu, Ph.D. Dr. Liu was joined as co-founder by Andrew Anzalone, M.D., Ph.D., who conceived of and developed Prime Editing technology. Drawn by the promise of Prime Editing's ability to transform the field of gene editing, we have assembled a diverse team that has grown to more than 135 people as of June 30, 2022. There are no current plans for Dr. Liu to be an officer or director of our company following this offering. He is expected to continue to provide consulting services to us pursuant to a consulting agreement, which has a current term that runs through September 2025 and accommodates a previous commitment with respect to Beam Therapeutics Inc., which could result in or may create the appearance of a conflict of interest. He is also expected to retain his position and affiliation with the Broad Institute, Inc., Howard Hughes Medical Institute and Harvard University.

On September 20, 2022, we achieved a major milestone as the United States Patent and Trademark Office, or the USPTO, issued U.S. Patent 11,447,770, or the '770 Patent, covering methods of using Prime Editors. The '770 Patent is the first issued Prime Editing patent in our licensed patent portfolio and we believe it will be instrumental in protecting our Prime Editing platform and pipeline of gene editing programs.

We believe our in-licensed and company-owned Prime Editing technology has transformative potential that could change the course of how disease is treated and overcome the challenges associated with current genetic therapies. We in-license our Prime Editing technology pursuant to a license agreement with the Broad Institute, Inc., or Broad Institute. In addition, the license agreement grants us certain rights and licenses under certain patent rights the Broad Institute owns or controls, including a license to the '770 Patent, which covers Prime Editing technology and expires in 2040. The licenses are limited to the field of prevention or treatment of human disease, and most licenses granted to us under the license agreement are further limited to the prevention or treatment of human disease by editing (including modifying or converting) or targeting DNA *ex vivo*, *in vivo*, or through xeno transplantation methods, which we refer to as the Prime Broad Field. For more information regarding the scope of our rights and obligations under this license agreement, see the section titled "Business—Our License and Collaboration Agreements—License rights under the Broad License Agreement."

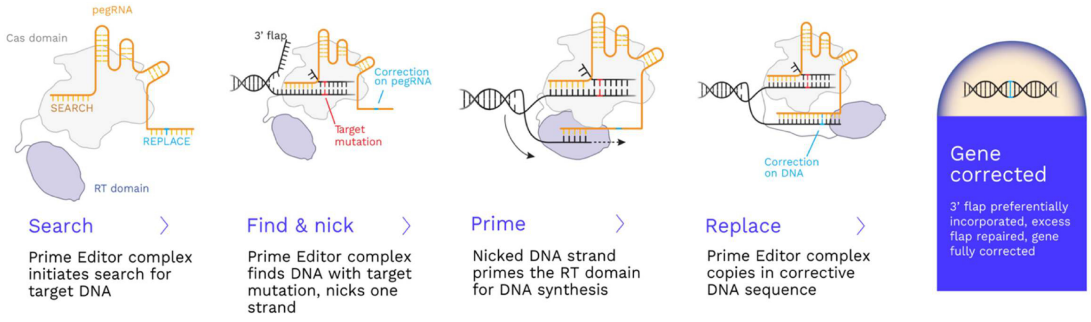
Our Prime Editing Platform

Prime Editing technology, as developed by Dr. Liu and Dr. Anzalone, has broad theoretical potential therapeutic applications. For example, Prime Editing technology has the ability to repair diverse mutations, including all types of point mutations, deletion mutations, insertion and duplication mutations and insertion-deletion mutations. Our analysis of more than 75,000 pathological, or disease-causing, mutations found in the National Center for Biotechnology Information ClinVar Database shows that those addressable by Prime Editing technology account for approximately 90 percent of genetic variants associated with disease. As such, we believe Prime Editing technology has the theoretical potential for repairing approximately 90 percent of known disease-causing mutations across many organisms, organs and cell types. Because biotechnology companies can only initiate therapeutic programs for a subset of pathogenic mutations and the associated diseases, we have chosen to strategically focus on disease settings where we believe that Prime Editing technology could offer compelling advantages over both current standard-of-care and novel therapeutic modalities in development. Currently, at Prime Medicine, we are leveraging the breadth of our in-licensed Prime Editing technology to focus on our current portfolio of 18 therapeutic programs.

Prime Editors also have the ability to create permanent modifications at their natural genomic location, resulting in durable edits that are passed on to daughter cells, and retain their native physiological control. Our next generation gene editing technology is capable of a wide variety of precise, predictable and efficient genetic outcomes at the targeted sequence, while minimizing unwanted bystander edits and off-target edits and avoiding double-stranded DNA breaks. Our Prime Editors are designed to make only the right edit at the right position within a gene.

Our novel Prime Editors have two main components that act together to edit DNA: (i) a Prime Editor protein, comprising a fusion between a Cas protein and a reverse transcriptase enzyme, and (ii) a pegRNA, that targets the Prime Editor to a specific genomic location and provides a template for making the desired edit to the target DNA sequence. Prime Editing leverages the established DNA-targeting capabilities of CRISPR-Cas proteins modified to nick, but not cause double-stranded DNA breaks, and combines these with the DNA synthesis capabilities of reverse transcriptase enzymes, which have been engineered to efficiently and precisely copy a pegRNA-encoded edited sequence into target DNA.

Illustration of Editing Mechanism by Prime Editor – No Double-Stranded DNA Breaks



If nuclease gene editing approaches are “scissors” for the genome, and base editors are “pencils,” erasing and rewriting a subset of single letters in the gene, then Prime Editing is a “word processor,” searching for the correct location and replacing or repairing a wide variety of target DNA.

The Importance of Avoiding Double-Stranded DNA Breaks

- Unlike first-generation nuclease-based technologies, Prime Editors do not generate double-stranded DNA breaks. Emerging literature supports that double-stranded DNA breaks result in many disadvantages, including:
  - Lack of editing precision at the target site, leading to many indels.
  - More likely to cause off-target edits elsewhere in the genome.
  - Can lead to large deletions, structural rearrangements, and chromosomal translocations.
  - Can activate p53, leading to apoptosis, and may select for somatic cells with p53 inactivation.
  - Can reduce cell viability in edited cells.

We believe Prime Editing is a versatile, precise, efficient and broad gene editing technology with the following key advantages:

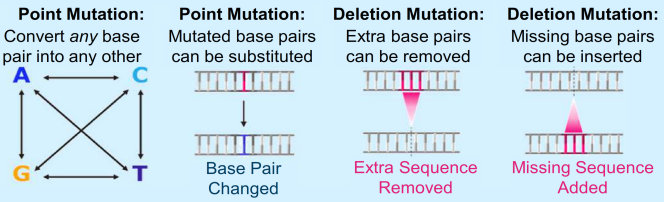
prime_ medicine

Versatility

Deep and highly differentiated toolbox of editing capabilities to enable a wide variety of therapeutic applications

- Applicability to a wide range of target mutations or alterations of DNA, including all twelve types of single base pair corrections, as well the ability to insert and delete DNA sequences.
- Direct correction of DNA with no requirement for delivery of the corrected DNA sequence in most applications of Prime Editing.
- Greater optionality with respect to editing site availability versus other approaches, due to a larger editing window.
- Programmable, which means that both the specified target location in the genome and the directed type of edit can be easily modified by replacing the Prime Editing guide RNA, or pegRNA, element of a Prime Editor.
- Multiple potential therapeutic applications, including but not limited to targeted gene correction, gene silencing or activation such as by altering the regulatory regions of genes, inserting or creating premature stop codons, or by modifying splicing sequences, hotspot region replacement, multiplex editing of several genes simultaneously, and wild-type variant modification to protect against or modify risk for a disease.
- Capable of inserting, deleting or inverting kilobase amounts of genomic DNA by combining Prime Editing with proprietary recombinase technology.

Ability to Correct All Twelve Potential Base Pair Mutations as well as to Address Sequence Insertions and Deletions



Precision

Highly specific and predictable gene editing

- Designed to specifically make only the directed type of Prime Edit at the desired target location.
- Avoidance of the potential negative impacts associated with double-stranded breaks, which results in minimal to potentially no unwanted on-target or off-target by-products and preservation of cell viability.
- Limited potential for bystander editing at the target site, a potential unwanted effect of base editing.

Effectiveness

Durable gene edits with potential for superior therapeutic activity

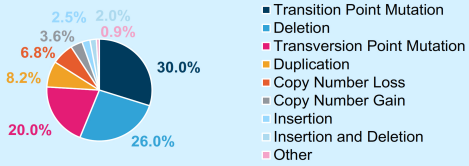
- Single treatment resulting in permanent corrections of disease-causing mutations by restoring the targeted gene back to its wild-type sequence.
- Permanent, durable edits that persist in a cell and are passed along to daughter cells, creating potential for a life-long, "once and done" therapeutic outcome.
- Preservation of natural regulation and a normal number of copies of the gene in the cell by modification of genes in situ, or in their native genomic setting.
- Highly efficient, effecting therapeutically relevant levels of precise gene correction generally unachievable by nuclease-based methods.

Breadth

Ability to address a wide range of diseases in multiple tissue types

- Applicability in a wide range of human cells, including both dividing and non-dividing human cells, a wide range of organs and cell types, as well as in a wide variety of other organisms, including primary cells such as hepatocytes, hematopoietic stem cells and neurons.
- Potential ability to repair approximately 90% of all types of mutations known to cause genetically driven disease.
- Broad therapeutic potential, including rare, genetic diseases as well as severe, chronic, and acute diseases. Beyond correcting disease-causing mutations, potential for gene modification to edit in naturally occurring variations within genes known to protect against or modify risk for a disease.

Percentage Distribution of Pathological Genetic Variants Associated with Disease



An important element of our capability is leveraging high-throughput screening and machine learning, coupled with automation of workflow, to build a data-driven model for designing optimized Prime Editing systems that can potentially accelerate our therapeutic candidate development and enhance efficiency. We have also optimized individual subcomponents of our Prime Editors to enhance their capability beyond first generation Prime Editing. Some notable developments include engineered pegRNAs and DNA mismatch repair modulation to further enhance efficiency of our Prime Editors where appropriate, and expanding the array of gene edits by incorporating recent innovations in Prime Editing, including dual-flap Prime Editing and targeted integration, deletion and inversion of gene-sized DNA.

We believe that we have built a leading position in Prime Editing by consolidating technology and intellectual property in the field, as well as by establishing extensive internal capabilities to deliver on the promise of this next generation gene editing technology.

Our Strategy

Our goal is to transform the lives of patients with debilitating diseases through the application of our ground-breaking Prime Editing platform and technology. Our key focus is on patients. We are committed to developing safe and efficient therapeutics using Prime Editing approaches to address high unmet need across a broad spectrum of diseases, from rare genetic diseases to severe, chronic and acute diseases, and ultimately to prevent disease before it occurs. Key components of our strategy are as follows:

- Deliver the broadest potential of Prime Editing in the service of patients.
- Deploy our technology to extend the application of one time potentially curative therapeutics to areas that we believe were not addressable before.
- Advance our pipeline while simultaneously enhancing, validating and enabling our Prime Editing platform.
- Continue to push the frontier of innovation in gene editing by optimizing and expanding our Prime Editing technology and capabilities.
- Opportunistically evaluate synergistic and value-creating partnerships to maximize the broad potential of our platform.
- Lead with our culture of integrity, ethics, innovation and respect in everything we do.

Our Portfolio

To maximize the potential of our Prime Editing technology to provide one-time curative genetic therapies to the broadest set of diseases possible, we have purposefully built a diversified portfolio organized around four strategic indication categories, each set of indications chosen to deliver a different strategic goal:

- Immediate target indications: Deliberately chosen as potentially the fastest, most direct path to demonstrate technological success of Prime Editing in patients. We are initially focusing on diseases of the blood via *ex vivo* delivery to hematopoietic stem cells, or HSCs, and on diseases of the liver, the eye and the ear.
- Differentiation target indications: Aimed to create therapeutics to address the underlying cause of severe genetic diseases with therapeutics that we believe could not have been created before, especially using other gene-editing approaches. These include repeat expansion diseases, or diseases where expansion of pathological DNA repeats results in serious disease.
- “Blue sky” indications: Intended to push new and innovative technological developments in Prime Editing and extend its application beyond rare genetic diseases and towards our goal of more broadly addressing human disease. These programs remain in the early stages of conception and will become an increasing focus over the next few years.

- "March up the chromosome" approaches: Represents opportunities to deliver upon our overarching vision to ultimately treat all patients with a disease and correct the full set of mutations in a particular gene. This category overlaps with other strategic indication categories, where most of our disclosed indications across other categories have a plan that can accommodate expansion opportunities to address additional mutations in that disease.

To unlock the full potential of our Prime Editing technology across a wide range of therapeutic applications, we are pursuing a comprehensive suite of clinically validated delivery modalities in parallel. For a given tissue type, we intend to use the delivery modality with the most compelling biodistribution. Our initial, immediate programs rely on three distinct delivery methodologies: (a) electroporation for efficient delivery to blood cells and immune cells *ex vivo*; (b) lipid nanoparticles, or LNPs, for non-viral *in vivo* delivery to the liver and potentially other organs in the future; and (c) adeno-associated viruses, or AAV, for viral delivery *in vivo* to the eye, ear and potentially the central nervous system, or CNS, and muscle.

We have constructed our portfolio of 18 therapeutic programs, including one partnered program, across our first two strategic indication categories in disease settings where the unique characteristics of Prime Editing could offer compelling advantages over current standard-of-care and novel therapeutic modalities in development. Our current portfolio includes the following 18 programs:

STRATEGIC CATEGORY	TARGET TISSUE	INDICATION	DELIVERY	DISCOVERY	IND-ENABLING	Phase 1	Phase 2	Phase 3	PARTNER
IMMEDIATE	BLOOD	Sickle Cell Disease	*ex vivo*						Beam
		Chronic Granulomatous Disease	*ex vivo*						
		Fanconi Anemia	*ex vivo*						
	LIVER	Wilson's Disease	LNP						
		Glycogen Storage Disease 1b	LNP						
	EYE	Retinitis Pigmentosa/Rhodopsin	AAV						
		Retinitis Pigmentosa/Usher Syndrome	AAV						
	EAR	Usher Syndrome Type 3	AAV						
		Non-Syndromic Hearing Loss – GJB2	AAV						
DIFFERENTIATION: REPEAT EXPANSION DISEASES	NEURO-MUSCULAR	Friedreich's Ataxia	viral/non-viral						
		Myotonic Dystrophy Type 1	viral/non-viral						
		Amyotrophic Lateral Sclerosis	viral/non-viral						
		Oculopharyngeal Muscular Dystrophy	LNP						
		Fragile X Syndrome	viral/non-viral						
		Huntington's Disease	TBD						
	EYE	Fuchs' Endothelial Corneal Dystrophy	viral/non-viral						
DIFFERENTIATION: OTHER	MUSCLE	Duchenne Muscular Dystrophy	AAV						
	LUNG	Cystic Fibrosis	LNP						

Initially focused on our first two strategic indication categories in diseases where Prime Editing could offer compelling advantages over current standard-of-care and novel therapeutic modalities in development

Note: AAV = adeno-associated viral vectors; LNP = lipid nanoparticles; TBD = to be determined

Key Achievements and Upcoming Milestones

We have established preclinical proof-of-concept *in vivo* with long term engraftment of *ex vivo* Prime Edited human CD34 cells in mice in our partnered sickle cell disease program, where we have precisely corrected the disease-causing mutation. This program is closely followed by Prime Editing for patients with chronic granulomatous disease where we have designed Prime Editors with high levels of correction of the disease-causing mutation in the cells that must be targeted, and also achieved long-term engraftment. We have demonstrated Prime Editing of cells *in vitro* at predicted therapeutically relevant levels for all of our remaining named programs. We have designed proprietary high throughput methods to identify highly efficient Prime Editors and have advanced the reach and efficiency of the Prime Editing technology. We have incorporated dual-flap in Prime Editing technology enabling us to establish Prime Editors with greater than 75 percent precise removal of pathological expansion repeats in five different repeat expansion diseases.

We expect that key upcoming events will continue to drive the Prime Medicine platform forward. The following outlines a summary of select ongoing activities and next steps for Prime Medicine. All our *in vivo* studies are preliminary to date. We will continue to expand preclinical proof-of-concept *in vivo*, including data from *in vivo*

rodent studies and non-human primate studies in several programs in . If successful, we will initiate IND-enabling studies for several of our lead programs in , leading to initial IND filings in , with the potential for our lead programs to move faster. Since we are in early stages of product candidate development, we will provide an update on our timelines moving forward. We also anticipate continuing to name additional programs as they advance over the next few years.

Selected Pipeline Programs

To highlight the breadth and diversity of our 18 programs, detailed below are selected example programs currently in development in unique target tissues. For a more detailed review of all of our pipeline programs, see the section entitled "Business."

Indication	Target Tissue	Delivery
Chronic Granulomatous Disease	Blood	*ex vivo*
Wilson's Disease	Liver	LNP
Retinitis Pigmentosa	Eye	AAV
Friedreich's Ataxia	Neuromuscular	Viral / non-viral
Myotonic Dystrophy	Neuromuscular	Viral / non-viral

Chronic Granulomatous Disease – Correcting the NCF Gene via ex vivo Electroporation of Hematopoietic Stem Cells

Chronic granulomatous disease, or CGD, is a rare inherited hematologic disorder that results in a failure of immune defense against extracellular pathogens. In CGD patients, myeloid cells lack a functional NADPH oxidase, or NOX2, complex, which renders patients susceptible to prolonged and recurrent bacterial and fungal infections and inflammatory complications. CGD causative mutations occur in approximately one in 200,000 births in the United States, and most children are diagnosed within the first three years of life.

We are using Prime Editing in *in vitro* studies to precisely correct the ΔGT mutation in one copy of the *NCF1* gene to restore $p47^{phox}$ protein expression and NOX2 activity. We have identified a series of Prime Editor complexes that demonstrate approximately 55 percent precise correction at the NCF gene in the target cells, or human primary HSCs. Following cloning of myeloid-differentiated clones after 14 days, clonal analysis showed that nearly 90 percent of clones had received at least one precise corrective edit to ΔGT. This greatly exceeds the approximately 15 percent precise editing target threshold that is predicted to provide a clinical benefit. We have demonstrated that we can restore NOX2 protein function in patient-derived myeloid cells as a result of Prime Editing, and show long-term and high-level engraftment of the edited CD34 cells in bone marrow in mice.

Wilson's Disease – Correcting the ATP7B Gene via LNP Delivery to the Liver

Wilson's disease, or WD, is a devastating rare disease of the liver, with manifestations throughout the body, that is caused by copper accumulation. Most people are diagnosed with WD between ages five and 35 years. We estimate it affects at least 25,000, with some studies suggesting more than 50,000 patients in the United States and Europe annually. WD is caused by mutations in both genomic copies of the ATP7B gene, which encodes a copper transporter that removes excess copper. Two predominant mutations have been described in Wilson's disease:

1. H1069Q, found in approximately 40 percent of all patients in the United States and 18 to 72 percent of all patients in Europe; and
2. R778L, frequently found in Asian patients and those of Asian ancestry, reported in 46 percent of Chinese, 38 percent of Korean, and 25 percent of Japanese Wilson's disease patients.

Our initial approach to WD is to correct the prevalent mutations ATP7B H1069Q and R778L in hepatocytes of the liver at their genomic location. Correction of the gene in the liver should address all aspects of the disease, by normalizing the process in which the body removes copper in the liver. We have identified Prime Editors that demonstrate precise correction of H1069Q ATP7B in 75 percent of cells in human hepatocyte lines and have observed similar results in primary human hepatocytes with the R778L mutation. This high level of precise editing in primary hepatocytes meets our threshold for predicted clinically relevant effects, and results in significant protection from copper toxicity in cell-based assays. We are currently conducting preclinical studies to confirm the ability to correct the human R778L sequence and the human H1069Q sequence in mouse models, using LNP technology.

Retinitis Pigmentosa Caused by Rhodopsin Mutations – Correcting the RHO gene via AAV Delivery to the Eye

Retinitis pigmentosa, or RP, is a subset of related inherited retinal diseases, or IRDs, where disease progression is characterized by loss of night vision in childhood or early adulthood, followed by loss of peripheral vision in adulthood characterized by constricting visual field, and eventual loss of central vision leading to blindness later in life. One of the most common IRDs is autosomal dominant RP, or adRP, caused by mutations in RHO which encodes the light sensitive Rhodopsin protein, or RhoP, expressed by rod photoreceptors of the retina. The disease is dominant, or manifests even with mutations to just one of the two gene copies in the genome. Approximately six to seven thousand patients have adRP in the United States caused by RHO mutations. We are initially focused on one predominant mutation, P23H; the P23H mutation is highly prevalent in the United States, causing disease in approximately 30 percent of all patients (approximately 2,000-2,500).

Our initial approach to adRP is to correct the RHO P23H mutation in rod photoreceptors of the retina at their natural genomic location. We believe a Prime Editor that corrects P23H will also correct rarer, nearby P23L and P23A mutations. Natural history studies suggest that correction of only 25 percent of rod photoreceptors would have an important clinical impact, because when 25 percent or more of rods are preserved, there is full preservation of cone photoreceptors that are critical to central vision. We have identified Prime Editors that demonstrate approximately 65 percent precise correction of the RHO P23H mutant locus. We are currently conducting preclinical studies to confirm that Prime Editing of P23H will correct healthy donor human retinal explants. We also plan to evaluate our approach in non-human primate studies where the Prime Editors will be delivered by subretinal injections to mimic the anticipated route of administration in the clinic.

Friedreich's Ataxia: Correcting Repeat Expansions in the FXN Gene

Friedreich's Ataxia, or FRDA, is a multisystem, autosomal recessive neurodegenerative disorder affecting the central and peripheral nervous systems as well as the heart and other organs. FRDA significantly reduces survival for patients, with the mean age of death being 39 years. FRDA is characterized by progressive ataxia, or lack of muscle control or coordination of voluntary movements, with mean age at onset of approximately five to 16 years. FRDA is caused by GAA-repeat nucleotide sequence expansions in intron 1 of the FXN gene encoding the frataxin protein, which plays important roles in mitochondria. The expanded repeats occur early in the gene, and cause disruptions in transcribing the FXN gene into RNA resulting in low levels of the frataxin protein. In the United States, it is estimated that around 4,000 individuals are affected by FRDA, while there are 15,000 to 94,000 patients globally.

Our Prime Editing technology enables us to precisely remove the expanded repeat sequences that cause FRDA. Our initial experiments are encouraging. Using the dual-flap technology with a Prime Editor targeted both upstream, or before the GAA pathological repeats, and downstream, or after the repeats, we have precisely removed the repeat sequence from intron 1 of the FXN gene to restore normal FXN regulation with 60-77 percent efficiency. In addition, in our models in donor- and patient-derived induced Pluripotent Stem Cells, or iPSCs, we measure the amount of frataxin expression in both FRDA patient cells, as well as cells derived from healthy donors. As expected, we demonstrated that patient cells have low levels of frataxin, and healthy donor cells have high levels of frataxin. When we Prime Edited the FRDA patient cells in this model, Prime Editors restored levels of frataxin towards that seen in healthy donor cells. In addition, our Prime Editors can restore normal function of patient sensory neurons.

We have established preliminary methods to deliver Prime Editors to terminally differentiated cardiomyocytes and plan to establish editing and functional recovery of frataxin expression in this cell system. Then, to ultimately deliver Prime Editors to heart and other tissues, we expect initially to rely on the tropism of AAV capsids, each optimized to deliver our Prime Editors to the central nervous system or heart. We are currently optimizing the AAVs for expression in neurons and glial cells as our first focus.

Myotonic Dystrophy – Correcting Repeat Expansions in the DMPK Gene

Myotonic Dystrophy type 1, or DM1, is a common autosomal dominant muscular dystrophy among people of European ancestry and is principally a muscle disease affecting skeletal and cardiac muscle but has multisystem manifestations. Patients often initially present with muscle weakness. DM1 is caused by expanded CTG repeats in the 3' UTR of one copy of the DMPK gene. When transcribed into RNA, the expanded repeat nucleotides in the case of DM1 sequester critical splicing factors, thereby preventing the correct function of many genes that regulate cell function. Recent newborn screening studies indicate that the true prevalence of DM1 is 1:2,100 (approximately 140,000 patients in the United States).

Our dual-flap Prime Editing technology enables the removal of the expanded repeat sequences that cause disease. Our goal in DM1 is to leverage our Prime Editing technology to precisely remove the repeat sequence from the UTR region of the DMPK gene, to restore DMPK regulation and expression of DMPK protein back to normal levels. The primary target tissues are cardiac and skeletal muscle, which we believe could have a transformative effect on patients; CNS is an important secondary target tissue. We have performed screens to identify pegRNA pairs that achieve highly efficient and precise removal of the expanded repeats and have demonstrated precise removal of pathological repeats from the DMPK gene. We have established precise removal of the smaller number of repeats in healthy cell lines with more than 80 percent efficiency. In patient derived stem cells, which contain approximately 1,600 pathological repeats, we have demonstrated precise removal of repeats, with our best Prime Editors achieving more than 90 percent precise editing and removal of the pathological repeats.

We are developing patient-derived stem cell-based models of disease. As a first step, we have acquired patient fibroblasts and generated iPSCs and cardiomyocytes in which to evaluate dual-flap Prime Editing. We have established preclinical methods to deliver Prime Editors to terminally differentiated cardiomyocytes and aim to establish editing and functional recovery in this cell system. In parallel, we will perform similar experiments in patient-derived skeletal muscle cells.

Risks Associated with Our Business

- We have incurred significant losses since inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.
- We will need substantial additional funding. If we are unable to raise capital when needed, we will be forced to delay, reduce, eliminate or prioritize among our research and product development programs or future commercialization efforts.
- Gene editing, including platforms such as Prime Editing, is a novel technology that is not yet clinically validated for human therapeutic use. The approach we are taking to discover and develop novel therapeutics is unproven and may never lead to marketable products. We may incur unexpected costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of any product candidates.
- Clinical drug development involves a lengthy and expensive process, with an uncertain outcome. Because gene editing is novel and the regulatory landscape that will govern our potential product candidates is uncertain and may change, we cannot predict the time and cost of obtaining regulatory approval, if we receive it at all, for our potential product candidates.
- We may enter into collaborations with collaborators and strategic partners such as Beam Therapeutics or other third parties for the research, development, delivery, manufacturing and commercialization of Prime Editing technology and certain of the product candidates we may develop. If any such collaborations are

not successful, we may not be able to capitalize on the market potential of our Prime Editing platform or product candidates.

- If conflicts arise between us and our collaborators or strategic partners, these parties may act in a manner adverse to us and could limit our ability to implement our strategies.
- If we are unable to obtain and maintain patent and other intellectual property protection for any product candidates we develop and for our Prime Editing technology, or if the scope of the patent and other intellectual property protection obtained is not sufficiently broad, third parties could develop and commercialize products and technology similar or identical to ours and our ability to successfully commercialize any product candidates we may develop and our Prime Editing technology may be adversely affected.
- Our rights to develop and commercialize our Prime Editing platform technology and product candidates are subject to the terms and conditions of licenses granted to us by others. If we fail to comply with our obligations in the agreements under which we license intellectual property rights from third parties or otherwise experience disruptions to our business relationships with our licensors, we could lose license rights that are important to our business.
- Our in-licensed issued patent, owned and in-licensed patent applications and other intellectual property may be subject to priority, inventorship or ownership disputes and similar proceedings. If we or our licensors are unsuccessful in any of these proceedings, we may be required to obtain licenses from third parties, which may not be available on commercially reasonable terms or at all, or to cease the development, manufacture and commercialization of one or more of our product candidates, which could have a material adverse impact on our business. With respect to our licenses from Broad Institute:
    - Our licenses are subject to Broad Institute's inclusive innovation model, pursuant to which Broad Institute retains the right, in certain circumstances, to grant to third parties (other than specified competitors of ours) licenses under the licensed patent rights that would otherwise fall within the scope of the exclusive license granted to us.
    - All gene targets, which are any human genes to which a program is directed, are subject to Broad Institute's march-in license, which means Broad Institute has the right to terminate our license to gene targets under certain conditions and could make one or more gene targets unavailable to us. However, once we initiate a program for a gene target, in accordance with the terms of such license agreement, Broad Institute loses the right to use its march-in license for such gene target, provided we continue to use commercially reasonable efforts to continue to progress such development. As such, we believe that Broad Institute cannot exercise its march-in license with respect to any of our current programs for gene targets because such programs have been initiated in accordance with the terms and requirements of such license agreement.
- The intellectual property landscape around the technologies we use or plan to use, including gene editing technology, is highly dynamic, and third parties may initiate legal proceedings alleging that we are infringing, misappropriating, or otherwise violating their intellectual property rights, the outcome of which would be uncertain and may prevent, delay or otherwise interfere with our product discovery and development efforts.
- The FDA, the EMA and the National Institutes of Health, or NIH, have demonstrated caution in their regulation of gene therapy treatments, and ethical and legal concerns about gene therapy and genetic testing may result in additional regulations or restrictions on the development and commercialization of any product candidates we may develop, which may be difficult to predict.
- Our future success depends on our ability to retain our President and Chief Executive Officer, our Co-Founders, our Chief Scientific Officer, our Chief Technical Officer and other key executives and to attract, retain and motivate qualified personnel.

- We expect to expand our research, development, delivery, manufacturing, commercialization, regulatory and future sales and marketing capabilities over time, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.
- We have identified a material weakness in our internal control over financial reporting. If we fail to remediate this material weakness or identify additional material weaknesses in the future or otherwise fail to maintain effective internal control over financial reporting in the future, we may not be able to accurately report our financial condition or results of operations which may adversely affect investor confidence in us and, as a result, the value of our common stock.

Corporate Information

We were incorporated under the laws of the State of Delaware in September 2019 under the name Prime Medicine, Inc. Our principal executive offices are located at 21 Erie Street, Cambridge, MA 02139, and our telephone number is (617) 564-0013.

We have one subsidiary, Prime Medicine Massachusetts Securities Corp., formed in October 2020 under the laws of the Commonwealth of Massachusetts.

Our website address is https://www.primemedicine.com. The information contained in or accessible from our website is not incorporated into this prospectus, and you should not consider it part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

Implications of Being an Emerging Growth Company and a Smaller Reporting Company

We qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, as amended, or the JOBS Act. As an emerging growth company, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies. These provisions include:

- being permitted to present only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's discussion and analysis of financial condition and results of operations" disclosure in this prospectus;
- reduced disclosure about our executive compensation arrangements;
- not being required to hold advisory votes on executive compensation or to obtain stockholder approval of any golden parachute arrangements not previously approved;
- an exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act of 2002; and
- an exemption from compliance with the requirements of the Public Company Accounting Oversight Board regarding the communication of critical audit matters in the auditor's report on the financial statements.

We may take advantage of these exemptions for up to five years or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company on the date that is the earliest of (i) the last day of the fiscal year in which we have total annual gross revenues of $1.07 billion or more; (ii) the last day of our fiscal year following the fifth anniversary of the date of the completion of this offering; (iii) the date on which we have issued more than $1.0 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under the rules of the Securities and Exchange Commission, or the SEC. We may choose to take advantage of some but not all of these exemptions. We have taken advantage of reduced reporting requirements in this prospectus. Accordingly, the information contained herein may be different from the information you receive from other public companies in which you hold stock. Additionally, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail

ourselves of this exemption and, therefore, while we are an emerging growth company we will not be subject to new or revised accounting standards at the same time that they become applicable to other public companies that are not emerging growth companies. As a result of this election, our financial statements may not be comparable to those of other public companies that comply with new or revised accounting pronouncements as of public company effective dates. We may choose to early adopt any new or revised accounting standards whenever such early adoption is permitted for private companies.

We are also a "smaller reporting company," meaning that the market value of our shares held by nonaffiliates plus the proposed aggregate amount of gross proceeds to us as a result of this offering is less than $700 million and our annual revenue was less than $100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company after this offering if either (i) the market value of our shares held by non-affiliates is less than $250 million or (ii) our annual revenue was less than $100 million during the most recently completed fiscal year and the market value of our shares held by nonaffiliates is less than $700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company, we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

THE OFFERING

Shares of common stock offered by us	shares.
Shares of our common stock to be outstanding after this offering	shares (or shares if the underwriters exercise their option to purchase additional shares in full).
Underwriters' option to purchase additional shares	We have granted the underwriters a 30-day option to purchase up to additional shares of our common stock at the initial public offering price, less underwriting discounts and commissions on the same terms as set forth in this prospectus.
Use of proceeds	We estimate that the net proceeds to us from the sale of shares of our common stock in this offering will be approximately $ million, or $ million if the underwriters exercise their option to purchase additional shares in full, assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds of this offering, together with our existing cash and cash equivalents and short-term investments, to: continue research and development of our immediate target indications and differentiation target indications; to develop our early-stage manufacturing processes and build out our dedicated chemistry facility; and for general corporate purposes. See "Use of Proceeds."
Proposed Nasdaq Global Market symbol	"PRME"
Risk factors	Investment in our common stock involves substantial risks. You should read this prospectus carefully, including the section entitled "Risk Factors" and the consolidated financial statements and the related notes to those statements included in this prospectus, before investing in our common stock.

The number of shares of our common stock outstanding after this offering is based on 265,603,788 shares (which includes 37,293,160 shares of unvested restricted common stock) of our common stock outstanding as of June 30, 2022, after giving effect to the automatic conversion of all outstanding shares of our Series A and Series B convertible preferred stock into an aggregate of 161,420,799 shares of our common stock upon the completion of this offering, and excludes:

- 53,125 shares of common stock issued after June 30, 2022 upon the exercise of stock options under our 2019 Stock Option and Grant Plan;
- 11,171,720 shares of common stock issuable upon the exercise of stock options outstanding as of June 30, 2022, with a weighted-average exercise price of $1.55 per share under our 2019 Stock Option and Grant Plan;
- 1,605,000 shares of common stock issuable upon the exercise of stock options granted after June 30, 2022, with a weighted-average exercise price of $2.56 per share under our 2019 Stock Option and Grant Plan;
- 5,652,280 shares of common stock reserved for issuance under our 2019 Stock Option and Grant Plan as of June 30, 2022, which shares will cease to be available for issuance at the time our 2022 Stock Option and Incentive Plan becomes effective;

- shares of common stock reserved for future issuance under our 2022 Stock Option and Incentive Plan, which will become effective upon the date immediately preceding the date on which the registration statement of which this prospectus is a part is declared effective; and
- shares of common stock reserved for future issuance under our 2022 Employee Stock Purchase Plan, which will become effective upon the date immediately preceding the date on which the registration statement of which this prospectus is a part is declared effective.

Except as otherwise noted, all information in this prospectus:

- gives effect to a 1-for- reverse stock split of our common stock effected on ;
- assumes no exercise of the underwriters' option to purchase up to additional shares of common stock in this offering;
- assumes no exercise of the outstanding options and restricted stock described above; and
- assumes the filing of our third amended and restated certificate of incorporation immediately prior to the closing of this offering and the effectiveness of our amended and restated bylaws upon the effectiveness of the registration statement of which this prospectus is a part.

SUMMARY FINANCIAL DATA

You should read the following summary consolidated financial data together with our consolidated financial statements and the related notes appearing at the end of this prospectus and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of this prospectus. We have derived the consolidated statement of operations data for the period from September 13, 2019 (inception) to December 31, 2019, the years ended December 31, 2020 and 2021 from our audited consolidated financial statements appearing at the end of this prospectus. The consolidated statement of operations data for the six months ended June 30, 2021 and 2022 and the consolidated balance sheet data as of June 30, 2022 have been derived from our unaudited financial statements appearing at the end of this prospectus and have been prepared on the same basis as the audited consolidated financial statements. In the opinion of management, the unaudited data reflect all adjustments, consisting only of normal recurring adjustments, necessary for a fair statement of the financial information in those statements. Our historical results are not necessarily indicative of the results that may be expected in any future period.

	Period from September 13, 2019 (Inception) to December 31,	Year Ended December 31,		Six Months Ended June 30,	
	2019	2020	2021	2021	2022
	(in thousands, except share and per share data)				
Consolidated Statement of Operations Data:					
Related party collaboration revenue	$ —	$ 5,210	$ —	$ —	$ —
Operating expenses:					
Research and development[1]	920	2,980	70,550	10,261	32,617
General and administrative	1,252	3,162	13,924	3,710	13,586
Total operating expenses	2,172	6,142	84,474	13,971	46,203
Loss from operations	(2,172)	(932)	(84,474)	(13,971)	(46,203)
Other income (expense):					
Change in fair value of preferred stock tranche right liability	(353)	(10,904)	(74,319)	(74,319)	—
Change in fair value of anti-dilution obligation	—	(700)	(6,681)	(6,681)	—
Change in fair value of related party short-term investment	—	10,867	(391)	9,429	(8,208)
Other income, net[2]	—	126	12	1	249
Total other expense, net	(353)	(611)	(81,379)	(71,570)	(7,959)
Net loss before income taxes	(2,525)	(1,543)	(165,853)	(85,541)	(54,162)
Provision for (benefit from) income taxes	4	1,867	(486)	503	(974)
Net loss	(2,529)	(3,410)	(165,367)	(86,044)	(53,188)
Accretion of preferred stock to redemption value	(265)	(1,645)	(1,468)	(1,468)	—
Cumulative dividend on preferred stock	—	—	(17,284)	(4,559)	(12,517)
Net loss attributable to common stockholders	$ (2,794)	$ (5,055)	$ (184,119)	$ (92,071)	$ (65,705)
Net loss per share attributable to common stockholders, basic and diluted[3]	$ (0.60)	$ (0.62)	$ (4.57)	$ (2.91)	$ (1.06)
Weighted-average common shares outstanding, basic and diluted[3]	4,622,576	8,206,374	40,332,091	31,662,400	61,777,538
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)[4]			$ (0.82)		$ (0.24)
Pro forma weighted-average common shares outstanding, basic and diluted (unaudited)[4]			201,752,890		223,198,337

(1) Includes related party amounts of $45, $150 and $42,170 for the period from September 13, 2019 (inception) to December 31, 2019 and for the years ended December 31, 2020 and 2021, respectively. See Note 14 to our consolidated financial statements appearing at the end of this prospectus.

(2) Includes related party amount of $126 for the year ended December 31, 2020. See Note 14 to our consolidated financial statements appearing at the end of this prospectus.
(3) See Note 13 to our consolidated financial statements included elsewhere in this prospectus for details on the calculation of basic and diluted net loss per share attributable to common stockholders.
(4) Pro forma basic and diluted net loss per share attributable to common stockholders has been prepared to give effect to adjustments to our capital structure arising in connection with the completion of this offering and is calculated by dividing the pro forma net loss attributable to common stockholders by the pro forma weighted-average common shares outstanding for the period. The unaudited pro forma net loss attributable to common stockholders used in the calculation of unaudited pro forma basic and diluted net loss per share attributable to common stockholders adjusts net loss attributable to common stockholders to remove the accretion of preferred stock to redemption value and cumulative dividends on preferred stock for the year ended December 31, 2021 because the calculation gives effect to the automatic conversion of all shares of our preferred stock outstanding as of December 31, 2021 into shares of common stock as if such conversion had occurred on January 1, 2021. Pro forma weighted-average common shares outstanding is computed by adjusting the weighted-average common shares outstanding to give pro forma effect to the automatic conversion of all shares of our preferred stock outstanding as of December 31, 2021 into shares of common stock as if such conversion had occurred on January 1, 2021. For the year ended December 31, 2021, weighted-average common shares outstanding includes the impact of the 3,424,422 shares we were obligated to issue to Myeloid as of December 24, 2021, the date of the agreement. Pro forma basic and diluted net loss per share attributable to common stockholders does not include the effect of the shares expected to be sold in this offering.

	As of June 30, 2022		
	Actual	Pro Forma[1]	Pro Forma As Adjusted[2]
	(in thousands)		
Consolidated Balance Sheet Data[1]:			
Cash and cash equivalents	$ 92,239	$ 92,239	
Working capital[3]	157,772	157,772	
Total assets	247,597	247,597	
Total liabilities	46,860	46,860	
Convertible preferred stock	395,800	—	
Total stockholders' equity (deficit)	(195,063)	200,737	

(1) The pro forma balance sheet data gives effect to the automatic conversion of all outstanding shares of our Series A and Series B convertible preferred stock into an aggregate of 161,420,799 shares of our common stock upon the completion of this offering.
(2) The pro forma as adjusted balance sheet data gives effect to (i) the pro forma adjustments set forth in footnote (1) above and (ii) the issuance and sale of shares of our common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, working capital, total assets and total stockholders' equity (deficit) by $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each increase (decrease) of 1,000,000 shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, working capital, total assets and total stockholders' equity (deficit) by $ million, assuming no change in the assumed initial public offering price per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.
(3) We define working capital as current assets less current liabilities.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below together with all of the other information contained in this prospectus, including our consolidated financial statements and related notes appearing at the end of this prospectus, before deciding to invest in our common stock. If any of the events or developments described below were to occur, our business, prospects, operating results and financial condition could suffer materially, the trading price of our common stock could decline and you could lose all or part of your investment. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may also adversely affect our business.

Risks Related To Our Financial Position and Need for Additional Capital

We have incurred significant losses since inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.

Since inception, we have incurred significant operating losses. Our net loss was $2.5 million, $3.4 million, $165.4 million, $86.0 million, and $53.2 million for the period from September 13, 2019 (inception) to December 31, 2019, the years ended December 31, 2020 and 2021, and the six months ended June 30, 2021 and 2022, respectively. As of June 30, 2022, we had an accumulated deficit of $224.6 million. We have financed our operations primarily through private placements of our preferred stock. Substantially all of our losses have resulted from expenses incurred in connection with our research and development and from general and administrative costs associated with our operations. We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future. The net losses we incur may fluctuate significantly from quarter to quarter. We anticipate that our expenses will increase substantially if and as we:

- continue our current research programs and preclinical development of any product candidates we identify;
- seek to identify additional research programs and product candidates;
- initiate preclinical studies and clinical trials for any product candidates we may identify;
- experience any delays or interruptions due to the ongoing COVID-19 pandemic, including delays in preclinical testing and clinical trials or interruptions in the supply chain for any future product candidates;
- further develop our in-licensed and company-owned gene editing platform, which we call our Prime Editing platform;
- maintain, expand, enforce, defend and protect our intellectual property portfolio and provide reimbursement of third-party expenses related to our patent portfolio;
- seek marketing approvals for any product candidates that successfully complete clinical trials;
- develop, maintain and enhance a sustainable, scalable, reproducible and transferable manufacturing process for the product candidates we may develop;
- ultimately establish a sales, marketing and distribution infrastructure to commercialize any therapies for which we may obtain marketing approval;
- hire additional research and development personnel;
- hire clinical and commercial personnel;
- add operational, financial and management information systems and personnel, including personnel to support our product development;
- acquire or in-license product candidates, intellectual property and technologies;

- establish and maintain collaborations;
- should we decide to do so, build and maintain a commercial-scale current Good Manufacturing Practices, or cGMP, manufacturing facility; and
- operate as a public company.

We have not initiated clinical development of any potential product candidate and expect that it will be many years, if ever, before we have a product candidate ready for commercialization. To become and remain profitable, we must develop and, either directly or through collaborators, eventually commercialize a therapy or therapies with market potential. This will require us to be successful in a range of challenging activities, including identifying product candidates, completing preclinical studies and clinical trials of product candidates, obtaining marketing approval for these product candidates, manufacturing, marketing and selling those therapies for which we may obtain marketing approval and satisfying any post-marketing requirements. We may never succeed in these activities and, even if we do, may never generate revenues that are significant or large enough to achieve profitability.

We have transitioned from research and development to early preclinical development for our most advanced potential product candidate. Because of the numerous risks and uncertainties associated with developing Prime Editing product candidates, we are unable to predict the extent of any future losses or when we will become profitable, if at all. If we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would decrease the value of our company and could impair our ability to raise capital, maintain our research and development efforts, expand our business or continue our operations. A decline in the value of our company could also cause you to lose all or part of your investment.

We will need substantial additional funding. If we are unable to raise capital when needed, we will be forced to delay, reduce, eliminate or prioritize among our research and product development programs or future commercialization efforts.

We expect our expenses to continue to increase in connection with our ongoing activities, particularly as we identify, continue the research and development of, initiate preclinical studies and clinical trials of, and seek marketing approval for, product candidates. Because we have limited financial and managerial resources, we have prioritized our research programs and lead optimization efforts in specific indications among many potential options. Specifically, our initial development programs target blood, liver, eye, and neuromuscular indications, amongst others. As a result of this prioritization, we may forego or delay pursuit of opportunities with other product candidates or for other indications that later prove to have greater clinical or commercial potential and we may need to reprioritize our focus in the future. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable therapies.

In addition, if we obtain marketing approval for any product candidates we may develop, we expect to incur significant commercialization expenses related to product sales, marketing, manufacturing and distribution to the extent that such sales, marketing, manufacturing and distribution are not the responsibility of a collaborator. Furthermore, upon the closing of this offering, we expect to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we would be forced to delay, reduce or eliminate our research and product development programs or future commercialization efforts.

As of June 30, 2022, our cash and cash equivalents and short-term investments were $180.6 million, excluding restricted cash. We estimate that the net proceeds of this offering will be approximately $, assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We expect that the net proceeds from this offering, together with our existing cash and cash equivalents and short-term investments will enable us to fund our operating expenses and capital expenditure requirements for at least the next . However, our operating plan may change as a result of factors currently

unknown to us, and we may need to seek funding sooner than planned. Our future capital requirements will depend on many factors, including those discussed in the risk factor entitled "We have incurred significant losses since inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability."

Any additional fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize any product candidates we may develop. We cannot be certain that additional funding will be available on acceptable terms or at all. We have no committed source of additional capital and, if we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of any product candidates or other research and development initiatives. Our license and collaboration agreements and any future collaboration agreements may also be terminated if we are unable to meet the payment or other obligations under the agreements. We could be required to seek collaborators for potential product candidates earlier than we would otherwise plan or on terms that are less favorable than might otherwise be available. We could also be required to relinquish or license our rights to product candidates on unfavorable terms in certain markets where we otherwise would seek to pursue development or commercialization ourselves.

Raising additional capital may cause dilution to our stockholders, including purchasers of common stock in this offering, restrict our operations or require us to relinquish rights to our technologies or product candidates we may develop.

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of equity offerings, debt financings, collaborations, strategic alliances and licensing arrangements. We do not have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures, declaring dividends and possibly other restrictions. In addition, if we raise funds through additional license and collaboration agreements, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our intellectual property, technologies, future revenue streams, research programs or product candidates we may develop, or we may have to grant licenses on terms that may not be favorable to us.

Our short operating history may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

We are an early-stage company. We were founded in September 2019 and commenced operations in July 2020. Our operations to date have been limited to organizing and staffing our company, business planning, raising capital, acquiring and developing our platform and technology and identifying and beginning to advance preclinical testing of potential product candidates. All of our programs are still in the research or preclinical stage of development and their risk of failure is high. We have not yet demonstrated an ability to initiate or successfully complete any clinical trials, including large-scale, pivotal clinical trials, obtain marketing approvals, manufacture a commercial-scale therapy, arrange for a third party to do so on our behalf or conduct sales and marketing activities necessary for successful commercialization. Typically, it takes about 10 to 15 years to develop a new therapy from the time it is discovered to when it is available for treating patients.

Our limited operating history, particularly in light of the rapidly evolving gene editing field, may make it difficult to evaluate our technology and industry and predict our future performance. Our very short history as an operating company makes any assessment of our future success or viability subject to significant uncertainty. We will encounter risks and difficulties frequently experienced by very early stage companies in rapidly evolving fields. If we do not address these risks successfully, our business will suffer.

In addition, as a new business, we may encounter other unforeseen expenses, difficulties, complications, delays, and other known and unknown factors. We will need to transition from a company with a research focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

We have never generated revenue from product sales and may never become profitable.

Our ability to generate revenue from product sales and achieve profitability depends on our ability, alone or with collaborative partners, to successfully complete the development of, and obtain the regulatory approvals necessary to commercialize, product candidates we may identify for development. We do not anticipate generating revenues from product sales for many years, if ever. Our ability to generate future revenues from product sales depends heavily on our, or our collaborators', ability to successfully:

- identify product candidates and successfully complete research development of any product candidates we may identify;
- seek and obtain regulatory and marketing approvals for any product candidates for which we complete clinical trials;
- launch and commercialize any product candidates for which we may obtain regulatory and marketing approval by establishing a sales force, marketing and distribution infrastructure, or alternatively, collaborating with a commercialization partner;
- qualify for adequate coverage and reimbursement by government and third-party payors for any product candidates for which we may obtain regulatory and marketing approval;
- establish and maintain supply and manufacturing relationships with third parties that can provide adequate, in both amount and quality, products and services to support clinical development and the market demand for any product candidates for which we obtain regulatory and marketing approval;
- develop, maintain and enhance a sustainable, scalable, reproducible and transferable manufacturing process for the product candidates we may develop;
- address competing technological and market developments;
- negotiate favorable terms in any collaboration, licensing or other arrangements into which we may enter and performing our obligations in such collaborations;
- receive market acceptance by physicians, patients, healthcare payors, and others in the medical community;
- maintain, protect, enforce, defend and expand our portfolio of intellectual property and other proprietary rights, including patents, trade secrets and know-how;
- defend against third party intellectual property claims of infringement, misappropriation or other violation; and
- attract, hire and retain qualified personnel.

Our expenses could increase beyond expectations if we are required by the U.S. Food and Drug Administration, or the FDA, the European Medicines Agency, or the EMA, or other regulatory authorities to perform clinical and other studies in addition to those that we currently anticipate. Even if one or more of the product candidates we may develop are approved for commercial sale, we anticipate incurring significant costs associated with commercializing any approved product candidate. Additionally, such products may become subject to unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives. Even if we are able to generate revenues from the sale of any approved product candidates, we may not become profitable and may need to obtain additional funding to continue operations.

Our future ability to utilize our net operating loss carryforwards and certain other tax attributes may be limited.

Since our inception, we have incurred losses and we may never achieve profitability. To the extent that we continue to generate taxable losses, under current law, our unused U.S. federal net operating losses, or NOLs, may be carried forward to offset a portion of future taxable income, if any. Additionally, we continue to generate business tax credits, including research and development tax credits, which generally may be carried forward to

offset a portion of future taxable income, if any, subject to expiration of such credit carryforwards. Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code, if a corporation undergoes an "ownership change," generally defined as one or more shareholders or groups of shareholders who own at least 5 percent of the corporation's equity increasing their equity ownership in the aggregate by more than 50 percentage points (by value) over a three-year period, the corporation's ability to use its pre-change NOLs and other pre-change tax attributes (such as research and development tax credits) to offset its post-change income or taxes may be limited. Similar rules may apply under state tax laws. Our prior equity offerings and other changes in our stock ownership may have resulted in such ownership changes in the past. In addition, we may experience ownership changes in the future as a result of this offering or subsequent shifts in our stock ownership, some of which are outside of our control. As a result, if we earn net taxable income, our ability to use our pre-change NOLs or other pre-change tax attributes to offset U.S. federal taxable income may be subject to limitations, which could potentially result in increased future tax liability to us. Additional limitations on our ability to utilize our NOLs to offset future taxable income may arise as a result of our corporate structure whereby NOLs generated by our subsidiary may not be available to offset taxable income earned by our subsidiary. There is a risk that due to changes under the tax law, regulatory changes or other unforeseen reasons, our existing NOLs or business tax credits could expire or otherwise be unavailable to offset future income tax liabilities. At the state level, there may also be periods during which the use of NOLs or business tax credits is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed. For these reasons, we may not be able to realize a tax benefit from the use of our NOLs or tax credits, even if we attain profitability.

We face risks related to health epidemics, pandemics and other widespread outbreaks of contagious disease, including the ongoing COVID-19 pandemic, which could significantly disrupt our operations, impact our financial results or otherwise adversely impact our business.

Significant outbreaks of contagious diseases and other adverse public health developments could have a material impact on our business operations and operating results. For example, the spread of COVID-19 has and identification of new variants of COVID-19 have affected segments of the global economy and our operations. As a result of the ongoing COVID-19 pandemic or similar public health crises that may arise, we may experience disruptions that could adversely impact our operations, research and development, and as we continue developing, any preclinical studies, clinical trials and manufacturing activities we may conduct, some of which may include:

- delays or disruptions in research programs, preclinical studies, clinical trials or investigational new drug, or IND-enabling studies that we or our collaborators may conduct;
- interruption or delays in the operations of the FDA, the EMA and comparable foreign regulatory agencies;
- interruption of, or delays in receiving and distributing, supplies of drug substance and drug product from our contract manufacturing organizations, or CMOs, to preclinical or clinical research sites or delays or disruptions in any preclinical studies or clinical trials performed by contract research organizations, or CROs;
- limitations imposed on our business operations by local, state or federal authorities to address a pandemic or similar public health crises, including if facilities and materials are commandeered under the Defense Production Act of 1950 or equivalent foreign legislation; and
- business disruptions caused by potential workplace, laboratory and office closures and an increased reliance on employees working from home, disruptions to or delays in ongoing laboratory experiments and operations, staffing shortages, travel limitations, and cybersecurity and data accessibility or security issues.

For example, our laboratory-based personnel have been unable to maximize use of our existing laboratory space due to restrictions on density of people and other aspects of our work have been limited by the need for our staff to isolate.

In addition, the trading prices for biopharmaceutical companies have been highly volatile as a result of the ongoing COVID-19 pandemic and we may face similar volatility in our stock price after we complete this public offering. We cannot predict the scope and severity of any economic recovery after the COVID-19 pandemic abates,

including following any additional "waves" or other intensifying of the pandemic. If we or any of the third parties with whom we engage were to experience additional shutdowns or other business disruptions, our ability to conduct our business in the manner and on the timelines presently planned could be materially and negatively affected, which could have a material adverse impact on our business, financial condition, our results of operations and prospects. Furthermore, the COVID-19 pandemic could exacerbate the other risks described in this section. For additional information regarding the impact of the ongoing COVID-19 pandemic, see the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations—Impact of COVID-19 on Our Operations."

Risks Related To Discovery, Development and Commercialization

Gene editing, including platforms such as Prime Editing, is a novel technology that is not yet clinically validated for human therapeutic use. The approach we are taking to discover and develop novel therapeutics is unproven and may never lead to marketable products. We may incur unexpected costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of any product candidates.

We are focused on developing therapies utilizing gene editing technology, which is new and largely unproven. The Prime Editing technologies that we have licensed and that we are utilizing in our research programs have not yet been clinically tested, nor are we aware of any clinical trials for safety or efficacy having been completed by third parties using Prime Editing or similar technologies. The scientific evidence to support the feasibility of developing product candidates based on gene editing technologies is both preliminary and limited. Successful development of product candidates will require us to safely deliver a gene editor into target cells, optimize the efficiency and specificity of such product candidates and ensure the therapeutic selectivity of such product candidates. We may need to address other safety issues as well, and to demonstrate the full value of these products, we will need to achieve these goals with single administration and demonstrate a permanent correction. There can be no assurance that our Prime Editing platform will achieve these goals, lead to the development of genetic therapies or be successful in solving any or all of these issues.

Our future success is highly dependent on the successful development of gene editing technologies, cellular delivery methods and therapeutic applications of that technology. We may decide to alter or abandon our initial programs as new data become available and we gain experience in developing gene editing therapeutics. We cannot be sure that our technologies will yield satisfactory products that are safe and effective, scalable or profitable in our initial indications or any other indication we pursue. Adverse developments in the clinical development efforts of other gene editing technology companies could adversely affect our efforts or the perception of any product candidates we may develop by both investors and regulatory authorities.

Similarly, other gene therapy approaches may be determined to be more attractive than Prime Editing. Moreover, if we decide to develop gene editing technologies other than those involving Prime Editing, we cannot be certain we will be able to obtain rights to such technologies. Although both of our co-founders have entered into agreements with us pursuant to which they assign any inventions to us with respect to the services they perform for us, such assignment obligations are subject to certain limitations, and do not extend to their work in other fields or to the intellectual property arising from their employment with their respective academic and research institutions. To obtain intellectual property rights assigned by our co-founders to such institutions, we would need to enter into license agreements with such institutions, such as the Broad Institute, Inc., or Broad Institute, Howard Hughes Medical Institute, or HHMI, and Harvard University, or Harvard, which may not be available on commercially reasonable terms or at all. Additionally, our consulting agreement with David Liu is subject to (i) the policies and regulations of certain institutions and (ii) certain agreements between such co-founder and certain third parties, including Beam Therapeutics Inc., or Beam Therapeutics. Any of these factors could reduce or eliminate our commercial opportunity and could have a material adverse effect on our business, financial condition, results of operations and prospects.

Development activities in the field of gene editing are currently subject to a number of risks, including risks related to the ownership and use of certain intellectual property rights that are subject to patent interference proceedings in the United States and opposition proceedings in Europe. For additional information regarding the

risks that may apply to our and our licensors' intellectual property rights, see the section entitled "—Risks Related To Our Intellectual Property" for more information.

Additionally, public perception and related media coverage relating to the adoption of new therapeutics or novel approaches to treatment, as well as ethical concerns related specifically to gene editing, may adversely influence the willingness of subjects to participate in clinical trials, or, if any therapeutic is approved, of physicians and patients to accept these novel and personalized treatments. Physicians, health care providers and third-party payors often are slow to adopt new products, technologies and treatment practices, particularly those that may also require additional upfront costs and training. Physicians may not be willing to undergo training to adopt these novel and potentially personalized therapies, may decide the particular therapy is too complex or potentially risky to adopt without appropriate training, and may choose not to administer the therapy. Furthermore, due to health conditions, genetic profile or other reasons, certain patients may not be candidates for the therapies. In addition, responses by federal and state agencies, Congressional committees and foreign governments to negative public perception, ethical concerns or financial considerations may result in new legislation, regulations or medical standards that could limit our ability to develop or commercialize any product candidates, obtain or maintain regulatory approval or otherwise achieve profitability. New government requirements may be established that could delay or prevent regulatory approval of any product candidates we may develop. It is impossible to predict whether legislative changes will be enacted, regulations, policies or guidance changed, or interpretations by agencies or courts changed, or what the impact of such changes, if any, may be. Based on these and other factors, health care providers and payors may decide that the benefits of these new therapies do not or will not outweigh their costs.

Clinical drug development involves a lengthy and expensive process, with an uncertain outcome. Because gene editing is novel and the regulatory landscape that will govern our potential product candidates is uncertain and may change, we cannot predict the time and cost of obtaining regulatory approval, if we receive it at all, for our potential product candidates.

The time required to obtain approval for any of our potential product candidates from the FDA, the EMA or other comparable foreign regulatory authorities is unpredictable but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the substantial discretion of regulatory authorities. For more information on the regulatory approval process, see "Business—Government Regulation." Clinical trials may fail to demonstrate that our product candidates are safe for humans and effective for indicated uses. Even if initial clinical trials in any of our product candidates we may develop are successful, such product candidates may fail to show the desired safety and efficacy in later stages of clinical development despite having successfully advanced through preclinical studies and initial clinical trials. There is a high failure rate for drugs and biologics proceeding through clinical trials. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in later stage clinical trials even after achieving promising results in earlier stage clinical trials.

Because gene editing is novel, the regulatory requirements that will govern any novel gene editing product candidates we develop may continue to evolve. Within the broader genetic therapy field, a limited number of gene therapy products have received marketing authorization from the FDA and the EMA to date. Even with respect to more established products that fit into the categories of gene therapies or cell therapies, the regulatory landscape is still developing. Regulatory requirements governing gene therapy products and cell therapy products have changed frequently and may continue to change in the future. Moreover, there is substantial, and sometimes uncoordinated, overlap in those responsible for regulation of existing gene therapy products and cell therapy products. For example, in the United States, the FDA has established the Office of Tissues and Advanced Therapies within its Center for Biologics Evaluation and Research, or CBER, to consolidate the review of gene therapy and related products, and the Cellular, Tissue and Gene Therapies Advisory Committee to advise CBER on its review. Gene therapy clinical trials may also be subject to review and oversight by an institutional biosafety committee, or IBC, a local institutional committee that reviews and oversees certain basic and clinical research conducted at the institution participating in the clinical trial. Although the FDA decides whether individual gene therapy protocols may proceed, the review process and determinations of other reviewing bodies, such as an IBC, can impede or delay the initiation of a clinical trial, even if the FDA has reviewed the trial and approved its initiation.

The same applies in the European Union. The EMA's Committee for Advanced Therapies, or CAT, is responsible for assessing the quality, safety and efficacy of advanced-therapy medicinal products (i.e. gene therapy, somatic-cell therapy or tissue-engineered medicines). The role of the CAT is to prepare a draft opinion on an application for marketing authorization for a gene therapy medicinal candidate that is submitted to the Committee for Medicinal Products for Human Use, or CHMP, before CHMP adopts its opinion which is submitted to the European Commission for the final decision on whether to grant a marketing authorization or not. In the European Union, the EMA publishes guidelines for the development and evaluation of gene therapy medicinal products to assist in preparing marketing authorization applications, however these are continually under review. The EMA may issue new guidelines concerning the development and marketing authorization for gene therapy medicinal products and require that we comply with these new guidelines.

Adverse developments in post-marketing experience or in clinical trials conducted by others of gene therapy products, cell therapy products or products developed through the application of gene editing technology may cause the FDA, the EMA and other regulatory bodies to revise the requirements for development or approval of our potential product candidates or limit the use of products utilizing gene editing technologies, either of which could materially harm our business. In addition, the clinical trial requirements of the FDA, the EMA and other regulatory authorities and the criteria these regulators use to determine the safety and efficacy of a product candidate vary substantially according to the type, complexity, novelty and intended use and market of the potential products. The regulatory approval process for novel product candidates can be more expensive and take longer than for other, better known or more extensively studied pharmaceutical or other product candidates. Regulatory agencies administering existing or future regulations or legislation may not allow production and marketing of products utilizing gene editing technology in a timely manner or under technically or commercially feasible conditions. In addition, regulatory action or private litigation could result in expenses, delays or other impediments to our research programs or the commercialization of resulting products.

The regulatory review committees and advisory groups described above and the new guidelines they promulgate may lengthen the regulatory review process, require us to perform additional studies or trials, increase our development costs, lead to changes in regulatory positions and interpretations, delay or prevent approval and commercialization of these treatment candidates or lead to significant post-approval limitations or restrictions. As we advance our research programs and develop future product candidates, we will be required to consult with these regulatory and advisory groups and to comply with applicable guidelines. If we fail to do so, we may be required to delay or discontinue development of any product candidates we identify and develop.

Because we are developing product candidates in the field of genetic medicines in which there is little clinical experience, there is increased risk that the FDA, the EMA or other regulatory authorities may not consider the endpoints of our clinical trials to provide clinically meaningful results and that these results may be difficult to analyze.

In order to proceed into clinical development of any product candidates we identify, we will need to submit INDs or clinical trial applications to regulatory authorities and obtain regulatory clearance to commence clinical development. Because the product candidates we identify are based on novel gene-editing technology, we may be unsuccessful in obtaining clearance from regulatory authorities to proceed into clinical development. In order to commence clinical development, we will need to identify success criteria and endpoints such that the FDA, the EMA or other regulatory authorities will be able to determine the clinical efficacy and safety profile of any product candidates we may develop. As we are initially seeking to identify and develop product candidates to treat diseases in which there is little clinical experience using new technologies, and while we may have opportunities to discuss our clinical development plans with regulatory authorities prior to commencing clinical development, there is heightened risk that the FDA, the EMA or other regulatory authorities may not consider the clinical trial endpoints that we propose to provide clinically meaningful results (reflecting a tangible benefit to patients). In addition, the resulting clinical data and results may be difficult to analyze. Even if the FDA does find our success criteria to be sufficiently validated and clinically meaningful, we may not achieve the pre-specified endpoints to a degree of statistical significance. This may be a particularly significant risk for many of the genetically defined diseases for which we plan to develop product candidates because many of these diseases such as Friedreich's Ataxia have small patient populations, and designing and executing a rigorous clinical trial with appropriate statistical power is more difficult than with diseases that have larger patient populations. Furthermore, even if we do achieve the pre-specified

criteria, we may produce results that are unpredictable or inconsistent with the results of the non-primary endpoints or other relevant data. The FDA also weighs the benefits of a product against its risks, and the FDA may view the efficacy results in the context of safety as not being supportive of regulatory approval. Other regulatory authorities in the European Union and other countries may make similar comments with respect to these endpoints and data. Any product candidates we may develop will be based on a novel technology that makes it difficult to predict the time and cost of development and of subsequently obtaining regulatory approval. No gene editing therapeutic product has been approved in the United States or in Europe. Within the broader genome product field, only a limited number of gene therapy products, such as uniQure N.V.'s Glybera and Abecma from Bristol Myers Squibb and bluebird bio, have received marketing authorization or marketing approval from the European Commission or the FDA. Some of these products have taken years to register and have had to deal with significant issues in their post-marketing experience.

We are very early in our development efforts and may not be successful in identifying and developing potential product candidates. It will be many years before we or our collaborators commercialize a product candidate or generate any revenues, if ever.

The success of our business depends primarily upon our ability to identify, develop and commercialize product candidates. We are very early in our development efforts and have focused our research and development efforts to date on our Prime Editing platform, developing our Prime Editors and identifying our initial targeted disease indications. Although we believe we can demonstrate many of the key advantages of Prime Editing, because we are very early in our development efforts, we are not yet certain of the results we may achieve, which may be important for registration and commercialization of our products. Such uncertainties include but are not limited to the actual size of the set of pathogenic mutations we can address, the level of editing efficiency we can produce, the degree of unwanted byproducts we may encounter, our ability to achieve editing success in a single administration or the permanence of our edits. We have also not yet shown that preclinical editing efficacy can result in clinically important effects, nor that results of biomarker studies in our preclinical models can translate into positive results in clinical trials. One particular form of Prime Editing that uses recombinases to insert targeted "gene-sized" DNA into the genome, is in an even earlier stage of research and development than our immediate target indications and our differentiation indications. We believe this promising form of Prime Editing needs more than one source of DNA as a template and may deliver with less efficacy.

All of our product development programs are still in the research or preclinical stage of development. Our research methodology may be unsuccessful in identifying potential product candidates, our potential product candidates may be shown to have harmful side effects in preclinical *in vitro* experiments or animal model studies, they may not show promising signals of therapeutic effect in such experiments or studies or they may have other characteristics that may make the product candidates impractical to manufacture, unmarketable, or unlikely to receive marketing approval. We have not achieved preclinical proof of concept for our programs and there is no guarantee that we will achieve it. Our proposed delivery methods with potential product candidates have never been evaluated in human clinical trials. Moreover, we are not aware of any clinical trials involving Prime Editing technology. Our ability to generate product revenue, which we do not expect will occur for many years, if ever, will depend heavily on the successful development and eventual commercialization of any product candidates we may develop, which may never occur. We currently generate no revenue from sales of any product, and we may never be able to develop or commercialize a marketable product.

In addition, although we believe Prime Editing will position us to rapidly expand our portfolio of product candidates beyond the initial product candidates we may develop after only minimal changes to the product candidate construct, we have not yet successfully developed any product candidate and our ability to expand our portfolio may never materialize.

Commencing clinical trials in the United States is also subject to acceptance by the FDA of our IND application and finalizing the trial design based on discussions with the FDA and other regulatory authorities. Even after we receive and incorporate guidance from these regulatory authorities, the FDA or other regulatory authorities could disagree that we have satisfied their requirements to commence our clinical trial or change their position on the acceptability of our trial design or the clinical endpoints selected, which may require us to complete additional

studies or trials or impose stricter approval conditions than we currently expect. There are equivalent processes and risks applicable to clinical trial applications in other countries, including in Europe.

Some of our approaches may require interaction and approval from regulatory authorities beyond the specific requirements for individual product candidates. For example, our "march up the chromosome" personalized medicine approach may require the use of basket clinical studies, studies where more than one mutation in a disease are studied in a single clinical trial or even studies where mutations in different diseases are studied in a single clinical trial. Some of our approaches may also require studying more than one Prime Editor under a single IND or applying for registration for a suite of Prime Editor products to allow broad therapeutic coverage for a wide range of mutations in a single disease. It is also possible that using Prime Editing approaches in a wider, healthier population, as we propose in our "Blue Sky" approaches, may require different safety and regulatory thresholds from those required for smaller, more critically ill groups of patients.

Even if we complete the necessary clinical trials, we cannot predict when, or if, we will obtain regulatory approval to commercialize our potential product candidates in the United States or any other jurisdiction, if at all, and any such approval may be for a more narrow indication than we seek. In addition, clinical trials conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory approval in one country does not guarantee regulatory approval in any other country. We may conduct one or more of our clinical trials with one or more trial sites that are located outside the United States. Although the FDA may accept data from clinical trials conducted outside the United States, acceptance of these data is subject to conditions imposed by the FDA, and there can be no assurance that the FDA will accept data from trials conducted outside of the United States. If the FDA does not accept the data from any trial that we conduct outside the United States, it would likely result in the need for additional trials, which would be costly and time-consuming and could delay or permanently halt our development of the applicable product candidates. Similarly, marketing approval by the FDA in the United States, if obtained, does not ensure approval by regulatory authorities in other countries or jurisdictions. Approval processes vary among countries and can involve additional product candidate testing and validation and additional administrative review periods.

Commercialization of any product candidates we may develop will also require obtaining manufacturing supply, capacity and expertise; building of a commercial organization; and significant marketing efforts. If we do not successfully commercialize any product candidates we may develop, we could experience a material harm to our business.

We may find it difficult to enroll patients in our clinical trials given the limited number of patients who have the diseases any product candidates we identify or develop are intended to target. If we experience delays or difficulties in the enrollment of patients in clinical trials, our clinical development activities and our receipt of necessary regulatory approvals could be delayed or prevented.

Although we are currently in preclinical development, as we progress our programs we may not be able to initiate or continue clinical trials for any product candidates we identify or develop if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA, the EMA or other analogous regulatory authorities outside the United States, or as needed to provide appropriate statistical power for a given trial. Enrollment may be particularly challenging for some of the rare genetically defined diseases we are targeting in our most advanced programs. In addition, if patients are unwilling to participate in our gene editing trials because of negative publicity from adverse events related to the biotechnology, gene therapy or gene editing fields, competitive clinical trials for similar patient populations, clinical trials in competing products or for other reasons, the timeline for recruiting patients, conducting studies and obtaining regulatory approval of our potential product candidates may be delayed. Moreover, some of our competitors may have ongoing clinical trials for product candidates that would treat the same indications as our potential product candidates, and patients who would otherwise be eligible for our clinical trials may instead enroll in clinical trials of our competitors' product candidates.

Patient enrollment is also affected by other factors, some of which may include:

- severity of the disease under investigation;

- size of the patient population and process for identifying patients, including proximity and availability of clinical trial sites for prospective patients with conditions that have small patient pools;
- design of the trial protocol, including efforts to facilitate timely enrollment in clinical trials;
- availability and efficacy of approved medications for the disease under investigation;
- availability of genetic testing for potential patients and ability to monitor patients adequately during and after treatment;
- ability to obtain and maintain patient informed consent;
- risk that enrolled patients will drop out before completion of the trial;
- eligibility and exclusion criteria for the trial in question;
- perceived risks and benefits of the product candidate under trial and gene editing as a therapeutic approach; and
- patient referral practices of physicians.

In addition, our ability to successfully initiate, enroll and complete a clinical trial in any foreign country is subject to numerous risks unique to conducting business in foreign countries, some of which may include:

- difficulty in establishing or managing relationships with CROs and physicians;
- different standards for the conduct of clinical trials;
- different standard-of-care for patients with a particular disease;
- difficulty in locating qualified local consultants, physicians and partners; and
- potential burden of complying with a variety of foreign laws, medical standards and regulatory requirements, including the regulation of pharmaceutical and biotechnology products and treatment and of gene editing technologies.

Enrollment delays in our clinical trials may result in increased development costs for our potential product candidates, which would cause the value of our Company to decline and limit our ability to obtain additional financing. If we or our collaborators have difficulty enrolling a sufficient number of patients to conduct our clinical trials as planned, we may need to delay, limit or terminate ongoing or planned clinical trials or entire clinical programs, any of which would have an adverse effect on our business, financial condition, results of operations and prospects.

The gene editing field is relatively new and is evolving rapidly. We are focusing our research and development efforts on gene editing using Prime Editing technology, but other gene editing technologies may be discovered that provide significant advantages over Prime Editing, which could materially harm our business.

To date, we have focused our efforts on our Prime Editing platform. However, there are numerous other companies advancing gene editing and gene therapy product candidates that are in preclinical or clinical development. Some of these other companies have previously undertaken research and development of gene editing technologies using clustered regularly interspaced short palindromic repeats, or CRISPR, or other forms such as base editing, zinc finger nucleases, engineered meganucleases and transcription activator-like effector nucleases, or TALENs, but to date none has obtained marketing approval for a product candidate. There can be no certainty that Prime Editing technology will lead to the development of genetic therapies or that other gene editing technologies will not be considered better or more attractive for the development of therapies. For example, transposons, or “jumping genes,” can insert themselves into different places in the genome and carry specific DNA sequences to specific sites without the need for making double-stranded breaks in DNA, although such methods currently cannot target specific locations. In addition, Beam Therapeutics is developing novel base editing technology. We have

entered into a collaboration and license agreement with Beam Therapeutics, under which we grant Beam Therapeutics certain exclusive and non-exclusive rights in our Prime Editing technology in certain fields. Our license grant to Beam Therapeutics does not cover all fields and applications of Prime Editing and we retain the majority of rights to use the licensed Prime Editing technology outside of the fields licensed to Beam Therapeutics. It is possible that base editing or other gene editing technology developed by Beam Therapeutics will be competitive with our business, and it is also possible that such editing technology may be considered more attractive than Prime Editing. Therefore, Beam Therapeutics may develop competing products using such technology. For more information regarding our agreement with Beam Therapeutics, see "Business—Our License and Collaboration Agreements—Strategic Relationship with Beam Therapeutics."

Similarly, other new gene editing technologies that have not been discovered yet may be determined to be more attractive than Prime Editing. Moreover, if we decide to develop gene editing technologies other than those involving Prime Editing, we cannot be certain we will be able to obtain rights to such technologies. Although both of our co-founders who currently provide consulting and advisory services to us in the area of gene editing technologies have entered into agreements with us pursuant to which they assign to us any inventions with respect to the services they perform for us, such obligations are subject to limitations and do not extend to their work in other fields or to the intellectual property arising from their employment with their respective academic and research institutions. To obtain intellectual property rights assigned by these co-founders to such institutions, such as Broad Institute, HHMI and Harvard, we would need to enter into license agreements with such institutions, which may not be available on commercially reasonable terms or at all. Additionally, our consulting agreement with David Liu is subject to (i) the policies and regulations of certain institutions and (ii) certain agreements between such co-founder and certain third parties, including Beam Therapeutics. Furthermore, although our co-founders have long-term supporting or employment roles with us, a financial stake in our success and, in certain cases, non-competition clauses in their consulting or employment agreements, such non-competition obligation is limited to the field of any and all gene editing and technology. Therefore it is possible that they may in the future develop new technologies that are outside of the field of their non-competition obligations but may be competitive to our business. In addition, other companies may use Prime Editing to develop product candidates in areas they believe are not covered under our foundational licensed issued patent, patent applications or know-how. There are also a number of large pharmaceutical and biotechnology companies that currently market and sell products or are pursuing the development of products for the treatment of the disease indications for which we have research programs, using approaches other than gene editing approaches. Any of these factors could reduce or eliminate our commercial opportunity, and could have a material adverse effect on our business, financial condition, results of operations and prospects.

We are very early in our development efforts, and we have not yet completed IND-enabling studies or initiated clinical development of any product candidate. As a result, we expect it will be many years before we commercialize any product candidate, if ever. If we are unable to advance our current or future product candidates into and through clinical trials, obtain marketing approval and ultimately commercialize our product candidates or experience significant delays in doing so, our business will be materially harmed.

We are very early in our development efforts and have focused our research and development efforts to date on research efforts and preclinical development. Currently, all of our programs are still in the research or preclinical stage of development. Our ability to generate product revenues, which we do not expect will occur for many years, if ever, will depend heavily on the successful development, marketing approval and eventual commercialization of our product candidates, which may never occur. We have not yet generated revenue from product sales or otherwise, and we may never be able to develop or commercialize a marketable product.

Commencing clinical trials in the United States is subject to acceptance by the FDA of an IND and finalizing the trial design based on discussions with the FDA and other regulatory authorities. In the event that the FDA requires us to complete additional preclinical studies or we are required to satisfy other FDA requests prior to commencing clinical trials, the start of our first clinical trials may be delayed or we may be unsuccessful obtaining clearance to proceed into clinical development. Even after we receive and incorporate guidance from these regulatory authorities, the FDA or other regulatory authorities could disagree that we have satisfied their requirements to commence any clinical trial or change their position on the acceptability of our trial design or the clinical endpoints selected, which may require us to complete additional preclinical studies or clinical trials, delay

the enrollment of our clinical trials, abandon our clinical development plans or meet stricter approval conditions than we currently expect. There are equivalent processes and risks applicable to clinical trial applications in other countries, including countries in the European Union.

Commercialization of any product candidates we may develop will require preclinical and clinical development; regulatory and marketing approval in multiple jurisdictions, including by the FDA and the EMA; manufacturing supply, capacity and expertise; a commercial organization; and significant marketing efforts. The success of product candidates we may identify and develop will depend on many factors, including the following:

- timely and successful completion of preclinical studies, including toxicology studies, biodistribution studies and minimally efficacious dose studies in animals, where applicable;
- effective INDs or comparable foreign applications that allow commencement of our planned clinical trials or future clinical trials for any product candidates we may develop;
- successful enrollment and completion of clinical trials, including under the FDA's current Good Clinical Practices, or GCPs, current Good Laboratory Practices, or GLPs, and any additional regulatory requirements from foreign regulatory authorities;
- positive results from our future clinical trials that support a finding of safety and effectiveness and an acceptable risk-benefit profile in the intended populations;
- receipt of marketing approvals from applicable regulatory authorities;
- establishment of arrangements through our own facilities or with third-party manufacturers for clinical supply and, where applicable, commercial manufacturing capabilities;
- establishment, maintenance, defense and enforcement of patent, trademark, trade secret and other intellectual property protection or regulatory exclusivity for any product candidates we may develop;
- commercial launch of any product candidates we may develop, if approved, whether alone or in collaboration with others;
- acceptance of the benefits and use of our product candidates we may develop, including method of administration, if and when approved, by patients, the medical community and third-party payers;
- effective competition with other therapies;
- maintenance of a continued acceptable safety, tolerability and efficacy profile of any product candidates we may develop following approval; and
- establishment and maintenance of healthcare coverage and adequate reimbursement by payers.

If we do not succeed in one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize any product candidates we may develop, which would materially harm our business. If we are unable to advance our product candidates to clinical development, obtain regulatory approval and ultimately commercialize our product candidates, or experience significant delays in doing so, our business will be materially harmed.

We have not tested any of our proposed delivery methods or gene editing approaches in clinical trials and any favorable results we may have may not be predictive of results that may be observed in later preclinical studies or clinical trials. If our potential product candidates, our Prime Editing technology or the delivery modes we rely on to administer them lack efficacy or cause serious adverse events, undesirable side effects or unexpected characteristics, such results could delay or prevent regulatory approval of the product candidates, limit the commercial potential or result in significant negative consequences following any potential marketing approval.

We are developing a broad set of delivery technologies to support our Prime Editing programs. This will lead to significant challenges to develop a corresponding set of technical capabilities in support of these programs. In

particular, a variety of serious adverse events, undesirable side effects or unexpected characteristics may occur. Such events, side effects or characteristics could delay or prevent regulatory approval of any product candidates we may develop, limit the commercial potential or result in significant negative consequences following any potential marketing approval. In addition, our Prime Editing technology itself, may lead to other issues, such as inability to deliver the desired efficacy or safety-related consequences as it is tested in clinical trials.

We have not tested any of our proposed delivery methods in clinical trials and any favorable results we may have may not be predictive of results that may be observed in later preclinical studies or clinical trials. Furthermore, we have not generated any clinical trial results to date. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their product candidates. Many product candidates that initially showed promise in early stage testing for treating a variety of diseases have later been found to lack efficacy or to cause side effects that prevented further clinical development of the product candidates.

Moreover, there have been only a very limited number of clinical trials involving the use of any gene editing technologies and none involving gene editing technology similar to our Prime Editing technology. It is impossible to predict when or if any product candidates we may develop will prove safe in humans. In the genetic therapy field, there have been several significant adverse events from gene therapy treatments in the past, including both the impact of the technology for editing, as well as the delivery methods used to convey the gene editing technology. These include a variety of safety concerns, including reported cases of leukemia, other cancers, significant morbidities and death. There can be no assurance that gene editing technologies such as our Prime Editing technology or the delivery methods we plan to use will not cause such undesirable side effects.

We cannot be sure that our Prime Editing technology or any of our planned delivery methods will not result in adverse effects in the long-term, such as improper editing of a patient's DNA that leads to lymphoma, leukemia, other cancers or other aberrantly functioning cells or other as yet unidentified findings. Many times, side effects manifest or are only detectable after investigational products are tested in larger scale, pivotal clinical trials or, in some cases, after they are made available to patients on a commercial scale after approval. FDA guidance advises that patients treated with gene therapies undergo long-term follow-up observation for identification of potential adverse events for as long as 15 years. If additional clinical or long-term follow-up experience indicates that any of our potential product candidates have side effects or cause serious or life-threatening side effects, the development of the product candidate may fail or be delayed, or, if the product candidate has received regulatory approval, such approval may be revoked or limited. It is also possible that serious or life-threatening side effects may cause significant delay or altered perception of any product candidates we may develop, even if we are able to later show these effects are unrelated to our product candidates. Any adverse events may cause us to delay, limit or terminate other planned clinical trials, for example any that use a similar delivery method or those that use similar aspects of Prime Editing, any of which would have a material adverse effect on our business, financial condition, results of operations and prospects. In addition, many product candidates that initially showed promise in early-stage testing have later been found to cause later side effects that prevented further clinical development of the product candidates.

Additionally, a significant risk in any gene editing product candidate is that "off-target" edits, or edits far from the intended site of gene editing, may occur, which could cause serious adverse events, undesirable side effects or unexpected characteristics. One major causative factor leading to "off target" edits is the formation of double-strand breaks during gene editing. If double-strand breaks were to occur, they can also lead to decreased cell viability in edited cells, and an increase large deletions or structural rearrangements of DNA, chromosomal translocations or joining of one chromosome to another. In certain uses of Prime Editing, such as the use of dual flaps methods, or in some cases of use of nick-guide RNAs, more than one edit occurs along the target site. Although our preliminary data suggests otherwise, it is possible that the use of these variations of Prime Editing could result in adverse effects similar to those observed with double-strand breaks. However, our current understanding of our mechanism of action, which is designed to prevent double-strand breaks with Prime Editing, and preliminary data in our experiments suggest this risk may be low. We have performed initial experiments using assays that can detect off-target edits, even when such edits occur at very low frequencies. Using these assays, as well as reviewing published results, off-target edits have been noted. Except for initial experiments, we have not yet performed these

experiments with our potential product candidates, so it is possible that we will detect more such off-target edits. However, our current information is limited, and we cannot be certain that Prime Editing with any product candidates we may develop will not cause rare double-strand breaks or that off-target editing will not occur and cause serious adverse events in any of our future clinical trials. Furthermore, the lack of observed serious side effects in any preclinical studies to date does not guarantee that such side effects will not occur in human clinical trials of any product candidates we may develop, which would adversely impact our product development programs and business.

There is also the potential risk of delayed adverse events following exposure to Prime Editing therapy due to the permanence of edits to DNA or due to other components of product candidates used to carry the genetic material. In addition, because Prime Editing makes a permanent change, the therapy cannot be withdrawn, even after a side effect is observed. These risks also apply to "on-target" mis-edits, also often called "indels," or edits that are not intended but occur at the target site of gene correction, which might also have all of the above consequences, as well as yet unforeseen adverse effects.

Although we and others have demonstrated the ability to engineer gene editors which are designed to improve the specificity of their edits in a laboratory setting, we cannot be sure that our engineering efforts will be effective in any product candidates that we may develop. For example, we might not be able to engineer an editor to make the desired change, could diminish the effectiveness of an edit that we make or lead to adverse effects. To date, these types of adverse effects have not been observed in our ongoing experiments and programs. Some Prime Editing approaches, such as those that use mismatch repair, or MMR, inhibition, may potentially also lead to adverse effects. Since our inhibition of MMR for use in Prime Editing is likely to be transient, lasting at most hours to days, we believe the risk related to MMR inhibition is small.

We also cannot be sure that our Prime Editing technology or any of our planned delivery methods will not result in adverse effects including allergic reactions, other changes in safety parameters, increases in liver function tests or many other potential concerns noted in clinical trials. It is also possible that our Prime Editors or our delivery methods will result in significant immunogenicity that may lead to adverse effects and could also prevent any chance of reapplication of a delivery method, or gene editing method in the future, if needed.

In certain of our programs, we plan to use lipid nanoparticles, or LNPs, to deliver our Prime Editors. LNPs have been shown to induce oxidative stress in the liver at certain doses, as well as initiate systemic inflammatory responses that can be fatal in some cases. While we aim to continue to optimize our LNPs, there can be no assurance that our LNPs will not have undesired effects. Our LNPs could contribute, in whole or in part, to one or more of the following: immune reactions, infusion reactions, complement reactions, opsonation reactions, antibody reactions including IgA, IgM, IgE or IgG or some combination thereof, or reactions to the PEG from some lipids or PEG otherwise associated with the LNP. Certain aspects of our investigational therapies may induce immune reactions from either the mRNA or the lipid as well as adverse reactions within liver pathways or degradation of the mRNA or the LNP, any of which could lead to significant adverse events in one or more of our future clinical trials. Many of these types of side effects have been seen for legacy LNPs. There may be uncertainty as to the underlying cause of any such adverse event, which would make it difficult to accurately predict side effects in future clinical trials and would result in significant delays in our programs.

Our viral vectors including adeno-associated viruses, or AAVs, or lentiviruses, which are relatively new approaches used for disease treatment, also have known side effects, and for which additional risks could develop in the future. In past clinical trials that were conducted by others with non-AAV vectors, several significant side effects were caused by gene therapy treatments, including reported cases of leukemia and death. Other potential side effects could include an immunologic reaction and insertional oncogenesis, which is the process whereby the insertion of a functional gene near a gene that is important in cell growth or division results in uncontrolled cell division, which could potentially enhance the risk of malignant transformation. AAV vectors may also persist in the cell for long periods, potentially permanently, and may result in long-term adverse effects. If the vectors we use demonstrate a similar side effect or other adverse events, we may be required to halt or delay further clinical development of any potential product candidates. Furthermore, the FDA has stated that lentiviral vectors possess characteristics that may pose high risks of delayed adverse events. Such delayed adverse events may occur in other viral vectors, including AAV vectors, at a lower rate.

In addition to side effects and adverse events caused by any product candidates we may develop, the conditioning, administration process or related procedures which may be used in our electroporation pipeline also can cause adverse side effects and adverse events. A gene therapy patient is generally administered cytotoxic drugs to remove stem cells from the bone marrow to create sufficient space in the bone marrow for the modified stem cells to engraft and produce new cells. This procedure compromises the patient's immune system. In the future, if we are unable to demonstrate that such adverse events were caused by the conditioning regimens used, administration process or related procedure, the FDA, the EMA or other regulatory authorities could order us to cease further development of, or deny approval of, any product candidates we may develop for any or all target indications. Even if we are able to demonstrate that adverse events are not related to the drug product or the administration of such drug product, such occurrences could affect patient recruitment, the ability of enrolled patients to complete the clinical trial or the commercial viability of any product candidates that obtain regulatory approval.

We are subject to additional development challenges and risks due to the novel nature of our gene editing technology.

Because our *in vivo* technology may involve gene editing across multiple cell and tissue types, we are subject to many of the challenges and risks that other gene editing therapeutics and gene therapies face, some of which may include:

- regulatory guidance governing gene and gene editing therapy products have changed and may continue to change in the future;
- to date, only a limited number of products that involve *in vivo* gene transfer have been approved globally;
- improper modulation of a gene sequence, including unintended editing events or insertion of a sequence into certain locations in a patient's chromosome, could lead to cancer, other aberrantly functioning cells or other diseases, including death;
- corrective expression of a missing protein in a patient's cells could result in the protein being recognized as foreign and lead to a sustained immunological reaction against the expressed protein or expressing cells, which could be severe or life-threatening; and
- regulatory agencies may require extended follow-up observation periods of patients who receive treatment using gene editing products such as the FDA's recommended 15-year follow-up observation period for such patients, which will require us to adopt such observation periods for any product candidates we develop if required by the relevant regulatory agencies, which could vary by country or region.

Furthermore, because any *ex vivo* product candidates we may develop involve editing human cells and then delivering modified cells to patients, we are subject to many of the challenges and risks that engineered cell therapies face. For example, clinical trials using engineering cell-based gene therapies require complex logistics for autologous therapies and such personalized manufacturing may be inefficient and cost-prohibitive, which could lead to delays or even termination of our product development programs in the future which could materially harm our business.

We may also consider additional delivery modes, which may carry additional known and unknown risks.

We may also consider additional delivery modes, which may carry additional known and unknown risks. For example, we intend to use novel split intein technology for AAV gene therapy that allows us to deliver the Prime Editor and guide RNA construct by co-infection with two viruses, where each virus contains one half of the editor. The scientific evidence to support the feasibility of developing product candidates based on this technology is both preliminary and limited. We also intend to use LNPs to deliver some of our Prime Editors. While LNPs have been used to deliver smaller molecules, such as RNAi, they have not been clinically proven to deliver large RNA molecules, such as the ones we intend to use for our Prime Editors. Furthermore, as with many AAV-mediated gene therapy approaches, certain patients' immune systems might prohibit the successful delivery, thereby potentially limiting treatment outcomes of these patients. Even if initial clinical trials in any of our potential product candidates we may develop are successful, these product candidates we may develop may fail to show the desired safety and

efficacy in later stages of clinical development despite having successfully advanced through preclinical studies and initial clinical trials.

In the future, if we are unable to demonstrate that any of the above adverse events were caused by factors other than our product candidates or our delivery methods, the FDA, the EMA or other regulatory authorities could order us to cease further development of, or deny approval of, any product candidates we are able to develop for any or all targeted indications. Even if we are able to demonstrate that all future serious adverse events are not product- and/or delivery-related, such occurrences could affect patient recruitment or the ability of enrolled patients to complete the trial or may cause significant delays to our programs and potential registration. Moreover, if we elect, or are required, to delay, suspend or terminate any clinical trials, the commercial prospects of such product candidates may be harmed and our ability to generate product revenues from any of these product candidates may be delayed or eliminated. Any of these occurrences may harm our ability to identify and develop product candidates, and may harm our business, financial condition, result of operations and prospects significantly.

We face significant competition in an environment of rapid technological change, and there is a possibility that our competitors may achieve regulatory approval before us or develop therapies that are safer or more advanced or effective than ours, which may harm our financial condition and our ability to successfully market or commercialize any product candidates we may develop.

The development and commercialization of new drug products is highly competitive. Moreover, the gene editing field is characterized by rapidly changing technologies, significant competition and a strong emphasis on intellectual property. We will face competition with respect to any product candidates that we may seek to develop or commercialize in the future from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. Potential competitors also include academic institutions, government agencies and other public and private research organizations that conduct research, seek patent or other intellectual property protection and establish collaborative arrangements for research, development, manufacturing and commercialization.

There are a number of large pharmaceutical and biotechnology companies that currently market and sell products or are pursuing the development of products for the treatment of the disease indications for which we have research programs. Some of these competitive products and therapies are based on scientific approaches that are the same as or similar to our approach, while others are based on entirely different approaches.

There are several companies utilizing CRISPR/Cas9 nuclease technology, including Caribou Biosciences, Inc., Editas Medicine, Inc., CRISPR Therapeutics AG, Intellia Therapeutics, Inc. and Graphite Bio, Inc., among others. Several additional companies such as Sangamo Therapeutics, Inc., Precision BioSciences, Inc. and bluebird bio, Inc. utilize alternative nuclease-based genome editing technologies, including Zinc Fingers, Meganucleases and TAL Nucleases. Beam Therapeutics utilizes base editing technology. In addition, other private companies such as Tessera Therapeutics, Inc. and Tome Biosciences, Inc. have announced their work in recombinase DNA and RNA gene writers, although little is known publicly about their science or portfolio. Other companies have announced intentions to enter the gene editing field, such as Moderna, Inc. and Pfizer Inc. Most recently, new epigenetic editing companies have emerged, such as Chroma Medicine, Inc. and Tune Therapeutics, Inc. In addition, we face competition from companies utilizing gene therapy, oligonucleotides and cell therapy therapeutic approaches. Several companies such as Arbor Biotechnologies, Inc., Scribe Therapeutics Inc., Mammoth Biosciences, Inc. and Metagenomi, Inc. are actively searching for novel genome editing components and have reported the discovery of new DNA-cutting enzymes. Other companies are active in LNP delivery technologies and advancing those into therapeutics using genetic therapies, including Recode Therapeutics, Inc., Verve Therapeutics, Inc., Generation Bio Co. and Beam Therapeutics, among others.

Any product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future that are approved to treat the same diseases for which we may obtain approval for any product candidates we may develop. This may include other types of therapies, such as small molecule, antibody and/or protein therapies.

Many of our current or potential competitors, either alone or with their collaboration partners, may have significantly greater financial resources and expertise in research and development, manufacturing, conducting preclinical studies and clinical trials, obtaining regulatory approvals and marketing approved products than we do. Mergers and acquisitions in the pharmaceutical, biotechnology and gene therapy industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize product candidates that are safer, more effective, have fewer or less severe side effects, are more convenient, or are less expensive than any product candidates that we may develop or that would render any product candidates that we may develop obsolete or non-competitive. Our competitors also may obtain FDA or other regulatory approval for their product candidates more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. Additionally, technologies developed by our competitors may render our potential product candidates uneconomical or obsolete, and we may not be successful in marketing any product candidates we may develop against competitors.

In addition, as a result of the expiration or successful challenge of our patent or other intellectual property rights, we could face risks relating to our ability to successfully prevent or delay launch of competitors' products. The availability of our competitors' products could limit the demand and the price we are able to charge for any product candidates that we may develop and commercialize.

Adverse public perception of genetic therapies and of gene editing and Prime Editing in particular, may negatively impact regulatory approval of, and/or demand for, our potential products.

Our potential therapeutic products involve editing the human genome and making permanent changes that may not be reversible. The clinical and commercial success of our potential products will depend in part on public understanding and acceptance of the use of gene editing therapy for the prevention or treatment of human diseases. Public attitudes may be influenced by claims that gene editing is unsafe, unethical or immoral, and, consequently, any product candidates we may develop may not gain the acceptance of the public or the medical community. Moreover, our success will depend upon physicians prescribing, and their patients being willing to receive, treatments that involve the use of product candidates we may develop in lieu of, or in addition to, existing treatments with which they are already familiar and for which greater clinical data may be available.

In addition, gene editing technology is subject to public debate and heightened regulatory scrutiny due to ethical concerns relating to the application of gene editing technology to human embryos or the human germline. For example, academic scientists in several countries, including the United States, have reported on their attempts to edit the gene of human embryos as part of basic research. In addition, in November 2018, Dr. Jiankui He, a Chinese biophysics researcher who was an associate professor in the Department of Biology of the Southern University of Science and Technology in Shenzhen, China, reportedly claimed he had created the first human genetically edited babies, twin girls. This claim, and another that Dr. He had helped create a second gene-edited pregnancy, was subsequently confirmed by Chinese authorities and was negatively received by the public, in particular those in the scientific community. News reports indicate that Dr. He was sentenced to three years in prison and fined $430,000 in December 2019 by the Chinese government for illegal medical practice in connection with such activities. In the wake of the claim, the World Health Organization established a new advisory committee to create global governance and oversight standards for human gene editing. The Alliance for Regenerative Medicine also released principles for the use of gene editing in therapeutic applications endorsed by a number of companies that use gene editing technologies.

Moreover, in an annual worldwide threat assessment report delivered to the U.S. Congress in February 2016, the U.S. Director of National Intelligence stated that research into gene editing that is conducted under different regulatory standards than those of Western countries probably increases the risk of the creation of potentially harmful biological agents or products, including weapons of mass destruction. He noted that given the broad

distribution, low cost and accelerated pace of development of gene editing technology, its deliberate or unintentional misuse could have far-reaching economic and national security implications.

Although we do not, and will not use our technologies to edit human embryos or the human germline, such public debate about the use of gene editing technologies in human embryos and heightened regulatory scrutiny could prevent or delay our development of product candidates. More restrictive government regulations or negative public opinion would have a negative effect on our business or financial condition and may delay or impair our development and commercialization of product candidates or demand for any product candidates we may develop. Adverse events in our preclinical studies or clinical trials or those of our competitors or of academic researchers utilizing gene editing technologies, even if not ultimately attributable to product candidates we may identify and develop, and negative publicity could result in increased governmental regulation, unfavorable public perception, potential regulatory delays in the testing or approval of potential product candidates we may identify and develop, stricter labeling requirements for those product candidates that are approved, and a decrease in demand for any such product candidates.

If the market opportunities for any product candidates we may develop are smaller than we believe they are, our potential revenues may be adversely affected and our business may suffer. Because the target patient populations for many of the product candidates we may develop are small, we must be able to successfully identify patients and achieve market acceptance in the medical community in order to secure a significant market share to maintain profitability and growth.

We focus our research and product development on treatments for rare genetically defined diseases. Many of the product candidates we may develop are expected to target a single, often predominant mutation; as a result, the relevant patient population may therefore be small. Although we believe we can expand beyond our immediate target indications, this approach will require regulatory approval as discussed in the risk factor entitled "We are very early in our development efforts and may not be successful in identifying and developing potential product candidates. It will be many years before we or our collaborators commercialize a product candidate or generate any revenues, if ever." Our projections of both the number of people who have these diseases, as well as the subset of people with these diseases who have the potential to benefit from treatment with product candidates we may develop, are based on estimates. These estimates may prove to be incorrect and new studies may change the estimated incidence or prevalence of these diseases. The number of patients in the United States, Europe and elsewhere may turn out to be lower than expected, and patients may not be amenable to treatment with the product candidates we may develop, or may become increasingly difficult to identify or gain access to, all of which would adversely affect our business, financial condition, results of operations and prospects. Additionally, because of the potential that any product candidates we develop could cure a target disease, we may not receive recurring revenues from patients and may deplete the patient population prevalence through curative therapy.

Clinical trial and product liability lawsuits against us could divert our resources and could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.

We will face an inherent risk of clinical trial and product liability exposure related to the testing of our product candidates in human clinical trials, and we will face an even greater risk if we commercially sell any products that we may develop. While we currently have no products in clinical trials or that have been approved for commercial sale, the future use of product candidates by us in clinical trials, and the sale of any approved products in the future, may expose us to liability claims. These claims might be made by patients that use the product, healthcare providers, pharmaceutical companies or others selling such products. If we cannot successfully defend ourselves against claims that our product candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any product candidates or products that we may develop;
- termination of clinical trials;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;

- significant costs to defend any related litigation;
- substantial monetary awards to trial participants or patients;
- loss of revenue;
- reduced resources of our management to pursue our business strategy; and
- the inability to commercialize any products that we may develop.

We currently do not hold any clinical trial liability insurance coverage. We may need to obtain insurance coverage as we expand our clinical trials or if we commence commercialization of our product candidates. Insurance coverage is increasingly expensive. We may not be able to obtain and maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise. If a successful clinical trial or product liability claim or series of claims is brought against us for uninsured liabilities or in excess of insured liabilities, our assets may not be sufficient to cover such claims and our business operations could be impaired.

If we or any contract manufacturers and suppliers we engage fail to comply with environmental, health, and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of our business.

We and any contract manufacturers and suppliers we engage are subject to numerous federal, state, and local environmental, health, and safety laws, regulations, and permitting requirements, including those governing laboratory procedures; the generation, handling, use, storage, treatment, and disposal of hazardous and regulated materials and wastes; the emission and discharge of hazardous materials into the ground, air, and water; and employee health and safety. Our operations involve the use of hazardous and flammable materials, including chemicals and biological and radioactive materials. Our operations also produce hazardous waste. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. Under certain environmental laws, we could be held responsible for costs relating to any contamination at our current or past facilities and at third-party facilities. We also could incur significant costs associated with civil or criminal fines and penalties.

Compliance with applicable environmental laws and regulations may be expensive, and current or future environmental laws and regulations may impair our research and product development efforts. In addition, we cannot entirely eliminate the risk of accidental injury or contamination from these materials or wastes. Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We carry specific biological or hazardous waste insurance coverage (under which we currently have an aggregate of approximately $2.0 million in coverage). However, in the event of contamination or injury, we could be held liable for damages or be penalized with fines in an amount exceeding our resources, and our clinical trials or regulatory approvals could be suspended, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

In addition, we may incur substantial costs in order to comply with current or future environmental, health, and safety laws, regulations, and permitting requirements. These current or future laws, regulations, and permitting requirements may impair our research, development, or production efforts. Failure to comply with these laws, regulations, and permitting requirements also may result in substantial fines, penalties, or other sanctions or business disruption, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Any third-party contract manufacturers and suppliers we engage will also be subject to these and other environmental, health, and safety laws and regulations. Liabilities they incur pursuant to these laws and regulations could result in significant costs or an interruption in operations, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Genetic therapies are novel, and any product candidates we develop may be complex and difficult to manufacture. We could experience delays in satisfying regulatory authorities or production problems that result in delays in our development programs, limit the supply of the product candidates we may develop or otherwise harm our business.

Any product candidates we may develop will likely require processing steps that are more complex than those required for most chemical pharmaceuticals. For example, one component of our Prime Editors is guide RNA, known as a Prime Editing guide RNA, or pegRNA we currently obtain from partners and vendors; future needs could require additional pegRNA lengths or increased purity, beyond what our partners and vendors can currently supply. Moreover, unlike chemical pharmaceuticals, the physical and chemical properties of a biologic such as the product candidates we intend to develop generally cannot be fully characterized. As a result, assays of the finished product candidate may not be sufficient to ensure that the product candidate will perform in the intended manner. Problems with the manufacturing process, even minor deviations from the normal process, could result in product defects or manufacturing failures that result in lot failures, product recalls, product liability claims, insufficient inventory or potentially delay progression of our potential IND filings. If we successfully develop product candidates, we may encounter problems achieving adequate quantities and quality of clinical-grade materials that meet the FDA, the EMA or other comparable applicable foreign standards or specifications with consistent and acceptable production yields and costs. For example, the current approach of manufacturing AAV vectors may fall short of supplying required number of doses needed for advanced stages of preclinical studies or clinical trials, and the FDA may ask us to demonstrate that we have the appropriate manufacturing processes in place to support the higher-dose group in our preclinical studies or clinical trials. In addition, any product candidates we may develop will require complicated delivery methods, such as electroporation, LNPs or viral vectors, each of which will introduce additional complexities in the manufacturing process.

In addition, the FDA, the EMA and other regulatory authorities may require us to submit samples of any lot of any approved product together with the protocols showing the results of applicable tests at any time. Under some circumstances, the FDA, the EMA or other regulatory authorities may require that we not distribute a lot until the agency authorizes its release. Slight deviations in the manufacturing process, including those affecting quality attributes and stability, may result in unacceptable changes in the product that could result in lot failures or product recalls. Lot failures or product recalls could cause us to delay clinical trials or product launches, which could be costly to us and otherwise harm our business, financial condition, results of operations and prospects.

Furthermore, we intend to use novel technology for gene editing. Our novel Prime Editors have two main components that act together to edit DNA: (i) a Prime Editor protein, comprising a fusion between a Cas protein and a reverse transcriptase enzyme, and (ii) a pegRNA, that targets the Prime Editor to a specific genomic location and provides a template for making the desired edit to the target DNA sequence. Prime Editing leverages the established DNA-targeting capabilities of CRISPR-Cas proteins modified to nick, but not cause double-stranded DNA breaks, and combines these with the DNA synthesis capabilities of reverse transcriptase enzymes, which have been engineered to efficiently and precisely copy a pegRNA-encoded edited sequence into target DNA. The scientific evidence to support the feasibility of developing product candidates based on this technology is both preliminary and limited and has yet to be produced at a clinical scale.

We also may encounter problems hiring and retaining the experienced scientific, quality control and manufacturing personnel needed to manage our manufacturing process, which could result in delays in our production or difficulties in maintaining compliance with applicable regulatory requirements.

Given the nature of biologics manufacturing there is a risk of contamination during manufacturing. Any contamination could materially harm our ability to produce product candidates on schedule and could harm our results of operations and cause reputational damage. Some of the raw materials that we anticipate will be required in our manufacturing process are derived from biologic sources. Such raw materials are difficult to procure and may be subject to contamination or recall. A material shortage, contamination, recall or restriction on the use of biologically derived substances in the manufacture of any product candidates we may develop could adversely impact or disrupt the commercial manufacturing or the production of clinical material, which could materially harm our development timelines and our business, financial condition, results of operations and prospects.

Any problems in our manufacturing process or the facilities with which we contract could make us a less attractive collaborator for potential partners, including larger pharmaceutical companies and academic research institutions, which could limit our access to additional attractive development programs. Problems in third-party manufacturing process or facilities also could restrict our ability to ensure sufficient clinical material for any clinical trials we may be conducting or are planning to conduct and meet market demand for any product candidates we develop and commercialize.

If preclinical studies or clinical trials of any product candidates we may identify and develop fail to demonstrate safety and efficacy to the satisfaction of regulatory authorities or do not otherwise produce positive results, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of such product candidates.

Before obtaining marketing approval from regulatory authorities for the sale of any product candidates we may identify and develop, we must complete preclinical development and then conduct extensive clinical trials to demonstrate the safety and efficacy in humans. Clinical testing is expensive, difficult to design and implement, can take many years to complete, and is uncertain as to outcome. A failure of one or more clinical trials can occur at any stage of testing. The outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results.

Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses. Many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their product candidates.

We and our collaborators, if any, may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent our ability to receive marketing approval or commercialize any product candidates we may identify and develop, including:

- delays in reaching a consensus with regulators on trial design;
- regulators, institutional review boards, or IRBs, or independent ethics committees may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- delays in reaching or failing to reach agreement on acceptable clinical trial contracts or clinical trial protocols with prospective CROs and clinical trial sites;
- clinical trials of any product candidates we may develop may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical trials or abandon product development or research programs;
- difficulty in designing well-controlled clinical trials due to ethical considerations which may render it inappropriate to conduct a trial with a control arm that can be effectively compared to a treatment arm;
- difficulty in designing clinical trials and selecting endpoints for diseases that have not been well-studied and for which the natural history and course of the disease is poorly understood;
- the number of patients required for clinical trials of any product candidates we may develop may be larger than we anticipate; enrollment of suitable participants in these clinical trials, which may be particularly challenging for some of the rare genetically defined diseases we are targeting in our most advanced programs, may be delayed or slower than we anticipate; or patients may drop out of these clinical trials at a higher rate than we anticipate;
- our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- regulators, IRBs, or independent ethics committees may require that we or our investigators suspend or terminate clinical research or clinical trials of any product candidates we may develop for various reasons, including noncompliance with regulatory requirements, a finding of undesirable side effects or other

unexpected characteristics, or that the participants are being exposed to unacceptable health risks or after an inspection of our clinical trial operations or trial sites;

- the cost of clinical trials of any product candidates we may develop may be greater than we anticipate;
- the supply or quality of any product candidates we may develop or other materials necessary to conduct clinical trials of any product candidates we may develop may be insufficient or inadequate, including as a result of delays in the testing, validation, manufacturing, and delivery of any product candidates we may develop to the clinical sites by us or by third parties with whom we have contracted to perform certain of those functions;
- delays in having patients complete participation in a trial or return for post-treatment follow-up;
- clinical trial sites dropping out of a trial;
- selection of clinical endpoints that require prolonged periods of clinical observation or analysis of the resulting data;
- occurrence of serious adverse events associated with any product candidates we may develop that are viewed to outweigh their potential benefits;
- occurrence of serious adverse events in trials of the same class of agents conducted by other sponsors; and
- changes in regulatory requirements and guidance that require amending or submitting new clinical protocols.

If we or our collaborators are required to conduct additional clinical trials or other testing of any product candidates we may develop beyond those that we currently contemplate, if we or our collaborators are unable to successfully complete clinical trials or other testing of any product candidates we may develop, or if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, we or our collaborators may:

- be delayed in obtaining marketing approval for any such product candidates we may develop or not obtain marketing approval at all;
- obtain approval for indications or patient populations that are not as broad as intended or desired;
- obtain approval with labeling that includes significant use or distribution restrictions or safety warnings, including boxed warnings;
- be subject to changes in the way the product is administered;
- be required to perform additional clinical trials to support approval or be subject to additional post-marketing testing requirements;
- have regulatory authorities withdraw, or suspend, their approval of the product or impose restrictions on its distribution in the form of a Risk Evaluation and Mitigation Strategy, or REMS, or through modification to an existing REMS;
- be sued; or
- experience damage to our reputation.

Product development costs will also increase if we or our collaborators experience delays in clinical trials or other testing or in obtaining marketing approvals. We do not know whether any clinical trials will begin as planned, will need to be restructured, or will be completed on schedule, or at all. Significant clinical trial delays also could shorten any periods during which we may have the exclusive right to commercialize any product candidates we may develop, could allow our competitors to bring products to market before we do, and could impair our ability to

successfully commercialize any product candidates we may develop, any of which may harm our business, financial condition, results of operations, and prospects.

Social media campaigns and demand for expanded access to our potential product candidates could negatively affect our reputation and harm our business.

We are developing product candidates in areas of unmet medical need where there are currently limited or no available therapeutic options and may receive requests in the future for right to try access or expanded access on a compassionate use basis to certain of our potential product candidates. It is possible for individuals or groups to target companies with disruptive social media campaigns related to a request for access to unapproved drugs for patients with significant unmet medical need. If we experience a similar social media campaign regarding our decision to provide or not provide access to any of our potential product candidates under an expanded access policy, our reputation may be negatively affected and our business may be harmed.

In addition, some patients who receive access to drugs prior to their commercial approval through compassionate use, expanded access programs or right to try access have life-threatening illnesses and have exhausted all other available therapies. The risk for serious adverse events in this patient population is high, which could have a negative impact on the safety profile of our potential product candidates if we were to provide them to these patients, which could cause significant delays or an inability to successfully commercialize our potential product candidates, which could materially harm our business. If we were to provide patients with our potential product candidates under an expanded access program, we may in the future need to restructure or pause any compassionate use and/or expanded access programs in order to perform the controlled clinical trials required for regulatory approval and successful commercialization of our potential product candidates, which could prompt adverse publicity or other disruptions related to current or potential participants in such programs.

Risks Related To Our Relationships with Third Parties

We may enter into collaborations with collaborators and strategic partners such as Beam Therapeutics or other third parties for the research, development, delivery, manufacturing and commercialization of Prime Editing technology and certain of the product candidates we may develop. If any such collaborations are not successful, we may not be able to capitalize on the market potential of our Prime Editing platform or product candidates.

We may seek third-party collaborators and strategic partners for the research, development, delivery, manufacturing and commercialization of certain of the product candidates we may develop. If we enter into any such arrangements with any third parties, we will likely have limited control over the amount and timing of resources that our collaborators dedicate to collaboration, including the development, delivery, manufacturing or commercialization of any product candidates we may seek to develop with them. Our ability to generate revenues from these arrangements will depend on our collaborators' and strategic partners' abilities to successfully perform the functions assigned to them in these arrangements. We cannot predict the success of any collaboration that we enter into.

Collaborations involving our research, development, expansion of our technology or for any product candidates we may develop pose numerous risks to us, including the following:

- Collaborators and strategic partners have significant discretion in determining the efforts and resources that they will apply to these collaborations, may not pursue development and commercialization of any product candidates we may develop or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborator's strategic focus or available funding or external factors such as an acquisition that diverts resources or creates competing priorities.
- Collaborators and strategic partners may have significant overlap in their areas of interest and capabilities, research and development activities and product candidates with us, which may result in potential conflicts of interest.
- The transfer of key technology between our collaborators and strategic partners and us may be incomplete, delayed or not meet our standards of quality.

- Collaborators and strategic partners may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing.
- Collaborators and strategic partners could independently develop or develop with third parties, products that compete directly or indirectly with our therapies or product candidates we may develop if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours.
- Collaborators and strategic partners with marketing and distribution rights to one or more therapies may not commit sufficient resources to the marketing and distribution of such therapy or therapies.
- Collaborators and strategic partners may have rights or may believe they have rights to sub-license our Prime Editing technology more broadly than anticipated for the collaboration.
- Collaborators and strategic partners may not properly obtain, maintain, enforce or defend our intellectual property or proprietary rights or may use our intellectual property or proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation.
- Collaborators and strategic partners may not properly use our technology, perform activities below quality standards or wrongly interpret results, any of which may result in adverse public perception of Prime Editing or negatively impact the regulatory approval of, and/or demand for, our potential product candidates.
- There may be areas of ambiguity in the interpretation of obligations and deliverables under any collaboration agreements we have entered or may enter into, including disputes that may arise between the collaborators and strategic partners and us that result in the delay or termination of the research, development or commercialization of our therapies or product candidates or that result in costly litigation or arbitration that diverts management attention and resources.
- We may lose certain valuable rights under circumstances identified in our collaborations, including if we undergo a change of control.
- Collaborations may be terminated and, if terminated, may leave incomplete some or all of the goals that were set for such collaboration or result in a need for additional capital to pursue further development or commercialization of the applicable product candidates we may develop.
- Collaboration agreements may not lead to development or commercialization of product candidates in the most efficient manner or at all. If a present or future collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development or commercialization program under such collaboration could be delayed, diminished or terminated.

If our collaborations do not result in successful research or delivery approaches or successful development and commercialization of product candidates, or if one of our collaborators or strategic partners terminates its agreement with us, there may be adverse consequences. For example, we may not receive any future research funding or milestone or royalty payments under the collaboration. If we do not receive the funding we expect under these agreements, our development of product candidates could be delayed, and we may need additional resources to develop product candidates. In addition, if one of our collaborators or strategic partners terminates its agreement with us, we may find it more difficult to find a suitable replacement or attract a new collaboration, lose access to key technology or our development programs may be delayed or the perception of us in the business and financial communities could be adversely affected. All of the risks relating to product development, regulatory approval and commercialization described in this prospectus apply to the activities of our collaborators and strategic partners.

These relationships, or those like them, may require us to incur non-recurring and other charges, increase our near- and long-term expenditures, issue securities that dilute our existing stockholders, result in a loss of value to our

stock or disrupt our management and business. In addition, we could face significant competition in seeking appropriate collaborators and strategic partners and the negotiation process is time-consuming and complex. Our ability to reach a definitive collaboration agreement will depend, among other things, upon our assessment of the collaborator's and strategic partner's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of several factors. If we license rights to any product candidates we may develop we or our collaborators and strategic partners may develop, we may not be able to realize the benefit of such transactions if we are unable to successfully integrate them with our existing operations and company culture.

If conflicts arise between us and our collaborators or strategic partners, these parties may act in a manner adverse to us and could limit our ability to implement our strategies.

If conflicts arise between our corporate or academic collaborators or strategic partners and us, the other party may act in a manner adverse to us and could limit our ability to implement our strategies. Some of our academic collaborators and strategic partners are conducting multiple product development efforts within each area that is the subject of the collaboration with us. Our collaborators or strategic partners, however, may develop, either alone or with others, products in related fields that are competitive with the product candidates we may develop that are the subject of these collaborations with us. Competing products, either developed by the collaborators or strategic partners or to which the collaborators or strategic partners have rights, may result in the withdrawal of partner support for any product candidates we may develop.

Some of our collaborators or strategic partners could also become our competitors in the future. For example, Beam Therapeutics, currently one of our strategic partners, may develop product candidates in areas where both companies have freedom to pursue development. For more information regarding our agreement with Beam Therapeutics, see "Business—Our License and Collaboration Agreements" and the risk factor entitled "The gene editing field is relatively new and is evolving rapidly. We are focusing our research and development efforts on gene editing using Prime Editing technology, but other gene editing technologies may be discovered that provide significant advantages over Prime Editing, which could materially harm our business**.**"

Our collaborators or strategic partners could develop competing products, preclude us from entering into collaborations with their competitors, fail to obtain timely regulatory approvals, prevent us from obtaining timely regulatory approvals, terminate their agreements with us prematurely or fail to devote sufficient resources to the collaboration efforts, including development, delivery, manufacturing and commercialization of products. Any of these developments could harm our company and product development efforts.

We expect to rely on third parties to conduct our clinical trials and some aspects of our research, as well as some aspects of our delivery methods, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials, research or testing.

We currently, and expect to continue to, rely on third parties, such as CROs, clinical data management organizations, medical institutions, preclinical laboratories and clinical investigators, to conduct some aspects of our research. For example, we may rely on a third party to conduct electroporation, to supply LNPs or AAVs, or to conduct some of our preclinical animal experiments. Any of these third parties may terminate their engagements with us at any time under certain criteria. If we need to enter into alternative arrangements, it may delay our product development activities.

Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our responsibilities. For example, we will remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA, the EMA and other regulatory authorities require us and the study sites and investigators we work with to comply with standards, commonly referred to as GLPs and GCPs for conducting, recording and reporting the results of preclinical studies and clinical trials to assure, amongst other things, that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. In the United States, we also are required to register certain clinical trials and post the results of completed clinical trials on a government-sponsored database, ClinicalTrials.gov, within certain timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

Although we intend to design the clinical trials for our potential product candidates, CROs will conduct some or all of the clinical trials. As a result, many important aspects of our development programs, including their conduct and timing, will be outside of our direct control. Our reliance on third parties to conduct preclinical studies and future clinical trials will also result in less direct control over the management of data developed through preclinical studies and clinical trials than would be the case if we were relying entirely upon our own staff. Communicating with outside parties can also be challenging, potentially leading to mistakes as well as difficulties in coordinating activities. Among other reasons that may delay or impact the development of our potential product candidates, outside parties may:

- have staffing difficulties;
- fail to comply with contractual obligations;
- experience regulatory compliance issues;
- undergo changes in priorities or become financially distressed; or
- form relationships with other entities, some of which may be our competitors.

These factors may materially adversely affect the willingness or ability of third parties to conduct our preclinical studies and clinical trials and may subject us to unexpected cost increases that are beyond our control. If the CROs and other third parties do not perform such preclinical studies and future clinical trials in a satisfactory manner, breach their obligations to us or fail to comply with regulatory requirements, the development, regulatory approval and commercialization of our potential product candidates may be delayed, we may not be able to obtain regulatory approval and commercialize our potential product candidates or our development programs may be materially and irreversibly harmed. If we are unable to rely on preclinical and clinical data collected by our CROs and other third parties, we could be required to repeat, extend the duration of or increase the size of any preclinical studies or clinical trials we conduct and this could significantly delay commercialization and require greater expenditures.

We may also expect to rely on other third parties to store and distribute drug supplies for our future clinical trials. Any performance failure on the part of our distributors could delay clinical development or marketing approval of any product candidates we may develop or commercialization of our therapies, producing additional losses and depriving us of potential product revenue.

We contract with third parties for the manufacture of materials for our research programs and expect to continue to do so for clinical trials and for any commercialization of product candidates that we may develop. This reliance on third parties increases the risk that we will not have sufficient quantities of such materials, product candidates or any therapies that we may develop and commercialize, or that such supply will not be available to us on time or at an acceptable cost.

We do not have any manufacturing facilities at the present time. We currently rely on third-party manufacturers to manufacture many of our materials for research and may continue to do so for preclinical studies and possibly even clinical trials. We have not yet formulated our plans for commercial supply of any product candidates that we may develop or for which we or our collaborators may in the future obtain marketing approval, but our future decisions may be subject to similar risks to the ones discussed below.

We may be unable to establish any agreements with third-party manufacturers or to do so on acceptable terms. Even if we are able to establish agreements with third-party manufacturers, reliance on third-party manufacturers entails additional risks, some of which may include:

- the possible breach of the manufacturing agreement by the third party;
- the possible termination or nonrenewal of the agreement by the third party at a time that is costly or inconvenient for us; and
- reliance on the third party for regulatory compliance, quality assurance, safety and pharmacovigilance and related reporting.

Third-party manufacturers may not be able to comply with cGMP regulations or similar regulatory requirements outside the United States. Our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocations, seizures or recalls of product candidates or therapies, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our therapies and harm our business, financial condition, results of operations and prospects.

Any therapies that we may develop may compete with other product candidates and products for access to manufacturing facilities. There are a limited number of manufacturers that operate under cGMP regulations and that might be capable of manufacturing for us.

Any performance failure on the part of our existing or future manufacturers could delay clinical development or marketing approval. We do not currently have arrangements in place for redundant supply for bulk drug substances. If any third party-manufacturer with whom we contract fails to perform its obligations, we may be forced to manufacture the materials ourselves, for which we may not have the facilities or resources, or enter into an agreement with a different third party-manufacturer, which we may not be able to do on reasonable terms, if at all. In either scenario, our clinical trials supply could be delayed significantly as we establish alternative supply sources. In some cases, the technical skills required to manufacture our products or product candidates may be unique or proprietary to the original third party-manufacturer and we may have difficulty, or there may be contractual restrictions prohibiting us from, transferring such skills to a back-up or alternate supplier, or we may be unable to transfer such skills at all. In addition, if we are required to change third party-manufacturers for any reason, we will be required to verify that the new third party-manufacturer maintains facilities and procedures that comply with quality standards and with all applicable regulations. We will also need to verify, such as through a manufacturing comparability study, that any new manufacturing process will produce our potential product candidates according to the specifications previously submitted to the FDA or another regulatory authority. The delays associated with the verification of a new third party-manufacturer could negatively affect our ability to develop product candidates or commercialize our products in a timely manner or within budget. Furthermore, a third party-manufacturer may possess technology related to the manufacture of our product candidate that such third party-manufacturer owns independently. This would increase our reliance on such third party-manufacturer or require us to obtain a license from such third party-manufacturer in order to have another third party-manufacturer manufacture our product candidates, which may not be available on commercially reasonable terms, or at all. In addition, changes in manufacturers often involve changes in manufacturing procedures and processes, which could require that we conduct bridging studies between our prior clinical supply used in our clinical trials and that of any new manufacturer. We may be unsuccessful in demonstrating the comparability of clinical supplies which could require the conduct of additional clinical trials.

Our current and anticipated future dependence upon others for the manufacture of any product candidates or therapies we may develop may adversely affect our future profit margins and our ability to commercialize any therapies that receive marketing approval on a timely and competitive basis.

If we are not able to establish collaborations on a timely basis, on commercially reasonable terms, or at all, we may have to alter, reduce or delay our development and commercialization plans or increase our expenditures to fund development or commercialization activities at our own expense.

For some of the product candidates we may develop, we may decide to collaborate with other pharmaceutical and biotechnology companies for the development and potential commercialization of those product candidates, which is a complex and time-consuming process to negotiate and document. Whether we reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator or strategic partner's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator or strategic partner's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the likelihood of approval by the FDA, the EMA or similar regulatory authorities outside the United States, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge and industry and market conditions generally. The collaborator or strategic partner may

also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us. In addition, we and the collaborator or strategic partner may have differences in risk tolerance, which may affect the development and execution of such collaborations with respect to timing and other considerations.

We may also be restricted under existing collaboration agreements from entering into future collaboration agreements on certain terms with potential collaborators. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators, which further increases competition we face in seeking potential collaborations.

We may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of the product candidate for which we are seeking to collaborate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to develop product candidates or bring them to market and generate product revenue.

Risks Related To Our Intellectual Property

If we are unable to obtain and maintain patent and other intellectual property protection for any product candidates we develop and for our Prime Editing technology, or if the scope of the patent and other intellectual property protection obtained is not sufficiently broad, third parties could develop and commercialize products and technology similar or identical to ours and our ability to successfully commercialize any product candidates we may develop and our Prime Editing technology may be adversely affected.

Our commercial success will depend in large part on our ability to obtain and maintain patent, trademark, trade secret and other intellectual property protection of our Prime Editing technology, product candidates and other technology, methods used to manufacture them and methods of treatment, as well as to successfully defend our patent and other intellectual property rights against third-party challenges. It is difficult and costly to protect our Prime Editing technology and product candidates, and we may not be able to ensure their protection. The development of our product candidates and technology is at an early stage and consequently, our patent portfolio is also at an early stage. For example, while we in-license one issued patent, we do not currently own any, or in-license any other, issued patents relating to our technology and product candidates and many of our and our licensors' patent applications are either at the provisional stage or at an early stage in prosecution. Our ability to stop unauthorized third parties from making, using, selling, offering to sell, importing or otherwise commercializing our product candidates we may develop is dependent upon the extent to which we have established rights under valid and enforceable patents or trade secrets that cover these activities.

We seek to protect our proprietary position by in-licensing intellectual property relating to our platform technology and filing patent applications in the United States and abroad related to our Prime Editing technology and product candidates that are important to our business. If we or our licensors are unable to obtain or maintain patent protection with respect to our Prime Editing technology and product candidates we may develop, or if the scope of the patent protection secured is not sufficiently broad, third parties could develop and commercialize products and technology similar or identical to ours and our ability to commercialize any product candidates we may develop may be adversely affected.

The patent prosecution process is expensive, time-consuming and complex, and we may not be able to file, prosecute, maintain, enforce, defend or license all necessary or desirable patent applications at a reasonable cost or in a timely manner. In addition, we may not pursue or obtain patent protection in all relevant markets. It is also possible that we will fail to identify patentable aspects of our research and development output in time to obtain patent protection. Although we enter into non-disclosure and confidentiality agreements with parties who have access to confidential or patentable aspects of our research and development output, such as our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors and

other third parties, any of these parties may breach the agreements and disclose such output before a patent application is filed, thereby jeopardizing our ability to seek patent protection. In addition, our ability to obtain and maintain valid and enforceable patents depends on whether the differences between our inventions and the prior art allow our inventions to be patentable over the prior art. Furthermore, publications of discoveries in the scientific literature often lag behind the actual discoveries and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot be certain that we or our licensors were the first to make the inventions claimed in our owned or licensed pending patent applications or in-licensed issued patent, or that we or our licensors were the first to file for patent protection of such inventions. If a third party can establish that we or our licensors were not the first to make or the first to file for patent protection of such inventions, our owned or licensed patent applications may not issue as patents and even if issued, may be challenged and invalidated or rendered unenforceable.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has been the subject of much litigation in recent years. The field of genome editing has been the subject of extensive patenting activity and litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain and we may become involved in complex and costly litigation. Our pending and future patent applications may not result in patents being issued which protect our Prime Editing technology and product candidates we may develop or which effectively prevent others from commercializing competitive technologies and product candidates. For example, our provisional applications may never result in issued patents. A provisional patent application is not eligible to become an issued patent until, among other things, we file a non-provisional patent application within 12 months of filing the related provisional patent application. If we do not timely file non-provisional patent applications, we may lose our priority dates with respect to our provisional patent applications and any patent protection on the inventions disclosed in our provisional patent applications. While we intend to timely file non-provisional patent applications relating to our provisional patent applications, we cannot predict whether any of our patent applications for our technology and product candidates will result in the issuance of patents that effectively protect our technology and product candidates. Any failure to obtain or maintain patent protection with respect to our technology and product candidates would have a material adverse effect on our business, financial condition, results of operations and prospects.

No consistent policy regarding the scope of claims allowable in the field of genome editing, including for Prime Editing technologies such as our Prime Editing technology, has emerged in the United States. The scope of patent protection outside of the United States is also uncertain. Changes in either the patent laws or their interpretation in the United States and other countries may diminish our ability to protect our inventions, obtain, maintain, enforce and defend our intellectual property rights and, more generally, could affect the value of our intellectual property or narrow the scope of our owned and licensed patent rights. With respect to both in-licensed and owned intellectual property, we cannot predict whether the patent applications we and our licensors are currently pursuing will issue as patents in any particular jurisdiction or whether the claims of any issued patents will be valid and enforceable and provide sufficient protection from third parties.

Moreover, the coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted after issuance. Even if patent applications we license or own currently or in the future issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors or other third parties from competing with us, or otherwise provide us with any competitive advantage. Any patent applications that we own or in-license may, if issued as patents, be challenged, narrowed, circumvented, or invalidated by third parties. Consequently, we do not know whether any of our platform advances and product candidates we may develop will be protectable or remain protected by valid and enforceable patents. Our competitors or other third parties may be able to circumvent our patents that may be issued from our patent applications by developing similar or alternative technologies or products in a non-infringing manner. In addition, given the amount of time required for the development, testing and regulatory review of new product candidates, patents that may be issued protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our intellectual property may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

Some of our owned and in-licensed patent applications are, and may in the future be, co-owned with third parties. With respect to any patent applications co-owned by third parties, we may require exclusive licenses to such

co-owners' interest to such patents. If we are unable to obtain an exclusive license to any such third-party co-owners' interest in such patent applications, we may be unable to prevent such co-owner from licensing their rights under the patent applications to other third parties, including our competitors, and our competitors may be able to market competing products and technology. In addition, we may need the cooperation of any such co-owners of our future patents in order to enforce such future patents against third parties, and such cooperation may not be provided to us.

Our rights to develop and commercialize our Prime Editing platform technology and product candidates are subject to the terms and conditions of licenses granted to us by others. If we fail to comply with our obligations in the agreements under which we license intellectual property rights from third parties or otherwise experience disruptions to our business relationships with our licensors, we could lose license rights that are important to our business.

We do not currently own any issued patents and are heavily reliant upon certain patent rights and proprietary technology we have licensed from third parties that are important or necessary to the development of our Prime Editing technology and product candidates. For example, we are a party to a license agreement with Broad Institute. In September 2019, we entered into a license agreement with Broad Institute, and in May 2020 and February 2021, we entered into amendments to such license agreement. Under the amended license agreement, or the Broad License Agreement, Broad Institute grants us certain rights and licenses under certain patent rights it owns or controls relating to our Prime Editing technology and product candidates. The Broad License Agreement imposes various diligence, milestone payment, royalty, insurance and other obligations on us. Our licenses are subject to Broad Institute's inclusive innovation model, pursuant to which Broad Institute retains the right, in certain circumstances, to grant to third parties (other than specified competitors of ours) licenses under the licensed patent rights that would otherwise fall within the scope of the exclusive license granted to us. All gene targets, which are any human genes to which a program is directed, are subject to Broad Institute's march-in license, which means Broad Institute has the right to terminate our license to gene targets under certain conditions and could make one or more gene targets unavailable to us. However, once we initiate a program for a gene target, in accordance with the terms of the Broad License Agreement, Broad Institute loses the right to use its march-in license for such gene target, provided we continue to use commercially reasonable efforts to continue to progress such development. As such, we believe Broad Institute cannot exercise its march-in license with respect to any of our current programs for gene targets because such programs have been initiated in accordance with the terms and requirements of the Broad License Agreement. Internally, we determine when a program for a gene target has been initiated by considering factors such as whether a gene target has been identified as the subject of a program, how much time or resources have been dedicated to researching, developing, and/or designing and using reagents for a program, and the amount of preclinical testing in process for such program. For more information regarding the scope of our rights and obligations under the Broad License Agreement, see the section titled "Business—Our License and Collaboration Agreements—License Agreement with Broad Institute." If we fail to comply with these or other obligations in our current or future license agreements, our licensors may have the right to terminate our license, in which event we would not be able to develop or market our Prime Editing technology or any other technology or product candidates covered by the intellectual property licensed under this agreement. Our business would be seriously harmed if any current or future licenses terminate, if our licensors fail to abide by the terms of the license, if our licensors fail to enforce licensed patents against infringing third parties, if the licensed patents or other rights are found to be invalid or unenforceable, or if we are unable to enter into necessary licenses on acceptable terms. If our license agreements terminate, or we experience a reduction or elimination of licensed rights under these agreements, we may have to negotiate new or reinstated licenses with less favorable terms or we may not have sufficient intellectual property rights to operate our business. Moreover, if certain of our license agreements terminate, we may be required to continue to license or assign certain of our intellectual property to the applicable counterparty.

Certain of the patent rights that we license from Broad Institute are co-owned by Broad Institute with Harvard and certain of the licensed patent rights are co-owned by Broad Institute, Harvard, and Massachusetts Institute of Technology, or MIT. In addition, some of the inventors of the licensed patent and patent applications are or were employees of HHMI, which retains certain rights to patents and patent applications invented by their employees. Our rights to our in-licensed patent and patent applications from Broad Institute are dependent, in part, on inter-institutional or other operating agreements between Broad Institute, Harvard, MIT and HHMI. If Broad Institute, Harvard, MIT or HHMI breaches or terminates such inter-institutional or operating agreements, our rights to such

in-licensed patent and patent applications may be adversely affected. We have also licensed certain improvements to Prime Editing from Dr. Liu's laboratory at Broad Institute. For example, Dr. Liu's laboratory at Broad Institute recently developed engineered pegRNAs, or epegRNAs, which we have exclusively in-licensed. Dr. Liu has entered into an agreement with us pursuant to which he is obligated to assign to us any inventions with respect to the services he performs for us. However, such obligations are subject to limitations and do not extend to his work in other fields or to the intellectual property arising from his employment with Harvard, HHMI and Broad Institute. To obtain such intellectual property rights, we would need to enter into license agreements with such institutions, including negotiations under the Broad Option Agreement, which may expire in November 2022, and such license agreements may not be available on commercially reasonable terms or at all.

Additionally, in September 2019, we established a strategic relationship with Beam Therapeutics, a biotechnology company developing gene editing products using its proprietary base editing technology. Under our license and collaboration agreement with Beam Therapeutics, or the Beam Collaboration Agreement, each party grants to the other certain exclusive and non-exclusive licenses and rights to certain Prime Editing, CRISPR and delivery technologies for use in certain specified fields. Activities performed by Prime and Beam Therapeutics under the Beam Collaboration Agreement may lead to co-owned patents and patent applications. For more information regarding the Broad License Agreement and the Beam Collaboration Agreement and our other material agreements related to our technology, see the section titled "Business—Our License and Collaboration Agreements."

These and other licenses may not provide exclusive rights to use such intellectual property and technology in all relevant fields of use and in all territories in which we may wish to develop or commercialize our Prime Editing technology and product candidates in the future. Some licenses granted to us are expressly subject to certain preexisting rights held by the licensors or certain third parties. As a result, we may not be able to prevent third parties from developing and commercializing competitive products in certain territories or fields. For example, the rights granted to us under the Broad License Agreement are subject to certain retained rights of Broad Institute, MIT, Harvard, HHMI and the U.S. federal government, and the rights granted to us under the Beam Collaboration Agreement are subject to certain third party agreements and certain rights retained by third parties. Additionally, the Broad License Agreement provides that our field of use is limited to the field of prevention or treatment of human disease, and most licenses granted to us under the Broad License are further limited to the prevention or treatment of human disease by editing (including modifying or converting) or targeting DNA *ex vivo*, *in vivo*, or through xeno-transplantation methods and includes other specified exclusions. If we determine that rights to additional fields, including the specifically excluded fields, are necessary to commercialize our product candidates or maintain our competitive advantage, we may need to obtain a license from Broad Institute and/or other third parties in order to continue developing, manufacturing or marketing our product candidates. We may not be able to obtain such a license on an exclusive basis, on commercially reasonable terms, or at all, which could prevent us from commercializing our product candidates or allow our competitors or other third parties the chance to access technology that is important to our business.

We do not control the preparation, filing, prosecution and maintenance of the patents and patent applications covering the technology that we license from Broad Institute or Beam Therapeutics. For example, pursuant to our licenses with Broad Institute and Beam Therapeutics, our licensors retain control of preparation, filing, prosecution and maintenance of their wholly-owned patents and patent applications. We rely on such licensors to determine inventorship and perfect priority of their patent applications. We cannot be certain that these patents and patent applications will be prepared, filed, prosecuted, maintained and defended in a manner consistent with the best interests of our business. If Broad Institute or Beam Therapeutics fails to prosecute or maintain such patents and patent applications or loses rights to such patents and patent applications, the rights we have licensed may be reduced or eliminated, our right to develop and commercialize any of our product candidates we may develop that are the subject of such licensed rights could be adversely affected and we may not be able to prevent third parties from making, using and selling competing products. In addition, we do not control all enforcement of the patents and patent applications we license from Broad Institute. It is possible that our licensors' enforcement of patents against infringers or defense of such patents against challenges of validity or claims of enforceability may be less vigorous than if we had conducted them ourselves, or may not be conducted in accordance with our best interests.

Our licensors have also relied on third-party collaborators or on funds from third parties such that our licensors are not the sole and exclusive owners of the patent rights we have in-licensed. For example, our optioned patent

applications directed to the use of MMR inhibition for prime editing is jointly owned by Broad Institute, Harvard, The Trustees of Princeton University, or Princeton, and The Regents of the University of California, or University of California. The exclusivity of such option is solely with respect to Broad Institute and Harvard, and if we are unable to secure licenses to the rights of all co-owners of such patent applications, including Princeton and University of California, the license granted to us in jurisdictions where the consent of a co-owner is necessary to grant such a license may not be valid, and such co-owners for which we do not secure exclusive licenses may be able to license such patent rights to third parties, including our competitors, and such third parties may be able to market competing products and technology.

Furthermore, inventions contained within some of our in-licensed issued patent and patent applications were made using U.S. government funding. We rely on our licensors to ensure compliance with applicable obligations arising from such funding, such as timely reporting, an obligation associated with our in-licensed patent and patent applications. The failure of our licensors to meet their obligations may lead to a loss of rights or the unenforceability of relevant patents that may issue from such applications. For example, the U.S. government could have certain rights in such in-licensed issued patent and patent applications, including a non-exclusive license authorizing the U.S. government to use the invention or to have others use the invention on its behalf. If the U.S. government decides to exercise these rights, it is not required to engage us as its contractor in connection with doing so. The U.S. government's rights may also permit it to disclose the funded inventions and technology to third parties and to exercise march-in rights to use or allow third parties to use the technology we have licensed that was developed using U.S. government funding. The U.S. government may also exercise its march-in rights if it determines that action is necessary because we or our licensors failed to achieve practical application of the U.S. government-funded technology, because action is necessary to alleviate health or safety needs, to meet requirements of federal regulations, or to give preference to U.S. industry. For example, if the U.S. government determines it is necessary, the U.S. government may exercise its march-in rights and license to third-party manufacturers any or all of our future products or current or future product candidates covered by in-licensed patents and patent applications made using U.S. government funding. In addition, our rights in such in-licensed U.S. government-funded inventions may be subject to certain requirements to manufacture product candidates embodying such inventions in the United States. Any of the foregoing could harm our business, financial condition, results of operations and prospects significantly.

In the event that any of our third-party licensors determines that, in spite of our efforts, we have materially breached a license agreement or have failed to meet certain obligations thereunder, it may elect to terminate the license agreement or, in some cases, one or more license(s) under the applicable license agreement and such termination would result in us no longer having the ability to develop and commercialize product candidates and technology covered by that license agreement or license. In the event of such termination of a third-party in-license, or if the underlying patent rights under a third-party in-license fail to provide the intended exclusivity, third parties may be able to seek regulatory approval of, and to market, products identical to ours. Moreover, our licensors may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing or otherwise violating the licensor's rights. Any of these events could have a material adverse effect on our competitive position, business, financial conditions, results of operations and prospects.

Pursuant to our license agreements with Beam Therapeutics and Broad Institute, we are generally responsible for bringing any actions against any third party for infringing on certain of the patent rights we have licensed from such counterparty, subject to certain conditions. Certain provisions of the Broad License Agreement also require us to meet development thresholds within specified timeframes to maintain the license, including establishing a set timeline for developing and commercializing products, while some provisions of the Beam Collaboration Agreement require us to use commercially reasonable efforts to conduct development activities for collaboration products. For more information regarding the scope of our rights and obligations under the Broad License Agreement and the Beam Collaboration Agreement, see the section titled "Business—Our License and Collaboration Agreements." In spite of our efforts, Broad Institute, Beam Therapeutics, or any future licensor from whom we may seek to license intellectual property rights might conclude that we have materially breached our obligations under such license agreements and might therefore terminate the license agreements, thereby removing or limiting our ability to develop and commercialize products and technology covered by these license agreements. If these in-licenses are

terminated, or if the underlying patent rights fail to provide the intended exclusivity, competitors or other third parties may be able to seek regulatory approval of, and to market, products identical to ours and we may be required to cease our development and commercialization of our Prime Editing technology or product candidates. Any of the foregoing could have a material adverse effect on our competitive position, business, financial condition, results of operations and growth prospects. Disputes may arise regarding intellectual property subject to a licensing agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- the sublicensing of patent rights to third parties under our collaborative development relationships;
- our diligence obligations under the license agreement with respect to the use of the licensed technology in relation to our development and commercialization of our product candidates and what activities satisfy those diligence obligations;
- the inventorship and ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensor and us and our partners; and
- the priority of invention of patented technology.

In addition, the agreements under which we currently license intellectual property rights from Beam Therapeutics and Broad Institute are complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise under our existing license agreements or future license agreements into which we may enter could narrow what we believe to be the scope of our rights to the relevant intellectual property or technology or broaden what we believe to be the scope of the licensor's rights to our intellectual property and technology, or increase what we believe to be our financial or other obligations under the relevant agreement, any of which could have a material adverse effect on our business, financial condition, results of operations and prospects. For example, we have exclusively licensed and sublicensed certain of our owned and licensed intellectual property rights to Beam Therapeutics under the Beam Collaboration Agreement in certain fields. Such agreement may be susceptible to multiple interpretations and the resolution of any contract interpretation disagreement could expand the field of exclusivity or other rights we have granted to Beam Therapeutics and therefore, narrow our field of exclusivity or rights with respect to such licensed intellectual property rights. Moreover, if disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on commercially acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates. As a result, any termination of or disputes over our intellectual property licenses could result in the loss of our ability to develop and commercialize our Prime Editing technology or other product candidates or we could lose other significant rights, any of which could have a material adverse effect on our business, financial conditions, results of operations and prospects. It is also possible that a third party could be granted limited licenses to some of the same technology, in certain circumstances.

Our in-licensed issued patent and owned and in-licensed patent applications may not provide sufficient protection of our Prime Editing technologies and our future product candidates or result in any competitive advantage.

We have in-licensed an issued U.S. patent and own and have in-licensed a number of patent applications that cover Prime Editing and related technologies. We and our licensors have filed patent applications intended to specifically cover our Prime Editing technology and uses with respect to treatment of particular diseases and conditions. While we in-license one issued patent, we do not currently own any, or in-license any other, issued U.S. patents.

Our in-licensed issued U.S. patent contains claims directed to methods of using Prime Editors. Our owned and in-licensed patent applications contain claims directed to compositions of matter for our Prime Editing product candidates, as well as methods directed to the use of such product candidates for gene therapy treatment. Method-of-use patents do not prevent a competitor or other third party from developing or marketing an identical product for an

indication that is outside the scope of the patented method. Moreover, with respect to method-of-use patents, even if competitors or other third parties do not actively promote their product for our targeted indications or uses for which we may obtain patents, providers may recommend that patients use these products off-label, or patients may do so themselves.

The strength of patents in the biotechnology and pharmaceutical field involves complex legal and scientific questions and can be uncertain. The issuance of a patent is not conclusive as to its inventorship, scope, validity, or enforceability, and our or our licensors' current and future patents may be challenged in the courts or patent offices in the United States and abroad. The patent applications that we own or in-license may fail to result in issued patents with claims that cover our product candidates or uses thereof in the United States or in other foreign countries. For example, while our or our licensors' patent applications are pending, such patent applications may now or in the future be subject to a third party pre-issuance submission of prior art to the USPTO, or become involved in interference or derivation proceedings or equivalent proceedings in foreign jurisdictions. For example, prior art was submitted by a third party with respect to certain of our PCT patent applications in-licensed from Broad Institute directed to Prime Editing. Third parties may challenge their inventorship, priority of invention, validity, enforceability or scope of our in-licensed patent and our or our licensors' patent applications that successfully issue, including through opposition, revocation, reexamination, post-grant and *inter partes* review proceedings and litigation. Moreover, we, or one of our licensors, may have to participate in interference proceedings declared by the USPTO to determine priority of invention or in post grant challenge proceedings, such as oppositions in a foreign patent office, that challenge priority of invention or other features of patentability. An adverse determination in any such submission, proceeding or litigation may result in loss of patent rights, loss of exclusivity, or in patent claims being narrowed, invalidated, or held unenforceable, which could limit our ability to stop others from using or commercializing similar or identical technology and products, allow third parties to commercialize our technology or product candidates and compete directly with us, without payment to us, limit the duration of the patent protection of our technology and product candidates, or result in our inability to manufacture or commercialize products without infringing third-party patent rights. Furthermore, even if they are unchallenged, our patent rights may not adequately protect our intellectual property or prevent others from designing around our platform technology or product candidates. If the breadth or strength of protection provided by our in-licensed patent or patents that may issue from the patent applications we own or in-license with respect to our Prime Editing technology and product candidates is threatened, it could dissuade companies from collaborating with us to develop, and threaten our ability to commercialize, our product candidates. Further, if we encounter delays in development, testing and regulatory review of new product candidates, the period of time during which we could market our product candidates under patent protection would be reduced.

Given that patent applications in the United States and other countries are confidential for a period of time after filing, at any moment in time, we cannot be certain that we or our licensors were in the past or will be in the future the first to file any patent application related to our Prime Editing technology or product candidates. In addition, some patent applications in the United States may be maintained in secrecy until the patents are issued. As a result, there may be prior art of which we or our licensors are not aware that may affect the validity or enforceability of a patent claim, and we or our licensors may be subject to priority disputes. For our in-licensed patent portfolios, we rely on our licensors to determine inventorship and to obtain and file inventor assignments of priority applications before their conversion as PCT applications. A failure to do so in a timely fashion may give rise to a challenge to entitlement of priority for foreign applications nationalized from such PCT applications. We or our licensors may in the future become a party to proceedings or priority disputes in Europe or other foreign jurisdictions. The loss of priority for, or the loss of, any European or other foreign patent rights could have a material adverse effect on the conduct of our business.

We may be required to disclaim part or all of the term of certain patents that may issue from our owned or in-licensed patent applications. There may be prior art of which we are not aware that may affect the validity or enforceability of a patent claim. There also may be prior art of which we or our licensors are aware, but which we or our licensors do not believe affects the validity or enforceability of a claim, which may, nonetheless, ultimately be found to affect the validity or enforceability of a claim. No assurance can be given that, if challenged, our in-licensed patent and patent applications, if issued, would be declared by a court, patent office or other governmental authority to be valid or enforceable, or that even if the patent claims were found to be not invalid or unenforceable, a

third party's technology or product would be found by a court to infringe our patent rights. Moreover, even if our in-licensed patent and patent applications, if issued, are declared to be valid and enforceable and a third party's technology or product found to infringe our patent rights, a court or other governmental authority may refuse to prevent a third party's technology or product from being marketed, and the court or governmental authority would determine the royalty rate to be paid by the third party to us. We analyze patents or patent applications of third parties that we believe are relevant to our activities, but third parties may achieve issued claims, including in patents we consider to be unrelated, that block our efforts or potentially result in our product candidates or our activities infringing such claims. It is possible that third parties may have filed, and may in the future file, patent applications covering our products or gene editing technology similar to ours. Those patent applications may have priority over our in-licensed patent and owned and in-licensed patent applications, which could require us to obtain rights to issued patents covering such technologies. The possibility also exists that others will develop products that have the same effect as our product candidates on an independent basis that do not infringe our in-licensed patent or patents that may issue from our own or in-licensed patent applications, or other intellectual property rights, or will design around the claims of our in-licensed patent or our patents that may issue from our owned or in-licensed patent applications that cover our product candidates.

Likewise, our in-licensed issued patent and currently owned and in-licensed patent applications, if issued as patents, directed to our in-licensed and company-owned Prime Editing technologies and our product candidates are expected to expire between 2040 and 2043 , without taking into account any possible patent term adjustments or extensions. Our in-licensed issued patent, or owned or in-licensed patent applications, if issued as patents, may expire before, or soon after, our first product candidate achieves marketing approval in the United States or foreign jurisdictions. Additionally, no assurance can be given that the USPTO or relevant foreign patent offices will grant any of the pending patent applications we own or in-license currently or in the future. Upon the expiration of such patents that may issue from our current owned or in-licensed patent applications, we may lose the right to exclude others from practicing these inventions. The expiration of these patent rights could also have a similar material adverse effect on our business, financial condition, results of operations and prospects.

Our in-licensed issued patent and owned and in-licensed patent applications and other intellectual property may be subject to priority, inventorship or ownership disputes and similar proceedings. If we or our licensors are unsuccessful in any of these proceedings, we may be required to obtain licenses from third parties, which may not be available on commercially reasonable terms or at all, or to cease the development, manufacture and commercialization of one or more of our product candidates, which could have a material adverse impact on our business.

We or our licensors may be subject to claims that former employees, collaborators, or other third parties have an interest in our in-licensed issued patent or owned or in-licensed patent applications or other intellectual property as an inventor or co-inventor. If we or our licensors are unsuccessful in any interference proceedings or other priority, validity (including any patent oppositions), inventorship or ownership disputes to which we or they are subject, we may lose valuable intellectual property rights through the loss of part or all of our owned or licensed patent rights, the loss of exclusive ownership of or the exclusive right to use our owned or in-licensed patent rights, or the narrowing, invalidation, or unenforceability of our or our licensors' patent claims. In the event of loss of patent rights as a result of any of these disputes, we may be required to obtain and maintain licenses from third parties, including parties involved in any such interference proceeding or other priority, inventorship or ownership disputes. Such licenses may not be available on commercially reasonable terms or at all, or may be non-exclusive. If we are unable to obtain and maintain such licenses, we may need to cease the development, manufacture and commercialization of one or more of our product candidates. The loss of exclusivity or the narrowing of our patent rights could limit our ability to stop others from using or commercializing similar or identical technology and product candidates. Even if we or our licensors are successful in an inventorship or ownership dispute, it could result in substantial costs and be a distraction to management and other employees. Any of the foregoing could result in a material adverse effect on our business, financial condition, results of operations, or prospects.

We have limited foreign intellectual property rights and may not be able to protect our intellectual property and proprietary rights throughout the world.

We have limited intellectual property rights outside the United States. Filing, prosecuting and defending patents on our Prime Editing technologies and product candidates in all countries throughout the world would be prohibitively expensive and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. The laws of foreign countries do not protect intellectual property rights to the same extent as federal and state laws of the United States, even in jurisdictions where we or our licensors do pursue patent protection. In addition, our intellectual property license agreements may not always include worldwide rights. Consequently, we or our licensors may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Third parties may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection but where enforcement is not as strong as that in the United States. These products may compete with our product candidates and patents that may issue from our or our licensors' pending patent applications or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, particularly those relating to biotechnology and pharmaceutical products, which could make it difficult for us to stop the infringement of our future patents or marketing of competing products by third parties in violation of our intellectual property and proprietary rights generally. Proceedings to enforce our future patents or our licensors' patent or future patents and intellectual property rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our future patents or our licensors' patent or future patents at risk of being invalidated or interpreted narrowly and our or our licensors' patent applications at risk of not issuing and could provoke third parties to assert claims against us or our licensors. We may not prevail in any lawsuits that we or our licensors initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. Moreover, the initiation of proceedings by third parties to challenge the scope or validity of our or our licensors' patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business. Accordingly, our or our licensors' efforts to enforce our or our licensors' intellectual property and proprietary rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we or our licensors are forced to grant one or more licenses to third parties with respect to any patent or future patents relevant to our business, our competitive position may be impaired, and our business, financial condition, results of operations and prospects may be adversely affected.

We may not be successful in acquiring or in-licensing necessary rights to key technologies or any product candidates we may develop.

We currently have rights to intellectual property, through licenses from third parties, to identify and develop product candidates, and we expect to seek to expand our product candidate pipeline in part by in-licensing additional rights to key technologies. The future growth of our business will depend in part on our ability to in-license or otherwise acquire the rights to additional product candidates and technologies. Although we have succeeded in licensing technologies from Beam Therapeutics and Broad Institute in the past, we cannot guarantee that we will be able to in-license or acquire additional rights to any product candidates or technologies from Beam Therapeutics, Broad Institute, or other third parties on acceptable terms or at all. For example, Broad Institute is developing improvements to the Prime Editing technology for which we may find it necessary or useful to obtain a license. In addition, our agreements with Beam Therapeutics and Broad Institute provide that our fields of use excludes particular fields. If we determine that rights to such fields are necessary to commercialize our technology or product

candidates or maintain our competitive advantage, we may need to obtain a license from Beam Therapeutics or Broad Institute in order to continue developing, manufacturing or marketing our technology or product candidates. In addition, we may seek to obtain additional licenses from our licensors and, in connection with obtaining such licenses, we may agree to amend our existing licenses in a manner that may be more favorable to the licensors, including by agreeing to terms that could enable third parties (potentially including our competitors) to receive licenses to a portion of the intellectual property that is subject to our existing licenses. Additionally, upon our finalization of our product candidates, we may determine that there are third parties who possess technologies related to gene editing or other technologies which we may need to in-license, including intellectual property covering the use of Cas proteins and reverse transcriptases. We may not be able to obtain such a license on an exclusive basis, on commercially reasonable terms, or at all, which could prevent us from commercializing our product candidates or allow our competitors or other third parties the chance to access technology that is important to our business.

Furthermore, there has been extensive patenting activity in the field of gene editing. Pharmaceutical companies, biotechnology companies and academic institutions are competing with us or are expected to compete with us in the in the field of gene editing technology and filing patent applications potentially relevant to our business and we are aware of certain third-party patent applications that, if issued, may allow the third party to circumvent our patent rights. For example, we are aware of several third-party patents and patent applications, that if issued, may be construed to cover or be relevant to our Prime Editing technology and product candidates. In order to market our product candidates, we may find it necessary or prudent to obtain licenses from such third-party intellectual property holders. However, we may be unable to secure such licenses or otherwise acquire or in-license any compositions, methods of use, processes, or other intellectual property rights from third parties that we identify as necessary for product candidates we may develop and our Prime Editing technology. We may also require licenses from third parties for certain additional technologies, including technologies relating to Prime Editing, such as guide RNA modification, target sequences, Cas proteins such as Cas9, reverse transcriptases, as well as delivery technologies for product candidates we may develop.

Additionally, we may collaborate with academic institutions to accelerate our research or development under written agreements with these institutions. In certain cases, these institutions may provide us with an option to negotiate a license to any of the institution's rights in technology resulting from the collaboration. Even if we hold such an option, we may be unable to negotiate a license from the institution within the specified timeframe or under terms that are acceptable to us. If we are unable to do so, such institution may offer the intellectual property rights to others, potentially blocking our ability to pursue our program.

The licensing or acquisition of third-party intellectual property rights is a highly competitive area, and a number of more established companies are also pursuing strategies to license or acquire third-party intellectual property rights that we may consider attractive or necessary. These established companies may have a competitive advantage over us due to their size, capital resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment or at all. If we are unable to successfully obtain rights to required third party intellectual property rights or maintain the existing intellectual property rights we have, we may have to abandon development of the relevant program or product candidate, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

The intellectual property landscape around the technologies we use or plan to use, including gene editing technology, is highly dynamic, and third parties may initiate legal proceedings alleging that we are infringing, misappropriating, or otherwise violating their intellectual property rights, the outcome of which would be uncertain and may prevent, delay or otherwise interfere with our product discovery and development efforts.

The field of gene editing is still in its infancy, and no such therapeutic product candidates have reached the market. Due to the intense research and development that is taking place by several companies, including us and our competitors, in this field, the intellectual property landscape is evolving and in flux, and it may remain uncertain for the coming years. There may be significant intellectual property related litigation and proceedings relating to our owned and in-licensed, and other third-party, intellectual property and proprietary rights in the future.

Our commercial success depends upon our ability and the ability of our collaborators and present and future licensees to develop, manufacture, market and sell any product candidates that we may develop and use our proprietary technologies without infringing, misappropriating, or otherwise violating the intellectual property and proprietary rights of third parties. The biotechnology and pharmaceutical industries are characterized by extensive litigation regarding patents and other intellectual property rights as well as administrative proceedings for challenging patents, including interference, derivation, *inter partes* review, post grant review and reexamination proceedings before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions. We may be subject to and may in the future become party to, or threatened with, adversarial proceedings or litigation regarding intellectual property rights with respect to our Prime Editing technology and product candidates we may develop, including interference proceedings, post-grant review, *inter partes* review and derivation proceedings before the USPTO and similar proceedings in foreign jurisdictions such as oppositions before the European Patent Office, or EPO. Numerous U.S. and foreign issued patents and pending patent applications that are owned by third parties exist in the fields in which we are developing our product candidates and they may assert infringement claims against us based on existing patents or patents that may be granted in the future, regardless of their merit.

As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our Prime Editing technology and product candidates may give rise to claims of infringement of the patent rights of others. Moreover, it is not always clear to industry participants, including us, which patents cover various types of therapies, products or their methods of use or manufacture. There may be third-party patents of which we are currently unaware with claims to technologies, methods of manufacture or methods for treatment related to the use or manufacture of our product candidates. Because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents that our product candidates may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents.

Numerous third-party U.S. and foreign issued patents and pending patent applications exist in the fields in which we are developing product candidates. Our product candidates make use of CRISPR-based technology, which is a field that is highly active for patent filings. As of June 2019, it was reported that approximately 2072 patent families worldwide related to CRISPR gene editing inventions and their uses. The extensive patent filings related to CRISPR make it difficult for us to assess the full extent of relevant patents and pending applications that may cover our Prime Editing technology and product candidates and their use or manufacture. There may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our Prime Editing platform technology and product candidates. We are aware of multiple patents and patent applications directed to CRISPR technologies, Cas molecules, including Cas9, and their uses in gene editing. For example, we are aware of a patent portfolio that is co-owned by the University of California, University of Vienna and Emmanuelle Charpentier, which we refer to together as CVC, which contains multiple patents and pending applications directed to gene editing. We are also aware of patents and patent applications directed to gene editing owned or co-owned by Broad Institute, MIT, Rockefeller University and Harvard, which we refer to together as the Boston Licensing Parties, Toolgen Inc. and Sigma-Aldrich. Additional patents and patent applications that we are aware of and directed to gene-editing are owned or co-owned by The General Hospital Corporation, BASF, SNIPR Technologies Ltd., Novartis, Columbia University, Agilent Technologies, Thermo Fisher Scientific, Life Technologies Corporation and Intellia.

Our ability to commercialize our product candidates may be adversely affected if we require but cannot obtain a license to these patents. We may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be nonexclusive, thereby giving our competitors and other third parties access to the same technologies licensed to us, and it could require us to make substantial licensing and royalty payments. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, we may be unable to commercialize our Prime Editing technology or product candidates or such commercialization efforts may be significantly delayed, which could in turn significantly harm our business.

Several patents and pending applications with claims directed to foundational aspects of gene editing are currently involved in interference proceedings at the USPTO. The Patent Trial and Appeal Board, or PTAB, of the USPTO declared a second interference between 10 pending applications co-owned by the CVC and 13 patents and one pending application co-owned by the Boston Licensing Parties on June 24, 2019, after the first interference

between the two parties was terminated in 2018. Toolgen subsequently joined the patent dispute and two more interferences were declared in December 2020, between a pending application owned by Toolgen and several pending applications co-owned by the CVC or patents and pending applications co-owned by the Boston Licensing Parties. In June 2021, two additional interferences were declared between patents and applications co-owned by the Boston Licensing Parties or pending applications co-owned by the CVC and pending applications owned by Sigma-Aldrich. It is presently unclear who will prevail in these proceedings and own or partially own the patents subject to such interferences. If it is necessary for us to obtain a license to one or more of the patents currently involved in such interference proceedings, such patents may not be available to license on commercially reasonable terms or at all. For example, we are aware that the Boston Licensing Parties and CVC have previously licensed certain of such patents to third parties. Our ability to commercialize our product candidates in the United States and abroad may be adversely affected if we cannot obtain a license on commercially reasonable terms to relevant third-party patents that cover our product candidates or Prime Editing technology.

Because of the large number of patents issued and patent applications filed in our field, third parties may allege they have patent rights encompassing our product candidates, technologies or methods. Third parties may assert that we are employing their proprietary technology without authorization and may file patent infringement claims or lawsuits against us, and if we are found to infringe such third-party patents, we may be required to pay damages, cease commercialization of the infringing technology, or obtain a license from such third parties, which may not be available on commercially reasonable terms or at all. In addition, we have in the past, and may in the future, receive an offer for license from third parties regarding their proprietary intellectual property for which they may believe encompass our product candidates and technologies. We will evaluate such offers for relevance to our business.

Even if we believe third-party claims that we or our technology or product candidates are infringing, misappropriating or otherwise violating such third party's intellectual property are without merit, there is no assurance that a court would find in our favor on questions of infringement, validity, enforceability, or priority. A court of competent jurisdiction could hold that these third-party patents are valid, enforceable and infringed, which could materially and adversely affect our ability to commercialize our product candidates and any other product candidates or technologies covered by the asserted third-party patents. In order to successfully challenge the validity of any such U.S. patent in federal court, we would need to overcome a presumption of validity. As this burden is a high one requiring us to present clear and convincing evidence as to the invalidity of any such U.S. patent claim, there is no assurance that a court of competent jurisdiction would invalidate the claims of any such U.S. patent. Further, even if we were successful in defending against any such claims, such claims could require us to divert substantial financial and management resources that we would otherwise be able to devote to our business. If we are found to infringe a third party’s intellectual property rights, and we are unsuccessful in demonstrating that such patents are invalid or unenforceable, we could be forced, including by court order, to cease developing, manufacturing and commercializing the infringing technology or product candidates. In addition, we could be found liable for significant monetary damages, including treble damages and attorneys’ fees, if we are found to have willfully infringed a patent or other intellectual property right. We also could be required to obtain a license from such third party to continue developing, manufacturing and marketing product candidates we may develop and our technology. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors and other third parties access to the same technologies licensed to us, and it could require us to make substantial licensing and royalty payments. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, we may be unable to commercialize our Prime Editing technology or product candidates or such commercialization efforts may be significantly delayed, which could in turn significantly harm our business. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar material adverse effect on our business, financial condition, results of operations and prospects.

In addition, our agreements with certain suppliers with whom we do business require us to defend or indemnify such parties to the extent they become involved in patent infringement claims. We could also voluntarily agree to defend or indemnify third parties in instances where we are not obligated to do so if we determine it would be important to our business relationships. If we are required or agree to defend or indemnify third parties in connection with any infringement claims, we could incur significant costs and expenses that could adversely affect our business, operating results or financial condition.

Defense of third-party claims of infringement of misappropriation, or violation of intellectual property rights involves substantial litigation expense and would be a substantial diversion of management and employee time and resources from our business. Some third parties may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the funds necessary to continue our operations or could otherwise have a material adverse effect on our business, financial condition, results of operations and prospects. There could also be public announcements of the results of hearings, motions, or other interim proceedings or developments, and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Any of the foregoing events could have a material adverse effect on our business, financial condition, results of operations and prospects.

We may become involved in lawsuits to protect or enforce our future patents, or the issued patents or future patents of our licensors, which could be expensive, time consuming and unsuccessful and could result in a finding that such patents are unenforceable or invalid.

Competitors and other third parties may infringe, misappropriate or otherwise violate our future patents or the patent or future patents of our licensors, or we may be required to defend against claims of infringement, misappropriation or other violation. In addition, our future patents, or the issued or future patents of our licensors also may become involved in inventorship, priority, validity or enforceability disputes. Countering or defending against such claims can be expensive and time consuming. In an infringement proceeding, a court may decide that a patent owned or in-licensed by us is invalid or unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our future owned patents and in-licensed patent and future patents do not cover the technology in question. An adverse result in any litigation proceeding could put one or more of our future owned patents or in-licensed patent or future patents at risk of being invalidated or interpreted narrowly.

In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. Third parties may also raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. These types of mechanisms include re-examination, post-grant review, *inter partes* review, interference proceedings, derivation proceedings and equivalent proceedings in foreign jurisdictions (*e.g.*, opposition proceedings). These types of proceedings could result in revocation or amendment to our in-licensed patent or future patents such that they no longer cover our product candidates. The outcome for any particular patent following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we, our licensor, our patent counsel and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, or if we are otherwise unable to adequately protect our rights, we would lose at least part, and perhaps all, of the patent protection on our technology and/or product candidates. Defense of these types of claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business.

Conversely, we may choose to challenge the patentability of claims in a third party's U.S. patent by requesting that the USPTO review the patent claims in re-examination, post-grant review, *inter partes* review, interference proceedings, derivation proceedings and equivalent proceedings in foreign jurisdictions (*e.g.*, opposition proceedings). We may choose to challenge third-party patents in patent opposition proceedings in the EPO or another foreign patent office. Even if successful, the costs of these opposition proceedings could be substantial and may consume our time or other resources. If we fail to obtain a favorable result at the USPTO, EPO or other patent office then we may be exposed to litigation by a third party alleging that their patent may be infringed by our product candidates, Prime Editing technology or other proprietary technologies.

Even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses and could distract our personnel from their normal responsibilities.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions, or other interim proceedings or developments, and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing, or distribution activities. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Certain third parties, including our competitors, may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by government patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees, renewal fees, annuity fees and various other government fees on patents and applications are due to be paid to the USPTO and foreign patent agencies outside of the United States over the lifetime of our in-licensed patent, owned or licensed patent applications and patents that may issue from such applications. In certain circumstances, we rely on our licensors to pay these fees due to U.S. and non-U.S. patent agencies. The USPTO and foreign patent agencies require compliance with several procedural, documentary, fee payment and other similar provisions during the patent application process. We are also dependent on our licensors to take the necessary action to comply with these requirements with respect to our licensed intellectual property. While an inadvertent lapse or non-compliance with such requirements can sometimes be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which non-compliance can result a partial or complete loss of patent rights in the relevant jurisdiction. Were a noncompliance event to occur, third parties might be able to enter the market with similar or identical products or technology, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

Changes in patent law in the United States and in non-U.S. jurisdictions could diminish the value of patents in general, thereby impairing our ability to protect our Prime Editing platform technology and product candidates.

As is the case with other biotech and pharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involve both technological and legal complexity, and is therefore costly, time-consuming and inherently uncertain.

Changes in either the patent laws or interpretation of the patent laws could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of our issued in-licensed patent and future issued patents. For example, in March 2013, under the Leahy-Smith America Invents Act, or the America Invents Act, the United States transitioned from a “first to invent” to a “first-to-file” patent system. Under a “first-to-file” system, assuming that other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to a patent on an invention regardless of whether another inventor had made the invention earlier. A third party that files a patent application in the USPTO after March 2013, but before us could therefore be awarded a patent covering an invention of ours even if we had made the invention before it was made by such third party. This will require us to be cognizant going forward of the time from invention to filing of a patent application. Since patent applications in the United States and most other countries are confidential for a period of time after filing or until issuance, we cannot be certain that we or our licensors were the first to either file any patent application related to our technology or product candidates or invent any of the inventions claimed in our or our licensors’ patent applications. The America Invents Act also includes a number of other significant changes to U.S. patent law, including provisions that affect the way patent applications will be prosecuted, allowing third party submission of prior art and establishing a new post-grant review system including post-grant review, *inter partes* review and derivation proceedings. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in U.S. federal courts necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though

the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action. The effects of these changes are currently unclear as the USPTO continues to promulgate new regulations and procedures in connection with the America Invents Act and many of the substantive changes to patent law, including the "first-to-file" provisions, only became effective in March 2013. In addition, the courts have yet to address many of these provisions and the applicability of the act and new regulations on the specific patents discussed in this filing have not been determined and would need to be reviewed. However, the America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued in-licensed patent and future issued patents.

In addition, recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the validity and enforceability of patents, once obtained. Depending on future actions by the U.S. Congress, the federal courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways that could weaken our ability to obtain new patents or to enforce patents that we or our licensors have obtained or might obtain in the future. For example, in the case, *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.,* the U.S. Supreme Court held that certain claims to DNA molecules are not patentable. We cannot predict how this and future decisions by the courts, the U.S. Congress or the USPTO may impact the value of our or our licensors' patent or patent applications. Similarly, foreign courts have made, and will likely continue to make, changes in how the patent laws in their respective jurisdictions are interpreted. We cannot predict future changes in the interpretation of patent laws or changes to patent laws that might be enacted into law by U.S. and foreign legislative bodies. Any similar adverse changes in the patent laws of other jurisdictions could also have a material adverse effect on our business, financial condition, results of operations and prospects.

Patent terms may be inadequate to protect our competitive position on our product candidates for an adequate amount of time.

Patents have a limited lifespan. The terms of individual patents depend upon the legal term for patents in the countries in which they are granted. In most countries, including the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest non-provisional filing date in the applicable country. However, the actual protection afforded by a patent varies from country to country and depends upon many factors, including the type of patent, the scope of its coverage, the availability of regulatory-related extensions, the availability of legal remedies in a particular country and the validity and enforceability of the patent. Various extensions including patent term extensions, or PTEs, and patent term adjustments, or PTAs, may be available, but the life of a patent and the protection it affords is limited. For more information regarding PTA and PTE, see the section titled "Business—Intellectual Property". Even if patents covering our product candidates are obtained, once the patent life has expired, we may be open to competition from competitive products, including generics or biosimilars. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting our product candidates might expire before or shortly after we or our partners commercialize those candidates. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

If we do not obtain PTE and data exclusivity for any product candidates we may develop, our business may be materially harmed.

Depending upon the timing, duration and specifics of any FDA marketing approval of product candidates we may develop, one or more of our U.S. patents may be eligible for limited PTE under the Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Amendments. The Hatch-Waxman Amendments provides a PTE term of up to five years as compensation for patent term lost during the FDA regulatory review process. A PTE cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, only one patent per product may be extended and only those claims covering the approved product, a method for using it, or a method for manufacturing it may be extended. However, even if we were to seek a PTE, it may not be granted because of, for example, the failure to exercise due diligence during the testing phase or

regulatory review process, the failure to apply within applicable deadlines, the failure to apply prior to expiration of relevant patents, or any other failure to satisfy applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request. In addition, to the extent we wish to pursue a PTE based on a patent that we in-license from a third party, we would need the cooperation of that third party, which may not be available. If we are unable to obtain PTE or term of any such extension is less than we request, third parties may obtain approval of competing products following our patent expiration, and our business, financial condition, results of operations and prospects could be materially harmed.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patent protection for our technology and product candidates, we also rely on know-how and trade secret protection, as well as confidentiality agreements, non-disclosure agreements and invention assignment agreements with our employees, consultants and third-parties, to protect our confidential and proprietary information, especially where we do not believe patent protection is appropriate or obtainable.

It is our policy to require our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors and other third parties to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements generally provide that all confidential information concerning our business or financial affairs developed by or made known to the individual or entity during the course of the party's relationship with us is to be kept confidential and not disclosed to third parties, except in certain specified circumstances. In the case of employees, the agreements generally provide that all inventions conceived by the individual, and that are related to our current or planned business or research and development or made during normal working hours, on our premises or using our equipment or proprietary information, are our exclusive property. In the case of consultants and other third parties, the agreements generally provide that all inventions conceived in connection with the services provided are our exclusive property. However, we cannot guarantee that we have entered into such agreements with each party that may have or have had access to our trade secrets or proprietary technology and processes or who were involved in the development of intellectual property. Additionally, the assignment of intellectual property rights may not be self-executing, or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. Any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. We may not be able to prevent the unauthorized disclosure or use of our technical know-how or other trade secrets by the parties to these agreements. Monitoring unauthorized uses and disclosures is difficult and we do not know whether the steps we have taken to protect our proprietary technology will be effective. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable.

In addition to contractual measures, we try to protect the confidential nature of our proprietary information through other appropriate precautions, such as physical and technological security measures. However, trade secrets and know-how can be difficult to protect and we do not have a formal trade secret policy at this time. These measures may not, for example, in the case of misappropriation of a trade secret by an employee or third party with authorized access, provide adequate protection for our proprietary information. Our security measures may not prevent an employee or consultant from misappropriating our trade secrets and providing them to a third party, and any recourse we might take against this type of misconduct may not provide an adequate remedy to protect our interests fully. In addition, trade secrets may be independently developed by others in a manner that could prevent us from receiving legal recourse. If any of our confidential or proprietary information, such as our trade secrets, were to be disclosed or misappropriated, or if any of that information was independently developed by a third party, our competitive position could be harmed.

In addition, some courts inside and outside the United States are sometimes less willing or unwilling to protect trade secrets. If we choose to go to court to stop a third party from using any of our trade secrets, we may incur substantial costs. Even if we are successful, these types of lawsuits may consume our time and other resources. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

Third parties may assert that our employees, consultants, or advisors have wrongfully used or disclosed confidential information or misappropriated trade secrets.

As is common in the biotechnology and biopharmaceutical industries, we employ individuals who were previously employed at universities or other biotechnology or biopharmaceutical companies, including our competitors or potential competitors. Although no claims against us are currently pending, and although we try to ensure that our employees, consultants, independent contractors or other third parties do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or our employees, consultants, independent contractors or other third parties have inadvertently or otherwise used or disclosed intellectual property, including trade secrets or other proprietary information, of a former employer or other third parties. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in defending against such claims, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments, and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. This type of litigation or proceeding could substantially increase our operating losses and reduce our resources available for development activities. We may not have sufficient financial or other resources to adequately conduct such litigation or proceedings. Certain third parties, including our competitors, may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their substantially greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other intellectual property related proceedings could adversely affect our ability to compete in the marketplace.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

We do not currently own any registered trademarks. Our unregistered trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names, which we need to build name recognition among potential partners or customers in our markets of interest. At times, competitors or other third parties may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate variations of our unregistered trademarks or trade names. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected. Our efforts to enforce or protect our proprietary rights related to trademarks, trade secrets, domain names, copyrights or other intellectual property may be ineffective and could result in substantial costs and diversion of resources and could adversely affect our business, financial condition, results of operations and growth prospects.

Intellectual property rights do not necessarily address all potential threats.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations and may not adequately protect our business or permit us to maintain our competitive advantage. For example:

- our product candidates, if approved, will eventually become commercially available in generic or biosimilar product forms;
- others may be able to make gene therapy products that are similar to our product candidates or utilize similar gene editing technology but that are not covered by the claims of the issued patent or patent applications that we own or license or the patents that we may own or license in the future;
- we, our licensors, or our current or future collaborators, might not have been the first to make the inventions covered by the issued patent or pending patent applications that we license or may own in the future;

- we, our licensors, or our current or future collaborators, might not have been the first to file patent applications covering certain of our or their inventions;
- we, our licensors, or our current or future collaborators, may fail to meet our obligations to the U.S. government regarding any in-licensed patent or patent applications funded by U.S. government grants, leading to the loss or unenforceability of patent rights;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our owned or licensed intellectual property rights;
- it is possible that our pending, owned or licensed patent applications or those that we may own in the future will not lead to issued patents;
- it is possible that there are prior public disclosures that could invalidate our owned or in-licensed patent rights, or parts of our owned or in-licensed patent rights;
- it is possible that there are unpublished patent applications or patent applications maintained in secrecy that may later issue with claims covering our product candidates or technology similar to ours;
- it is possible that our owned or in-licensed patent or patent applications omit individual(s) that should be listed as inventor(s) or include individual(s) that should not be listed as inventor(s), which may cause the patent or patents issuing from these patent applications to be held invalid or unenforceable;
- patents, if and when issued, that we obtain in the future may be held invalid, unenforceable, or narrowed in scope, including as a result of legal challenges by third parties, including our competitors;
- the claims of our owned or in-licensed patents, if and when issued, may not cover our product candidates;
- the laws of foreign countries may not protect our proprietary rights or the proprietary rights of license partners or current or future collaborators to the same extent as the laws of the United States;
- the inventors of our owned or in-licensed patent or patent applications may become involved with competitors, develop products or processes that design around our patent or patent applications, or become hostile to us or the patent, patent applications or patents that may issue from such patent applications on which they are named as inventors;
- third parties might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we have engaged in scientific collaborations in the past and will continue to do so in the future and our collaborators may develop adjacent or competing products that are outside the scope of our patent or patent applications;
- we may not develop additional proprietary technologies that are patentable;
- any product candidates we develop may be covered by third-parties' patents or other exclusive rights;
- the patents of others may harm our business; or
- we may choose not to file a patent in order to maintain certain trade secrets or know-how and a third party may subsequently file a patent covering such intellectual property.

Should any of these events occur, they could have a material adverse effect on our business, financial condition, results of operations and prospects.

Risks Related To Regulatory and Other Legal Compliance Matters

The FDA, the EMA and the National Institutes of Health, or NIH, have demonstrated caution in their regulation of gene therapy treatments, and ethical and legal concerns about gene therapy and genetic testing may result in additional regulations or restrictions on the development and commercialization of any product candidates we may develop, which may be difficult to predict.

The FDA, the EMA and the NIH have each expressed interest in further regulating biotechnology, including gene therapy and genetic testing. For example, the EMA advocates a risk-based approach to the development of a gene therapy product. Agencies at both the federal and state level in the United States, as well as the U.S. congressional committees and other governments or governing agencies, have also expressed interest in further regulating the biotechnology industry. Such action may delay or prevent commercialization of any product candidates we may develop. Additionally, gene therapies may be associated with undesirable or unacceptable side effects, unexpected characteristics or other serious adverse events, including death, off-target cuts of DNA, or the introduction of cuts in DNA at locations other than the target sequence. These off-target cuts could lead to disruption of a gene or a genetic regulatory sequence at an unintended site in the DNA, or, in those instances where we also provide a segment of DNA to serve as a repair template, it is possible that following off-target cut events, DNA from such repair template could be integrated into the genome at an unintended site, potentially disrupting another important gene or genomic element. There also is the potential risk of delayed adverse events following exposure to gene therapies due to persistent biologic activity of the genetic material or other components of products used to carry the genetic material. Due to concerns from regulatory agencies on the development of gene therapies and their potential for unknown long-term effects, participants in gene-therapy clinical trials may also require long-term follow-up for as long as 15 years.

Regulatory requirements in the United States and in other jurisdictions governing gene therapy products have changed frequently and may continue to change in the future. In January 2020, the FDA issued several new guidance documents on gene therapy products, and in March 2022, the FDA published a draft guidance document providing recommendations for human genome editing gene therapy products. The FDA established the Office of Tissues and Advanced Therapies within its Center for Biologics Evaluation and Research to consolidate the review of gene therapy and related products and established the Cellular, Tissue and Gene Therapies Advisory Committee to advise this review. In addition to the government regulators, the IBC and IRB of each institution at which we will conduct clinical trials of our potential product candidates, or a central IRB if appropriate, would need to review the proposed clinical trial to assess the safety of the trial. In addition, adverse developments in clinical trials of gene therapy product candidates conducted by others may cause the FDA or other oversight bodies to change the requirements for approval of any of our potential product candidates. Similarly, the EMA governs the development of gene therapies in the European Union and may issue new guidelines concerning the development and marketing authorization for gene therapy products and require that we comply with these new guidelines. These regulatory review agencies and committees and the new requirements or guidelines they promulgate may lengthen the regulatory review process, require us to perform additional studies or trials, increase our development costs, lead to changes in regulatory positions and interpretations, delay or prevent approval and commercialization of any product candidates we may develop or lead to significant post-approval limitations or restrictions. As we advance our potential product candidates, we will be required to consult with these regulatory agencies and committees and comply with applicable requirements and guidelines. If we fail to do so, we may be required to delay or discontinue development of such product candidates. These additional processes may result in a review and approval process that is longer than we otherwise would have expected. Delays as a result of an increased or lengthier regulatory approval process or further restrictions on the development of our potential product candidates can be costly and could negatively impact our or our collaborators' ability to complete clinical trials and commercialize our current and future product candidates in a timely manner, if at all.

Even if we, or any of our collaborators or strategic partners, obtain marketing approvals for any product candidates we may develop, the terms of approvals and ongoing regulation of such product candidates could require the substantial expenditure of resources and may limit how we, or they, manufacture and market such product candidates, which could materially impair our ability to generate revenue.

Any product candidate for which we obtain marketing approval, along with the manufacturing processes, post-approval clinical data, labeling, advertising and promotional activities for such product, will be subject to continual requirements of and review by the FDA, the EMA and other regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, facility registration and drug listing requirements, cGMP requirements relating to quality control, quality assurance and corresponding maintenance of records and documents, applicable product tracking and tracing requirements and requirements regarding the distribution of samples to physicians and recordkeeping. In addition, our manufacturing and testing facilities will be required to undergo pre-license inspections and pre-approval inspections. Even if marketing approval of a product candidate is granted, the approval may be subject to limitations on the indicated uses for which the products may be marketed or to the conditions of approval, or contain requirements for costly post-marketing testing and surveillance to monitor the safety or efficacy of the products.

Accordingly, assuming we, or any collaborators we may have, receive marketing approval for one or more product candidates we develop, we, and such collaborators, and our and their contract manufacturers will continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production, product surveillance and quality control. If we and such collaborators are not able to comply with post-approval regulatory requirements, we and such collaborators could have the marketing approvals for our products withdrawn by regulatory authorities and our, or such collaborators', ability to market any future products could be limited, which could adversely affect our ability to achieve or sustain profitability. Furthermore, the cost of compliance with post-approval regulations may have a negative effect on our business, operating results, financial condition and prospects.

Reductions in government operations may delay necessary manufacturing facility inspections by regulators and adversely affect the supply of any product candidates we may develop. Since March 2020 when foreign and domestic inspections of facilities were largely placed on hold, the FDA has been working to resume pre-pandemic levels of inspection activities, including routine surveillance, bioresearch monitoring and pre-approval inspections. Should the FDA determine that an inspection is necessary for approval and an inspection cannot be completed during the review cycle due to restrictions on travel, and the FDA does not determine a remote interactive evaluation to be adequate, the agency has stated that it generally intends to issue, depending on the circumstances, a complete response letter or defer action on the application until an inspection can be completed. During the COVID-19 public health emergency, a number of companies announced receipt of complete response letters due to the FDA's inability to complete required inspections for their applications. Regulatory authorities outside the U.S. may adopt similar restrictions or other policy measures in response to the ongoing COVID-19 pandemic and may experience delays in their regulatory activities.

Disruptions at the FDA and other government agencies caused by funding shortages or global health concerns could hinder their ability to hire, retain or deploy key leadership and other personnel, or otherwise prevent new or modified products from being developed, approved, or commercialized in a timely manner or at all, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, statutory, regulatory, and policy changes, the FDA's ability to hire and retain key personnel and accept the payment of user fees, and other events that may otherwise affect the FDA's ability to perform routine functions. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of other government agencies that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable. Disruptions at the FDA and other agencies may also slow the time necessary for biologics or modifications to approved biologics to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, including for 35 days beginning on December 22, 2018, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA, have had to furlough critical FDA employees and stop critical activities.

Healthcare and other reform legislation may increase the difficulty and cost for us and any collaborators we may have to obtain marketing approval of and commercialize any product candidates we may develop and affect the prices we, or they, may obtain.

In the United States and some foreign jurisdictions, there have been and continue to be ongoing efforts to implement legislative and regulatory changes regarding the healthcare system. Such changes could prevent or delay marketing approval of any product candidates that we may develop, restrict or regulate post-approval activities and affect our ability to profitably sell any product candidates for which we obtain marketing approval. Although we cannot predict what healthcare or other reform efforts will be successful, such efforts may result in more rigorous coverage criteria, in additional downward pressure on the price that we, or our future collaborators, may receive for any approved products or in other consequences that may adversely affect our ability to achieve or maintain profitability.

Within the United States, the federal government and individual states have aggressively pursued healthcare reform, as evidenced by the passing of the Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively the ACA, and the ongoing efforts to modify or repeal that legislation. The ACA substantially changed the way healthcare is financed by both governmental and private insurers and contains a number of provisions that affect coverage and reimbursement of drug products and/or that could potentially reduce the demand for pharmaceutical products such as increasing drug rebates under state Medicaid programs for brand name prescription drugs and extending those rebates to Medicaid managed care and assessing a fee on manufacturers and importers of brand name prescription drugs reimbursed under certain government programs, including Medicare and Medicaid. Other aspects of healthcare reform, such as expanded government enforcement authority and heightened standards that could increase compliance-related costs, could also affect our business. Modifications have been implemented under the former Trump administration and additional modifications or repeal may occur.

There have been executive, judicial and congressional challenges to certain aspects of the ACA. On February 10, 2021, the Biden administration withdrew the federal government's support for overturning the ACA. On June 17, 2021, the U.S. Supreme Court dismissed the most recent judicial challenge to the ACA brought by several states without specifically ruling on the constitutionality of the ACA. Prior to the Supreme Court's decision, President Biden issued an executive order that initiated a special enrollment period for purposes of obtaining health insurance coverage through the ACA marketplace, from February 15, 2021 through August 15, 2021. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. It is unclear how other healthcare reform measures of the Biden administration or other efforts, if any, to challenge, repeal or replace the ACA will impact our business. There is no assurance that federal or state health care reform will not adversely affect our future business and financial results, and we cannot predict how future federal or state legislative, judicial or administrative changes relating to healthcare reform will affect our business.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted. For example, on March 22, 2021, President Biden signed the American Rescue Plan Act of 2021 into law, which eliminates the statutory Medicaid drug rebate cap, currently set at 100 percent of a drug's average manufacturer price, for single source and innovator multiple source drugs, beginning January 1, 2024. On August 2, 2011, the U.S. Budget Control Act of 2011, among other things, included aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2030, with the exception of a temporary suspension that lasted from May 1, 2020 through March 31, 2022 due to the COVID-19 pandemic. Following the suspension, a 1% payment reduction began April 1, 2022, lasting through June 30, 2022. The 2% payment reduction resumed on July 1, 2022. On January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. The Bipartisan Budget Act, or BBA, also amended the ACA, effective January 1, 2019, by increasing the point-of-sale discount that is owed by

pharmaceutical manufacturers who participate in Medicare Part D and closing the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole."

Furthermore, the prices of prescription pharmaceuticals in the United States and foreign jurisdictions is subject to considerable legislative and executive actions and could impact the prices we obtain for our products, if and when licensed. At the U.S. federal level, the former Trump administration used several means to propose or implement drug pricing reform, including through federal budget proposals, executive orders and policy initiatives. For example, on July 24, 2020 and September 13, 2020, the Trump administration announced several executive orders related to prescription drug pricing that seek to implement several of the administration's proposals. As a result, the FDA released a final rule on September 24, 2020, effective November 30, 2020, providing guidance for states to build and submit importation plans for drugs from Canada. Furthermore, on November 20, 2020, the U.S. Department of Health and Human Services, or HHS, finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Medicare Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The implementation of the rule has been delayed by the Biden administration from January 1, 2022 to January 1, 2023 in response to ongoing litigation. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a new safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers, the implementation of which have also been delayed until January 1, 2023. On November 20, 2020, CMS, issued an interim final rule implementing the Trump administration's Most Favored Nation executive order, which would tie Medicare Part B payments for certain physician-administered drugs to the lowest price paid in other economically advanced countries, effective January 1, 2021. On December 28, 2020, the U.S. District Court in Northern California issued a nationwide preliminary injunction against implementation of the interim final rule. It is unclear whether the Biden administration will work to reverse these measures or pursue similar policy initiatives.

In addition to pricing regulations, reforms of regulatory approval frameworks may adversely affect our pricing strategy. For example, on July 9, 2021, President Biden issued an executive order directing the FDA to, among other things, continue to clarify and improve the approval framework for biosimilars, including the standards for interchangeability of biological products, facilitate the development and approval of biosimilar and interchangeable products, clarify existing requirements and procedures related to the review and submission of BLAs, and identify and address any efforts to impede biosimilar competition. Individual states in the United States have also become increasingly active in passing legislation and implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. It is difficult to predict the future legislative landscape in healthcare and the effect on our business, results of operations, financial condition and prospects. However, we expect that additional state and federal healthcare reform measures will be adopted in the future, particularly in light of the new presidential administration. Furthermore, it is possible that additional governmental action is taken in response to the ongoing COVID-19 pandemic. At the state level, legislatures have also been increasingly passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

In the European Union, similar political, economic and regulatory developments may affect our ability to profitably commercialize our potential product candidates. In markets outside of the United States and the European Union, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies. In some countries, particularly the countries of the European Union, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of any product candidates we may develop to other available

therapies. If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business could be harmed, possibly materially.

While we intend to seek designations for our potential product candidates with the FDA and comparable foreign regulatory authorities that are intended to confer benefits such as a faster development process or an accelerated regulatory pathway, there can be no assurance that we will successfully obtain such designations. In addition, even if one or more of our potential product candidates are granted such designations, we may not be able to realize the intended benefits of such designations.

The FDA and comparable foreign regulatory authorities offer certain designations for product candidates that are designed to encourage the research and development of product candidates that are intended to address conditions with significant unmet medical need. These designations may confer benefits such as additional interaction with regulatory authorities, a potentially accelerated regulatory pathway and priority review. However, there can be no assurance that we will successfully obtain such designations for any product candidates. In addition, while such designations could expedite the development or approval process, they generally do not change the standards for approval. Even if we obtain such designations for one or more of our potential product candidates, there can be no assurance that we will realize their intended benefits. For example, we may seek fast track designation for some of our potential product candidates. If a therapy is intended for the treatment of a serious or life threatening condition and the therapy nonclinical or clinical data demonstrates the potential to address unmet medical needs for this condition, the therapy sponsor may apply for fast track designation. The FDA has broad discretion whether or not to grant this designation, so even if we believe a particular product candidate is eligible for this designation, there can be no assurance that the FDA would decide to grant it. Even if we do receive fast track designation, we may not experience a faster development process, review or approval compared to conventional FDA procedures, and receiving a fast track designation does not provide assurance of ultimate FDA approval. In addition, the FDA may withdraw fast track designation if it believes that the designation is no longer supported by data from our clinical development program. Additionally, we may seek a breakthrough therapy designation for some of our potential product candidates. A breakthrough therapy is defined as a therapy that is intended, alone or in combination with one or more other therapies, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the therapy may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. For therapies that have been designated as breakthrough therapies, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control regimens. Therapies designated as breakthrough therapies by the FDA may also be eligible for accelerated approval. Designation as a breakthrough therapy is within the discretion of the FDA. Accordingly, even if we believe one of our potential product candidates meets the criteria for designation as a breakthrough therapy, the FDA may disagree and instead determine not to make such designation. In any event, the receipt of a breakthrough therapy designation for a product candidate may not result in a faster development process, review or approval compared to therapies considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if one or more of our potential product candidates qualify as breakthrough therapies, the FDA may later decide that such product candidates no longer meet the conditions for qualification. In addition, we may seek a regenerative medicine advanced therapy, or RMAT, designation for some of our potential product candidates. An RMAT is defined as cell therapies, therapeutic tissue engineering products, human cell and tissue products and combination products using any such therapies or products. Gene therapies, including genetically modified cells that lead to a durable modification of cells or tissues may meet the definition of a regenerative medicine therapy. The RMAT program is intended to facilitate efficient development and expedite review of RMATs, which are intended to treat, modify, reverse or cure a serious or life-threatening disease or condition. A new drug application or a biologics license application, or BLA, for an RMAT may be eligible for priority review or accelerated approval through (1) surrogate or intermediate endpoints reasonably likely to predict long-term clinical benefit or (2) reliance upon data obtained from a meaningful number of sites. Benefits of such designation also include early interactions with FDA to discuss any potential surrogate or intermediate endpoint to be used to support accelerated approval. A regenerative medicine therapy that is granted accelerated approval and is subject to post-approval requirements may fulfill such requirements through the submission of clinical evidence, clinical trials, patient registries or other sources of real world evidence, such as electronic health records; the collection of larger confirmatory data sets; or post-approval

monitoring of all patients treated with such therapy prior to its approval. RMAT designation is within the discretion of the FDA. Accordingly, even if we believe one of our potential product candidates meets the criteria for designation as a regenerative medicine advanced therapy, the FDA may disagree and instead determine not to make such designation. In any event, the receipt of RMAT designation for a product candidate may not result in a faster development process, review or approval compared to drugs considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if one or more of our potential product candidates qualify as for RMAT designation, the FDA may later decide that the biological products no longer meet the conditions for qualification.

In the future, we may also seek approval of product candidates under the FDA's accelerated approval pathway. A product may be eligible for accelerated approval if it is designed to treat a serious or life-threatening disease or condition and generally provides a meaningful advantage over available therapies upon a determination that the product candidate has an effect on a surrogate endpoint or intermediate clinical endpoint that is reasonably likely to predict clinical benefit or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, or IMM, that is reasonably likely to predict an effect on IMM or other clinical benefit. The FDA considers a clinical benefit to be a positive therapeutic effect that is clinically meaningful in the context of a given disease, such as IMM. For the purposes of accelerated approval, a surrogate endpoint is a marker, such as a laboratory measurement, radiographic image, physical sign or other measure that is thought to predict clinical benefit, but is not itself a measure of clinical benefit. An intermediate clinical endpoint is a clinical endpoint that can be measured earlier than an effect on irreversible morbidity or mortality that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit. The accelerated approval pathway may be used in cases in which the advantage of a new drug over available therapy may not be a direct therapeutic advantage, but is a clinically important improvement from a patient and public health perspective. If granted, accelerated approval is usually contingent on the sponsor's agreement to conduct, in a diligent manner, additional post-approval confirmatory studies to verity and describe the drug's clinical benefit. If the sponsor fails to conduct such studies in a timely manner or if such post-approval studies fail to verify the drug's predicted clinical benefit, the FDA may withdraw its approval of the drug on an expedited basis. In addition, for products being considered for accelerated approval, the FDA generally requires, unless otherwise informed by the Agency, that all advertising and promotional materials intended for dissemination or publication within 120 days of marketing approval be submitted to the Agency for review during the pre-approval review period. There can be no assurance that FDA would allow any of the product candidates we may develop to proceed on an accelerated approval pathway, and even if FDA did allow such pathway, there can be no assurance that such submission or application will be accepted or that any expedited development, review or approval will be granted on a timely basis, or at all. Moreover, even if we received accelerated approval, any post-approval studies required to confirm and verify clinical benefit may not show such benefit, which could lead to withdrawal of any approvals we have obtained. Receiving accelerated approval does not assure that the product's accelerated approval will eventually be converted to a traditional approval.

If the FDA determines that a product candidate offers a treatment for a serious condition and, if approved, the product would provide a significant improvement in safety or effectiveness, the FDA may designate the product candidate for priority review. A priority review designation means that the goal for the FDA to review an application is six months, rather than the standard review period of ten months. We may request priority review for the product candidates that we may develop. The FDA has broad discretion with respect to whether or not to grant priority review status to a product candidate, so even if we believe a particular product candidate is eligible for such designation or status, the FDA may decide not to grant it. Moreover, a priority review designation does not necessarily result in an expedited regulatory review or approval process or necessarily confer any advantage with respect to approval compared to conventional FDA procedures. Receiving priority review from the FDA does not guarantee approval within the six-month review cycle or at all.

In addition, in the European Union, we may seek to participate in the PRIME scheme for our product candidates. The PRIority MEdicines, or PRIME, scheme is intended to encourage drug development in areas of unmet medical need and provides accelerated assessment of products representing substantial innovation, where the marketing authorization application will be made through the centralized procedure in the European Union. Eligible products must target conditions for which where is an unmet medical need (there is no satisfactory method of diagnosis, prevention or treatment in the European Union or, if there is, the new medicine will bring a major

therapeutic advantage) and they must demonstrate the potential to address the unmet medical need by introducing new methods of therapy or improving existing ones. Many benefits accrue to sponsors of product candidates with PRIME designation, including but not limited to, early and proactive regulatory dialogue with the EMA, frequent discussions on clinical trial designs and other development program elements, and accelerated marketing authorization application assessment once a dossier has been submitted. There is no guarantee, however, that our product candidates would be deemed eligible for the PRIME scheme and even if we do participate in the PRIME scheme, where during the course of development a medicine no longer meets the eligibility criteria, support under the PRIME scheme may be withdrawn.

We may not be able to obtain orphan drug designation or exclusivity for our potential product candidates, and even if we do, that designation may not provide an expedited development or regulatory review or approval process and any orphan drug exclusivity we may receive for approved products may not prevent the FDA or the EMA from approving other competing products.

Under the Orphan Drug Act, the FDA may designate a product candidate as an orphan drug if it is a drug or biologic intended to treat a rare disease or condition. A similar regulatory scheme governs approval of orphan product candidates by the EMA in the European Union. Generally, if a product with an orphan drug designation subsequently receives the first marketing approval for the indication for which it has such designation, the product is entitled to a period of marketing exclusivity, which precludes the FDA or the EMA (as applicable) from approving another marketing application for another similar product candidate for the same orphan therapeutic indication for that time period. The applicable period is seven years in the United States and ten years in the European Union. The exclusivity period in the European Union can be reduced to six years if at the end of the fifth year it is determined that a product no longer meets the criteria for orphan drug designation, including if the product is sufficiently profitable so that market exclusivity is no longer justified.

In order for the FDA to grant orphan drug exclusivity to one of our potential product candidates, the agency must find that the product candidate is indicated for the treatment of a condition or disease that affects fewer than 200,000 individuals in the United States or that affects 200,000 or more individuals in the United States and for which there is no reasonable expectation that the cost of developing and making the product candidate available for the disease or condition will be recovered from sales of the product in the United States. The FDA may conclude that the condition or disease for which we seek orphan drug exclusivity does not meet this standard. Even if we obtain orphan drug exclusivity for a product candidate, that exclusivity may not effectively protect the product candidate from competition because different product candidates can be approved for the same condition. In addition, even after an orphan drug is approved, the FDA can subsequently approve the same product candidate for the same condition if the FDA concludes that the later product candidate is clinically superior in that it is shown to be safer, more effective or makes a major contribution to patient care compared with the product that has orphan exclusivity. Orphan drug exclusivity may also be lost if the FDA or EMA determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantity of the product to meet the needs of the patients with the rare disease or condition.

Our employees, principal investigators, consultants and commercial partners may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements and insider trading.

We are exposed to the risk of fraud or other misconduct by our employees, consultants and commercial partners, and, if we commence clinical trials, our principal investigators. Misconduct by these parties could include intentional failures to comply with FDA regulations or the regulations applicable in the European Union and other jurisdictions, provide accurate information to the FDA, the EMA and other regulatory authorities, comply with healthcare fraud and abuse laws and regulations in the United States and abroad, report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Such misconduct also could involve the improper use of information obtained in the course of clinical trials or interactions with the FDA, the EMA or other regulatory authorities, which could result in regulatory sanctions and cause serious harm to our reputation. We are also exposed to risks in connection with any insider

trading violations by employees or others affiliated with us. Upon the effectiveness of this registration statement, we will adopt a code of conduct and an insider trading policy applicable to all of our employees, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from government investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, financial condition, results of operations and prospects, including the imposition of significant fines or other sanctions.

Laws and regulations governing any international operations we may have in the future may preclude us from developing, manufacturing and selling certain product candidates outside of the United States and require us to develop and implement costly compliance programs.

We are subject to numerous laws and regulations in each jurisdiction outside the United States in which we operate. The creation, implementation and maintenance of international business practices compliance programs is costly and such programs are difficult to enforce, particularly where reliance on third parties is required.

The Foreign Corrupt Practices Act, or FCPA, prohibits any U.S. individual or business from paying, offering, authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with certain accounting provisions requiring the company to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations. The anti-bribery provisions of the FCPA are enforced primarily by the Department of Justice. The SEC is involved with enforcement of the books and records provisions of the FCPA.

Similarly, the U.K. Bribery Act 2010 has extra-territorial effect for companies and individuals having a connection with the United Kingdom. The U.K. Bribery Act prohibits inducements both to public officials and private individuals and organizations. Compliance with the FCPA and the U.K. Bribery Act is expensive and difficult, particularly in countries in which corruption is a recognized problem. In addition, the FCPA presents particular challenges in the pharmaceutical industry, because, in many countries, hospitals are operated by the government, and doctors and other hospital employees are considered foreign officials. Certain payments to hospitals in connection with clinical trials and other work have been deemed to be improper payments to government officials and have led to FCPA enforcement actions.

Various laws, regulations and executive orders also restrict the use and dissemination outside of the United States, or the sharing with certain non-U.S. nationals, of information classified for national security purposes, as well as certain products and technical data relating to those products. Our expansion outside of the United States has required, and will continue to require, us to dedicate additional resources to comply with these laws, and these laws may preclude us from developing, manufacturing or selling certain drugs and drug candidates outside of the United States, which could limit our growth potential and increase our development costs. The failure to comply with laws governing international business practices may result in substantial penalties, including suspension or debarment from government contracting. Violation of the FCPA can result in significant civil and criminal penalties. Indictment alone under the FCPA can lead to suspension of the right to do business with the U.S. government until the pending claims are resolved. Conviction of a violation of the FCPA can result in long-term disqualification as a government contractor. The termination of a government contract or relationship as a result of our failure to satisfy any of our obligations under laws governing international business practices would have a negative impact on our operations and harm our reputation and ability to procure government contracts. The SEC also may suspend or bar issuers from trading securities on U.S. exchanges for violations of the FCPA's accounting provisions.

We are subject to stringent laws, rules, regulations, policies, standards and contractual obligations related to data privacy and security and changes in such laws, rules, regulations, policies, standards and contractual obligations could adversely affect our business.

We are subject to data privacy and protection laws, rules, regulations, policies, standards and contractual obligations that apply to the collection, transmission, storage, use, disclosure, transfer, maintenance and other processing of sensitive, personal and personally-identifying information, which, among other things, impose certain requirements relating to the privacy, security, transmission and other processing of personal information, including comprehensive regulatory systems in the United States and European Union. The legislative and regulatory landscape for privacy and data protection continues to evolve in jurisdictions worldwide, and there has been an increasing focus on privacy and data protection issues with the potential to affect our business. However, our data privacy program is in its early stages and we have not yet assessed the applicability of and our compliance with data privacy-related laws, rules and regulations. As a result, we cannot guarantee that we are and have been in compliance with all applicable data privacy and protection laws, rules regulations, policies and standards, and we may need to expend significant resources to implement privacy compliance measures. Additionally, we rely on certain third-party vendors to process certain confidential, sensitive or personal information on our behalf. Failure by us or our third-party vendors to comply with any of these laws, rules, regulations, contractual obligations or standards could result in notification obligations, enforcement actions, regulatory investigations or inquiries, significant fines, imprisonment of company officials and public censure, litigation and claims for damages by affected individuals, customers or business partners, damage to our reputation and loss of goodwill, any of which could have a material adverse effect on our business, financial condition, results of operations or prospects.

There are numerous U.S. federal and state laws, rules and regulations related to the privacy and security of personal information. In particular, regulations promulgated pursuant to the Health Insurance Portability and Accountability Act of 1996, or HIPAA, establish privacy and security standards that limit the use and disclosure of individually identifiable health information, or protected health information, and require the implementation of administrative, physical and technological safeguards to protect the privacy of protected health information and ensure the confidentiality, integrity and availability of electronic protected health information. Additionally, laws in all 50 states require businesses to provide notice to customers whose personally identifiable information has been disclosed as a result of a data breach. Determining whether personal information has been handled in compliance with applicable privacy standards and our contractual obligations can be complex and may be subject to changing interpretation.

If we are unable to properly protect the privacy and security of personal information, we could be alleged or actually found to have breached our contracts. Furthermore, if we fail to comply with applicable privacy laws, including applicable HIPAA privacy and security standards, we could face significant civil and criminal penalties. HHS has the discretion to impose penalties without attempting to resolve violations through informal means, and such enforcement activity can result in financial liability and reputational harm, and responses to such enforcement activity can consume significant internal resources. In addition, state attorneys general are authorized to bring civil actions seeking either injunctions or damages in response to violations that threaten the privacy of state residents. We cannot be sure how these laws, rules and regulations will be interpreted, enforced or applied to our operations. In addition to the risks associated with enforcement activities and potential contractual liabilities, our ongoing efforts to comply with evolving laws, rules and regulations at the international, federal and state level may be costly and require ongoing modifications to our policies, procedures and systems.

We make public statements about our use, collection, disclosure and other processing of personal information through our privacy policies, information provided on our website and press statements. Although we endeavor to comply with our public statements and documentation, we may at times fail to do so or be alleged to have failed to do so. The publication of our privacy policies and other statements that provide promises and assurances about data privacy and security can subject us to potential government or legal action if they are found to be deceptive, unfair or misrepresentative of our actual practices.

Data privacy remains an evolving landscape at both the domestic and international level, with new laws, rules and regulations coming into effect and continued legal challenges, and our efforts to comply with the evolving data protection laws, rules and regulations may unsuccessful. It is possible that these laws, rules and regulations may

be interpreted and applied in a manner that is inconsistent with our practices. The laws are not consistent, and compliance in the event of a widespread data breach is costly and time-consuming. States are also frequently amending existing laws, requiring attention to frequently changing regulatory requirements. We must devote significant resources to understanding and complying with this changing landscape. Failure by us or our third-party vendors to comply with laws, rules and regulations regarding data privacy and protection would expose us to risk of enforcement actions taken by data protection authorities and carries with it the potential for significant penalties if we are found to be non-compliant. Similarly, failure to comply with federal and state laws, rules and regulations in the United States regarding privacy and security of personal information could expose us to penalties under such laws, rules and regulations. Any such failure to comply with data protection and privacy laws, rules and regulations could result in significant government-imposed fines or orders requiring that we change our practices, claims for damages or other liabilities, regulatory investigations and enforcement action, litigation and significant costs for remediation, any of which could adversely affect our business. Even if we are not determined to have violated these laws, rules or regulations, government investigations into these issues typically require the expenditure of significant resources and generate negative publicity, which could harm our business, financial condition, results of operations or prospects.

Risks Related To Employee Matters, Managing Growth and Information Technology

Our future success depends on our ability to retain our President and Chief Executive Officer, our Co-Founders, our Chief Scientific Officer, our Chief Technical Officer and other key executives and to attract, retain and motivate qualified personnel.

We are highly dependent on Keith Gottesdiener, our President and Chief Executive Officer, David R. Liu and Andrew Anzalone, our Co-Founders, Jeremy Duffield, our Chief Scientific Officer, Ann Lee, our Chief Technical Officer, as well as the other principal members of our management and scientific teams. Dr. Gottesdiener, Dr. Liu, Dr. Anzalone and Dr. Lee and such other principal members are engaged "at will," meaning we or they may terminate the relationship at any time. We do not maintain "key person" insurance for any of our executives or other employees. The loss of the services of any of these persons could impede the achievement of our research, development and commercialization objectives.

Following this offering, Dr. Liu will continue to serve on our Scientific Advisory Board and as our paid consultant and will retain his position and affiliation with Harvard, HHMI and Broad Institute. Furthermore, Dr. Liu is one of our principal stockholders. Dr. Liu's positions at Harvard, HHMI and Broad Institute could result in, or may create the appearance of, conflicts of interest related to our license of intellectual property rights from Harvard , HHMI and Broad Institute and other contractual relationships we may enter into from time to time with Harvard, HHMI and Broad Institute. For more information, see "Business —Team— Relationship with David Liu, Ph.D."

Recruiting and retaining qualified scientific, clinical, manufacturing and sales and marketing personnel will also be critical to our success. In addition, our company-building efforts and establishment of a company culture will also be important to developing an innovative company in a high-evolving area. We may not be able to succeed in these efforts to build Prime Medicine as an attractive and exciting place to build a career or to attract and retain these types of personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors, including our scientific co-founders, may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. The inability to recruit, or loss of services of, certain executives, key employees, consultants or advisors, may impede the progress of our research, development and commercialization objectives and have a material adverse effect on our business, financial condition, results of operations and prospects.

We expect to expand our research, development, delivery, manufacturing, commercialization, regulatory and future sales and marketing capabilities over time, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

As of June 30, 2022, we had 137 full-time employees, of which 75 have M.D. or Ph.D. degrees. Within our workforce, 115 employees are engaged in research and development and 22 are engaged in business development, finance, legal, and general management and administration. In connection with the growth and advancement of our pipeline and becoming a public company, we expect to increase the number of our employees and the scope of our operations, particularly in the areas of drug development, regulatory affairs and sales and marketing. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities, and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expected expansion of our operations or recruit and train additional qualified personnel. Moreover, the expected physical expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

As a growing biotechnology company, we are actively pursuing new platforms and product candidates in many therapeutic areas and across a wide range of diseases. Successfully developing product candidates for and fully understanding the regulatory and manufacturing pathways to all of these therapeutic areas and disease states requires a significant depth of talent, resources and corporate processes in order to allow simultaneous execution across multiple areas. Due to our limited resources, we may not be able to effectively manage this simultaneous execution and the expansion of our operations or recruit and train additional qualified personnel. This may result in weaknesses in our infrastructure, give rise to operational mistakes, legal or regulatory compliance failures, loss of business opportunities, loss of employees and reduced productivity among remaining employees. The physical expansion of our operations may lead to significant costs and may divert financial resources from other projects, such as the development of our potential product candidates. If our management is unable to effectively manage our expected development and expansion, our expenses may increase more than expected, our ability to generate or increase our revenue could be reduced and we may not be able to implement our business strategy. Our future financial performance and our ability to compete effectively and commercialize any product candidates we may develop will depend in part on our ability to effectively manage the future development and expansion of our company.

The administrator of the 2019 Plan is authorized to exercise its discretion to effect the repricing of stock options and stock appreciation rights and there may be adverse consequences to our business if the administrator of the 2019 Plan exercises such discretion.

Pursuant to our 2019 Stock Option and Grant Plan, or the 2019 Plan, we are authorized to grant equity awards, including stock options and stock appreciation rights, to our employees, directors and consultants. The administrator of the 2019 Plan (which we expect will be, as is customary, our compensation committee) is authorized to exercise its discretion to reduce the exercise price of stock options or stock appreciation rights or effect the repricing of such awards. Although we do not anticipate needing to exercise this discretion in the near term, or at all, if the administrator of the 2019 Plan were to exercise such discretion without seeking prior stockholder approval, certain proxy advisory firms or institutional investors may be unsupportive of such actions and publicly criticize our compensation practices, and proxy advisory firms may recommend an “against” or “withhold” vote for members of our compensation committee. In addition, if we are required to hold an advisory vote on named executive officer compensation (known as the “say-on-pay” vote) at the time of, or subsequent to, any such repricing, it is likely that proxy advisory firms would issue an “against” recommendation on our say on pay vote and institutional investors may not be supportive of our say-on-pay vote. If proxy advisory firms or institutional investors are successful in aligning their views with our broader stockholder base and we are required to make changes to the composition of our board and its committees, or if we need to make material changes to our compensation and corporate governance practices, our business might be disrupted and our stock price might be negatively impacted. Even if we are able to successfully rationalize the exercise of such discretionary power, defending against any “against” or “withhold” recommendation for members of our compensation committee, any “against” recommendation on our say on pay

vote or public criticism could be distracting to management, and responding to such positions from such firms or investors, even if remedied, can be costly and time-consuming.

In addition, if the administrator of the 2019 Plan does determine to reprice stock options or stock appreciation rights, even absent negative reactions from proxy advisory firms and institutional investors, management attention may be diverted and we could incur significant costs, including accounting and administrative costs and attorneys' fees. We may also be required to recognize incremental compensation expense as a result of such repricing. These actions could cause our stock price to decrease and experience periods of increased volatility, which could result in material adverse consequences to our business.

Our board of directors has determined not to make any further awards under the 2019 Plan following the closing of this offering.

Our internal computer and information technology systems, or those of our third-party vendors, collaborators, contractors, consultants or other third parties, may fail or suffer security incidents or data breaches, which could result in a material disruption of our product development programs, compromise confidential, sensitive or personal information related to our business or prevent us from accessing critical information, potentially exposing us to liability or otherwise adversely affecting our business.

Our internal computer and information technology systems and those of our current and any future third-party vendors, collaborators, contractors, consultants or other third parties, are vulnerable to damage or interruption from, among other things, computer viruses, computer hackers, phishing attacks, ransomware, malware, social engineering, malicious code, employee theft, fraud, misconduct or misuse, denial-of-service attacks, sophisticated nation-state and nation-state-supported actors, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. While we seek to protect our information technology systems from system failure, accident and security breach, we have in the past and may in the future experience phishing and other security incidents which could result in a disruption of our development programs and our business operations, whether due to a loss of our trade secrets or other proprietary, personal or confidential information or other disruptions. For example, the loss of clinical trial data from future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data.

Controls employed by our information technology department and other third parties could prove inadequate, and our ability to monitor such third parties' data security practices is limited. Due to applicable laws, rules, regulations and standards or contractual obligations, we may be held responsible for any information security failure or cybersecurity attack attributed to our third-party vendors as they relate to the information we share with them.

If we were to experience a cybersecurity breach or other security incident relating to our information systems or data, the costs, time and effort associated with the investigation, remediation and potential notification of the breach to counterparties, regulators and data subjects could be material. We may incur significant costs in an effort to detect and prevent security incidents, and we may face increased costs and requirements to expend substantial resources in the event of an actual or perceived security incident. In addition, techniques used to sabotage or to obtain unauthorized access to networks in which data is stored or through which data is transmitted change frequently, become more complex over time and generally are not recognized until launched against a target. As a result, we and our third-party vendors may be unable to anticipate these techniques or implement adequate preventative measures quickly enough to prevent either an electronic intrusion into our systems or services or a compromise of critical information. We cannot guarantee that we will be able to detect or prevent any such incidents, and, our remediation efforts may not be successful or timely. Our efforts to improve security and protect data from compromise may also identify previously undiscovered instances of data breaches or other cybersecurity incidents. If we do not allocate and effectively manage the resources necessary to build and sustain the proper technology and cybersecurity infrastructure, we could suffer significant business disruption, including transaction errors, supply chain or manufacturing interruptions, processing inefficiencies, data loss or the loss of or damage to intellectual property or other proprietary, personal or confidential information. Additionally, we do not currently maintain cybersecurity insurance, and any insurance we may maintain in the future against the risk of this type of loss in the future may not be sufficient to cover actual losses, or may not apply to the circumstances relating to any particular loss.

To the extent that any disruption or security breach were to result in a loss of, or damage to, our or our third-party vendors', collaborators', contractors', consultants' or other third parties' data, including personal data, or applications or inappropriate disclosure, loss, destruction or alteration of, or access to, confidential, personal or proprietary information, we could incur significant liability including litigation exposure, substantial penalties and fines, we could become the subject of regulatory action, inquiry or investigation, our competitive position could be harmed, we could incur significant reputational damage and the further development and commercialization of any product candidates we may develop could be delayed. Any of the above could have a material adverse effect on our business, financial condition, results of operations or prospects.

Risks Related To This Offering and Ownership of Our Common Stock

We do not know whether a market will develop for our common stock or what the market price of our common stock will be, and, as a result, it may be difficult for you to sell your shares of our common stock.

Before this offering, there was no public trading market for our common stock. If a market for our common stock does not develop or is not sustained, it may be difficult for you to sell your shares of common stock at an attractive price or at all. We cannot predict the prices at which our common stock will trade. It is possible that in one or more future periods our results of operations may be below the expectations of public market analysts and investors, and, as a result of these and other factors, the price of our common stock may fall.

You will incur immediate and substantial dilution as a result of this offering.

If you purchase common stock in this offering, you will incur immediate and substantial dilution of $ per share, representing the difference between the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and our pro forma as adjusted net tangible book value per share as of June 30, 2022 after giving effect to this offering. Moreover, we issued options in the past that allow the holders to acquire common stock at prices significantly below the assumed initial public offering price. As of June 30, 2022, there were 11,171,720 shares subject to outstanding options with a weighted-average exercise price of $1.55 per share. To the extent that these outstanding options are ultimately exercised, the underwriters exercise their option to purchase additional shares or further vesting of restricted stock occurs, you will incur further dilution. For a further description of the dilution you will experience immediately after this offering, see "Dilution."

If securities analysts do not publish research or reports about our business or if they publish negative evaluations of our stock, the price of our stock could decline.

The trading market for our common stock will rely in part on the research and reports that industry or financial analysts publish about us or our business. We do not currently have and may never obtain research coverage by industry or financial analysts. If no or few analysts commence coverage of us, the trading price of our stock would likely decrease. Even if we do obtain analyst coverage, if one or more of the analysts covering our business downgrade their evaluations of our stock, the price of our stock could decline. If one or more of these analysts cease to cover our stock, we could lose visibility in the market for our stock, which in turn could cause our stock price to decline.

Future sales of our common stock in the public market could cause our stock price to fall.

Our stock price could decline as a result of sales of a large number of shares of our common stock after this offering or the perception that these sales could occur. These sales, or the possibility that these sales may occur, also might make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate.

Upon completion of this offering, shares of our common stock will be outstanding (or shares of common stock will be outstanding assuming exercise in full of the underwriters' option to purchase additional shares), based on our shares outstanding as of . All shares of common stock expected to be sold in this offering will be freely tradable without restriction or further registration under the Securities Act of 1933, as amended, or Securities Act, unless held by our "affiliates," as that term is defined in Rule 144 under the Securities

Act. The resale of the remaining shares, or percent of our outstanding shares after this offering, is currently prohibited or otherwise restricted as a result of securities law provisions, market standoff agreements entered into by our stockholders with us or lock-up agreements entered into by our stockholders with the underwriters. However, subject to applicable securities law restrictions and excluding shares of restricted stock that will remain unvested, these shares will be able to be sold in the public market beginning 180 days after the date of this prospectus. Shares of unvested restricted stock that were issued and outstanding as of the date of this prospectus will become available for sale immediately upon the vesting of such shares, as applicable, and the expiration of any applicable market stand-off or lock-up agreements. Shares issued upon the exercise of stock options pursuant to future awards that may be granted under our equity incentive plans or pursuant to future awards granted under those plans will become available for sale in the public market to the extent permitted by the provisions of applicable vesting schedules, any applicable market stand-off and lock-up agreements and Rule 144 and Rule 701 under the Securities Act. For more information see the section entitled "Shares Eligible for Future Sale" included elsewhere in this prospectus.

Upon completion of this offering, the holders of approximately shares, or percent, of our common stock, will have rights, subject to some conditions, to require us to file registration statements covering the sale of their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. We also intend to register the offer and sale of all shares of common stock that we may issue under our equity compensation plans. Once we register the offer and sale of shares for the holders of registration rights and shares to be issued under our equity incentive plans, they can be freely sold in the public market upon issuance, subject to the lock-up agreements described in the section entitled "Underwriting" included elsewhere in this prospectus.

In addition, in the future, we may issue additional shares of common stock or other equity or debt securities convertible into common stock in connection with a financing, acquisition, litigation settlement, employee arrangements or otherwise. Any such issuance could result in substantial dilution to our existing stockholders and could cause our stock price to decline.

Insiders will continue to have substantial influence over us after this offering, which could limit your ability to affect the outcome of key transactions, including a change of control.

After this offering, our directors and executive officers and their affiliates will beneficially own shares representing approximately percent of our outstanding common stock. As a result, these stockholders, if they act together, will be able to influence our management and affairs and all matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. This concentration of ownership may have the effect of delaying or preventing a change in control of our company and might affect the market price of our common stock.

The market price of our common stock may be volatile, which could result in substantial losses for investors purchasing shares in this offering.

The initial public offering price for our common stock was determined through negotiations with the underwriters. This initial public offering price may vary from the market price of our common stock after the offering. As a result, you may not be able to sell your common stock at or above the initial public offering price. The market price for our common stock may be influenced by those factors discussed in this "Risk Factors" section and many others, some of which may include:

- the success of existing or new competitive product candidates or technologies;
- the timing and results of preclinical studies and clinical trials for any product candidates we may develop;
- failure or discontinuation of any of our development and research programs;
- results of any preclinical studies, clinical trials or regulatory approvals of product candidates of our competitors, or announcements about new research programs or product candidates of our competitors;

- developments or changing views regarding the use of genetic therapies, including those that involve gene editing;
- commencement or termination of collaborations for our product development and research programs;
- regulatory or legal developments in the United States and other countries;
- developments or disputes concerning patent applications, issued patents or other intellectual property or proprietary rights;
- the recruitment or departure of key personnel;
- the level of expenses related to any of our research programs, clinical development programs or product candidates that we may develop;
- the results of our efforts to develop product candidates;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts, if any, that cover our stock;
- announcement or expectation of additional financing efforts;
- sales of our common stock by us, our insiders or other stockholders;
- expiration of market stand-off or lock-up agreements;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors;
- the ongoing COVID-19 pandemic, natural disasters or major catastrophic events;
- general economic, industry and market conditions; and
- the other factors described in this "Risk Factors" section.

In recent years, the stock market in general and the market for pharmaceutical and biotechnology companies in particular, has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to changes in the operating performance of the companies whose stock is experiencing those price and volume fluctuations. In particular, in relation to uncertainty around inflation and the U.S. Federal Reserve's measures to slow inflation, the stock market has been exceptionally volatile. Market and industry factors may seriously affect the market price of our common stock, regardless of our actual operating performance. These fluctuations may be even more pronounced in the trading market for our stock shortly following this offering. Following periods of such volatility in the market price of a company's securities, securities class action litigation has often been brought against that company. Because of the potential volatility of our stock price, we may become the target of securities litigation in the future.

Securities litigation could result in substantial costs and divert management's attention and resources from our business.

We are an "emerging growth company" and a "smaller reporting company," and the reduced disclosure requirements applicable to emerging growth companies and smaller reporting companies may make our common stock less attractive to investors.

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and may remain an emerging growth company for up to five years. For so long as we remain an emerging growth company, we are permitted and plan to rely on exemptions from certain disclosure requirements

that are applicable to other public companies that are not emerging growth companies. These exemptions include not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, or SOX Section 404, not being required to comply with any requirement for a supplement to the auditor's report providing additional information about the audit and the financial statements, reduced disclosure obligations regarding executive compensation and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. As a result, the information we provide stockholders will be different than the information that is available with respect to other public companies. In this prospectus, we have not included all of the executive compensation related information that would be required if we were not an emerging growth company.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of this exemption, and, therefore, while we are an emerging growth company we will not be subject to the new or revised accounting standards at the same time that they become applicable to other public companies that are not emerging growth companies. As a result of this election, our financial statements may not be comparable to those of other public companies that comply with new or revised accounting pronouncements as of public company effective dates. We may choose to early adopt any new or revised accounting standards whenever such early adoption is permitted for private companies.

We are also a "smaller reporting company," meaning that the market value of our stock held by non-affiliates plus the proposed aggregate amount of gross proceeds to us as a result of this offering is less than $700 million and our annual revenue is less than $100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company after this offering if either (i) the market value of our stock held by non-affiliates is less than $250 million or (ii) our annual revenue is less than $100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than $700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

We cannot predict whether investors will find our common stock less attractive if we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

We will incur increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives and corporate governance practices.

As a public company, and particularly after we are no longer an "emerging growth company," we will incur significant legal, accounting and other expenses that we did not incur as a private company. The Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of The Nasdaq Global Market and other applicable securities rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. We expect that we will need to hire additional accounting, finance and other personnel in connection with our becoming, and our efforts to comply with the requirements of being, a public company. Our management and other personnel will need to devote a substantial amount of time towards maintaining compliance with these requirements. These requirements will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we expect that the rules and regulations applicable to us as a public company may make it more difficult and more expensive for us to obtain director and officer liability insurance, which could make it more difficult for us to attract and retain qualified members of our board of directors. We are currently evaluating these rules and regulations and cannot predict or estimate the amount of additional costs we may incur or the timing of such costs. These rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new

guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

Pursuant to SOX Section 404, we will be required to furnish a report by our management on our internal control over financial reporting beginning with our second filing of an Annual Report on Form 10-K with the SEC after we become a public company. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with SOX Section 404 within the prescribed period, we will be engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants, adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting. Despite our efforts, there is a risk that we will not be able to conclude, within the prescribed timeframe or at all, that our internal control over financial reporting is effective as required by SOX Section 404. This could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our financial statements.

We do not expect to pay any dividends for the foreseeable future. Investors in this offering may never obtain a return on their investment.

You should not rely on an investment in our common stock to provide dividend income. We do not anticipate that we will pay any dividends to holders of our common stock in the foreseeable future. Instead, we plan to retain any earnings to maintain and expand our existing operations. In addition, any future credit facility may contain terms prohibiting or limiting the amount of dividends that may be declared or paid on our common stock. Accordingly, investors must rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize any return on their investment. As a result, investors seeking cash dividends should not purchase our common stock.

General Risks Factors

Changes in tax laws or in their implementation or interpretation may adversely affect our business and financial condition.

The rules dealing with U.S. federal, state and local income taxation are constantly under review by persons involved in the legislative process and by the Internal Revenue Service and the U.S. Treasury Department. Changes to tax laws (which changes may have retroactive application) could adversely affect our business and our financial condition. In recent years, many such changes have been made and changes are likely to continue to occur in the future. We cannot predict whether, when, in what form or with what effective dates, tax laws, regulations and rulings may be enacted, promulgated or decided or whether they could increase our tax liability or require changes in the manner in which we operate in order to minimize increases in our tax liability.

If we fail to establish and maintain proper and effective internal control over financial reporting, our operating results and our ability to operate our business could be harmed.

Ensuring that we have adequate internal financial and accounting controls and procedures in place so that we can produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with generally accepted accounting principles. In connection with this offering, we intend to begin the process of documenting, reviewing and improving our internal controls and procedures for compliance with Section 404 of the Sarbanes-Oxley Act of 2002, or SOX, which will require annual management assessment of the effectiveness of our internal control over financial reporting.

Implementing any appropriate changes to our internal controls may distract our officers and employees, entail substantial costs to modify our existing processes and take significant time to complete. These changes may not,

however, be effective in maintaining the adequacy of our internal controls, and any failure to maintain that adequacy or consequent inability to produce accurate financial statements on a timely basis could increase our operating costs and harm our business. In addition, investors' perceptions that our internal controls are inadequate or that we are unable to produce accurate financial statements on a timely basis may harm our common share price and make it more difficult for us to effectively market and sell our service to new and existing customers.

We have identified a material weakness in our internal control over financial reporting. If we fail to remediate this material weakness or identify additional material weaknesses in the future or otherwise fail to maintain effective internal control over financial reporting in the future, we may not be able to accurately report our financial condition or results of operations which may adversely affect investor confidence in us and, as a result, the value of our common stock.

In preparing our financial statements as of and for the years ended December 31, 2019 and 2020, we identified a material weakness in our internal control over financial reporting that existed as of the end of those periods, and which remains unremediated as of June 30, 2022. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis.

Specifically, we did not design and maintain effective controls over segregation of duties commensurate with our financial reporting requirements, as certain personnel have access to edit financial information without an independent review. This material weakness did not result in a misstatement to the consolidated financial statements. However, this material weakness could result in a misstatement of substantially all of the financial statement accounts and disclosures that would result in a material misstatement to the annual or interim consolidated financial statements that would not be prevented or detected.

We cannot assure you that we will be successful in fully remediating this material weakness, or that additional material weaknesses in our internal control over financial reporting will not be identified in the future. Our failure to design, implement and maintain effective internal control over financial reporting could result in misstatements in our financial statements that could result in a restatement of our financial statements, and could cause us to fail to meet our reporting obligations.

The process of designing and implementing effective internal control over financial reporting is a continuous effort that requires us to anticipate and react to changes in our business and the economic and regulatory environments and to expend significant resources that are adequate to satisfy our reporting obligations. We have not performed a formal evaluation of our internal control over financial reporting, as required by the rules and regulations of the SEC, nor are we required to have an independent registered public accounting firm perform an audit of our internal control over financial reporting as of any balance sheet date or for any period reported in our financial statements. Presently, we are not an accelerated filer, as such term is defined by Rule 12b-2 of the Exchange Act, and therefore, our management is not presently required to perform an annual assessment of the effectiveness of our internal control over financial reporting. Our independent registered public accounting firm will first be required to attest to the effectiveness of our internal control over financial reporting for our Annual Report on Form 10-K for the first year we are no longer an "emerging growth company" or a "smaller reporting company". Failure to comply with the rules and regulations of the SEC could potentially subject us to sanctions or investigations by the SEC, the applicable stock exchange or other regulatory authorities, which would require additional financial and management resources. We have begun the process of compiling the system and processing documentation necessary to perform the evaluation needed to comply with the rules and regulations of the SEC in the future, but we may not be able to complete our evaluation, testing and any required remediation in a timely fashion. An independent assessment of the effectiveness of our internal control over financial reporting could detect deficiencies in our internal control over financial reporting that our management's assessment might not. Undetected material weaknesses in our internal control over financial reporting could lead to financial statement restatements and require us to incur the expense of remediation.

Provisions in our third amended and restated certificate of incorporation, our amended and restated by-laws and Delaware law may have anti-takeover effects that could discourage an acquisition of us by others, even if an acquisition would be beneficial to our stockholders, and may prevent attempts by our stockholders to replace or remove our current management.

Our third amended and restated certificate of incorporation, amended and restated by-laws and Delaware law contain provisions that may have the effect of discouraging, delaying or preventing a change in control of us or changes in our management that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. Our third amended and restated certificate of incorporation, which will become effective immediately prior to the closing of this offering, and by-laws, which will become effective upon the effectiveness of the registration statement of which this prospectus is a part, include provisions that:

- authorize "blank check" preferred stock, which could be issued by our board of directors without stockholder approval and may contain voting, liquidation, dividend and other rights superior to our common stock;
- create a classified board of directors whose members serve staggered three-year terms;
- specify that special meetings of our stockholders can be called only by our board of directors;
- prohibit stockholder action by written consent;
- establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our board of directors;
- provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even though less than a quorum;
- provide that our directors may be removed only for cause;
- specify that no stockholder is permitted to cumulate votes at any election of directors;
- expressly authorized our board of directors to make, alter, amend or repeal our amended and restated by-laws; and
- require supermajority votes of the holders of our common stock to amend specified provisions of our third amended and restated certificate of incorporation and amended and restated by-laws.

These provisions, alone or together, could delay or prevent hostile takeovers and changes in control or changes in our management. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock.

In addition, because we are incorporated in the State of Delaware, we are governed by the provisions of Section 203 of the General Corporation Law of the State of Delaware, or the DGCL, which prohibits a person who owns in excess of 15 percent of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15 percent of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

Any provision of our third amended and restated certificate of incorporation, amended and restated by-laws or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our common stock and could also affect the price that some investors are willing to pay for our common stock.

Our amended and restated bylaws that will become effective upon the effectiveness of our registration statement designate specific courts as the exclusive forum for certain litigation that may be initiated by our stockholders, which could limit stockholders' ability to obtain a favorable judicial forum for disputes with us.

Pursuant to our amended and restated bylaws that will become effective upon the effectiveness of our registration statement, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware is the sole and exclusive forum for any state law claims for (i) any derivative action or proceeding brought on our behalf; (ii) any action asserting a claim of or based on a breach of a fiduciary duty owed by any director, officer or other employee of ours to us or our stockholders; (iii) any action asserting a claim pursuant to any provision of the DGCL, our third amended and restated certificate of incorporation or our amended and restated bylaws or as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware; or (iv) any action asserting a claim governed by the internal affairs doctrine, or the Delaware Forum Provision. The Delaware Forum Provision will not apply to any causes of action arising under the Securities Act or the Securities Exchange Act of 1934, as amended, or the Exchange Act. Our amended and restated bylaws further provide that unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States shall be the sole and exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, the Exchange Act, the respective rules and regulations promulgated thereunder or the Federal Forum Provision. In addition, our amended and restated bylaws provide that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock is deemed to have notice of and consented to the Delaware Forum Provision and the Federal Forum Provision; provided, however, that stockholders cannot and will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

We recognize that the Delaware Forum Provision and the Federal Forum Provision in our amended and restated bylaws may impose additional litigation costs on stockholders in pursuing any such claims, particularly if the stockholders do not reside in or near the State of Delaware. Additionally, the forum selection clauses in our amended and restated bylaws may limit our stockholders' ability to bring a claim in a judicial forum that they find favorable for disputes with us or our directors, officers or employees, which may discourage the filing of lawsuits against us and our directors, officers and employees, even though an action, if successful, might benefit our stockholders. In addition, while the Delaware Supreme Court ruled in March 2020 that federal forum selection provisions purporting to require claims under the Securities Act be brought in federal court are "facially valid" under Delaware law, there is uncertainty as to whether other courts will enforce our Federal Forum Provision. If the Federal Forum Provision is found to be unenforceable, we may incur additional costs associated with resolving such matters. The Federal Forum Provision may also impose additional litigation costs on stockholders who assert that the provision is not enforceable or invalid. The Court of Chancery of the State of Delaware and the federal district courts of the United States may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments may be more or less favorable to us than our stockholders.

We have wide discretion in the use of the net proceeds from this offering and may not use them effectively.

We cannot specify with certainty the particular uses of the net proceeds we will receive from this offering. Our management will have wide discretion in the application of the net proceeds, including for any of the purposes described in "Use of Proceeds." Accordingly, you will have to rely upon the judgment of our management with respect to the use of the proceeds, with only limited information concerning management's specific intentions. Our management may spend a portion or all of the net proceeds from this offering in ways that our stockholders may not desire or that may not yield a favorable return. The failure by our management to apply these funds effectively could harm our business, financial condition, results of operations and prospects. Pending their use, we may invest the net proceeds from this offering in a manner that does not produce income or that loses value.

Unfavorable global economic conditions could adversely affect our business, financial condition or results of operations.

Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. A severe or prolonged economic downturn or additional global financial crises could result

in a variety of risks to our business, including weakened demand for any product candidates we develop or our ability to raise additional capital when needed on acceptable terms, if at all. A weak or declining economy could also strain our suppliers, possibly resulting in supply disruption. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

Our operations are vulnerable to interruption by disasters, terrorist activity, pandemics and other events beyond our control, which could harm our business.

Our facilities are located in Massachusetts. We have not undertaken a systematic analysis of the potential consequences to our business and financial results from a major flood, power loss, terrorist activity, pandemics or other disasters and do not have a recovery plan for such events. In addition, we do not carry sufficient insurance to compensate us for actual losses from interruption of our business that may occur, and any losses or damages incurred by us could harm our business. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the sections entitled "Prospectus Summary," "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Business," contains express or implied forward-looking statements that are based on our management's belief and assumptions and on information currently available to our management. Although we believe that the expectations reflected in these forward-looking statements are reasonable, these statements relate to future events or our future operational or financial performance, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. Forward-looking statements in this prospectus include, but are not limited to, statements about:

- the initiation, timing, progress and results of our research and development programs, preclinical studies and future clinical trials;
- our ability to demonstrate, and the timing of, preclinical proof-of-concept *in vivo* for multiple programs;
- our ability to advance any product candidates that we may identify and successfully complete any clinical studies, including the manufacture of any such product candidates;
- our ability to pursue our four strategic indication categories: immediate target indications, differentiation target indications, "blue sky" indications and "march up the chromosome" approaches;
- our ability to quickly leverage programs within our initial target indications and to progress additional programs to further develop our pipeline;
- the timing of our investigational new drug applications submissions;
- the implementation of our strategic plans for our business, programs and technology;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our Prime Editing technology;
- developments related to our competitors and our industry;
- our ability to leverage the clinical, regulatory, and manufacturing advancements made by gene therapy and gene editing programs to accelerate our clinical trials and approval of product candidates;
- our ability to identify and enter into future license agreements and collaborations;
- developments related to our Prime Editing technology;
- regulatory developments in the United States and foreign countries;
- our ability to attract and retain key scientific and management personnel; and
- our use of proceeds from this offering, estimates of our expenses, capital requirements, and needs for additional financing.

In some cases, you can identify forward-looking statements by terminology such as "may," "should," "expects," "intends," "plans," "anticipates," "believes," "estimates," "predicts," "potential," "continue" or the negative of these terms or other comparable terminology. These statements are only predictions. You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties, and other factors, which are, in some cases, beyond our control and which could materially affect results. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under the section entitled "Risk Factors" and elsewhere in this prospectus. If one or more of these risks or uncertainties occur, or if our underlying assumptions prove to be incorrect, actual events or results may vary significantly from those implied or projected by the forward-looking statements. No forward-looking statement is a guarantee of future

performance. You should read this prospectus and the documents that we reference in this prospectus and have filed with the SEC as exhibits to the registration statement, of which this prospectus forms a part, completely and with the understanding that our actual future results may be materially different from any future results expressed or implied by these forward-looking statements.

The forward-looking statements in this prospectus represent our views as of the date of this prospectus. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should therefore not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this prospectus.

This prospectus also contains estimates, projections and other information concerning our industry, our business and the markets for our product candidates. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. Unless otherwise expressly stated, we obtained this industry, business, market, and other data from our own internal estimates and research as well as from reports, research surveys, studies, and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources. While we are not aware of any misstatements regarding any third-party information presented in this prospectus, their estimates, in particular, as they relate to projections, involve numerous assumptions, are subject to risks and uncertainties and are subject to change based on various factors, including those discussed under the section entitled “Risk factors” and elsewhere in this prospectus.

USE OF PROCEEDS

We estimate that the net proceeds to us from the sale of shares of our common stock in this offering will be approximately $ million, or approximately $ million if the underwriters exercise in full their option to purchase additional shares, assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the net proceeds to us from this offering by $ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. An increase (decrease) of 1.0 million shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) net proceeds to us from this offering by $ million, assuming no change in the assumed initial public offering price per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We do not expect that a change in the offering price or the number of shares by these amounts would have a material effect on our intended uses of the net proceeds from this offering, although it may impact the amount of time prior to which we may need to seek additional capital.

As of June 30, 2022, we had cash and cash equivalents and short-term investments of $180.6 million, excluding restricted cash. We currently intend to use the net proceeds from this offering, together with our existing cash and cash equivalents, as follows:

- approximately $ million for continued research and development of our immediate target indications and differentiation target indications, including through achieving preclinical proof-of-concept in several programs;
- approximately $ million to develop our early-stage manufacturing processes and build out our dedicated chemistry facility; and
- the remainder for general corporate purposes.

Based on our current plans, we believe our existing cash and cash equivalents and short-term investments, together with the net proceeds from this offering, will be sufficient to fund our operations and capital expenditure requirements into .

All of our programs are currently in preclinical stage of development. The expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the closing of this offering or the amounts that we will actually spend on the uses set forth above. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our research and development, the status of and results from preclinical studies or clinical trials we may commence in the future, as well as any collaborations that we may enter into with third parties for our product candidates or strategic opportunities that become available to us, and any unforeseen cash needs. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering. We expect the net proceeds from this offering, together with our existing cash and cash equivalents, and short-term investments, will not be sufficient for us to advance any of our programs through regulatory approval, and we will need to raise additional capital to complete the development and potential commercialization of any of our programs.

Pending our use of proceeds from this offering, we intend to invest the net proceeds in a variety of capital preservation instruments, including short-term, investment-grade, interest-bearing instruments and U.S. government securities.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain any future earnings to fund the development and expansion of our business, and therefore we do not anticipate paying cash dividends on our common stock in the foreseeable future. Any future determination to pay dividends will be at the discretion of our board of directors and will depend on our results of operations, financial condition, capital requirements and other factors deemed relevant by our board of directors.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and our capitalization as of June 30, 2022:

- on an actual basis;
- on a pro forma basis to give effect to (i) the automatic conversion of all outstanding shares of our Series A and Series B convertible preferred stock into an aggregate of 161,420,799 shares of common stock upon the completion of this offering and (ii) the filing and effectiveness of our third amended and restated certificate of incorporation immediately prior to the closing of this offering, in each case as if such events had occurred on June 30, 2022; and
- on a pro forma as adjusted basis to give further effect to our issuance and sale of shares of our common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma as adjusted information below is illustrative only, and our capitalization following the completion of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. You should read the information in this table together with our consolidated financial statements and the related notes included elsewhere in this prospectus and "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of this prospectus.

	As of June 30, 2022		
	Actual	Pro forma	Pro forma as adjusted
	(in thousands, except share and per share data)		
Cash and cash equivalents	$ 92,239	$ 92,239	$
Convertible preferred stock (Series A and B), $0.00001 par value; 161,420,799 shares authorized; 161,420,799 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	395,800	—	
Stockholders' equity (deficit):			
Preferred stock, $0.00001 par value; no shares authorized, issued or outstanding, actual; 10,000,000 shares authorized and no shares issued or outstanding, pro forma and pro forma as adjusted	—	—	
Common stock, $0.00001 par value; 293,258,790 shares authorized, 104,182,989 shares issued and outstanding, actual; 775,000,000 shares authorized, 265,603,788 shares issued and outstanding, pro forma; 775,000,000 shares authorized, shares issued and outstanding, pro forma as adjusted	1	3	
Additional paid-in capital	29,650	425,448	
Accumulated other comprehensive loss	(150)	(150)	
Accumulated deficit	(224,564)	(224,564)	
Total stockholders' equity (deficit)	(195,063)	200,737	
Total capitalization	$ 200,737	$ 200,737	$

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, total stockholders' equity and total capitalization by $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each increase (decrease) of 1,000,000 shares in the number of shares offered by us, as set forth on the

cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, total stockholders' equity and total capitalization by $ million, assuming no change in the assumed initial public offering price per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The number of shares of our common stock outstanding after this offering is based on 265,603,788 shares (which includes 37,293,160 shares of unvested restricted common stock) of our common stock outstanding as of June 30, 2022, after giving effect to the automatic conversion of all outstanding shares of our Series A and Series B convertible preferred stock into an aggregate of 161,420,799 shares of our common stock upon the completion of this offering, and excludes:

- 53,125 shares of common stock issued after June 30, 2022 upon the exercise of stock options under our 2019 Stock Option and Grant Plan;
- 11,171,720 shares of common stock issuable upon the exercise of stock options outstanding as of June 30, 2022, with a weighted-average exercise price of $1.55 per share under our 2019 Stock Option and Grant Plan;
- 1,605,000 shares of common stock issuable upon the exercise of stock options granted after June 30, 2022, with a weighted-average exercise price of $2.56 per share under our 2019 Stock Option and Grant Plan;
- 5,652,280 shares of common stock reserved for issuance under our 2019 Stock Option and Grant Plan as of June 30, 2022, which shares will cease to be available for issuance at the time our 2022 Stock Option and Incentive Plan becomes effective;
- shares of common stock reserved for future issuance under our 2022 Stock Option and Incentive Plan, which will become effective upon the date immediately preceding the date on which the registration statement of which this prospectus is a part is declared effective; and
- shares of common stock reserved for future issuance under our 2022 Employee Stock Purchase Plan, which will become effective upon the date immediately preceding the date on which the registration statement of which this prospectus is a part is declared effective.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be diluted immediately to the extent of the difference between the initial public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering.

Our historical net tangible book (deficit) as of June 30, 2022 was $(198.3) million, or $(2.96) per share of our common stock. Our historical net tangible book deficit per share is the amount of our total tangible assets less our total liabilities and the carrying values of our convertible preferred stock, which is not included within stockholders' deficit. Our historical net tangible book deficit per share represents historical net tangible book deficit divided by the 66,889,829 shares of our common stock outstanding (which excludes 37,293,160 shares of unvested restricted common stock) as of June 30, 2022.

Our pro forma net tangible book value as of June 30, 2022 was $197.5 million, or $0.87 per share of our common stock. Pro forma net tangible book value represents the amount of our total tangible assets less our total liabilities, after giving effect to the automatic conversion of all outstanding shares of our Series A and Series B convertible preferred stock into an aggregate of 161,420,799 shares of common stock upon the completion of this offering. Pro forma net tangible book value per share represents pro forma net tangible book value divided by the total number of shares outstanding (which excludes 37,293,160 shares of unvested restricted common stock) as of June 30, 2022, after giving effect to the pro forma adjustment described above.

After giving further effect to our issuance and sale of shares of our common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of June 30, 2022 would have been $ million, or $ per share. This amount represents an immediate increase in pro forma as adjusted net tangible book value per share of $ to our existing stockholders and immediate dilution of $ in pro forma as adjusted net tangible book value per share to new investors purchasing common stock in this offering.

Dilution per share to new investors is determined by subtracting pro forma as adjusted net tangible book value per share after this offering from the initial public offering price per share paid by new investors. The following table illustrates this dilution on a per share basis (without giving effect to any exercise by the underwriters of their option to purchase additional shares):

Assumed initial public offering price per share			$
Historical net tangible book value (deficit) per share as of June 30, 2022	$	(2.96)	
Increase per share attributable to the pro forma adjustments described above	$	3.83	
Pro forma net tangible book value per share as of June 30, 2022	$	0.87	
Increase in pro forma as adjusted net tangible book value per share attributable to new investors participating in this offering			
Pro forma as adjusted net tangible book value per share immediately after this offering			
Dilution per share to new investors participating in this offering			$

The dilution information discussed above is illustrative only and will change based on the actual initial public offering price and other terms of this offering determined at pricing. Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) our pro forma as adjusted net tangible book value per share after this offering by $ and dilution per share to new investors purchasing common stock in this offering by $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each increase of 1,000,000 shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase our pro forma as adjusted net tangible book value per share after this offering by $ and decrease dilution per share to new investors purchasing common stock in this offering by $,

assuming no change in the assumed initial public offering price per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each decrease of 1,000,000 shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would decrease our pro forma as adjusted net tangible book value per share after this offering by $ and increase dilution per share to new investors purchasing common stock in this offering by $, assuming no change in the assumed initial public offering price and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise their option to purchase additional shares in full, our pro forma as adjusted net tangible book value per share after this offering would be $, representing an immediate increase in pro forma as adjusted net tangible book value per share of $ to existing stockholders and immediate dilution in pro forma as adjusted net tangible book value per share of $ to new investors purchasing common stock in this offering, based on the assumed initial public offering price of $ per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The following table summarizes on the pro forma as adjusted basis described above, the total number of shares of common stock purchased from us, including shares of unvested restricted stock, on an as converted to common stock basis, the total consideration paid or to be paid, and the average price per share paid or to be paid by existing stockholders and by new investors in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover of this prospectus, before deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. As the table shows, new investors purchasing common stock in this offering will pay an average price per share substantially higher than our existing stockholders paid.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders	265,603,788		$ 315,762,666		$ 1.19
Investors participating in this offering					
Total	265,603,788	100 %	$ 315,762,666	100 %	

The table above assumes no exercise of the underwriters' option to purchase additional shares in this offering. If the underwriters' option to purchase additional shares is exercised in full, the number of shares of our common stock held by existing stockholders would be reduced to percent of the total number of shares of our common stock outstanding after this offering, and the number of shares of common stock held by new investors purchasing common stock in this offering would be increased to percent of the total number of shares of our common stock outstanding after this offering.

The number of shares of our common stock outstanding after this offering is based on 265,603,788 shares (which includes 37,293,160 shares of unvested restricted common stock) of our common stock outstanding as of June 30, 2022, after giving effect to the automatic conversion of all outstanding shares of our Series A and Series B convertible preferred stock into an aggregate of 161,420,799 shares of our common stock upon the completion of this offering, and excludes:

- 53,125 shares of common stock issued after June 30, 2022 upon the exercise of stock options under our 2019 Stock Option and Grant Plan;
- 11,171,720 shares of common stock issuable upon the exercise of stock options outstanding as of June 30, 2022, with a weighted-average exercise price of $1.55 per share under our 2019 Stock Option and Grant Plan;
- 1,605,000 shares of common stock issuable upon the exercise of stock options granted after June 30, 2022, with a weighted-average exercise price of $2.56 per share under our 2019 Stock Option and Grant Plan;

- 5,652,280 shares of common stock reserved for issuance under our 2019 Stock Option and Grant Plan as of June 30, 2022, which shares will cease to be available for issuance at the time our 2022 Stock Option and Incentive Plan becomes effective;
- shares of common stock reserved for future issuance under our 2022 Stock Option and Incentive Plan, which will become effective upon the date immediately preceding the date on which the registration statement of which this prospectus is a part is declared effective; and
- shares of common stock reserved for future issuance under our 2022 Employee Stock Purchase Plan, which will become effective upon the date immediately preceding the date on which the registration statement of which this prospectus is a part is declared effective.

To the extent that new stock options are issued or any outstanding options are exercised, or we issue additional shares of common stock in the future, there will be further dilution to new investors. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with our consolidated financial statements and the related notes appearing at the end of this prospectus. This discussion and other parts of this prospectus contain forward-looking statements that involve risks and uncertainties, such as statements regarding our plans, objectives, expectations, intentions and projections. Our actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in the "Risk Factors" section of this prospectus. Our historical results are not necessarily indicative of the results that may be expected for any period in the future.

Overview

We are a biotechnology company committed to delivering a new class of differentiated one-time curative genetic therapies to address the widest spectrum of diseases by deploying our Prime Editing technology, which we believe is a versatile, precise, efficient and broad gene editing technology.

Genetic mutations implicated in disease are diverse and can range from errors of a single base, known as point mutations, to errors that extend beyond a single base, such as insertions, deletions, duplications, or combinations thereof. Other mutations can affect regulatory sequences that control the function of genes and can affect the function of larger biochemical and genetic pathways. Furthermore, natural genetic variations, revealed by population-level genomic studies, are known to protect against or to increase risk of disease. To maximize the impact of these genetic insights, we believe the ability to alter the human genome at the foundational level may confer the greatest therapeutic impact on human disease.

Since our inception in September 2019, we have devoted substantially all of our efforts on organizing and staffing our company, business planning, raising capital, research and development activities, developing our Prime Editing platform, building our intellectual property portfolio and providing general and administrative support for these operations. To date, we have financed our operations primarily with proceeds from sales of preferred stock. Through June 30, 2022, we had received gross proceeds of $315.8 million from sales of preferred stock.

We have incurred significant operating losses since inception. Our ability to generate product revenue sufficient to achieve profitability will depend heavily on the successful development and eventual commercialization of any product candidates we may develop. We generated net losses of $2.5 million, $3.4 million, $165.4 million, $86.0 million, and $53.2 million for the period from September 13, 2019 (inception) to December 31, 2019, the years ended December 31, 2020 and 2021, and the six months ended June 30, 2021 and 2022, respectively. As of June 30, 2022, we had an accumulated deficit of $224.6 million. We expect to continue to incur significant expenses for at least the next several years if and as we:

- continue our current research programs and preclinical development of any product candidates we identify;
- seek to identify additional research programs and product candidates;
- initiate preclinical studies and clinical trials for any product candidates we may identify;
- experience any delays or interruptions due to the ongoing COVID-19 pandemic, including delays in preclinical testing and clinical trials or interruptions in the supply chain for any future product candidates;
- further develop our in-licensed and company-owned gene editing platform, which we call our Prime Editing platform;
- maintain, expand, enforce, defend and protect our intellectual property portfolio and provide reimbursement of third-party expenses related to our patent portfolio;
- seek marketing approvals for any product candidates for which we successfully complete clinical trials;

- develop, maintain and enhance a sustainable, scalable, reproducible and transferable manufacturing process for the product candidates we may develop;
- ultimately establish a sales, marketing and distribution infrastructure to commercialize any therapies for which we may obtain marketing approval;
- hire additional research and development personnel;
- hire clinical and commercial personnel;
- add operational, financial and management information systems and personnel, including personnel to support our product development;
- acquire or in-license product candidates, intellectual property and technologies;
- establish and maintain collaborations;
- should we decide to do so, build and maintain a commercial-scale current Good Manufacturing Practices, or cGMP, manufacturing facility; and
- operate as a public company.

We will not generate revenue from product sales unless and until we successfully initiate and complete clinical development and obtain regulatory approval for any product candidates. If we obtain regulatory approval for any of our product candidates and do not enter into a commercialization partnership, we expect to incur significant expenses related to developing our commercialization capability to support product sales, manufacturing, marketing, and distribution. Further, following the completion of this offering, we expect to incur additional costs associated with operating as a public company, including increased accounting, audit, legal, regulatory, compliance and director and officer insurance costs as well as investor and public relations expenses associated with being a public company.

As a result, we will need substantial additional funding to support our continuing operations and pursue our growth strategy. Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operations through a combination of private and public equity offerings, debt financings, or other capital sources, which may include additional collaborations with other companies, marketing, distribution or licensing arrangements with third parties, or other strategic transactions. We may be unable to raise additional funds or enter into such other agreements or arrangements when needed on favorable terms, or at all. If we fail to raise capital or enter into such agreements as and when needed, we may have to significantly delay, reduce or eliminate the development and commercialization of any product candidates that we may identify or delay our pursuit of potential in-licenses or acquisitions.

Because of the numerous risks and uncertainties associated with product development, we are unable to accurately predict the timing or amount of increased expenses or when or if we will be able to achieve or maintain profitability. Even if we are able to generate product sales, we may not become profitable. If we fail to become profitable or are unable to sustain profitability on a continuing basis, then we may be unable to continue our operations at planned levels and be forced to reduce or terminate our operations.

We believe that the net proceeds from this offering, together with our existing cash and cash equivalents and short-term investments, will enable us to fund our operating expenses and capital expenditure requirements into the . We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect. See "—Liquidity and Capital Resources." and "Risk Factors—Risks Related To Our Financial Position and Need for Additional Capital."

Impact of COVID-19 on Our Operations

We are subject to a number of risks associated with the COVID-19 global pandemic, including potential delays associated with our ongoing preclinical studies and anticipated clinical trials. COVID-19 may have an adverse

impact on our operations, supply chains and distribution systems or those of our third-party vendors and collaborators, and increase expenses, including as a result of impacts associated with preventive and precautionary measures that are being taken, such as restrictions on travel and border crossings, quarantine policies and social distancing. For example, our laboratory-based personnel have been unable to maximize use of our existing laboratory space due to restrictions on density of people and other aspects of our work have been limited by the need for our staff to isolate. We and our third-party vendors and collaborators may experience disruptions in supply of items that are essential for our research and development activities. We cannot predict the scope and severity of any economic recovery after the COVID-19 pandemic abates, including following any additional "waves" or other intensifying of the pandemic will have on our financial condition, operations and business plans.

License Agreement with Broad Institute

In September 2019, we entered into a license agreement with Broad Institute, and in May 2020 and February 2021, we entered into amendments to the license agreement, for certain patents related to delivery or targeting of DNA, or the Broad License Agreement. Under the Broad License Agreement, Broad Institute grants to us (i) an exclusive, worldwide license under the licensed patent rights solely to offer for sale, sell, have sold and import products covered by such licensed patent rights, or licensed products, solely for use within the Prime Broad Field, as defined below (subject to certain specified limitations and exclusions with respect to certain applications), (ii) a non-exclusive, worldwide license under the licensed patent rights solely to make, have made, offer for sale, sell, have sold, and import licensed products solely for use in the Prime Broad Field, (iii) a non-exclusive, worldwide license under the licensed patent rights solely to make, have made, offer for sale, sell, have sold and import other products that are enabled by (a) the licensed patent rights or (b) the use of certain materials transferred to us by Broad Institute, solely for the prevention or treatment of human diseases and (iv) a non-exclusive, worldwide license solely for internal research. Further, with respect to DNA delivery or targeting applications covered by the licensed patent rights, the exclusive license granted to us by Broad Institute is limited only to "prime editor" products and specifically excludes applications relating to the production or processing of small or large molecules, including for the prevention or treatment of human disease. Under the Broad License Agreement, we also have the right to grant sublicenses to our affiliates and third parties, subject to certain requirements. We are obligated to use commercially reasonable efforts to develop, seek marketing approval for, and commercialize licensed products in the field. As partial consideration for the license, we made an upfront payment of $0.5 million to Broad Institute.

Concurrently with the Broad License Agreement, we entered into a subscription agreement with Broad Institute, or the Broad Subscription Agreement. Under the Broad Subscription Agreement, as additional consideration for the license, we issued 1,938,429 shares of common stock, with a fair value of $39,000, to Broad Institute, representing 5.0 percent of our then outstanding capital stock on a fully diluted basis. The Broad Subscription Agreement also obligated us to issue additional shares of common stock to Broad Institute without additional consideration to maintain Broad Institute's ownership of us at 5.0 percent on a fully-diluted basis, if at any time prior to the achievement of an equity financing up to $100.0 million, we issue additional securities that would cause Broad Institute shares of common stock to be less than 5.0 percent of our outstanding capital stock on a fully-diluted basis, or the Anti-Dilution Obligation. Upon the achievement of the $100.0 million of equity financing in connection with the closing of the fourth tranche of our Series A preferred stock, we fully settled the Anti-Dilution Obligation, which resulted in the issuance of 7,768,425 shares of common stock to Broad Institute with a fair value of $7.5 million.

We also granted certain preemptive rights to Broad Institute, under which if after we reach the financing threshold of $100.0 million, we propose to offer or sell any new securities, then Broad Institute shall have the right to purchase from us the portion of such new securities that would allow Broad Institute to maintain its 5.0 percent ownership in us. In April 2021, we exceeded the financing threshold with the fourth issuance of the Series A preferred stock. In connection with the fourth closing of Series A preferred stock, Broad Institute purchased an additional 761,844 shares of Series A preferred stock, at a price of $1.00 per share for gross proceeds of $0.8 million, to maintain its 5.0 percent ownership in us.

Under the Broad License Agreement, we are required to use commercially reasonable efforts to develop licensed products in the Prime Broad Field in accordance with a development plan that we prepared and submitted to Broad Institute. We are also obligated to pay Broad Institute an annual license maintenance fee ranging from the low to mid five-figures to the low six-figures, depending on the particular calendar year, for the term of the agreement.

Broad Institute is also entitled to receive clinical and regulatory milestone payments up to a total of $20.0 million per licensed product, depending on the patient population to be treated by the licensed product achieving the applicable milestone. If we undergo a change of control at any time during the term of the Broad License Agreement, certain of the clinical and regulatory milestone payments will increase by a specified percentage. Broad Institute is also entitled to sales-based milestone payments up to a total of $54.0 million per licensed product, depending on the patient population to be treated by the licensed product achieving the applicable milestone. Broad Institute is entitled to lower payments to the extent the clinical and regulatory milestones or sales-based milestones are achieved by enabled products, rather than licensed products.

Broad Institute is entitled to receive mid-single digit percentage royalties on net sales of licensed products, and low single-digit percentage royalties of enabled products. Royalties payable to Broad Institute are subject to customary offsets and reductions with respect to a product in a given country, to a floor. On a country-by-country and product-by-product basis, the royalty term for a product in a country will terminate on the latest of (i) the expiration of the last to expire valid claim of an issued patent or pending patent application within the licensed patent rights covering such product in such country, (ii) the period of regulatory exclusivity for such product in such country or (iii) 10 years after the first commercial sale of such product in such country.

Unless earlier terminated, the Broad License Agreement will remain in effect until the later of (i) the last to expire valid claim of an issued patent or pending patent application within the licensed patent rights covering our licensed products or (ii) the expiration of the last royalty term for a licensed product in a country. We can terminate the Broad License Agreement for our convenience following prior written notice to Broad Institute. Each party may terminate the Broad License Agreement for the other party's uncured material breach. Broad Institute may also immediately terminate the Broad License Agreement (i) to the extent we (or our affiliates or sublicensees) challenge a licensed patent right, (ii) upon our bankruptcy or insolvency or (iii) if we fail to procure and maintain insurance.

Exclusive Option Agreement with Broad Institute

In May 2021, we executed an exclusive option agreement with Broad Institute, or the Broad Option Agreement, pursuant to which, Broad Institute granted to us an exclusive option to negotiate an amendment to the Broad License Agreement to include certain additional patent rights relating to Prime Editing improvements to our license thereunder (subject to certain specific limitations and exclusions with respect to certain applications), or the Exclusive Option.

In connection with the Broad Option Agreement, Broad Institute also granted to us, during the option period, a limited, non-exclusive license under the new patent rights solely for research purposes to evaluate whether to exercise our option (subject to certain specified exceptions). We paid a upfront fee of $0.1 million to Broad Institute under the agreement upon execution of the agreement.

We may terminate the Broad Option Agreement for convenience by giving advance written notice of termination to Broad Institute. Broad Institute has the right to terminate the agreement if we (i) fail to make a payment to Broad Institute under the option agreement and fail to cure such non-payment within a certain time period, (ii) are otherwise in material breach of the option agreement and fail to cure within a certain time period, or (iii) become insolvent.

Our option expires in November 2022, unless we mutually agree in writing with Broad Institute to extend such expiration date. Through June 30, 2022, we have not exercised our Exclusive Option.

Pledge to Broad Institute and Harvard

In February 2021, we committed to donate $5.0 million to Broad Institute and Harvard annually for 14 years, commencing in 2021, or the Pledge. The Pledge is intended to be used for research and development related to new genome editing technologies, for example Prime Editing, improve on existing genome-editing technologies, identify delivery mechanisms for these technologies and apply these technologies to the understanding and treatment of rare genetic diseases. We can terminate the Pledge at our discretion, subject to providing one year of funding from the date of termination. In August 2022, we amended and restated the Pledge to clarify that the funds may be used by the laboratory of David Liu, who is a member of the Broad Institute and a faculty member at Harvard.

Related Party Beam Collaboration Agreement

In September 2019, we entered into a collaboration and license agreement, or the Beam Collaboration Agreement, with Beam Therapeutics Inc., or Beam, to collaborate on the research, development, manufacture and commercialization of certain Prime Editing products within a specified field and provide each other with access and licenses to certain proprietary technology to advance the other's progress. Under the Beam Collaboration Agreement, each party agreed to provide each other with access to, and licenses under, certain technology, know-how and patent rights controlled by each party for a limited number of years after the effective date, known as the initial term, and certain improvements thereto. Under the Beam Collaboration Agreement, we grant to Beam an exclusive (even as to us and our affiliates), worldwide license under (i) certain prime editing technology, know-how and patent rights that we control during the initial term, and improvements thereto that we control for a specified number of years following the initial term, and (ii) our interest in certain jointly-owned collaboration technology, in each case, solely to develop, make, have made, use, offer for sale, sell, import and commercialize licensed products only in the Beam field. Beam also grants to us certain non-exclusive, worldwide licenses under certain technology, know-how and patent rights, including under certain CRISPR or delivery-related technology, know-how and patent rights, that it controls during the initial term, and improvements thereto that Beam controls for a specified number of years following the initial term, solely to develop, make, have made, use, offer for sale, sell, import and commercialize products only in the Prime field. As partial consideration for the Beam Collaboration Agreement, Beam agreed to pay us, upon its election to continue its collaboration with us on the first anniversary of the Beam Collaboration Agreement, $5.0 million worth of its own shares of common stock which such shares were issued to us on October 6, 2020.

Before and within a short period of time after the filing of an IND for a development candidate being developed under the Beam Collaboration Agreement, Beam has the option to designate up to a mid-single digit number of licensed products for which we are not permitted to exercise our profit share right, or the Beam Option (described below). Under the Beam Collaboration Agreement, a licensed product for which we have not exercised our profit share option or for which Beam has exercised the Beam Option is referred to as a protected product. Beam must exercise its option within 30 days following the filing of an IND for such product. Unless we exercise our profit sharing option for a licensed product, Beam is solely responsible for the development and commercialization of licensed products in the Beam field under the Beam Collaboration Agreement. If Beam exercises its option for a protected product, Beam will owe us a payment of $5.0 million if the product is developed for non-sickle cell disease or $10.0 million if the product is developed for sickle cell disease.

On a licensed product-by-licensed product basis, we have the right to elect to share equally with Beam in the profits and losses in the United States for Beam's licensed products. We may exercise such right for each licensed product within a specified period of time. Any such licensed product for which we exercise our right we refer to as a collaboration product. If we exercise such right, we agree to share equally in the costs, profits and losses of each such collaboration product in the United States, rather than receiving milestones and royalties based on development and sales thereof by Beam in the United States. For clarity, we are still entitled to receive milestones and royalties on the development and sale of each such collaboration product outside the United States. We also have the right to elect, within a specified time period, at least one year prior to the expected filing of an NDA, to co-promote with Beam each collaboration product in the United States, in addition to sharing in the profits and losses. To the extent we exercise our co-promote option with respect to a given collaboration product, we and Beam must use commercially reasonable efforts to commercialize such collaboration product, in each case, in the Beam field in the major markets in which marketing authorization has been obtained. After we have exercised our right to profit share on a collaboration product, we are able to, at any time during the term of the Beam Collaboration Agreement, on a collaboration product-by-collaboration product basis, opt-out of the profit and loss share and co-promotion activities with respect to any collaboration product with prior written notice to Beam within a certain time period.

We are entitled to receive development milestone payments from Beam on Beam's development of protected products (which, for clarity, includes any licensed product for which we have not exercised our profit share option) and collaboration products. For protected products, we are entitled to receive up to a total of $35.5 million on a protected product-by-protected product basis based on Beam's development of such protected product and, for collaboration products, up to a total of $17.8 million on a collaboration product-by-collaboration product basis based on Beam's development of such collaboration product outside of the United States, in each case, with such amounts

lowered if such licensed product achieves a given milestone for use in treating an orphan disease. We are also entitled to receive sales-based milestone payments from Beam based on net sales of licensed products. For protected products, we are entitled to receive up to a total of $84.5 million on a protected product-by-protected product basis based on net sales of such protected product worldwide, and, for collaboration products, up to a total of $42.3 million on a collaboration product-by-collaboration product basis based on net sales of collaboration products outside of the United States.

The sickle cell disease product partnered with Beam is a licensed product under the Beam Collaboration Agreement. Beam has not designated this product as a protected product and we have not received any development or sales-based milestones with respect to Beam's exploitation thereof.

Beam is obligated to pay to us tiered royalties ranging from a high-single digit percentage to a low double-digit percentage, but less than teens on net sales of protected products worldwide on a protected product-by-protected product basis and net sales of collaboration products outside of the United States on a collaboration product-by-collaboration product basis. Our royalties are subject to customary offsets and reductions, to a floor that takes into account any royalties we are obligated to pay to our third party licensors, including Broad Institute. In addition, certain of the rights licensed under the Beam Collaboration Agreement are sublicensed from third parties, and Beam agrees to reimburse us for certain payments we are required to make to our third party licensors attributable to Beam's exercise of any sublicense we grant to Beam, including payments we make to Broad Institute under the Broad License Agreement.

If we develop a product that is covered by the technology, know-how or patent rights that Beam licenses to us under the Beam Collaboration Agreement, which we refer to as a Prime product, we are obligated to pay to Beam a low single digit percentage royalty on our worldwide net sales of such any product on a Prime product-by-Prime product and country-by-country basis, subject to certain customary reductions, to a floor.

Unless earlier terminated in accordance with its terms, the Beam Collaboration Agreement will expire on the later of (a) expiration of the last royalty term for a product on which a party is obligated to pay royalties to the other party or (b) with respect to any collaboration product, the date on which neither party is developing or commercializing any such collaboration product in the United States. See "Business–Our License and Collaboration Agreements."

In connection with the Beam Collaboration Agreement, concurrently in September 2019, we also entered into a mutual subscription agreement, or the Beam Mutual Subscription Agreement. Under the Beam Mutual Subscription Agreement, if Beam elected to continue its collaboration with us, on the first anniversary of the collaboration agreement, we were obligated to grant Beam 5,000,000 shares of our common stock that represented an amount equal to 5.0 percent of the 100 million shares of Series A preferred stock that we had issued or committed to issue as of the effective date, as part of our first preferred stock offering. In connection with the Beam Mutual Subscription Agreement, on October 6, 2020, we issued to Beam an aggregate of 5,000,000 shares of our common stock with a fair value of $0.2 million.

Research Collaboration, Option and License Agreement with Myeloid Therapeutics, Inc.

In December 2021, we entered into a research collaboration and exclusive option agreement with Myeloid Therapeutics Inc., or Myeloid, and such agreement, the Myeloid Agreement. Under the Myeloid Agreement, we collaborate with Myeloid, a related party, on the research and development of LINE-1 retrotransposon technology. This retrotransposon-based approach is complementary to Prime Editing and, if successfully deployed alongside Prime Editing, could expand the applicability of our technologies towards our goal of more broadly addressing human diseases. In connection with the Myeloid Agreement, we also entered into a subscription agreement with Myeloid under which we were obligated to issue an aggregate of 3,424,422 shares of our common stock as additional consideration for the license.

Myeloid grants to us an exclusive option, exercisable during the research term and for 60 days thereafter, to obtain ownership of certain patent rights and know-how owned by Myeloid that relate to LINE-1 retrotransposon technology. If we exercise our option, in addition to assigning us ownership of the applicable patent rights and

know-how, Myeloid also agrees to grant us certain exclusive and non-exclusive licenses, including to certain improvements and other enabling technology.

Through June 30, 2022, we have not exercised our option. Following the exercise of our option, we agree to grant Myeloid, in addition to certain other licenses, an exclusive, worldwide license under the assigned patent rights and know-how to develop and commercialize products in the field of myeloid cells and myeloid cell engineering, or the Myeloid Field.

Upon entering into the Myeloid Agreement, Myeloid was entitled to receive an upfront payment of $30.0 million in cash and an aggregate of 3,424,422 shares of our common stock, with a then fair value of $12.0 million, both of which Myeloid received in January 2022. If the research agreement meets its goals, then (i) during the research term, Myeloid is entitled to cash payments of up to $35.0 million in the aggregate upon the achievement of certain milestones reflecting the technology's development; and (ii) if we exercise our option, we agree to pay to Myeloid an option exercise fee of $80.0 million in cash, and shares of our common stock with a then fair value of $30.0 million. Additionally, if the research collaboration meets its goal and we exercise our option, and we are able to proceed with the development and commercialization of a product that is covered by (a) the patent rights or know-how subject to our option or (b) the patent rights or know-how developed by one or both of the parties during the research term related to LINE-1 retrotransposon technology, or, collectively, a Prime Product, Myeloid would be eligible to receive, for the first five Prime Products, development and regulatory milestone payments of up to $120.0 million on a Prime Product-by-Prime Product basis and sales-based milestone payments of up to $210.0 million on a Prime Product-by-Prime Product basis.

Myeloid is also eligible to receive tiered low to mid single-digit percentage royalties on our annual aggregate global net sales of Prime Products on a Prime Product-by-Prime Product and country-by-country basis, subject to customary offsets and reductions to a floor. On a country-by-country and Prime Product-by-Prime Product basis, the period during which royalties will be paid will continue until the latest of (i) the expiration date of the last to expire valid claim of an issued patent or pending patent application within the patent rights subject to our option or the patent rights developed by one or both of the parties during the research term related to LINE-1 retrotransposon technology, in each case, covering the applicable Prime Product, (ii) loss of regulatory exclusivity for such Prime Product in such country, or (iii) ten (10) years after the first commercial sale of such Prime Product in such country.

Following the exercise of our option and for a period of two years thereafter, Myeloid will have the right to select up to three targets, subject to certain exclusions, for the development and commercialization of products directed at such targets in all fields and we will be eligible to receive the development, regulatory and sales-based milestone payments and royalty payments as set forth above from Myeloid with respect to such products.

Unless earlier terminated based on customary termination rights, the Myeloid Agreement will continue on a Prime Product-by-Prime Product and country-by-country basis until the expiration of the royalty term for such Prime Product in such country. If we exercise our option, neither party will have the right to terminate the Myeloid Agreement for any reason.

Components of Our Results of Operations

Related Party Collaboration Revenue

We have not generated any revenue from product sales and do not expect to generate any revenue from the sale of products for the foreseeable future. Our revenues to date have been generated through the Beam Collaboration Agreement, as set forth above. In the future, we may generate additional revenue from collaboration, grant or license agreements we have entered into, or may enter into, with respect to our product candidates, as well as product sales from any approved product. Our ability to generate product revenues will depend on the successful development and eventual commercialization of any product candidates that we identify. If we fail to complete the development of any future product candidates in a timely manner or to obtain regulatory approval for such product candidates, our ability to generate future revenue and our results of operations and financial position would be materially adversely affected.

We concluded that the Beam Collaboration Agreement and the Beam Mutual Subscription Agreement should be combined and treated as a single arrangement for accounting purposes as the agreements were entered into contemporaneously and in contemplation of one another. We determined that the combined agreements are accounted for under Topic 606, *Revenue recognition,* or ASC 606. We identified the following performance obligations: (i) exclusive, worldwide license to certain Prime patents (ii) non-exclusive, worldwide license to CRISPR technology and (iii) joint research committee participation.

We also evaluated whether the Beam Option and our right to elect collaboration products in the Beam Collaboration Agreement represented material rights that would give rise to a performance obligation and concluded that neither the Beam Option nor our right to elect collaboration products convey a material right to Beam and therefore are not considered separate performance obligations within the Beam Collaboration Agreement. There have been no protected products or collaborations products to date. Under the Beam Collaboration Agreement, we are eligible to receive certain milestones and royalties regardless of whether any options are exercised, which are considered variable consideration. At each reporting period, we evaluate whether milestones are considered probable of being reached and, to the extent that a significant reversal would not occur in future periods, estimate the amount to be included in the transaction price. During the years ended December 31, 2020 and 2021, and the six months ended June 30, 2021 and 2022, we did not receive any milestone payments and all variable consideration related to the Beam Collaboration Agreement remained fully constrained.

We recognized revenue for the license performance obligations at a point in time, that is upon the first anniversary of the effective date when Beam elected to continue its collaboration with us. We determined that the joint research committee performance promise is immaterial in the context of the contract.

Operating Expenses

Research and Development Expenses

Research and development expenses consist primarily of costs incurred in connection with the development and research of our immediate target indications and our differentiation target indications. These expenses include:

- the cost allocated to acquire in-process research and development, or IPR&D, with no alternative future use associated with asset acquisitions or transactions to license intellectual property, such as our Myeloid Agreement and Broad License Agreement;
- expenses incurred in connection with our Pledge to Broad Institute;
- personnel-related expenses, including salaries, bonuses, benefits and stock-based compensation for employees engaged in manufacturing, research and development functions;
- expenses incurred in connection with continuing our current research programs and preclinical development of any product candidates we may identify, including under agreements with third parties, such as consultants and contractors;
- the cost of developing and validating our manufacturing process for use in our preclinical studies and future clinical trials;
- laboratory supplies and research materials; and
- facilities, depreciation and other expenses related to research and development activities, which include direct or allocated expenses for rent and maintenance of facilities, and utilities.

We measure and recognize asset acquisitions or licenses to intellectual property that are not deemed to be business combinations based on the cost to acquire or license the asset or group of assets, which includes transaction costs. Goodwill is not recognized in asset acquisitions or transaction to license intellectual property. In an asset acquisition or license to intellectual property, the cost allocated to acquire in-process research and development, or IPR&D, with no alternative future use is recognized as research and development expense on the acquisition date. For the period from September 13, 2019 (inception) to December 31, 2019, we recorded $0.7 million of research and

development expense related to the acquired IPR&D from Broad Institute, which consisted of the initial upfront payment of $0.5 million, the $39,000 fair value of common stock issued to Broad Institute and the initial fair value of the Anti-Dilution Obligation of $0.2 million. For the year ended December 31, 2021, we recorded $42.0 million of research and development expense related to the acquired IPR&D from Myeloid, which consisted of the accrued initial upfront payment of $30.0 million and the $12.0 million fair value of common stock to be issued to Myeloid.

Upfront and milestone payments made are accrued for and expensed when the achievement of the milestone is probable up to the point of regulatory approval. Milestone payments made upon regulatory approval will be capitalized and amortized over the remaining useful life of the related product.

We expense all research and development costs in the periods in which they are incurred. Most of our research and development expenses have been related to early stage development activities. We have not reported program costs because we have not historically tracked or recorded our research and development expenses on a program-by-program basis, as we do not currently have any product candidates. In the future, external research and development costs for any individual product candidate will be tracked commencing upon product candidate nomination. We do not allocate employee costs, costs associated with our discovery efforts, laboratory supplies, and facilities expenses, including depreciation or other indirect costs, to specific product development programs because these costs are deployed across multiple programs and our platform and, as such, are not separately classified.

We expect our research and development expenses to increase substantially for the foreseeable future as we continue to invest in research and development activities related to developing any future product candidates, including investments in manufacturing, as we advance any product candidates we may identify and begin to conduct clinical trials. The success of product candidates we may identify and develop will depend on many factors, including the following:

- timely and successful completion of preclinical studies, including toxicology studies, biodistribution studies and minimally efficacious dose studies in animals, where applicable;
- effective INDs or comparable foreign applications that allow commencement of our planned clinical trials or future clinical trials for any product candidates we may develop;
- successful enrollment and completion of clinical trials, including under the FDA's current Good Clinical Practices, or GCPs, current Good Laboratory Practices, or GLPs, and any additional regulatory requirements from foreign regulatory authorities;
- positive results from our future clinical trials that support a finding of safety and effectiveness and an acceptable risk-benefit profile in the intended populations;
- receipt of marketing approvals from applicable regulatory authorities;
- establishment of arrangements through our own facilities or with third-party manufacturers for clinical supply and, where applicable, commercial manufacturing capabilities;
- establishment, maintenance, defense and enforcement of patent, trademark, trade secret and other intellectual property protection or regulatory exclusivity for any product candidates we may develop; and
- maintenance of a continued acceptable safety, tolerability and efficacy profile of any product candidates we may develop following approval.

Any changes in the outcome of any of these variables with respect to the development of product candidates that we may identify could mean a significant change in the costs and timing associated with the development of such candidates. For example, if the FDA or another regulatory authority were to delay our planned start of clinical trials or require us to conduct clinical trials or other testing beyond those that we currently expect, or if we experience significant delays in enrollment in any of our planned clinical trials, we could be required to expend significant additional financial resources and time to complete clinical development of that therapeutic candidate. We may never obtain regulatory approval for any of our candidates, and, even if we do, drug commercialization takes several years and millions of dollars in development costs.

Following consummation of this offering, certain bonuses will become payable, and certain performance-based restricted stock awards and options to purchase common stock will vest and we will record approximately $0.9 million of compensation expense as research and development expenses on the closing date of the offering.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and personnel-related costs, including stock-based compensation, for our personnel in executive, legal, finance and accounting, human resources and other administrative functions. General and administrative expenses also include legal fees relating to patents and corporate matters; professional fees paid for accounting, auditing, consulting and tax service; insurance costs; office and information technology costs; and facilities, depreciation and other general and administrative expenses, which include direct or allocated expenses for rent and maintenance of facilities and utilities.

We anticipate that our general and administrative expenses will increase in the future as we increase our headcount to support development of product candidates and our continued research activities. We also anticipate that we will incur increased accounting, audit, legal, regulatory, compliance and director and officer insurance costs as well as investor and public relations expenses associated with being a public company. We also expect to incur additional intellectual property-related expenses as we file patent applications to protect innovations arising from our research and development activities.

Following consummation of this offering, certain performance-based restricted stock awards will vest and we will record approximately $0.2 million of compensation expense as general and administrative expenses on the closing date of the offering.

Other Income (Expense)

Change in Fair Value of Preferred Stock Tranche Liability

Our Series A preferred stock purchase agreement obligated the Series A investors to participate in subsequent offerings of Series A preferred stock upon satisfaction of certain conditions, or the preferred stock tranche right. The preferred stock tranche right was classified as a liability and initially recorded at fair value upon the issuance date of the right. The liability was subsequently remeasured to fair value at each reporting date and immediately prior to being settled, and changes in fair value of the preferred stock tranche right liability were recognized as a component of other income (expense), net in our consolidated statements of operations and comprehensive loss. In 2020, we closed the second tranche Series A preferred stock financing and in April 2021, we closed the third and fourth tranche Series A preferred stock financings, resulting in full settlement of the preferred stock tranche right, upon both of which we issued additional shares of Series A preferred stock. Immediately prior to the issuance of such shares, the preferred stock tranche right liability was remeasured to fair value with the change in fair value recognized as a component of other income (expense), net.

As a result of the preferred stock tranche right settlement in April 2021, we will no longer recognize changes in the fair value of the preferred stock tranche liability in our consolidated statements of operations and comprehensive loss.

Change in Fair Value of Anti-Dilution Obligation

In connection with the Broad License Agreement, we entered into the Broad Subscription Agreement, in which we granted Broad Institute 1,938,429 shares of common stock, which represented a 5.0 percent of our then outstanding capital stock on a fully-diluted basis. The Broad Subscription Agreement obligated us to issue additional shares of common stock to Broad Institute without additional consideration to maintain Broad Institute's ownership of us at 5.0 percent on a fully-diluted basis, if at any time prior to the achievement of an equity financing up to $100.0 million, we issue additional securities that would cause Broad Institute shares of common stock to be less than 5.0 percent of our outstanding capital stock on a fully-diluted basis, which we refer to collectively as the Anti-Dilution Obligation. We classified the Anti-Dilution Obligation as a liability on our consolidated balance sheet that we remeasured to fair value at each reporting date, and we recognized changes in the fair value of the liability

associated with the Anti-Dilution Obligation as a component of other income (expense) in our consolidated statement of operations and comprehensive loss.

As a result of the achievement of $100.0 million in equity financing upon the fourth Series A preferred stock closing, we fully settled the Anti-Dilution Obligation and will no longer recognize changes in the fair value of the Anti-Dilution Obligation in our consolidated statements of operations and comprehensive loss.

Change in Fair Value of Related Party Short-Term Investment

In connection with the Beam Collaboration Agreement, Beam issued 200,307 shares of Beam common stock to us on October 6, 2020. Our related party short-term investment is recorded at fair value based upon quoted market prices at each reporting date. Unrealized and realized gains and losses on this investment subsequent to its initial recognition are recognized as a component of other income (expense) in the consolidated statements of operations and comprehensive loss.

Other Income (Expense), Net

Other income (expense), net consists of the change in the fair value of the shares we were entitled to receive from our related party Beam from the first anniversary of the Beam Collaboration Agreement through the date we received the shares from Beam, October 6, 2020. In connection with the Beam Collaboration Agreement, Beam granted 200,307 shares of Beam common stock to us. We were entitled to receive the shares of Beam upon the first anniversary of the Beam Collaboration Agreement in September 2020. We received the shares of Beam on October 6, 2020. The change in the fair value of the shares from September through our receipt on October 6, 2020 is included as other income (expense), net in the consolidated statements of operations and comprehensive loss. As the shares were received on October 6, 2020, we no longer recognize changes in the fair value of the Beam shares we were entitled to receive.

Income Taxes

For the period from September 13, 2019 (inception) to December 31, 2019 and the years ended December 31, 2020 and 2021, we recorded an income tax provision (benefit) of $4,000, $1.9 million and $(0.5) million, respectively. For the six months ended June 30, 2021, we recorded an income tax provision of $0.5 million and for the six months ended June 30, 2022 we recorded an income tax benefit of $1.0 million. The income tax benefits for the year ended December 31, 2021 and the six months ended June 30, 2022, and the income tax provision for the six months ended June 30, 2021 are a result of changes associated with the unrealized gains on investments. We recorded a full valuation allowance of our net deferred tax assets as of December 31, 2021 and June 30, 2022, respectively, as we believed it was more likely than not we would not be able to utilize our deferred tax assets prior to their expiration.

As of December 31, 2021, we had U.S. federal NOL carryforwards of $41.8 million, which may be available to reduce future taxable income which do not expire. In addition, as of December 31, 2021, we had state NOL carryforwards of $40.9 million, which may be available to reduce future taxable income, and expire at various times beginning in 2039. As of December 31, 2021, we also had U.S. federal and state research and development tax credit carryforwards of $1.3 million and $0.4 million, respectively, which may be available to reduce future tax liabilities and expire at various dates beginning in 2040 and 2035, respectively.

Results of Operations

Comparison of the six months ended June 30, 2021 and 2022

The following table summarizes our results of operations for the six months ended June 30, 2021 and 2022:

	Six Months Ended June 30,		
	2021	2022	Change
	(in thousands)		
Operating expenses:			
Research and development	$ 10,261	$ 32,617	$ 22,356
General and administrative	3,710	13,586	9,876
Total operating expenses	13,971	46,203	32,232
Income (loss) from operations	(13,971)	(46,203)	(32,232)
Other income (expense):			
Change in fair value of preferred stock tranche right liability	(74,319)	—	74,319
Change in fair value of anti-dilution obligation	(6,681)	—	6,681
Change in fair value of related party short-term investment	9,429	(8,208)	(17,637)
Other income (expense), net	1	249	248
Total other expense, net	(71,570)	(7,959)	63,611
Net loss before income taxes	(85,541)	(54,162)	31,379
Provision for (benefit) from income taxes	503	(974)	(1,477)
Net loss	$ (86,044)	$ (53,188)	$ 32,856

Related Party Collaboration Revenue

No collaboration revenue was recognized for the six months ended June 30, 2021 and 2022.

Operating Expenses

Research and Development Expenses

	Six Months Ended June 30,		
	2021	2022	Change
	(in thousands)		
License, intellectual property fees and other	$ 2,726	$ 2,630	$ (96)
Personnel related (including stock-based compensation)	3,206	13,034	9,828
Lab supplies and services	1,913	9,932	8,019
Professional and consultant fees	152	720	568
Facility related and other	2,264	6,301	4,037
Total research and development expenses	$ 10,261	$ 32,617	$ 22,356

Research and development expenses were $10.3 million for the six months ended June 30, 2021, compared to $32.6 million for the six months ended June 30, 2022. The increase of $22.4 million was primarily due to an increase of $9.8 million in personnel-related expense driven by new hires in research and development, an increase of $8.0 million in lab supplies and services expense due to continued discovery efforts and expansion of our research and development activities, an increase of $4.0 million facility related expense primarily due to the expansion of our office and laboratory space through new facilities being leased, and an increase of $0.6 million in professional and consultant fees as we prepare to become and operate as a public company.

General and Administrative Expenses

	Six Months Ended June 30,		
	2021	2022	Change
	(in thousands)		
Personnel related (including stock-based compensation)	$ 1,197	$ 5,456	$ 4,259
Professional and consultant fees	2,028	5,701	3,673
Facility related and other	485	2,429	1,944
Total general and administrative expenses	$ 3,710	$ 13,586	$ 9,876

General and administrative expenses were $3.7 million for the six months ended June 30, 2021, compared to $13.6 million for the six months ended June 30, 2022. The increase of $9.9 million was primarily due to an increase of $4.3 million of personnel-related expense primarily due to compensation related costs related to new hires to support our expanding operations, $3.7 million in professional and consultant fees as we prepare to become and operate as a public company, and an increase of $1.9 million of facility and IT related expenses primarily due to newly signed office leases to support our expanded general and administrative staff.

Other Income (Expense)

	Six Months Ended June 30,		
	2021	2022	Change
	(in thousands)		
Change in fair value of preferred stock tranche right liability	$ (74,319)	$ —	$ 74,319
Change in fair value of anti-dilution obligation	(6,681)	—	6,681
Change in fair value of related party short-term investment	9,429	(8,208)	(17,637)
Other income (expense), net	1	249	248
Total other expense, net	$ (71,570)	$ (7,959)	$ 63,611

Change in Fair Value of Preferred Stock Tranche Right Liability

The change in fair value of the preferred stock tranche right liability decreased by $74.3 million from the six months ended June 30, 2021 compared to the six months ended June 30, 2022. The decrease was primarily due to a $1.55 increase in the per share fair value of the underlying preferred stock used to determine the fair value of the preferred stock tranche right from December 31, 2020 to June 30, 2021, with no corresponding change in the six months ended June 30, 2022 due to the preferred stock tranche right being settled in full upon the satisfaction of certain conditions in April 2021.

Change in Fair Value of Anti-Dilution Obligation

The change in fair value of the Anti-Dilution Obligation decreased by $6.7 million from the six months ended June 30, 2021 compared to the six months ended June 30, 2022. The decrease was primarily due to a $0.86 increase in the per share fair value of our common stock used to determine the fair value of the Anti-Dilution Obligation from December 31, 2020 through the settlement date in connection with the fourth Series A preferred stock closing in 2021, with no corresponding change in the six months ended June 30, 2022.

Change in Fair Value of Related Party Short-Term Investment

The change in fair value of related party short-term investment decreased by $17.6 million from the six months ended June 30, 2021 compared to the six months ended June 30, 2022. The decrease was due to a $40.98 decrease in the stock price from December 31, 2021 to June 30, 2022, as compared to the $47.07 increase in the stock price of the Beam stock from December 31, 2020 to June 30, 2021 .

Other Income (Expense), Net

The amount of other income (expense), net for the six months ended June 30, 2022 was insignificant.

Income Taxes

We recorded an income tax provision of $0.5 million for the six months ended June 30, 2021 and an income tax benefit of $1.0 million for the six months ended June 30, 2022.

Comparison of Years Ended December 31, 2020 and 2021

The following table summarizes our results of operations for the years ended December 31, 2020 and 2021:

	Years Ended December 31,		
	2020	2021	Change
	(in thousands)		
Related party collaboration revenue	$ 5,210	$ —	$ (5,210)
Operating expenses:			
Research and development	2,980	70,550	67,570
General and administrative	3,162	13,924	10,762
Total operating expenses	6,142	84,474	78,332
Income (loss) from operations	(932)	(84,474)	(83,542)
Other income (expense):			
Change in fair value of preferred stock tranche right liability	(10,904)	(74,319)	(63,415)
Change in fair value of anti-dilution obligation	(700)	(6,681)	(5,981)
Change in fair value of related party short-term investment	10,867	(391)	(11,258)
Other income (expense), net	126	12	(114)
Total other expense, net	(611)	(81,379)	(80,768)
Net loss before income taxes	(1,543)	(165,853)	(164,310)
Provision for (benefit from) income taxes	1,867	(486)	(2,353)
Net loss	$ (3,410)	$ (165,367)	$ (161,957)

Related Party Collaboration Revenue

Related party collaboration revenue was $5.2 million for the year ended December 31, 2020, consisting of $5.4 million of consideration received in the form of Beam shares in connection with the Beam Collaboration Agreement, offset by shares of our common stock that we issued to Beam with a then fair value of $0.2 million, and was recognized upon the first anniversary of the effective date of the agreement, when Beam elected to continue its collaboration with us. No collaboration revenue was recognized for the year ended December 31, 2021.

Operating Expenses

Research and Development Expenses

	Years Ended December 31,		
	2020	2021	Change
	(in thousands)		
License, intellectual property fees and other	$ 50	$ 47,346	$ 47,296
Personnel related (including stock-based compensation)	1,124	10,683	9,559
Lab supplies	523	6,142	5,619
Professional and consultant fees	163	650	487
Facility related and other	1,120	5,729	4,609
Total research and development expenses	$ 2,980	$ 70,550	$ 67,570

Research and development expenses were $3.0 million for the year ended December 31, 2020, compared to $70.6 million for the year ended December 31, 2021. The increase of $67.6 million was primarily due to an increase of $47.3 million in license, intellectual property fees and other primarily due to $42.0 million of an upfront expense under the Myeloid Agreement and $5.3 million under the Broad License Agreement (including amounts associated with the Pledge, as described above), an increase of $9.6 million in personnel-related expense driven by approximately 50 new hires in research and development, an increase of $5.6 million lab supplies expense due to continued discovery efforts and expansion of our research and development activities and an increase of $4.6 million facility related expense primarily due to the expansion of our office and laboratory space through new facilities being leased.

General and Administrative Expenses

	Years Ended December 31,		
	2020	2021	Change
	(in thousands)		
Personnel related (including stock-based compensation)	$ 1,030	$ 3,622	$ 2,592
Professional and consultant fees	1,951	8,088	6,137
Facility related and other	181	2,214	2,033
Total general and administrative expenses	$ 3,162	$ 13,924	$ 10,762

General and administrative expenses were $3.2 million for the year ended December 31, 2020, compared to $13.9 million for the year ended December 31, 2021. The increase of $10.8 million was primarily due to an increase of $6.1 million in professional and consultant fees as we prepare to become and operate as a public company, an increase of $2.6 million of personnel-related expense primarily due to compensation related costs related to eight new hires to expand upon our administrative staff functions and an increase of $2.0 million of facility related expenses primarily due to newly signed office leases to support our expanded general and administrative staff.

Other Income (Expense)

	Years Ended December 31,		
	2020	2021	Change
	(in thousands)		
Change in fair value of preferred stock tranche right liability	$ (10,904)	$ (74,319)	$ (63,415)
Change in fair value of anti-dilution obligation	(700)	(6,681)	(5,981)
Change in fair value of related party short-term investment	10,867	(391)	(11,258)
Other income (expense), net	126	12	(114)
Total other expense, net	$ (611)	$ (81,379)	$ (80,768)

Change in Fair Value of Preferred Stock Tranche Right Liability

The change in fair value of the preferred stock tranche right liability increased by $63.4 million from the year ended December 31, 2020 compared to the year ended December 31, 2021. The increase was primarily due to a $1.55 increase in the per share fair value of the underlying preferred stock used to determine the fair value of the preferred stock tranche right from December 31, 2020 through the settlement date in April 2021, as compared to the $0.33 increase in per share fair value of the underlying preferred stock used to determine the fair value of the preferred stock tranche right from December 31, 2019 to December 31, 2020.

Change in Fair Value of Anti-Dilution Obligation

The change in fair value of the Anti-Dilution Obligation increased by $6.0 million from the year ended December 31, 2020 compared to the year ended December 31, 2021. The increase was primarily due to a $0.86 increase in the per share fair value of our common stock used to determine the fair value of the Anti-Dilution Obligation from December 31, 2020 through the settlement date in connection with the fourth Series A preferred stock closing, as compared to the $0.09 increase in the per share fair value of our common stock used to determine the fair value of the Anti-Dilution Obligation from December 31, 2019 to December 31, 2020.

Change in Fair Value of Related Party Short-Term Investment

The change in fair value of related party short-term investment decreased by $11.3 million from the year ended December 31, 2020 compared to the year ended December 31, 2021. The decrease was primarily due to a $1.95 decrease in the stock price of the Beam stock from December 31, 2020 to December 31, 2021 as compared to the $54.25 increase in the per share value of our common stock used to determine the fair value of related party short-term investments from October 6, 2020, the date on which we received the Beam shares, to December 31, 2020.

Other Income (Expense), Net

The change in other income (expense), is due to the unrealized loss of $0.1 million recognized in the year ended December 31, 2020 related to the change in the fair value of the Beam shares we were entitled to receive for the period from the first anniversary date of the Beam Collaboration agreement, or September 26, 2020, through October 6, 2020, when we received the Beam shares due to a decrease in the stock price of the Beam stock. There is no similar unrealized loss in the year ended December 31, 2021 as any change in the fair value of the shares received subsequent to October 6, 2020 is included in the change in fair value of related party short-term investment.

Income Taxes

For the years ended December 31, 2020 and 2021, we recorded an income tax provision (benefit) of $1.9 million and $(0.5) million, respectively. The deferred income tax provision for the year ended December 31, 2020 was attributable to releasing our valuation allowance on our deferred tax assets as we were in a net deferred tax liability position, primarily due to our recognition of an unrealized gain on our related party short term investment. The deferred income tax benefit for the year ended December 31, 2021 was attributable to recording a valuation allowance on our deferred tax assets and liabilities due to being in a net deferred tax asset position.

Comparison of Period from September 13, 2019 (Inception) to December 31, 2019 and the Year Ended December 31, 2020

The following table summarizes our results of operations for the period from September 13, 2019 (inception) to December 31, 2019 and the year ended December 31, 2020:

	Period from September 13, 2019 (Inception) to December 31, 2019	Year Ended December 31, 2020	Change
	(in thousands)		
Related party collaboration revenue	$ —	$ 5,210	$ 5,210
Operating expenses:			
Research and development	920	2,980	2,060
General and administrative	1,252	3,162	1,910
Total operating expenses	2,172	6,142	3,970
Loss from operations	(2,172)	(932)	1,240
Other income (expense):			
Change in fair value of preferred stock tranche right liability	(353)	(10,904)	(10,551)
Change in fair value of anti-dilution obligation	—	(700)	(700)
Change in fair value of related party short term investment	—	10,867	10,867
Other income, net	—	126	126
Total other expense, net	(353)	(611)	(258)
Net Loss before income taxes	(2,525)	(1,543)	982
Provision for income taxes	4	1,867	1,863
Net loss	$ (2,529)	$ (3,410)	$ (881)

Related Party Collaboration Revenue

Related party collaboration revenue was zero for the period from September 13, 2019 (inception) to December 31, 2019, compared to $5.2 million for the year ended December 31, 2020. Collaboration revenue for the year ended December 31, 2020 consisted of $5.4 million of consideration received in the form of Beam shares in connection with the Beam Collaboration Agreement, offset by shares of our common stock that we issued to Beam with a then fair value of $0.2 million, and was recognized upon the first anniversary of the effective date of the agreement, when Beam elected to continue its collaboration with us.

Research and Development Expenses

	Period from September 13, 2019 (Inception) to December 31, 2019	Year Ended December 31, 2020	Change
	(in thousands)		
License, intellectual property fees and other	$ 719	$ 50	$ (669)
Personnel related (including stock-based compensation)	156	1,124	968
Lab supplies	—	523	523
Professional and consultant fees	45	163	118
Facility related and other	—	1,120	1,120
Total research and development expenses	$ 920	$ 2,980	$ 2,060

Research and development expenses were $0.9 million for the period from September 13, 2019 (inception) to December 31, 2019, compared to $3.0 million for the year ended December 31, 2020. The $2.1 million increase in research and development expenses was primarily due to an increase of $1.1 million in facility and other related costs due to our laboratory space lease in Cambridge, Massachusetts that was signed in March 2020, a $1.0 million increase in personnel-related expense primarily due to increased headcount of nine new hires for research and development activities and an increase of $0.5 million in lab supplies due to the expansion of our research and development staff and increased discovery and preclinical activities. These increases were offset by a $0.7 million decrease in license and intellectual property fees primarily due to the consideration paid for the Broad License Agreement in September 2019, which consisted of upfront fees paid of $0.5 million, the initial recognition of the Anti-Dilution Obligation of $0.2 million and the issuance of shares of our common stock to Broad Institute, with a fair value of $39,000. Personnel-related costs, consisting of employees and non-employees, included stock-based compensation of $0.2 million and $0.4 million for the period from September 13, 2019 (inception) to December 31, 2019 and the year ended December 31, 2020, respectively.

General and Administrative Expenses

	Period from September 13, 2019 (Inception) to December 31, 2019	Year Ended December 31, 2020	Change
	(in thousands)		
Personnel related (including stock-based compensation)	$ —	$ 1,030	$ 1,030
Professional and consultant fees	1,247	1,951	704
Facility related and other	5	181	176
Total general and administrative expenses	$ 1,252	$ 3,162	$ 1,910

General and administrative expenses were $1.3 million for the period from September 13, 2019 (inception) to December 31, 2019 compared to $3.2 million for the year ended December 31, 2020. The increase of $1.9 million in general and administrative expenses was primarily due to an increase of $1.0 million in personnel-related costs as a result of three hires, including our Chief Executive Officer, as we commenced our operations, an increase of $0.7 million in professional and consultant fees primarily due to the Broad License Agreement that we entered into which required us to reimburse Broad Institute for certain patent costs, and an increase of $0.2 million in facility-related and other expenses primarily due to an increase in our leased office space and other expenses primarily attributable to the increase in headcount. Personnel-related costs included stock-based compensation of $0 and $40,000 for the period from September 13, 2019 (inception) to December 31, 2019 and the year ended December 31, 2020, respectively.

Other Income (Expense)

	Period from September 13, 2019 (Inception) to December 31, 2019	Year Ended December 31, 2020	Change
	(in thousands)		
Change in fair value of preferred stock tranche right liability	$ (353)	$ (10,904)	$ (10,551)
Change in fair value of anti-dilution obligation	—	(700)	(700)
Change in fair value of related party short-term investment	—	10,867	10,867
Other income (expense), net	—	126	126
Total other income (expense), net	$ (353)	$ (611)	$ (258)

Change in Fair Value of Preferred Stock Tranche Right Liability

The change in fair value of the preferred stock tranche right liability expense was $0.4 million for the period from September 13, 2019 (inception) to December 31, 2019, compared to $10.9 million for the year ended December 31, 2020. The increase of $10.5 million was related to the remeasurement to fair value of the Series A preferred stock tranche liability associated with the Series A preferred stock, which primarily was due to an increase in the fair value of the underlying preferred stock during the year ended December 31, 2020, used to determine the fair value of the preferred stock tranche right liability.

Change in Fair Value of Anti-Dilution Obligation

The change in fair value of the Anti-Dilution Obligation was zero for the period from September 13, 2019 (inception) to December 31, 2019, compared to $0.7 million for the year ended December 31, 2020. The increase of $0.7 million was related to the remeasurement to fair value of the Anti-Dilution Obligation associated with the Broad License Agreement, primarily due to an increase in the fair value of our common stock during the year ended December 31, 2020, used to determine the fair value of the Anti-Dilution Obligation.

Change in Fair Value of Related Party Short-Term Investment

The change in fair value of related party short-term investment is due to the change in fair value of the Beam shares held by us since October 6, 2020, which increased by $10.9 million during the period from September 13, 2019 (inception) to December 31, 2019 to the year ended December 31, 2020. The increase was primarily due to a $54.25 increase in the stock price of the Beam stock from October 6, 2020 to December 31, 2020.

Other Income (expense), Net

Other expense was zero for the period from September 13, 2019 (inception) to December 31, 2019 compared to $0.1 million for the year ended December 31, 2020. The increase of $0.1 million was due to the change in fair value of the Beam shares we were entitled to receive on September 26, 2020 and the fair value of the shares we received from Beam on October 6, 2020.

Income Taxes

For the period from September 13, 2019 (inception) to December 31, 2019 and the year ended December 31, 2020, we recorded an income tax provision of $4,000 and $1.9 million, respectively. The deferred income tax provision for the year ended December 31, 2020 was attributable to releasing our valuation allowance on our deferred tax assets as we were in a net deferred tax liability position, primarily due to our recognition of an unrealized gain on our related party short term investment.

Liquidity and Capital Resources

Since our inception, we have incurred significant operating losses. We expect to incur significant expenses and operating losses for the foreseeable future as we commence the clinical development of our programs and continue our platform development and early-stage research activities. We have not yet commercialized any products and we do not expect to generate revenue from sales of products for several years, if at all. To date, we have funded our operations primarily with proceeds from the sale of our convertible preferred stock. Through June 30, 2022, we had received gross proceeds of $315.8 million from sales of our preferred stock. As of June 30, 2022, we had cash and cash equivalents and short-term investments of $180.6 million, excluding our restricted cash.

Cash Flows

The following table summarizes our sources and uses of cash for each of the periods presented:

	Period from September 13, 2019 (Inception) to December 31,	Year Ended December 31,		Six Months Ended June 30,	
	2019	2020	2021	2021	2022
			(in thousands)		
Net cash used in operating activities	$ (1,334)	$ (5,544)	$ (34,082)	$ (11,289)	$ (71,016)
Net cash (used in) provided by investing activities	—	(1,062)	(73,626)	(78,144)	(19,898)
Net cash provided by (used in) financing activities	9,981	34,934	269,278	270,365	(1,896)
Net increase in cash, cash equivalents and restricted cash	$ 8,647	$ 28,328	$ 161,570	$ 180,932	$ (92,810)

Operating Activities

During the six months ended June 30, 2022, operating activities used $71.0 million of cash, resulting primarily from our net loss of $53.2 million and a change in deferred income taxes of $1.0 million, partially offset by a change in the fair value of related party short-term investment of $8.2 million, non-cash rent expense of $4.2 million, stock-based compensation expense of $2.5 million, depreciation and amortization expense of $0.7 million, and amortization of premiums and discount on short-term investments of $0.2 million. Net cash used by changes in our operating assets and liabilities for the six months ended June 30, 2022 was $32.7 million which primarily consisted of a decrease in accrued expenses and other current liabilities of $30.9 million, and a decrease in lease liabilities of $4.3 million, partially offset by an increase in accounts payable of $2.4 million. The decrease in accrued expenses and other current liabilities was primarily due to a $30.0 million payment that we made to Myeloid in January 2022 in connection with the Myeloid Agreement.

During the six months ended June 30, 2021, operating activities used $11.3 million of cash, resulting primarily from our net loss of $86.0 million and a change in the fair value of related party short-term investment of $9.4 million, partially offset by a change in fair value of preferred stock tranche right liability of $74.3 million, a change in fair value of anti-dilution obligation of $6.7 million, non-cash rent expense of $1.7 million, a change in deferred income taxes of $0.5 million, stock-based compensation expense of $0.3 million, and depreciation and amortization expense of $0.2 million. Net cash provided by changes in our operating assets and liabilities for the six months ended June 30, 2021 was $0.4 million which primarily consisted of an increase in accrued expenses and other current liabilities of $1.4 million and an increase in accounts payable of $1.0 million, partially offset by a decrease in lease liabilities of $1.7 million and an increase in prepaid expenses and other current assets of $0.3 million.

During the year ended December 31, 2021, operating activities used $34.1 million of cash, resulting primarily from our net loss of $165.4 million and a change in our deferred income taxes of $0.6 million, partially offset by a change in fair value of preferred stock tranche right liability of $74.3 million, non-cash research and development expense of $12.0 million, a change in fair value of anti-dilution obligation of $6.7 million, non-cash rent expense of $4.3 million, stock-based compensation expense of $1.7 million, amortization of premium and discount on short-term investments of $0.7 million, depreciation and amortization expense of $0.6 million and a change in fair value of related party short-term investment of $0.4 million. Net cash provided by changes in our operating assets and liabilities for the year ended December 31, 2021 was $31.2 million which primarily consisted of an increase in accrued expenses and other current liabilities of $35.2 million, and an increase in accounts payable of $1.2 million, partially offset by a decrease in lease liability of $4.3 million and an increase in prepaid expenses and other current assets of $0.9 million due to increased spending during the year.

During the year ended December 31, 2020, operating activities used $5.5 million of cash, resulting primarily from our net loss of $3.4 million, a change in fair value of related party short-term investment of $10.9 million and non-cash consideration received under related party collaboration arrangement of $5.4 million, partially offset by non-cash expenses related to a change in fair value of preferred stock tranche right liability of $10.9 million, deferred income taxes of $1.9 million, a change in fair value of anti-dilution obligation of $0.7 million, stock-based compensation of $0.4 million, non-cash other income (expense) of $0.1 million, and non-cash consideration paid to Beam of $0.2 million. Net cash provided by changes in our operating assets and liabilities for the year ended December 31, 2020 was $0.2 million which primarily consisted of a net increase in accounts payable of $0.3 million and accrued expenses of $0.3 million due to increased spending during the year partially offset by a $0.4 million increase in prepaid expenses and other current assets due to payment of deposits for new leases.

During the period from September 13, 2019 (inception) to December 31, 2019, operating activities used $1.3 million of cash, resulting primarily from our net loss of $2.5 million, partially offset by a change in fair value of preferred stock tranche right liability of $0.4 million, non-cash research and development expense for a Broad license of $0.2 million, and non-cash expenses related to stock-based compensation of $0.2 million. Net cash provided by changes in our operating assets and liabilities for the September 13, 2019 (inception) to December 31, 2019 was $0.5 million, which primarily consisted of an increase in accrued expenses due to timing of payments to vendors.

Investing Activities

During the six months ended June 30, 2022, net cash provided by investing activities was $19.9 million, primarily consisting of purchases of short-term investments of $74.7 million, purchases of property and equipment of $6.5 million, and payments of security deposits of $0.7 million, partially offset by maturities of short-term investments of $62.0 million. The purchases of equipment were primarily related to laboratory equipment purchases, which increased as we expanded our discovery and preclinical activities.

During the six months ended June 30, 2021, net cash used in investing activities was $78.1 million, primarily consisting of purchases of short-term investments of $75.9 million, purchases of property and equipment of $1.9 million, and payments of security deposits of $0.3 million. The purchases of equipment were primarily related to laboratory equipment purchases, which increased as we expanded our discovery and preclinical activities.

During the year ended December 31, 2021, net cash used in investing activities was $73.6 million, primarily consisting of purchases of short-term investments of $82.0 million, purchase of property and equipment of $4.2 million and payment of security deposits of $0.5 million all of which were offset by $13.0 million from the maturities of short-term investments. The purchase of short-term investments consisted of U.S. treasuries using the proceeds from issuance of convertible preferred stock. The purchases of equipment were primarily related to laboratory equipment purchases, which increased as we expanded our discovery and preclinical activities. The payment of security deposits was due to our new leases signed during the period.

During the year ended December 31, 2020, net cash used in investing activities was $1.1 million, primarily consisting of payments of security deposit of $0.4 million related to our lab space and purchases of property and equipment of $0.6 million. The purchases of equipment during the period were primarily related to laboratory equipment purchases, which increased as we expanded our discovery and preclinical activities. The payment of security deposits was due to our new leases signed during the period.

During the period from September 13, 2019 (inception) to December 31, 2019, there were no cash flows from investing activities.

Financing Activities

During the six months ended June 30, 2022, net cash used in financing activities was $1.9 million, consisting of $1.9 million in payments of deferred offering costs.

During the six months ended June 30, 2021, net cash provided by financing activities was $270.4 million, consisting of net cash proceeds received of $270.4 million from our issuance of Series A and B preferred stock in April 2021.

During the year ended December 31, 2021, net cash provided by financing activities was $269.3 million, primarily consisting of net proceeds of $270.4 million from our additional issuances of Series A preferred stock and issuance of Series B preferred stock in April 2021, net of issuance costs, partially offset by $1.1 million of deferred offering costs.

During the year ended December 31, 2020, net cash provided by financing activities was $35.0 million, primarily consisting of net proceeds from our additional issuance of Series A preferred stock in November 2020.

During the period from September 13, 2019 (inception) to December 31, 2019, net cash provided by financing activities was $10.0 million, primarily consisting of net proceeds from our initial issuance of Series A preferred stock in September 2019.

Funding Requirements

To date, we have not generated any revenue from product sales. We do not expect to generate revenue from product sales unless and until we successfully complete preclinical and clinical development of, receive regulatory approval for, and commercialize a product candidate and we do not know when, or if at all, that will occur. We expect our expenses to increase substantially in connection with our ongoing activities, particularly as we advance the preclinical activities and studies and initiate clinical trials. In addition, if we obtain regulatory approval for any product candidates, we expect to incur significant expenses related to product sales, marketing, and distribution to the extent that such sales, marketing and distribution are not the responsibility of potential collaborators. Further, upon the completion of this offering, we expect to incur additional costs associated with operating as a public company. The timing and amount of our operating expenditures will depend largely on the factors set out above. For more information, see "Risk Factors—Risks Related To Our Financial Position and Need for Additional Capital."

We believe that the anticipated net proceeds from this offering, together with our existing cash and cash equivalents and short-term investments, will enable us to fund our operating expenses and capital expenditure requirements through . We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect. We expect that we will require additional funding to: continue our current research development activities; identify product candidates; initiate preclinical testing and clinical trials for our future product candidates we identify; develop, maintain, expand and protect our intellectual property portfolio; further develop our Prime Editing platform; and hire additional research, clinical and scientific personnel. If we receive regulatory approval for any of our product candidates, we expect to incur significant commercialization expenses related to product manufacturing, sales, marketing and distribution, depending on where we choose to commercialize ourselves.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through a combination of private and public equity offerings, debt financings, additional collaborations, strategic alliances, and marketing, distribution or licensing arrangements with third parties. To the extent that we raise additional capital through the sale of equity or convertible debt securities, ownership interest may be materially diluted, and the terms of such securities could include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include restrictive covenants that limit our ability to take specified actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise funds through collaborations, strategic alliances or marketing, or distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, any future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings or other arrangements when needed, we may be required to delay, reduce or eliminate our product development or future commercialization efforts, or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Contractual Obligations and Other Commitments

Leases

As of June 30, 2022, we have future remaining operating lease payments of $37.5 million relating to leases we have recognized on our consolidated balance sheet, of which an aggregate $6.1 million is payable before December 31, 2022. In addition, we have one lease that has been entered into but has not yet commenced, as of June 30, 2022, for which we expect to pay approximately $208.7 million over the 10 year lease term. Refer to Note 10 – *Leases* to our consolidated financial statements appearing at the end of this prospectus for more information on our lease obligations.

License and Collaboration Agreements

Under the Broad License Agreement, we are obligated to pay to Broad Institute an annual license maintenance fee ranging from the low to mid-five figures to the low six-figures, depending on the particular calendar year for the term of the agreement. Broad Institute is also entitled to receive clinical and regulatory milestone payments up to a total of $20.0 million per licensed product, depending on the patient population to be treated by the licensed product achieving the applicable milestone. If we undergo a change of control at any time during the term of the Broad License Agreement, certain of the clinical and regulatory milestone payments will increase by a specified percentage. Broad Institute is also entitled to sales-based milestone payments up to a total of $54.0 million per licensed product, depending on the patient population to be treated by the licensed product achieving the applicable milestone. Broad Institute is entitled to lower payments to the extent the clinical and regulatory milestones or sales-based milestones are achieved by enabled products, rather than licensed products.

Broad Institute is entitled to receive mid-single digit percentage royalties on net sales of licensed products, and low single-digit percentage royalties of enabled products. Royalties payable to Broad Institute are subject to customary offsets and reductions with respect to a product in a given country, to a floor.

Under the Beam Collaboration Agreement, Beam has the option to designate up to a mid-single digit number of licensed products for which we are not permitted to exercise our profit sharing right. If Beam exercises its option for a protected product, Beam will owe us a payment of $5.0 million if the product is developed for non-sickle cell disease or $10.0 million if the product is developed for sickle cell disease.

We are entitled to receive development milestone payments from Beam on Beam's development of protected products (which, for clarity, includes any licensed product for which we have not exercised our profit share option) and collaboration products. For protected products, we are entitled to receive up to a total of $35.5 million on a protected product-by-protected product basis based on Beam's development of such protected product and, for collaboration products, up to a total of $17.8 million on a collaboration product-by-collaboration product basis based on Beam's development of such collaboration product outside of the United States, in each case, with such amounts lowered if such licensed product achieves a given milestone for use in treating an orphan disease. We are also entitled to receive sales-based milestone payments from Beam based on net sales of licensed products. For protected products, we are entitled to receive up to a total of $84.5 million on a protected product-by-protected product basis based on net sales of such protected product worldwide, and, for collaboration products, up to a total of $42.3 million on a collaboration product-by-collaboration product basis based on net sales of collaboration products outside of the United States.

Beam is obligated to pay to us tiered royalties ranging from a high-single digit percentage to a low double-digit percentage, but less than teens on net sales of protected products worldwide on a protected product-by-protected product basis and net sales of collaboration products outside of the United States on a collaboration product-by-collaboration product basis. Our royalties are subject to customary offsets and reductions, to a floor that takes into account any royalties we are obligated to pay to our third-party licensors, including Broad Institute. In addition, certain of the rights licensed under the Beam Collaboration Agreement are sublicensed from third parties, and Beam agrees to reimburse us for certain payments we are required to make to our third-party licensors attributable to Beam's exercise of any sublicense we grant to Beam, including payments we make to Broad Institute under the Broad License Agreement.

If we develop a product that is covered by the technology, know-how or patent rights that Beam licenses to us under the Beam Collaboration Agreement, which we refer to as a Prime product, we are obligated to pay to Beam a low single digit percentage royalty on our worldwide net sales of such any product on a Prime product-by-Prime product and country-by-country basis, subject to certain customary reductions, to a floor.

Under the Myeloid Agreement, Myeloid was entitled to receive an upfront payment of $30.0 million in cash and an aggregate of 3,424,422 shares of our common stock, with a then fair value of $12.0 million, both of which Myeloid received in January 2022. During the research term, Myeloid is also entitled to receive cash payments of up to $35.0 million in the aggregate upon the achievement of a research milestone and a patent prosecution milestone.

If we exercise our option, we agree to (i) pay Myeloid an option exercise fee consisting of $80.0 million in cash and (ii) issue Myeloid shares of our common stock, with a fair value of $30.0 million. Additionally, if the research collaboration meets its goals, we exercise our option and proceed with the development and commercialization of a product that is covered by (a) the patent rights or know-how subject to our option or (b) the patent rights or know-how developed by one or both of the parties during the research term related to LINE-1 retrotransposon technology, or, collectively, a Prime Product, Myeloid would be eligible to receive, for the first five Prime Products, development and regulatory milestone payments of up to $120.0 million on a Prime Product-by-Prime Product basis and sales-based milestone payments of up to $210.0 million on a Prime Product-by-Prime Product basis.

Myeloid is also eligible to receive tiered low to mid single-digit percentage royalties on our annual aggregate global net sales of Prime Products on a Prime Product-by-Prime Product and country-by-country basis, subject to customary offsets and reductions to a floor.

Following the exercise of our option and for a period of two years thereafter, Myeloid will have the right to select up to three targets, subject to certain exclusions, for the development and commercialization of products directed at such targets in all fields and we will be eligible to receive development, regulatory and sales-based milestone payments and royalty payments as set forth above from Myeloid with respect to such products.

To date, no milestone or royalty payments under these agreements have been paid or were due from us. For additional information, see “Business—Our License and Collaboration Agreements— Research Collaboration, Option and License Agreement with Myeloid Therapeutics, Inc” and “Certain Relationships and Related Party Transactions.”

In February 2021, we committed to donate $5.0 million to Broad Institute and Harvard annually for 14 years, commencing in 2021 pursuant to the Pledge. The Pledge is intended to be used for research and development related to new genome editing technologies, for example Prime Editing, improve on existing genome-editing technologies, identify delivery mechanisms for these technologies and apply these technologies to the understanding and treatment of rare genetic diseases. We can terminate the Pledge at our discretion, subject to providing one year of funding from the date of termination. In August 2022, we amended and restated the Pledge to clarify that the funds may be used by the laboratory of David Liu, who is a member of the Broad Institute and a faculty member at Harvard. For additional information, see “Business—Our License and Collaboration Agreements—Pledge to Broad Institute and Harvard.”

Critical Accounting Policies and Significant Judgments and Estimates

Our management’s discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States, or GAAP. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosures of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses incurred during the reporting periods. We base our estimates on historical experience, known trends and events, and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities recorded revenues and expenses that are not readily apparent from other sources. We evaluate our estimates and assumptions on an ongoing basis. Actual results may differ from these estimates.

While our significant accounting policies are described in more detail in Note 2 to our consolidated financial statements appearing at the end of this prospectus, we believe that the following accounting policies are those most critical to the judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition

We recognize revenue when our customer obtains control of promised goods or services, in an amount that reflects the consideration which we expect to receive in exchange for those goods or services in accordance with ASC 606.

At contract inception, we assessed the goods or services promised within each contract, whether each promised good or service is distinct, and determines those that are performance obligations. In assessing whether promised goods or services are distinct, we consider factors such as the stage of development of the underlying intellectual property, the capabilities of the customer to develop the intellectual property on their own and whether the required expertise is readily available. In addition, we consider whether the collaboration partner can benefit from a promise for its intended purpose without the receipt of the remaining promises, whether the value of the promise is dependent on the unsatisfied promises, whether there are other vendors that could provide the remaining promises, and whether it is separately identifiable from the remaining promises. We then recognize as revenue the amount of the transaction price that is allocated to the respective performance obligation when or as the performance obligation is satisfied.

In determining the appropriate amount of revenue to be recognized as we fulfill our obligations under our arrangements, we performs the following steps: (i) identification of the promised goods or services in the contract; (ii) determination of whether the promised goods or services are performance obligations, including whether they are distinct in the context of the contract; (iii) measurement of the transaction price, including the assessment of the constraint on variable consideration; (iv) allocation of the transaction price to the performance obligations, and (v) recognition of revenue when, or as, we satisfy each performance obligation. As part of the accounting for arrangements under ASC 606, we must use significant judgment to determine: a) the performance obligations based on the determination under step (ii) above; b) the transaction price under step (iii) above; and c) the standalone selling price for each performance obligation identified in the contract for the allocation of transaction price in step (iv) above. We also use judgment to determine whether milestones or other variable consideration, except for royalties and sales-based milestones where such payments principally relate to a license of intellectual property, should be included in the transaction price as described below. At the end of each subsequent reporting period, we re-evaluate the estimated variable consideration included in the transaction price and any related constraint, and if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis in the period of adjustment. The transaction price is allocated to each performance obligation based on the relative standalone selling price of each performance obligation in the contract, and we recognize revenue based on those amounts when, or as, the performance obligations under the contract are satisfied. We utilize key assumptions to determine the standalone selling price, which may include other comparable transactions, pricing considered in negotiating the transaction, probabilities of technical and regulatory success and the estimated costs. Certain variable consideration is allocated specifically to one or more performance obligations in a contract when the terms of the variable consideration relate to the satisfaction of the performance obligation and the resulting amounts allocated to each performance obligation are consistent with the amount we would expect to receive for each performance obligation.

During the year ended December 31, 2020, we recognized revenue related to the Beam Collaboration Agreement. We concluded that the Beam Collaboration Agreement and the Beam Mutual Subscription Agreement should be combined and treated as a single arrangement for accounting purposes as the agreements were entered into contemporaneously and in contemplation of one another. We determined that the combined agreements are accounted for under ASC 606 and identified the following performance obligations: (i) exclusive, worldwide license to certain Prime patents, (ii) non-exclusive, worldwide license to CRISPR technology and (iii) joint research committee participation. We also evaluated whether the Beam Option and our right to elect collaboration products in the Beam Collaboration Agreement represented material rights that would give rise to a performance obligation and concluded that neither the Beam Option nor our right to elect collaboration products convey a material right to Beam and therefore are not considered separate performance obligations within the Beam Collaboration Agreement. There

have been no protected products or collaborations products to date. Under the Beam Collaboration Agreement, we are eligible to receive certain milestones and royalties regardless of whether any options are exercised, which are considered variable consideration. At each reporting period, we evaluate whether milestones are considered probable of being reached and, to the extent that a significant reversal would not occur in future periods, estimate the amount to be included in the transaction price. During the years ended December 31, 2020 and 2021, we did not receive any milestone payments and all variable consideration related to the Beam Collaboration Agreement remained fully constrained.

We assessed the above promises and determined that the exclusive licenses for certain Prime products and non-exclusive license to CRISPR technology represent performance obligations within the scope of ASC 606. The exclusive licenses for certain Prime products and non-exclusive license to CRISPR technology are considered functional intellectual property and distinct from other promises under the contract. The exclusive licenses for certain Prime products and non-exclusive license to CRISPR technology are considered functional licenses that are distinct in the context of the Beam Collaboration Agreement as Beam can benefit from the licenses on its own or together with other readily available resources. As the exclusive licenses for certain Prime products and non-exclusive license to CRISPR technology are delivered at the same time, they are considered one performance obligation at contract inception. The joint research committee performance promise is immaterial in the context of the contract.

We determined the transaction price under ASC 606 at the inception of the Beam Collaboration Agreement to be $5.2 million, consisting of the value of the Beam equity investment under the Mutual Subscription Agreement, when measured at fair value, less the fair value of our shares issued to Beam of $0.2 million. An immediate 10 percent change in the Beam share price would have had a $0.5 million impact on the collaboration revenue from Beam. The shares we issued to Beam represents a payment to a customer and is therefore a reduction of the transaction price.

We recognized revenue for the license performance obligations at a point in time, that is upon the first anniversary of the effective date when Beam elected to continue its collaboration with us. As control of these licenses was transferred on this date, Beam could begin to use and benefit from the licenses, we recognized $5.2 million of license revenue during the year ended December 31, 2020 under the Beam Collaboration Agreement. We did not recognize any revenue under the Beam Collaboration Agreement during the year ended December 31, 2021 or the six months ended June 30, 2021 or 2022.

Stock-Based Compensation Expense

We measure stock-based awards granted to employees, directors, and non-employees based on their fair value on the date of the grant using the Black-Scholes option-pricing model for stock options or the difference, if any, between the purchase price per share of the award and the fair value of our common stock at the date of grant for restricted stock awards. Compensation expense for those awards is recognized over the requisite service period, which is generally the vesting period of the respective award. Compensation expense for awards to non-employees with service-based vesting conditions is recognized in the same manner as if we had paid cash in exchange for the goods or services, which is generally the over the vesting period of the award. We use the straight-line method to recognize the expense of awards with service-based vesting conditions. We account for forfeitures of stock-based awards as they occur. Compensation expense for awards to employees and non-employees with performance-based vesting conditions is recognized based on the grant-date fair value over the requisite service period using the accelerated attribution method to the extent achievement of the performance condition is probable. As of each reporting date, we estimate the probability that specified performance criteria will be met and does not recognize compensation expense until it is probable that the performance-based vesting condition will be achieved.

Determination of the Fair Value of Common Stock

As there has been no public market for our common stock to date, the estimated fair value of our common stock has been determined by our board of directors as of the date of grant of each option or restricted stock award, with input from management, considering our most recently available third-party valuations of common stock and our board of directors' assessment of additional objective and subjective factors that it believed were relevant and which

may have changed from the date of the most recent valuation through the date of the grant. These third-party valuations were performed in accordance with the guidance outlined in the American Institute of Certified Public Accountants' Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*. Our common stock valuations were prepared using either an option pricing method, or OPM, or a hybrid method, both of which used market approaches to estimate our enterprise value. The OPM treats common stock and preferred stock as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company's securities changes. Under this method, the common stock has value only if the funds available for distribution to stockholders exceed the value of the preferred stock liquidation preferences at the time of the liquidity event, such as a strategic sale or a merger. The hybrid method is a probability-weighted expected return method, or PWERM, where the equity value in one or more of the scenarios is calculated using an OPM. The PWERM is a scenario-based methodology that estimates the fair value of common stock based upon an analysis of future values for us, assuming various outcomes. The common stock value is based on the probability-weighted present value of expected future investment returns considering each of the possible outcomes available as well as the rights of each class of stock. The future value of the common stock under each outcome is discounted back to the valuation date at an appropriate risk-adjusted discount rate and probability weighted to arrive at an indication of value for the common stock. A discount for lack of marketability, or DLOM, of the common stock is then applied to arrive at an indication of value for the common stock. These third-party valuations were performed at various dates, which resulted in valuation of our common stock of $1.18 per share as of May 31, 2021, $3.39 per share as of October 27, 2021, $3.51 as of December 24, 2021, and $2.56 as of May 20, 2022. In addition to considering the results of these third-party valuations, our board of directors considered various objective and subjective factors to determine the fair value of our common stock as of each grant date, including:

- the prices at which we sold shares of preferred stock and the superior rights and preferences of the preferred stock relative to our common stock at the time of each grant;
- the progress of our research and development programs, including the status of preclinical studies and clinical trials for our product candidates;
- our stage of development and business strategy;
- external market conditions affecting the biotechnology industry and trends within the biotechnology industry;
- our financial position, including cash on hand, and our historical and forecasted performance and operating results;
- the lack of an active public market for our common stock and our preferred stock;
- the likelihood of achieving a liquidity event, such as an initial public offering, or IPO, or sale of our company in light of prevailing market conditions; and
- the analysis of IPOs and subsequent market performance of similar companies in the biotechnology industry.

The assumptions underlying these valuations represented management's best estimate, which involved inherent uncertainties and the application of management's judgment. As a result, if we had used significantly different assumptions or estimates, the fair value of our common stock and our stock-based compensation expense could have been materially different.

Once a public trading market for our common stock has been established in connection with the completion of this offering, it will no longer be necessary for our board of directors to estimate the fair value of our common stock in connection with our accounting for granted stock options and other such awards we may grant, as the fair value of our common stock will be determined based on the quoted market price of our common stock.

Share-based Awards Granted

The following table sets forth by grant date the number of shares subject to options granted or number of restricted stock granted since January 1, 2020, the per share exercise price of the options or purchase price of restricted stock, the per share fair value of common stock on each grant date, and the per share estimated fair value of the options or restricted stock:

Grant Date	Type of Award	Number of Shares Subject to Award	Per Share Exercise or Purchase Price of Award	Per Share Fair Value of Common Stock on Grant Date	Per Share Estimated Fair Value of Awards on Grant Date
February 26, 2020	Restricted Stock	2,159,621	$0.00001	$0.02[1]	$0.02
July 28, 2020	Restricted Stock	12,957,727	$0.00001	$0.03[2]	$0.03
August 13, 2020	Restricted Stock	260,000	$0.00001	$0.03[2]	$0.03
October 27, 2020	Restricted Stock	1,480,000	$0.00001	$0.03[2]	$0.03
January 16, 2021	Restricted Stock	3,000,000	$0.00001	$0.11[2]	$0.11
February 10, 2021	Restricted Stock	298,000	$0.00001	$0.11[2]	$0.11
March 4, 2021	Restricted Stock	1,190,000	$0.00001	$0.11[2]	$0.11
August 4, 2021	Option	3,906,000	$1.18	$1.18	$0.79
August 31, 2021	Option	170,000	$1.18	$1.18	$0.76
October 27, 2021	Option	4,866,720	$1.18	$3.39[3]	$2.76
November 21, 2021	Option	80,500	$3.39	$3.39	$2.21
November 24, 2021	Option	84,000	$3.39	$3.39	$2.29
December 2, 2021	Option	133,000	$3.39	$3.39	$2.21
December 16, 2021	Option	95,000	$3.39	$3.39	$2.21
January 24, 2022	Option	475,500	$3.51	$3.51	$2.33
February 9, 2022	Option	57,000	$3.51	$3.51	$2.32
June 3, 2022	Option	1,469,000	$2.56	$2.56	$1.71
August 4, 2022	Option	1,605,000	$2.56	$2.56	$1.71

(1) At the time of the restricted stock grant on February 26, 2020, our board of directors determined that the fair value of our common stock of $0.04 per share reasonably reflected the fair value of our common stock as of the grant date. However, as described below, the fair value of our common stock as of the date of this grant was adjusted in connection with a retrospective fair value assessment for accounting purposes.

(2) At the time of the restricted stock grants from July 28, 2020 through March 4, 2021, our board of directors determined that the fair value of our common stock of $0.04 per share reasonably reflected the fair value of our common stock as of the grant date. However, as described below, the fair value of our common stock as of the dates of these grant was adjusted in connection with a retrospective fair value assessment for accounting purposes.

(3) At the time of the option grant on October 27, 2021, our board of directors determined that the fair value of our common stock of $1.18 per share calculated in the third-party valuation as of May 31, 2021 described above reasonably reflected the fair value of our common stock as of the grant date. However, as described below, the fair value of our common stock as of the date of this grant was adjusted in connection with a retrospective fair value assessment for accounting purposes.

The fair value of our common stock of $0.02 per share as of February 26, 2020 was determined by us, based, in part, on the $0.02 per share value indicated in the retrospective third-party valuation prepared as of December 31, 2019. In particular, the valuation determined our enterprise value using an OPM market-adjusted backsolve approach that was primarily based on the $1.00 price per share paid by new and existing investors in the first closing of our Series A preferred stock in September 2019 less the value of the anticipated additional Series A tranche closings, which were treated as call options for the purposes of allocating value to the various equity securities. The market adjustment applied to the equity value considered the performance of guideline public companies and the biotech indices since the most recent sale of our preferred stock through the valuation date. A DLOM of the common stock was then applied to arrive at an indication of value for our common stock.

The fair value of our common stock of $0.03 per share from July 28, 2020 to October 27, 2020 was determined by us, based, in part, on the $0.03 per share value indicated in the retrospective third-party valuation prepared as of

September 26, 2020. In particular, the retrospective valuation determined our enterprise value using an OPM market-adjusted backsolve approach that was primarily based on the $1.00 price per share paid by new and existing investors in the first closing of our Series A preferred stock in September 2019 less the value of the anticipated additional Series A tranche closings which were treated as call options for the purposes of allocating value to the various equity securities. The market adjustment applied to the equity value considered the performance of guideline public companies and the biotech indices since the most recent sale of our preferred stock through the valuation date. A DLOM of the common stock was then applied to arrive at an indication of value for our common stock.

The fair value of our common stock of $0.11 per share from January 16, 2021 to March 4, 2021 was determined by us, based, in part, on the $0.11 per share value indicated in the retrospective third-party valuation prepared as of December 31, 2020. In particular, the retrospective valuation determined our enterprise value using an OPM market-adjusted backsolve approach that was primarily based on the $1.00 price per share paid by new and existing investors in the first and second closings of our Series A preferred stock in September 2019 and November 2020, respectively, less the value of the anticipated additional Series A tranche closings, which were treated as call options for the purposes of allocating value to the various equity securities. The market adjustment applied to the equity value considered the performance of guideline public companies and the biotech indices since the most recent sale of our preferred stock through the valuation date. A DLOM of the common stock was then applied to arrive at an indication of value for our common stock.

The fair value of our common stock of $1.18 per share on August 4 and 31, 2021 was determined by our board of directors, based, in part, on the $1.18 per share value indicated in the third-party valuation prepared as of May 31, 2021. In particular, the valuation determined our enterprise value using an OPM backsolve approach that was based on the $4.3803 price per share paid by new and existing investors in the closing of our Series B preferred stock in May 2021. A DLOM of the common stock was then applied to arrive at an indication of value for our common stock.

The fair value of our common stock of $3.39 per share on October 27, 2021 was determined by us, based, in part, on the $3.39 per share value indicated in the third-party valuation prepared as of October 27, 2021. In particular, the valuation determined our enterprise value using the hybrid method, which included a PWERM, with an IPO scenario, and a sale scenario. Our enterprise value in the IPO scenario was based on guideline IPO transactions identified within the last one to two years, which was adjusted by a risk-adjusted discount rate. The IPO scenario also assumed an estimated timeline for the IPO to occur. Our enterprise value for the sale scenario was based on an OPM market-adjusted backsolve method based on the $4.3803 price per share paid by new and existing investors in the closing of our Series B preferred stock in May 2021. The market adjustment applied to the equity value considered the performance of guideline public companies and the biotech indices since the most recent sale of our preferred stock through the valuation date. A DLOM of the common stock was then applied to arrive at an indication of value for our common stock. In addition, the board determined that the fair value of our common stock remained at $3.39 per share through December 16, 2021.

The fair value of our common stock of $3.51 per share on January 24, 2022 and February 9, 2022 was determined by our board of directors, based, in part, on the $3.51 per share value indicated in the third-party valuation prepared as of December 24, 2021. In particular, the valuation determined our enterprise value using the hybrid method, which included a PWERM, with two IPO scenarios, short-term and long-term, and a sale scenario. Our enterprise value in the IPO scenarios was based on guideline IPO transactions identified within the last one to two years, which was adjusted by a risk-adjusted discount rate. Each IPO scenario also assumed an estimated timeline for the IPO to occur. Our enterprise value for the sale scenario was based on an OPM market-adjusted backsolve method based on the $4.3803 price per share paid by new and existing investors in the closing of our Series B preferred stock in May 2021. The market adjustment applied to the equity value considered the performance of guideline public companies and the biotech indices since the most recent sale of our preferred stock through the valuation date. A DLOM of the common stock was then applied to arrive at an indication of value for our common stock.

The fair value of our common stock of $2.56 per share on June 3, 2022 was determined by our board of directors, based, in part, on the $2.56 per share value indicated in the third-party valuation prepared as of May 20, 2022. In particular, the valuation determined our enterprise value using the hybrid method, which included a

PWERM, with two IPO scenarios, short-term and long-term, and a sale scenario. Our enterprise value in the IPO scenarios was based on guideline IPO transactions identified within the last one to two years, which was adjusted by a risk-adjusted discount rate. Each IPO scenario also assumed an estimated timeline for the IPO to occur. Our enterprise value for the sale scenario was based on an OPM market-adjusted backsolve method based on the $4.3803 price per share paid by new and existing investors in the closing of our Series B preferred stock in May 2021. The market adjustment applied to the equity value considered the performance of guideline public companies and the biotech indices since the most recent sale of our preferred stock through the valuation date. A DLOM of the common stock was then applied to arrive at an indication of value for our common stock. In addition, the board determined that the fair value of our common stock remained at $2.56 per share through August 4, 2022.

In the course of preparing for this offering, we applied the fair values of our common stock from our retrospective fair value assessments in December 2019, September and December 2020 and October 2021 to determine the fair value of each of the February 2020, July 2020, August 2020, October 2020, January 2021, February 2021, March 2021 and October 2021 awards as of the respective grant date and calculated stock-based compensation expense for accounting purposes based on applicable fair values.

Valuation of Preferred Stock Tranche Right Liability

We classify the preferred stock tranche right as a liability on our consolidated balance sheets as each preferred stock tranche right is a freestanding financial instrument that may require us to transfer assets upon the achievement of certain conditions. Each preferred stock tranche right liability was initially recorded at fair value upon the date of issuance of each preferred stock tranche right and is subsequently remeasured to fair value at each reporting date, and immediately prior to any subsequent Series A preferred stock financing. Changes in the fair value of the preferred stock tranche right liability are recognized as a component of other income (expense), net in the consolidated statement of operations and comprehensive loss. Changes in the fair value of the preferred stock tranche right liability were recognized until the preferred stock tranche right was settled in full upon the satisfaction of certain conditions in April 2021. During the year ended December 31, 2021, we recognized $74.3 million as a component of other income (expense), net related to the change in fair value of the preferred stock tranche right liability.

We utilize the Black-Scholes option pricing model, which incorporates management's assumptions and estimates, to value the preferred stock tranche right liability. We determine the fair value per share of the underlying convertible preferred stock by taking into consideration the most recent sales of our convertible preferred stock, fair value of the preferred stock at each valuation date as obtained from third-party valuations and additional factors we deem relevant. In November 2020 the second tranche of the Series A preferred stock closed and in April 2021 the third and fourth tranches of the Series A preferred stock closed. Upon the achievement of certain conditions the preferred stock tranche right liability was settled. In November 2020, the fair value of each Series A convertible preferred stock was $0.73 per share upon the closing of the second tranche. The fair value of each Series A convertible preferred stock was $2.31 per share upon the closing of the third and fourth tranches.

As of December 31, 2020, the fair value of each Series A convertible preferred stock was $0.76 per share. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve for time periods approximately equal to the remaining estimated time period of achievement of the specified milestones underlying the preferred stock tranche right. As of December 31, 2020, an immediate 10 percent increase in the fair value of our Series A preferred stock would have resulted in a $3.3 million increase, and in the case of a 10 percent decrease, a $3.1 million decrease to the fair value of the preferred stock tranche right liability.

Valuation of Anti-Dilution Obligation

The fair value of the Anti-Dilution Obligation recognized in connection with the anti-dilution provisions set forth in our license agreement with Broad Institute was determined based on significant inputs not observable in the market, which represented a Level 3 measurement within the fair value hierarchy.

The fair value of the Anti-Dilution Obligation was estimated using a probability-weighted scenario which considered as inputs the probability of occurrence of events that would trigger the issuance of shares, including a (i) the closing of Series A convertible preferred stock, (ii) our initial public offering, and (ii) no future sale of equity

securities. The weighted-average fair values of all scenarios were calculated utilizing the fair value per share of the underlying Series A convertible preferred stock and common stock. Changes in the estimated fair value of our common stock and the probability of achieving different financing scenarios can have a significant impact on the fair value of the Anti-Dilution Obligation. An immediate 10 percent change in fair value of our common stock would have had an insignificant impact on the fair value of fair value of the Anti-Dilution Obligation as of December 31, 2020. The fair value of our common stock was $0.11 per share as of December 31, 2020.

The Anti-Dilution Obligation was initially recorded at fair value upon entering into the license agreement with Broad Institute and was subsequently remeasured to fair value at each reporting date. Changes in fair value of the Anti-Dilution Obligation were recognized as a component of other income (expense), net in the consolidated statements of operations and comprehensive loss. Changes in the fair value of the Anti-Dilution Obligation were recognized until the achievement of $100.0 million in cumulative equity financing was raised by us in connection with the fourth Series A preferred stock closing. As a result, the Anti-Dilution Obligation was settled during the year ended December 31, 2021. During the year ended December 31, 2021, we recognized $6.7 million as a component of other income (expense), net related to the change in fair value of the Anti-Dilution Obligation.

Internal Control over Financial Reporting

In connection with the audit of our financial statements for the year ended December 31, 2020 and 2019, we identified a material weakness in our internal control over financial reporting that existed as of those periods, which remains unremediated as of June 30, 2022. See “Risk factors—We have identified a material weakness in our internal control over financial reporting. If we fail to remediate this material weakness or identify additional material weaknesses in the future or otherwise fail to maintain effective internal control over financial reporting in the future, we may not be able to accurately report our financial condition or results of operations which may adversely affect investor confidence in us and, as a result, the value of our common stock.”

Recently Issued and Adopted Accounting Pronouncements

A description of recently issued accounting pronouncements that may potentially impact our financial position and results of operations is disclosed in Note 2 to our consolidated financial statements appearing at the end of this prospectus.

Emerging Growth Company Status

The Jumpstart Our Business Startups Act of 2012 permits an “emerging growth company” such as us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies until those standards would otherwise apply to private companies. We have elected not to “opt out” of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we will adopt the new or revised standard at the time private companies adopt the new or revised standard and will do so until such time that we either (i) irrevocably elect to “opt out” of such extended transition period or (ii) no longer qualify as an emerging growth company. As a result of this election, our consolidated financial statements may not be comparable to other public companies that comply with new or revised accounting pronouncements as of public company effective dates. We may choose to early adopt any new or revised accounting standards whenever such early adoption is permitted for private companies.

Quantitative and Qualitative Disclosures About Market Risks

Interest Rate Risk

We are exposed to market risk related to changes in interest rates of our investment portfolio of cash equivalents and short-term investments. As of June 30, 2022, we held cash and cash equivalents, and short-term investments of $180.6 million, excluding restricted cash, which consisted of cash, money market funds, equity securities and U.S. Treasuries. Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of U.S. interest rates. The fair value of our cash equivalents, comprised of our money market funds, and U.S. Treasuries are subject to change as a result of potential changes in market interest rates, including changes resulting from the impact of the COVID-19 pandemic. Due to the short-term maturities of our cash equivalents and

U.S. Treasuries and the low risk profile of our investments, an immediate 10 percent change in interest rates would not have a material effect on the fair market value of our cash equivalents or U.S. Treasuries.

As of June 30, 2022, we had no debt outstanding and are therefore not exposed to interest rate risk with respect to debt.

BUSINESS

Overview

We are a biotechnology company committed to delivering a new class of differentiated one-time curative genetic therapies, Prime Editors, to address the widest spectrum of diseases by deploying Prime Editing technology, which we believe is a versatile, precise, efficient and broad gene editing technology.

Genetic mutations implicated in disease are diverse and can range from errors of a single base, known as point mutations, to errors that extend beyond a single base, such as insertions, deletions, duplications, or combinations thereof. Other mutations can affect regulatory sequences that control the function of genes and can affect the function of larger biochemical and genetic pathways. Furthermore, natural genetic variations, revealed by population-level genomic studies, are known to protect against or to increase risk of disease. To maximize the impact of these genetic insights, we believe the ability to alter the human genome at the foundational level may confer the greatest therapeutic impact on human disease.

Gene editing, including platforms such as Prime Editing, is a novel technology that is not yet clinically validated for human therapeutic use. Over the last decade, the field of genetic medicine has evolved tremendously, with groundbreaking advances in gene therapy, cell therapy, RNA therapy, and, more recently, gene editing. These technologies represent dramatic advancements for genetic therapies, but lack the versatility to precisely and efficiently correct the diverse range of mutations or DNA alterations implicated in disease. Non-targeted gene therapy, which involves introducing a new copy of a gene into a patient's cell, lacks the ability to target a specific, desired genetic location, resulting in the risk of random genomic integration, potentially waning durability and lack of native physiological gene regulation. Nuclease gene editing technologies, such as CRISPR, Zinc Fingers, Meganucleases and TAL Nucleases create a targeted double-stranded break in the DNA, and then rely on cellular mechanisms to complete the editing process, thereby limiting their use. While such approaches can be efficient in the disruption of gene expression, they lack control of the editing outcome, have low efficiency of precise gene correction, and can result in unwanted DNA modifications with potentially deleterious implications. The recent emergence of base editing technology has made it possible for more precise gene editing at the single base level without making a double-stranded break in the DNA. Despite this promise, base editing can only edit four out of the twelve types of single point mutations, cannot address errors that extend beyond those single base changes and has the potential to make certain unwanted on-target by-products known as bystander edits.

We believe Prime Editing technology has transformative potential that could change the course of how disease is treated and overcome the challenges associated with current genetic therapies. Although Prime Editing technology is a developing field and is not yet validated in clinical studies, it has been extensively validated *in vitro* and in animal studies, as first described in a Nature publication in December 2019 and replicated in over 50 papers published in the primary scientific literature since then. Our in-licensed Prime Editing technology was described in the Nature publication and further validated in other published papers, although we believe publications have not disclosed or used any of the specific pegRNA, ngRNA or Prime Editor protein sequences that are being used in our current programs.

In addition, in response to the Nature publication, more than 1,500 academic laboratories requested the substances, compounds, or sequences used to carry out the laboratory experiments, or reagents, from Dr. Liu's laboratory to replicate the experiments described in Nature and to perform Prime Editing in their laboratories, demonstrating the impact this new technology has had on the gene editing academic community. We believe that the number of requests for reagents demonstrates the excitement in the academic community about the potential of Prime Editing as most scientific publications tend to generate a much smaller number of requests for reagents.

Prime Editing technology, as developed by Dr. Liu and Dr. Anzalone, has broad theoretical potential therapeutic applications. For example, Prime Editing technology has the ability to repair diverse mutations, including all types of point mutations, deletion mutations, insertion and duplication mutations and insertion-deletion mutations. Our analysis of more than 75,000 pathological, or disease-causing, mutations found in the National Center for Biotechnology Information ClinVar Database shows that those addressable by Prime Editing technology account for approximately 90 percent of genetic variants associated with disease. As such, we believe Prime Editing technology

has the theoretical potential for repairing approximately 90 percent of known disease-causing mutations across many organisms, organs and cell types. Because biotechnology companies can only initiate therapeutic programs for a subset of pathogenic mutations and the associated diseases, we have chosen to strategically focus on disease settings where we believe that Prime Editing technology could offer compelling advantages over both current standard-of-care and novel therapeutic modalities in development. Currently, at Prime Medicine, we are leveraging the breadth of our in-licensed Prime Editing technology to focus on our current portfolio of 18 therapeutic programs.

Prime Editors also have the ability to create permanent modifications at their natural genomic location, resulting in durable edits that are passed on to daughter cells, and retain their native physiological control. Our next generation gene editing technology is capable of a wide variety of precise, predictable and efficient genetic outcomes at the targeted sequence, while minimizing unwanted bystander edits and off-target edits and avoiding double-stranded DNA breaks. Our Prime Editors are designed to make only the right edit at the right position within a gene.

If nuclease gene editing approaches are "scissors" for the genome, and base editors are "pencils," erasing and rewriting a subset of single letters in the gene, then Prime Editing is a "word processor," searching for the correct location and replacing or repairing a wide variety of target DNA.

Our novel Prime Editors have two main components that act together to edit DNA: (i) a Prime Editor protein, comprising a fusion between a Cas protein and a reverse transcriptase enzyme, and (ii) a pegRNA, that targets the Prime Editor to a specific genomic location and provides a template for making the desired edit to the target DNA sequence. Prime Editing leverages the established DNA-targeting capabilities of CRISPR-Cas proteins modified to nick, but not cause double-stranded DNA breaks, and combines these with the DNA synthesis capabilities of reverse transcriptase enzymes, which have been engineered to efficiently and precisely copy a pegRNA-encoded edited sequence into target DNA. This proprietary combination enables the precise and targeted editing of any single base pair of DNA to any other desired base pair, the precise insertion or deletion of DNA, and combinations of these edits, which has not been previously possible.

To maximize the potential of our Prime Editing technology to provide one-time curative genetic therapies to the broadest set of diseases possible, we have purposefully built a diversified portfolio organized around four strategic indication categories, each set of indications chosen to deliver a different strategic goal:

- Immediate target indications: Deliberately chosen as potentially the fastest, most direct path to demonstrate technological success of Prime Editing in patients. We are initially focusing on diseases of the blood via *ex vivo* delivery to hematopoietic stem cells and on diseases of the liver, the eye and the ear.
- Differentiation target indications: Aimed to create therapeutics to address the underlying cause of severe genetic diseases with therapeutics that we believe could not have been created before, especially using other gene-editing approaches. These include repeat expansion diseases, or diseases where expansion of pathological DNA repeats results in serious disease.
- "Blue sky" indications: Intended to push new and innovative technological developments in Prime Editing and extend its application beyond rare genetic diseases and towards our goal of more broadly addressing human disease. These programs remain in the early stages of conception and will become an increasing focus over the next few years.
- "March up the chromosome" approaches: Represents opportunities to deliver upon our overarching vision to ultimately treat all patients with a disease and correct the full set of mutations in a particular gene. This category overlaps with other strategic indication categories, where most of our disclosed indications across other categories have a plan that can accommodate expansion opportunities to address additional mutations in that disease.

We believe our Prime Editing programs are well-positioned to leverage the clinical, regulatory, and manufacturing advancements made to date across gene therapy, gene editing, and delivery modalities to accelerate progression to clinical trials and potential approval. To unlock the full potential of our Prime Editing technology across a wide range of therapeutic applications, we are pursuing a comprehensive suite of clinically validated

delivery modalities in parallel. For a given tissue type, we intend to use the delivery modality with the most compelling biodistribution. Our initial, immediate programs rely on three distinct delivery methodologies: (a) electroporation for efficient delivery to blood cells and immune cells *ex vivo*; (b) lipid nanoparticles, or LNPs, for non-viral *in vivo* delivery to the liver and potentially other organs in the future; and (c) adeno-associated virus, or AAV, for viral delivery *in vivo* to the eye, ear, and potentially the CNS and muscle.

We have constructed our portfolio of 18 therapeutic programs, including one partnered program, across our first two strategic indication categories in disease settings where the unique characteristics of Prime Editing could offer compelling advantages over current standard-of-care and novel therapeutic modalities in development.

Our current portfolio includes the following 18 programs:

STRATEGIC CATEGORY	TARGET TISSUE	INDICATION	DELIVERY	DISCOVERY	IND-ENABLING	Phase 1	Phase 2	Phase 3	PARTNER
IMMEDIATE	BLOOD	Sickle Cell Disease	*ex vivo*						Beam
		Chronic Granulomatous Disease	*ex vivo*						
		Fanconi Anemia	*ex vivo*						
	LIVER	Wilson's Disease	LNP						
		Glycogen Storage Disease 1b	LNP						
	EYE	Retinitis Pigmentosa/Rhodopsin	AAV						
		Retinitis Pigmentosa/Usher Syndrome	AAV						
	EAR	Usher Syndrome Type 3	AAV						
		Non-Syndromic Hearing Loss – GJB2	AAV						
DIFFERENTIATION: REPEAT EXPANSION DISEASES	NEURO-MUSCULAR	Friedreich's Ataxia	viral/non-viral						
		Myotonic Dystrophy Type 1	viral/non-viral						
		Amyotrophic Lateral Sclerosis	viral/non-viral						
		Oculopharyngeal Muscular Dystrophy	LNP						
		Fragile X Syndrome	viral/non-viral						
		Huntington's Disease	TBD						
	EYE	Fuchs' Endothelial Corneal Dystrophy	viral/non-viral						
DIFFERENTIATION: OTHER	MUSCLE	Duchenne Muscular Dystrophy	AAV						
	LUNG	Cystic Fibrosis	LNP						

Initially focused on our first two strategic indication categories in diseases where Prime Editing could offer compelling advantages over current standard-of-care and novel therapeutic modalities in development

Note: AAV = adeno-associated viral vectors; LNP = lipid nanoparticles; TBD = to be determined

We have established preclinical proof-of-concept *in vivo* with long term engraftment of *ex vivo* Prime Edited human CD34 cells in mice in our partnered sickle cell disease program, where we have precisely corrected the disease-causing mutation. This program is closely followed by Prime Editing for patients with chronic granulomatous disease where we have designed Prime Editors with high levels of correction of the disease-causing mutation in the cells that must be targeted. We have demonstrated preclinical Prime Editing of cells *in vitro* at predicted therapeutically relevant levels for all of our remaining named programs. We have designed proprietary high throughput methods to identify highly efficient Prime Editors and have advanced the reach and efficiency of the Prime Editing technology. We have incorporated dual-flap Prime Editing technology enabling us to establish Prime Editors with greater than 75 percent precise removal of pathological expansion repeats in five different repeat expansion diseases.

We expect that key upcoming events will continue to drive the Prime Medicine platform forward. The following outlines a summary of select ongoing activities and next steps for Prime Medicine. All our *in vivo* studies are preliminary to date. We will continue to expand preclinical proof-of-concept *in vivo*, including data from *in vivo* rodent studies and non-human primate studies in several programs in . If successful, we will initiate IND-enabling studies for several of our lead programs in , leading to initial IND filings in , with the potential for our lead programs to move faster. Since we are in early stages of product candidate development, we will provide an update on our timelines moving forward, with the potential to accelerate these programs. We also anticipate continuing to name additional programs as they advance over the next few years.

In addition, we are continuing to optimize non-viral and viral systems for delivery and are demonstrating meaningful delivery of our Prime Editors to various target tissues in animal models; to demonstrate a superior "off target" profile for Prime Editing programs; and to expand Prime Editing using proprietary recombinase and/or

retrotransposon technologies for new and existing programs. We continue to build key capabilities and infrastructure as we build an organization, culture, and expertise to meet our ambitious goals. This includes increasing R&D or CMC resources and building out translational medicine and clinical development capabilities to support rapid entry of a broad portfolio of programs to the clinic.

Team

We began operations at Prime Medicine in the summer of 2020, after being co-founded by a world-renowned leader in the field of gene editing, David Liu, Ph.D. Dr. Liu was joined as co-founder by Andrew Anzalone, M.D., Ph.D., who conceived of and developed Prime Editing along with Dr. Liu and others. Dr. Anzalone joined Prime Medicine as Head of Platform Development with years of experience in Prime Editing. This has helped us to rapidly and effectively extend our Prime Editing technology beyond the academic research laboratory and into the company for drug discovery and development.

Drawn by the promise of Prime Editing's ability to transform the field of gene editing, we have assembled a diverse team that has grown to more than 135 as of June 30, 2022. Our research and development team is comprised of experts in gene editing and Prime Editing, computational biology, automation, data sciences, off-target biology, structural biology, RNA chemistry, protein engineering and molecular evolution, genetics, pharmacology, translational medicine and the manufacturing and delivery of genetic medicines.

Our team has extensive industry experience in research and development, manufacturing and company building. Keith Gottesdiener, M.D., is our President and Chief Executive Officer and is an experienced executive and company builder with more than 26 years developing new vaccines and medicines, preceded by a 13 year career in academic medicine. Jeremy Duffield, M.D., Ph.D., our Chief Scientific Officer, is a physician scientist executive with over nine years of drug discovery experience in human genetics, innate immunity and regenerative medicine, business development and external innovation, preceded by a 20 year career in academic medicine.

Ann Lee, Ph.D., our Chief Technical Officer, is an accomplished leader with more than three decades of experience in manufacturing and technology innovation, where she contributed to the commercialization of 25 new vaccines and medicines across multiple modalities and has experience building global organizations. Meredith Goldwasser, Sc.D., SVP, Strategy and Corporate Operations, has over 18 years of experience developing new drugs in the biopharmaceutical industry, where she worked across all phases of development and in various leadership roles, including in project leadership, business development and company building. Karen Brown, Ph.D., J.D., is SVP of Intellectual Property and Legal Affairs, with more than 20 years of legal experience and leadership in the biopharmaceutical industry guiding global intellectual property strategy, negotiating complex partnership and collaboration agreements, and overseeing corporate legal matters. Carman Alenson, C.P.A., our interim Chief Financial Officer and Chief Accounting Officer, has more than 32 years of experience in corporate accounting and finance, with more than 17 in the life sciences industry. Richard Brudnick, our Chief Business Officer, has over 15 years of experience in the pharmaceutical industry, where he helped lead successful business development transactions across multiple stages of development and therapeutic areas. Niamh Alix, our Chief Human Resources Officer, has nearly 20 years of experience helping to grow teams from small, early-stage organizations to global enterprises in the life sciences industry. Fubao Wang, Ph.D., SVP, Head of Regulatory, has over 24 years of experience in the biopharmaceutical industry, leading product development of genomic medicine products and regulatory strategies and execution for both clinical and commercial-stage products.

We believe that our team's considerable research and drug development expertise, together with our exclusive and non-exclusive licenses and intellectual property, as well as our depth of expertise in Prime Editing, has positioned us at the forefront of the field of advanced precision genetic medicines.

Relationship with David Liu, Ph.D.

We benefit from a close working relationship with Dr. Liu. In addition to being a co-founder, Dr. Liu is the chair of our Scientific Advisory Board and a Board observer, meets regularly with Company representatives, and provides consulting services to us pursuant to a consulting agreement, or the Liu Consulting Agreement, related to any and all gene editing and related technology for any and all human or prophylactic uses.

Pursuant to the Liu Consulting Agreement, for the term of the Liu Consulting Agreement and six months thereafter, Dr. Liu cannot directly provide material services to any third party in the field of gene editing for therapeutics or become an owner, partner, shareholder, consultant, agent, employee or co-venturer of any third party that has committed, or intends to commit, significant resources to that field, with certain exceptions, including a previous commitment with respect to Beam Therapeutics Inc., or Beam. Dr. Liu's preexisting commitment to Beam could result in, or may create the appearance of a conflict of interest.

We have also licensed certain improvements to Prime Editing from Dr. Liu's laboratory at Broad Institute and Dr. Liu has entered into an agreement with us pursuant to which he is obligated to assign to us any inventions with respect to the services he performs for us. However, such obligations are subject to limitations and do not extend to his work in other fields or to the intellectual property arising from his employment with Harvard, HHMI and Broad Institute. To obtain such intellectual property rights, we would need to enter into license agreements with such institutions, including negotiations under the Broad Option Agreement, which may expire in November 2022, and such license agreements may not be available on commercially reasonable terms or at all. For more information, see the risk factors entitled "The gene editing field is relatively new and is evolving rapidly. We are focusing our research and development efforts on gene editing using Prime Editing technology, but other gene editing technologies may be discovered that provide significant advantages over Prime Editing, which could materially harm our business" and "Our rights to develop and commercialize our Prime Editing platform technology and product candidates are subject to the terms and conditions of licenses granted to us by others. If we fail to comply with our obligations in the agreements under which we license intellectual property rights from third parties or otherwise experience disruptions to our business relationships with our licensors, we could lose license rights that are important to our business."

Dr. Liu is a member of the faculty of Harvard and Broad Institute and the Pledge funds may be used by Dr. Liu's laboratory, consistent with the purpose of the Pledge. For more information, see "Business—Our License and Collaboration Agreements—Pledge to Broad Institute and Harvard."

Scientific Advisory Board

In December 2021, we formally assembled our Scientific Advisory Board, a group of prominent and highly accomplished scientists who are leaders in the field of genetic therapies to help us advance the technology and the pipeline. We are continuing to develop rules and procedures for our Scientific Advisory Board.

Focal points include: off-target genome biology, nucleic acid drugs, Prime Editing platform technology, Prime Editing delivery to target tissues and disease indications. The Scientific Advisory Board comprises of the following individuals:

- David R. Liu, Ph.D. (Chair of our Scientific Advisory Board); Richard Merkin Professor, Director of the Merkin Institute of Transformative Technologies in Healthcare, and Vice-Chair of the Faculty at the Broad Institute of Harvard and MIT; Thomas Dudley Cabot Professor of the Natural Sciences and Professor of Chemistry and Chemical Biology at Harvard University; and Howard Hughes Medical Institute Investigator.
- Yvonne Chen, Ph.D.; Associate Professor of Microbiology, Immunology, and Molecular Genetics at the University of California.
- Agnieszka Czechowicz, M.D., Ph.D.; Assistant Professor at Stanford University and Pediatric Hematologist/Oncologist, specializing in pediatric stem cell transplantation for rare genetic diseases.
- Guangping Gao, Ph.D.; Co-Director, Li Weibo Institute for Rare Diseases Research, Director, Horae Gene Therapy Center and Viral Vector Core, Professor of Microbiology and Physiological Systems, Penelope Booth Rockwell Professor in Biomedical Research, University of Massachusetts Medical School.
- James Haber, Ph.D.; Abraham and Etta Goodman Professor of Biology, and Director, Rosenstiel Basic Medical Sciences Research Center, Brandeis University.

- Ben Kleinstiver, Ph.D.; Assistant Professor, Center for Genomic Medicine, Massachusetts General Hospital and Harvard Medical School.
- Muthiah Manoharan, Ph.D.; Senior Vice President, Innovation Chemistry & Alnylam Distinguished Scientist, Alnylam Pharmaceuticals.
- Samuel H. Sternberg, Ph.D.; Assistant Professor in the Department of Biochemistry and Molecular Biophysics, Columbia University.
- Shengdar Tsai, Ph.D.; Assistant Member in the Department of Hematology at St. Jude Children's Research Hospital.
- Jay Shendure, M.D., Ph.D.; Professor of Genome Sciences in the Institute for Stem Cell and Regenerative Medicine, University of Washington.
- Anastasia Khvovora, Ph.D.; Professor, RNA Therapeutics Institute and Program in Molecular Medicine, UMass Chan Medical School.

Our Strategy

Our goal is to transform the lives of patients with debilitating diseases through the application of our ground-breaking Prime Editing platform and technology. Our key focus is on patients. We are committed to developing safe and efficient therapeutics using Prime Editing approaches to address high unmet need across a broad spectrum of diseases, from rare genetic diseases to severe, chronic and acute diseases, and ultimately to prevent disease before it occurs. Key components of our strategy are as follows:

- **Deliver the broadest potential of Prime Editing in the service of patients.** We believe our Prime Editing technology and capabilities represent the future of gene editing and could unlock broad applications in medicine and life sciences. As a result of our access to proprietary rights in groundbreaking technology and our continued investment to enhance this gene-editing approach, we have established a clear leadership position in Prime Editing. Our goal is to be the preeminent company to deliver Prime Editing to patients. We have built a cross-disciplinary team comprised of dedicated, scientifically curious individuals and experts in Prime Editing and drug development who are passionate about our common goal of helping patients live longer, healthier lives.
- **Deploy our technology to extend the application of one time potentially curative therapeutics to areas that we believe were not addressable before.** To unlock the full potential of our Prime Editing technology across a wide range of therapeutic applications, we intend to advance multiple therapeutic targets into clinical programs grouped into a series of four strategic indication categories: (1) immediate target indications, (2) differentiation target indications, (3) “blue sky” indications and (4) “march up the chromosome” approaches. Our immediate target indications were deliberately chosen as potentially the fastest, most direct path to demonstrate technological success of Prime Editing in patients. Our differentiation target indication programs aim to create therapeutics that we believe could not have been created before, especially using other gene-editing approaches. Our “blue sky” target indications are intended to push new and innovative technological developments in Prime Editing and extend the range of diseases we can treat. Finally, our “march up the chromosome” category represents opportunities to deliver upon our overarching vision to ultimately treat all patients with a disease and correct the full set of mutations in a particular gene.
- **Advance our pipeline while simultaneously enhancing, validating and enabling our Prime Editing platform.** We have established a diverse pipeline comprised of 18 Prime Editing programs, including one partnered program, with a primary initial focus on the first two of our strategic indication categories. In progressing our current immediate target indication pipeline using validated delivery methods, we believe we will enhance the probability of clinical success for future programs as we achieve early human proof-of-concept with our technology. We intend to advance these immediate programs carefully and quickly into the clinic and through development. We also believe we have the ability to move quickly into similar

follow-on programs in each target organ as we achieve therapeutic success. In advancing our current differentiation target indications, we aim to develop programs that build on the advantages of our technology to widen the possibilities for gene editing. Our initial focus on repeat expansion diseases is one of many potential areas of differentiation from other gene therapy and editing approaches, and was chosen to demonstrate where Prime Editing has a unique genetic approach that could be applied to a large set of related diseases with high unmet need: the precise removal of pathogenic repeats at the natural gene location, returning the patient's genome to wild-type genetics. We believe these longer-term programs will provide a large therapeutic benefit to patients.

- **Continue to push the frontier of innovation in gene editing by optimizing and expanding our Prime Editing technology and capabilities.** We plan to continue investing in our technology, team and intellectual property with a focus on reinforcing our leadership position and making fundamental progress towards better therapies for patients. We believe our relationship with and ability to access certain Prime Editing intellectual property and technology from Dr. David Liu's laboratory at Broad Institute exclusively in certain fields establishes a clear leadership position in Prime Editing. We aim to continue to supplement this foundational work with in-house generated intellectual property that supports the translation and advancements to our Prime Editing platform to broaden the scope of applications for Prime Editing. We are also leveraging and investing in a full range of validated, as well as novel delivery modalities in order to retain optionality for our portfolio and select the most appropriate delivery method for each program.

- **Opportunistically evaluate synergistic and value-creating partnerships to maximize the broad potential of our platform.** Our pipeline programs have been internally generated, and we retain worldwide development and commercialization rights to all but one of our programs. Given the broad potential of our technology, we may enter into complementary collaborations with external parties in order to maximize the potential applications of our platform. Examples could include opportunities that expand capabilities in Prime Editor delivery modalities, or collaborations for specific therapeutic areas where we do not currently have specific expertise or resources. We have already established important value- and capability-enhancing collaborations with Beam, a gene editing company that also emerged from the laboratory of Dr. Liu, as well as Broad Institute.

- **Lead with our culture of integrity, ethics, innovation and respect in everything we do.** We believe the potential of Prime Editing can only be achieved through the coordinated effort of our team and the support of our partners across academia and industry. Realizing this promise requires a talented team with a diversity of viewpoints and expertise. We are committed to jointly defining and maintaining a culture that is transparent, develops trust and values integrity and ethics, puts patients first and is science data driven, encourages innovation and relentlessness, to push the boundaries of where gene editing can go.

Prime Editors: A Next Generation Gene Editing Technology

We are developing Prime Editors as a potentially new class of therapeutics with transformative potential to expand the application of curative precision genetic medicines to the broadest spectrum of diseases.

Genetic mutations implicated in disease are diverse and can range from errors of a single base, known as point mutations, to errors that extend beyond a single base, such as insertions, deletions, duplications, or combinations thereof. Other mutations can affect regulatory sequences that control the function of genes and can affect the function of larger biochemical and genetic pathways. Furthermore, natural genetic variations, revealed by population-level genomic studies, are known to protect against or to increase risk of disease. To maximize the impact of these genetic insights, we believe the ability to alter the human genome at the foundational level in a versatile, precise, efficient and broad manner may confer the greatest therapeutic impact on human disease.

Over the last decade, groundbreaking advances in gene therapy, cell therapy and RNA therapeutics have resulted in several approvals for genetic medicines that have transformed the treatment of certain severe genetic diseases and cancers as well as the prevention of infectious diseases, such as COVID-19. More recently, the first generation of CRISPR-Cas based gene editing approaches for gene knockout have demonstrated initial evidence of the ability to correct pathogenic genetic mutations, via either *in vivo* or *ex vivo* delivery to humans. Finally, the first

base editing investigational medicine, that enables targeted editing of certain point mutations, has received IND clearance by the U.S. Food and Drug Administration, or the FDA, to begin clinical trials.

Despite this progress, there remain considerable limitations to current genetic medicine approaches that impede their ability to truly deliver on the promise of a curative, one-time therapy to the broadest set of patients. While each gene editing technology differs, the barriers that prohibit one or more of the existing technologies from addressing genetic diseases widely include:

- Limits in the types of edits they can make
- Limits in the types of cells in which they can make edits
- Limits in the precision of gene correction
- Reliance on double-stranded breaks
- Inability to correct the mutated gene at its physiological site

Due to these limitations, we believe that it is critical that new approaches be developed that can edit genes across most therapeutically relevant mutations, precisely at the edited site with minimal off-target, or unwanted, activity elsewhere in the genome, in clinically relevant organs, and at the physiological location to keep an edited gene under native gene control.

We believe our in-licensed and company-owned Prime Editing technology has the potential to address approximately 90 percent of known disease-causing mutations. By overcoming challenges associated with current methods in gene therapy and gene editing, we believe Prime Editing technology has the potential to provide life-long cures after a single treatment. Furthermore, we believe Prime Editing could accelerate progression of product candidates into clinical trials by leveraging the clinical, regulatory, and manufacturing advancements made to date in the field of genetic medicine.

Current Challenges for the Field of Genetic Medicines

Non-Targeted Gene Therapy

Non-targeted gene therapy includes using viral vectors, such as Adeno-Associated Virus, or AAV, or retroviruses such as lentiviruses, to deliver new copies of genes, or transgenes, to cells. It also includes the broad field of mobile gene elements, such as retrotransposons and transposons. These approaches generally do not correct genes but insert new whole genes into cells in a non-targeted manner.

While having some important benefits, non-targeted gene therapy approaches can have many of the following key limitations:

- Lack of programmability, or the ability to target the gene therapy approach to a specific, desired genetic location.
- For transposons and retrotransposons, integration may occur randomly at hundreds or thousands of sites in the human genome.
- Variable gene expression due to inability to fine tune the vector copy number per cell.
- Lack of normal endogenous regulation of gene expression.
- Limited durability for non-integrating viral vectors, such as AAV.
- Pre-existing immunity to AAV vectors that could limit their use.
- Inability to re-dose in the context of lack of persistence due to certain immune responses to AAV.

- Inability to correct the mutated gene which may lead to diminished efficiency of a transgene due to competition with mutated protein.
- Risk of random genomic integration of the vector, or insertional mutagenesis, for permanent integrating viral vectors, such as lentiviral vectors.
- Potentially curative only for loss-of-function mutations.

Nuclease Gene Editing

First generation gene editing methods rely on a class of enzymes called nucleases, such as CRISPR, Zinc Fingers, Meganucleases and TALENs, to create double-stranded breaks in DNA at a targeted location. The DNA can then be repaired by one of two naturally occurring DNA repair pathways: (1) non-homologous end joining, or NHEJ, which patches the broken ends of the chromosomes back together but can randomly insert indels, or unwanted insertions and deletions; or (2) homologous directed repair, or HDR, which can more precisely replace DNA at the target cut site with the delivery of a template of corrected DNA. However, given NHEJ is typically the dominant repair pathway in cells and due to the low efficiency of repair and complexity associated with HDR, most nuclease-based editing programs in the clinic have focused on an NHEJ-directed knock out approach to alter or silence gene expression.

Nuclease based gene editing approaches can have the following key limitations:

- Lack of predictability in genetic outcomes at the target site in NHEJ, such as randomly inserting indels (efficient if the goal is to disrupt or knock out a gene).
- Low percentage editing and efficiency with HDR to make correction, replacement or insertions.
- Inability to correct genes in non-dividing cells since currently, HDR DNA repair machinery is only expressed in dividing cells.
- Requirement for DNA template with desired, corrected gene sequence needs to be delivered simultaneously which increases complexity.
- Unwanted DNA modifications associated with double-stranded breaks, including cell death response, genomic instability, off-target editing and the potential for oncogenesis.
- Inability to multiplex edit due to potential for large scale translocations and rearrangements from multiple double-stranded breaks.

Base Editing

Base editing is an emerging gene editing technology that harnesses CRISPR-Cas9 to deliver a deaminase to a target DNA site, which can edit a single base efficiently. Base editing avoids double-stranded breaks and the deleterious effects associated with first generation nuclease editing.

Base editing can have the following key limitations:

- Edits can reliably correct only four out of 12 possible single base mutations, and base editing has no ability to perform or correct insertion or deletions, which limits the number of diseases base editing can address.
- Ability for each base editor to correct or introduce only a single point mutation at a time.
- Potential to make certain types of unwanted on-target by-products, called bystander edits, near the targeted site, e.g. modifying nearby bases which are not being targeted.
- Potential for limited optionality due to its smaller editing window.

Prime Editing: A Next Generation Gene Editing Approach

Prime Editing is a next generation gene editing approach that we believe can address the genetic cause of disease and potentially provide patients with long-lasting cures. Although Prime Editing is a developing technology and is not yet validated in clinical studies, it was first described in a Nature publication in December 2019 and has since been extensively validated *in vitro* and in animal studies, both by our company and in over 50 papers published in the primary scientific literature to date.

In addition, in response to the Nature publication, more than 1,500 academic laboratories requested the reagents, from Dr. Liu's laboratory to replicate the experiments described in Nature and to perform Prime Editing in their laboratories, demonstrating the impact this new technology has had on the gene editing academic community. We believe that the number of requests for reagents demonstrates the excitement in the academic community about the potential of Prime Editing as most scientific publications tend to generate a much smaller number of requests for reagents.

Prime Editors are designed to produce edits across many organisms, organs and types of cells and to work broadly across most types of gene mutations at the natural genomic location, while minimizing unwanted DNA modifications. This approach uses a process designed to produce a wide variety of precise, predictable and efficient genetic outcomes at the targeted sequence, which we believe will dramatically increase the impact of gene editing for a broad range of therapeutic applications.

If nuclease gene editing approaches are "scissors" for the genome, and base editors are "pencils," erasing and rewriting a subset of single letters in the gene, then Prime Editing is a "word processor," searching for the correct location and replacing or repairing a wide variety of target DNA.

The below image illustrates the potential of Prime Editing relative to some of the current genetic medicine approaches, using the example of correcting misspellings in a sentence from the Preamble to the U.S. Constitution. In this example, where the sentence represents a target of genetic code, gene therapy is unable to make a precise correction of the misspellings and instead inserts a new corrected sentence either randomly into the paragraph or outside of the paragraph (which is not shown below). In most cases, nuclease editing inserts or deletes letters (indels) within the existing sentence, which results in a sentence that has completely lost its initial meaning. Base editing enables the precise correction of specific letters within the existing sentence, but can only make specific changes like a G to an A, but cannot correct a C to an A. We believe Prime Editing allows for a much broader scope of corrections to the sentence, by either correcting all the misspellings or even modifying the meaning of the sentence by inserting and deleting whole words or groups of words.

"We the People of the United States, in Order to form g more perfeat Union…"

Gene Therapy	"We the People of the United States, in Order to form **g** more perfe**a**t Union, establish Justice, insure domestic Tranquility, provide for the common defense, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and estab**We the People of the United States, in Order to form a more perfec t Union**lish this Constitution for the United States of America. …"
Nuclease Editing	"We the People of the United States, in Order…… **im**perfe**a**t Union…"
Base Editing	"We the People of the United States, in Order to form **a** more perfe**a**t Union…"
Prime Editing	"We the People of the United States, in Order to form **a** more perfe**C**t Union…" *or* "We the People of the United States, in Order to form **a** ~~more~~ perfe**C**t and resilient Union…"

Our Prime Editing Platform

Summary of Gene Editing Technologies

The below table describes features of different gene therapy and gene editing methodologies, including Prime Editing, based on our assessment of publicly available data and our own data. It does not represent the results of head-to-head comparison studies and is not intended to represent superiority of any one methodology over any other in any of the displayed categories.

	Prime Editing	Non-Targeted Gene Delivery[1]	Nuclease-Based Gene Editing[2]	Base Editing
Versatility				
Can perform and correct insertions and deletions	✓		✓[3]	
Can correct all twelve types of single base pair corrections	✓		✓[3]	✓[4]
Direct correction of DNA without delivery of corrective DNA sequence	✓[5]		✓[6]	✓
Easily programmable target location and type of edit	✓		✓[7]	✓
Restores gene function for multiple mutations with a single product	✓	✓		
Precisely targets to insert, delete or invert kilobase-sized DNA	✓		✓[3]	
Precision				
High specificity (low indels rate) and minimal off-target activity	✓			✓
Does not create double stranded breaks	✓	✓[8]		✓
Limited potential for "bystander editing" at target site	✓			
Efficiency				
Permanent edits that are passed along to daughter cells	✓	✓[9]	✓	✓
Corrects genes *in situ*, maintaining native gene control	✓		✓[3]	✓
Single-dose, potentially curative correction to wild-type sequence	✓			✓
Breadth				
Corrects mutations in dividing and non-dividing human cells	✓			✓

Note: Yellow checkmarks are explained in the footnotes below.

1. Includes Lentivirus, AAV, mobile gene elements such as retrotransposons/transposon approaches. 2. Includes CRISPR-Cas (most forms), ZFNs, TALENs; most effective at knocking out genes.
3. Inefficient and limited. 4. Reliably corrects 4 of 12 types of single base pair mutations. 5. Except for Prime Editing recombinase approach. 6. Limited correction possible in some approaches.
7. Programmable target but unable to easily program new types of edits. 8. Retrotransposons create double-strand breaks, but not in the same manner as nucleases. 9. Some approaches integrate into the genome, but not as edits/corrections.

This table is based on our assessment of publicly available data, including representative citations listed below, as well as our own data. For Prime Editing references, see: Anzalone, et al. Genome editing with CRISPR–Cas nucleases, base editors, transposases and prime editors. Nat Biotechnol 38, 824–844 (2020); and Anzalone, A.V. et al, Programmable deletion, replacement, integration and inversion of large DNA sequences with twin prime editing. Nat Biotechnol (2021). For Non-Targeted Gene Delivery, see: Bulcha, J.T. at al, Viral vector platforms within the gene therapy landscape. Sig Transduct Target Ther 6, 53 (2021); and Tipanee, J. et al, Transposons: moving forward from preclinical studies to clinical trials. Hum Gene Ther 28, 1087-1104 (2017). For Nuclease-Based Gene Editing, see: Anzalone, A.V., et al, Nat Biotechnol Ibid (2020); Cox, D. et al, Therapeutic genome editing: prospects and

challenges. Nat Med 21, 121–131 (2015); and Li, H.at al, Applications of genome editing technology in the targeted therapy of human diseases: mechanisms, advances and prospects. Sig Transduct Target Ther 5, 1 (2020). For Base Editing, see: Rees, H.A.et al, Base editing: precision chemistry on the genome and transcriptome of living cells. Nat Rev Genet 19, 770–788 (2018); and Anzalone, A.V., et al, Nat Biotechnol Ibid (2020).

Advantages of our Platform

We believe Prime Editing is a versatile, precise, efficient and broad gene editing technology with the following key advantages:

Versatility: Deep and highly differentiated toolbox of editing capabilities to enable a wide variety of therapeutic applications

- Applicable to a wide range of target mutations or alterations of DNA, including all twelve types of single base pair corrections, as well the ability to insert and delete DNA sequences.
- Direct correction of DNA with no requirement for delivery of the corrected DNA sequence in most applications of Prime Editing.
- Greater optionality with respect to editing site availability than other approaches due to a larger editing window.
- Programmable, which means that both the specified target location in the genome and the directed type of edit can be easily modified by replacing the Prime Editing guide RNA, or pegRNA, element of a Prime Editor.
- Multiple potential therapeutic applications, including but not limited to targeted gene correction, gene silencing or activation such as by altering the regulatory regions of genes, inserting or creating premature stop codons, or by modifying splicing sequences, hotspot region replacement, multiplex editing of several genes simultaneously, and wild-type variant modification to protect against or modify risk for a disease.
- Capable of inserting, deleting or inverting kilobase amounts of genomic DNA by combining Prime Editing with proprietary recombinase technology.

Precision: Highly specific and predictable gene editing

- Designed to specifically make only the directed type of Prime Edit at the desired target location.
- Avoidance of the potential negative impacts associated with double-stranded breaks, which results in minimal to potentially no unwanted on-target or off-target by-products and preservation of cell viability.
- Limited potential for bystander editing at the target site, a potential unwanted effect of base editing.

Efficiency: Durable gene edits with potential for superior therapeutic activity

- Single treatment resulting in permanent corrections of disease-causing mutations by restoring the targeted gene back to its wild-type sequence.
- Permanent, durable edits that persist in a cell and are passed along to daughter cells, creating potential for a life-long, “once and done” therapeutic outcome.
- Preservation of natural regulation and a normal number of copies of the gene in the cell by modification of genes in situ, or in their native genomic setting.
- Highly efficient, effecting therapeutically relevant levels of precise gene correction generally unachievable by nuclease-based methods.

Breadth: Able to address a wide range of diseases in multiple tissue types

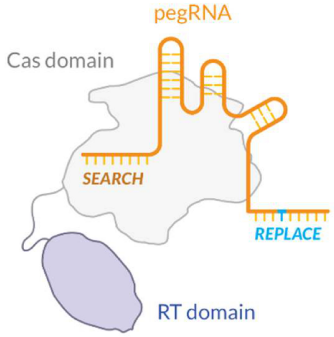
- Applicability in a wide range of human cells, including both dividing and non-dividing human cells, a wide range of organs and cell types, as well as in a wide variety of other organisms, as well as including primary cells such as hepatocytes, hematopoietic stem cells and neurons.
- Potential ability to repair approximately 90 percent of all types of mutations known to cause genetically driven disease.
- Broad therapeutic potential, including rare, genetic diseases as well as severe, chronic, and acute diseases. Beyond correcting disease-causing mutations, potential for gene modification to edit naturally occurring variations within genes known to protect against or modify risk for a disease.

Mechanism

Summary

Our novel Prime Editors have two main components that are designed to act together to edit DNA: (i) a Prime Editor protein, comprising a fusion between a Cas protein and a reverse transcriptase enzyme, and (ii) a pegRNA, that targets the Prime Editor to a specific genomic location and provides a template for making the desired edit to the target DNA sequence. Prime Editing leverages the established DNA-targeting capabilities of CRISPR-Cas proteins, which have been modified so that they do not cause double-stranded DNA breaks, and combines these with the DNA synthesis capabilities of reverse transcriptase enzymes, which have been engineered to efficiently and precisely copy a pegRNA-encoded edited sequence into target DNA. This proprietary combination enables the precise and targeted editing of any single base pair of DNA to any other desired base pair, the precise insertion or deletion of DNA, and combinations of these edits, all of which have not been previously possible with current gene editing technologies.

Illustration of Prime Editor and Two Main Components (Cas domain and RT domain)



Mechanism in Detail

Our Prime Editor proteins contain two protein domains. The first domain is a programmable DNA binding domain, often a CRISPR-Cas domain, or Cas domain. Cas proteins enable targeting of specific DNA sequences, and they have been adapted and engineered to target desired genomic locations in human cells with high specificity, yet modified such that they do not cause a double-stranded break in the DNA. Our Prime Editors most often use Cas9 proteins, though other Cas proteins can also be used to target DNA and we have ongoing efforts to expand our selection of Cas proteins.

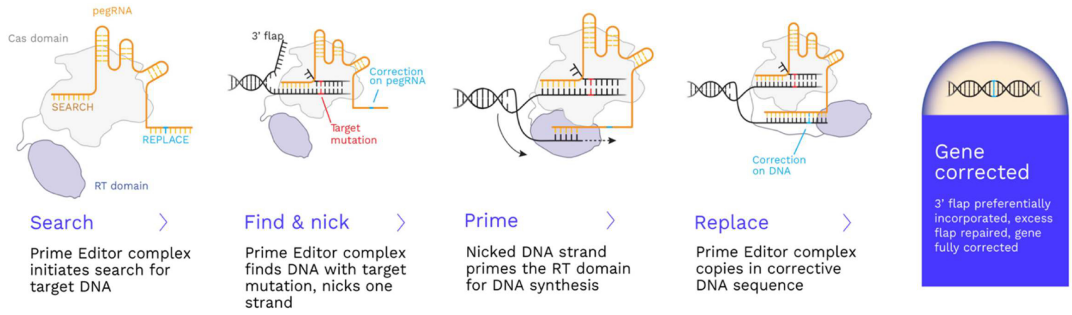
The second protein domain of Prime Editors is a reverse transcriptase enzyme domain, or RT, domain. Reverse transcriptases are DNA polymerase enzymes that write new DNA sequences by copying from an RNA template, provided by the pegRNA. In Prime Editing, the RT copies the edited DNA sequence directly into the target genomic site where the edit is made.

The other main component in Prime Editing is the pegRNA. The pegRNA contains a search sequence, also known as a spacer, which provides a target genomic address for the Prime Editor. This enables the Prime Editor to specifically target a desired gene sequence. The pegRNA also contains a second sequence unique to Prime Editing, a replace sequence, or edit template, which provides a blueprint for the edit that will be made to the target DNA sequence.

As shown in the second panel in the figure below, our Prime Editor and the pegRNA locate the DNA target site using the pegRNA's search sequence. When the correct DNA target is found (referred to as "edit check 1," as described below), the Prime Editor's Cas domain cleaves, or nicks, one of the two DNA strands, creating a single-stranded 3' flap. The other DNA strand remains intact and is not cleaved by the Prime Editor, thus avoiding the formation of double-stranded DNA breaks. Next, the 3' flap binds to a region of the replace sequence in the pegRNA ("edit check 2") and "primes" the DNA synthesis, which is shown in the third panel below. The Prime Editor's reverse transcriptase, or RT, domain copies the pegRNA's replace sequence, directly writing the corrected DNA sequence into the gene, as shown in the fourth panel. After the corrected sequence is fully copied, cellular DNA repair preferentially incorporates the corrective 3' flap ("edit check 3") while removing the excess original DNA sequence. The complementary DNA strand is also corrected, using the Prime-Edited DNA strand as a template. Incorporation of the correction into the complementary DNA strand can be made more efficient by adding a nicking guide RNA, or ngRNA, where the Prime Editor also transiently nicks the complementary strand. The overall result is a target gene sequence that is corrected on both strands of DNA.

As highlighted above, there are three distinct steps in the Prime Editing pathway that require exact matches between the target DNA and pegRNA sequences. Thus, the process of Prime Editing efficiently institutes three "edit checks," or three sequential steps where only if the match is exact does the next step occur. In addition to the lack of double-stranded DNA breaks, we believe that these "edit checks" are also important in helping to ensure that the right sequence in the genome is precisely edited in the desired manner, thereby minimizing both on- target and off-target mis-editing.

Illustration of Editing Mechanism by Prime Editor – No Double-Stranded DNA Breaks



A key feature of Prime Editing is that it is fully programmable, meaning that both (1) the location in the genome and the edit can be chosen specifically, and (2) the location targeted and the edit directed, can both be changed easily, based on simple design rules. By changing the search sequence of a pegRNA, we can quickly and precisely program our Prime Editors to different genomic locations based on their gene sequences. By changing the replace sequence of a pegRNA, we can control which edit is made. Therefore, to make a different correction edit in a new location in the genome, we can readily reprogram the Prime Editor to specifically target a new DNA sequence and to make the precise edit that is required, simply by changing the pegRNA sequence. Most often this will be performed by swapping out one pegRNA and replacing it with another, keeping other parts of the Prime Editor unchanged.

Characteristics of Prime Editing

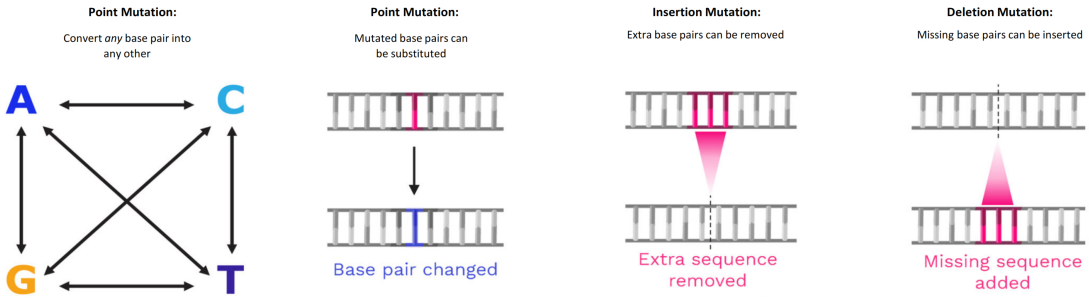
We believe Prime Editing's unique and differentiated mechanism makes it an extremely versatile, precise, efficient and broad gene editing technology. We believe these features, along with its programmable nature, allow

Prime Editors to be rapidly customized for specific diseases, creating a broad array of potential new therapeutic programs.

Versatility

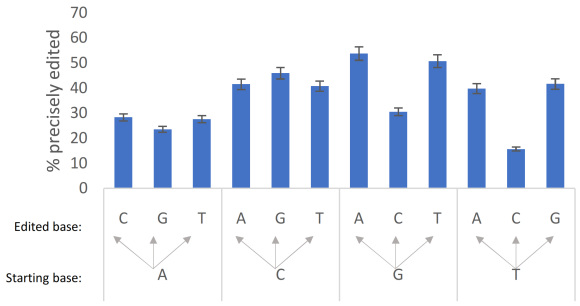
We believe Prime Editing can make diverse sequence edits at nearly any desired location in the human genome, enabling multiple therapeutic applications. Prime Editors are able to change any base pair to any other base pair to correct all twelve types of single base pair point mutations, delete DNA sequences to correct insertion mutations, or insert DNA sequences to correct deletion mutations. We can also make combinations of these types of edits with the same Prime Editor. Notably, Prime Editors also have the ability to make direct corrections of DNA, alter the regulatory regions of genes, insert or create premature stop codons, and modify splicing sequences, differentiating the Prime Editing approach to addressing genetic disease.

Illustration of Versatility of Prime Editors' Ability to Correct All Twelve Potential Base Pair Mutations as well as to Address Sequence Insertions and Deletions

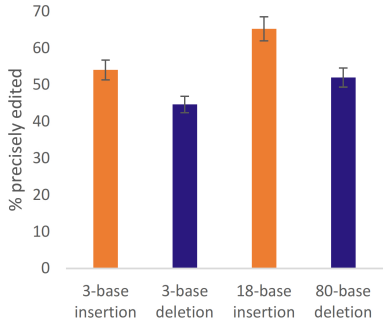


For example, Prime Editing can be used to convert an A to either a C, G or T, to change a C to an A, G or T, to convert a G to an A, C or T, or to change a T to an A, C or G, as shown in the figure below, left. Prime Editing can also make larger insertions or deletions, such as the precise 18-base insertion or 80-base deletion shown in the figure below, right. By combining Prime Editors with proprietary recombinase technology, kilobase amounts of genomic DNA can be inserted, deleted, or inverted. All of these changes can be made with highly efficient and potentially therapeutically relevant levels of precise gene correction, which we believe are generally unachievable by other gene editing approaches.

Prime Editors' Have Shown Ability to Address All Twelve Potential Base Pair Mutations (left) as well as Larger Insertions and Deletions (right)



All Point Mutation Edits

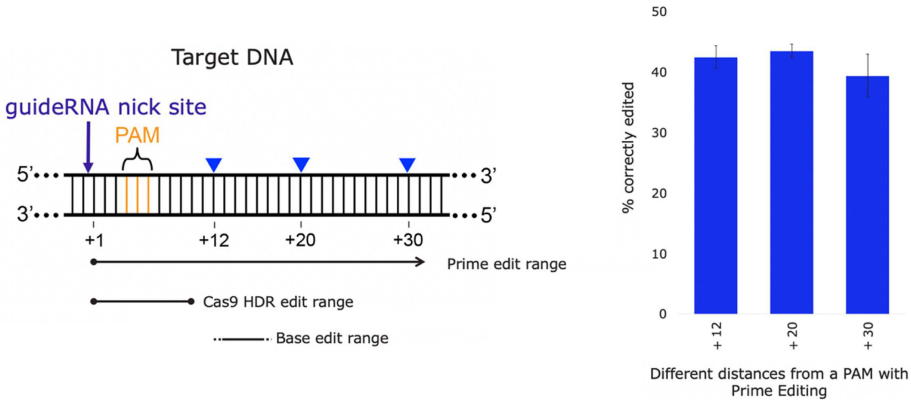


Insertion and Deletion Edits

The data displayed represent early demonstrative experiments that established the feasibility of performing each edit type. Prime Editing components were not individually optimized for each edit, and therefore the efficiencies shown are not intended to reflect general or optimal editing efficiencies for the corresponding edit type.

Prime Editing can also target a wide range of mutations throughout the genome that may not be accessible to other technologies. The targeting abilities of Cas proteins, like those used in Prime Editing and other gene editing technologies, to successfully dock onto the target DNA region, requires the presence of an approximately 3-base sequence, known as a PAM, which is adjacent to the target DNA sequence. Other CRISPR gene editing technologies, such as base editing and Cas9-HDR, can generally edit only within a limited sequence window around the location of the PAM. Importantly, Prime Editing is less constrained by PAM availability and can make edits near or far from the PAM sequence. For example, based on *in vitro* experiments, Prime Editing can make gene edits up to about 60 bases and potentially more from the PAM sequence; one supporting *in vitro* experiment is shown below. Because Prime Editing has a larger editing window, the likelihood that a PAM exists in a suitable location nearby a targeted mutation is higher than for other gene editing technologies. The larger Prime Editing window also offers greater flexibility and opportunity for optimization, since there may be multiple PAM options that have Prime Editing windows that cover the location of the targeted mutation. This offers the potential for greater flexibility and optionality for correcting a given target mutation and could broaden the number of mutations that Prime Editing can reach within a gene.

Prime Editing Less Constrained by PAM Availability and Can Correctly Perform Edits Far Removed from PAM Sequence



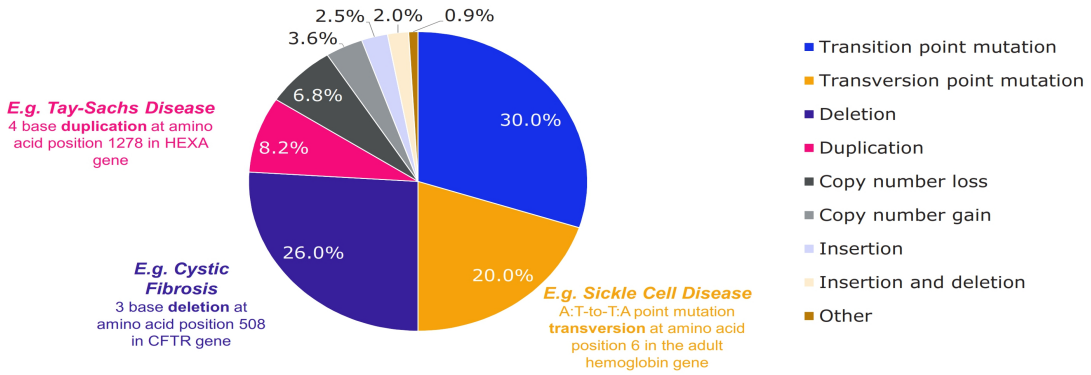
The blue triangles in the left graphic indicate base positions that are within the Prime Editing window, and corresponding examples of Prime Editing at those positions are shown in the bar graph on the right. This experiment was designed to provide initial proof-of-concept of Prime Editing capabilities and was not optimized.

Specifically, we believe that Prime Editing could be extended to additional therapeutic applications, including gene correction, gene modification, gene silencing and activation, multiplex editing, and hotspot editing. While we anticipate pursuing many of these applications as future programs, our current programs do not yet address all of these applications.

Gene Correction: Prime Editing technology has the ability to repair diverse mutations, including all types of point mutations, deletion mutations, insertion and duplication mutations and insertion-deletion mutations. Our analysis of more than 75,000 pathological, or disease-causing, mutations found in the National Center for Biotechnology Information ClinVar Database shows that those addressable by Prime Editing technology account for approximately 90 percent of genetic variants associated with disease. As such, we believe Prime Editing technology has the theoretical potential for repairing approximately 90 percent of known disease-causing mutations across many organisms, organs and cell types. Because biotechnology companies can only initiate therapeutic programs for a subset of pathogenic mutations and the associated diseases, we have chosen to strategically focus on disease settings where we believe that Prime Editing technology could offer compelling advantages over both current standard-of-

care and novel therapeutic modalities in development. Currently, at Prime Medicine, we are leveraging the breadth of our in-licensed Prime Editing technology to focus on our current portfolio of 18 therapeutic programs.

Percentage Distribution of Pathological Genetic Variants Associated with Disease



Gene Modification: We believe that our Prime Editors are also capable of making precise modifications to genes and their controlling elements to mimic natural genetic variations that are known to protect against or modify risk for a disease. For example, the apolipoprotein E4 genotype, or APOE4, is known to confer a higher risk of Alzheimer's Disease, whereas the "Icelandic" variant of the amyloid precursor protein gene significantly lowers the risk. By converting such variants from the high risk form to the low risk form, we believe Prime Editing could reduce risk of disease in high risk individuals.

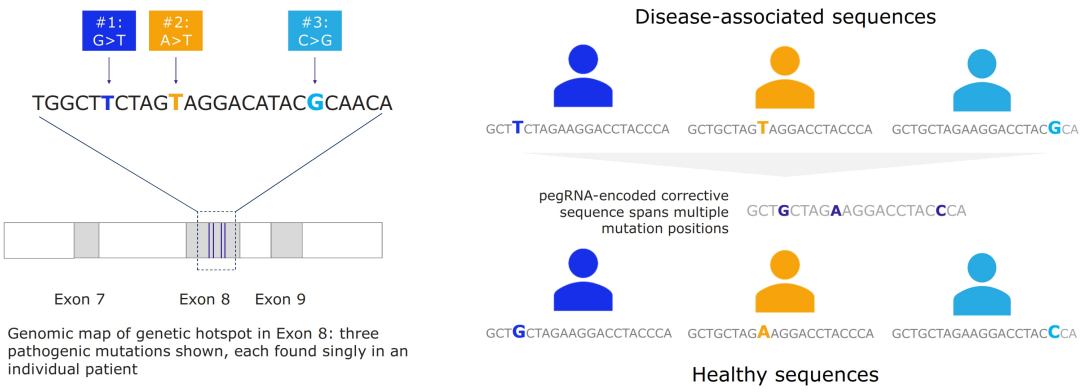
Gene Silencing and Activation: We believe the precision of our Prime Editors is ideally suited for modulation of biochemical pathways that require upregulation, activation, downregulation, or silencing, to prevent or treat disease. Precise editing of regulatory regions of genes at specific bases to achieve the desired effect avoids causing broader disruptions to adjacent regions that may still have important regulatory functions. Our Prime Editors can also be used to silence the expression of genes, without requiring a double-stranded break, either by the conversion of certain short gene sequences, called codons, into STOP codons, by the insertion or deletion of nucleotides that create a STOP codon, or by the disruption of splice donor-acceptor sites.

Multiplex Editing: We believe that our Prime Editors may be particularly advantageous for situations in which multiple sequences in the genome must be simultaneously targeted because they avoid creating double-stranded breaks. The simultaneous creation of multiple double-stranded breaks by nucleases can cause unwanted large-scale genomic rearrangements, such as translocations and deletions. These genomic rearrangements appear to occur more frequently as the number of double-stranded breaks increases. Conversely, Prime Editors do not create double-stranded breaks. The utility of cell therapies is currently limited by the immune recognition of donor cells by the recipient's immune system. Multiplex editing has the potential to be used to create cell therapies that can evade recipient's immune system and be given to multiple different individuals. Similarly, xenotransplantation or porcine organs for human disease is currently limited by immune recognition by the recipient's immune system. We believe that multiplex editing can be used to limit immune detection of porcine organs.

Hotspot Editing: Mutational hotspots are regions within genes where clusters of distinct mutations associated with disease have been found in the human population. By designing the replace sequence of a pegRNA so that it corrects an entire hotspot region, Prime Editing has the potential to correct many mutations within a hotspot using a single pegRNA, making it applicable for correcting multiple distinct but neighboring mutations, each found in different patients. Currently, the replace sequence of a pegRNA is able to target regions approximately 100 bases in length. In the hypothetical graphic shown below, three patients have distinct but neighboring mutations within a gene, representing a hotspot. Each mutation could be corrected by the single pegRNA edit template. By expanding on this approach to target multiple hotspot regions throughout a gene, a larger proportion of mutations could be

addressed by a single Prime Editor, enabling one of our broader goals to treat all patients' mutations in a given disease.

Illustration of How Prime Editors Can Address Hotspots Using a Single pegRNA



Note: G>T = T base pair mutation to be correctly edited to G to return to wild-type sequence; wild-type = normal, non-mutated gene sequence; pegRNA = prime editing guide RNA

Precision

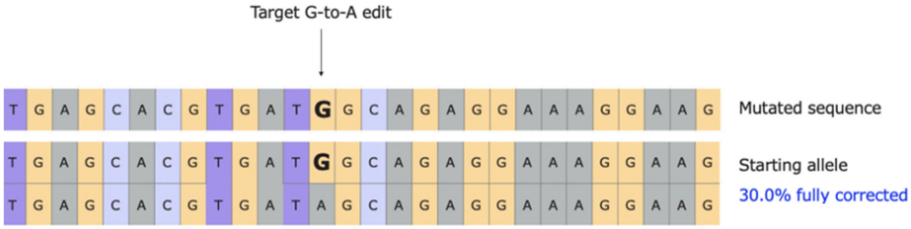
Prime Editing is designed to make only the right edit at the right position within a gene, which greatly minimizes on-target by-products at the site of editing, and results in low, or minimal off-target editing in other places in the genome. Importantly, our Prime Editors do not create double-stranded DNA breaks, which supports the precision of our technology. Prime Editing requires three "edit checks" or places where there must be a match between the editor and the target DNA in order to complete an edit. We believe that these "edit checks" also lead to highly specific and precise edits, as described above for our mechanism.

Precision at the Target Site

Prime Editing is precise in making corrections and edits at the target site in the genome. For example, as shown in the top panel of the graphic below, a specific pegRNA can be designed to edit only the first intended G to an A, and the bases before and after the target G are not edited, even if neighboring G bases are present. In the bottom panel, a different, specific pegRNA can be designed to edit only the second G to an A, again without affecting neighboring bases. With precise editing at the target site, Prime Editing minimizes bystander edits to nearby base sequences. Using the same graphic below, we see that only the intended G is edited, and the nearby G is not edited. This precision contrasts with base editing where it is challenging to selectively edit a single base pair when additional, similar target bases are present in the target window, such as GG in the graphic below, thus leading to bystander edits.

We have demonstrated that, following Prime Editing, more than 99 percent of the time, either a precise edit occurs in a cell or the uncorrected target DNA sequences remain unmodified and fully intact without production of unwanted by-products. Therefore, much of our approach to the optimization of Prime Editing at a target site is focused on increasing the relative percentage of edited cells to unedited, intact cells. We identify that information with "percent precise edits" on our graphs. In addition, we can also readily assess and optimize our choices, by screening and optimizing many pegRNA sequences, to reduce both on-target and off-target edits.

Prime Editing Is Designed to Make the Right Edit While Minimizing Bystander Edits at Neighboring Bases



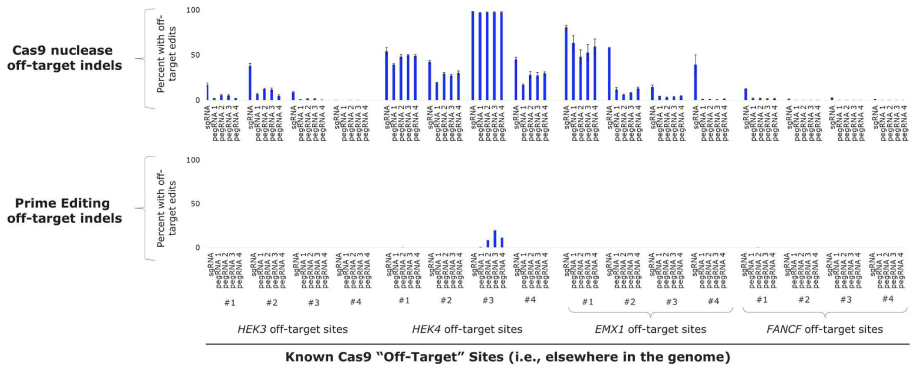
Precision at Off-Target Sites

Prime Editing shows low to no evidence of off-target editing at other locations in the genome. As mentioned above, we believe this is also due to the lack of double- stranded breaks in DNA, as well as our three "edit checks" that are integral parts of our editing mechanism.

An example of the potential for off-target activity is shown in the figure below, which compares Prime Editing to CRISPR-Cas9 editing in a head-to-head comparison. In this figure, the top panel reports percent of off-target editing (from 0 to 100 percent of cells) by CRISPR-Cas9 nuclease editing, and the bottom panel by Prime Editing. The experiment involved four well-known genes that were selected for gene editing (labeled at the bottom of the figure). A single location was edited in each of these genes. For each edit, four different pegRNAs were designed, along with a matched single guide, or sgRNA, for CRISPR-Cas9. CRISPR-Cas9 makes unwanted edits at well-characterized sites elsewhere in the genome, known as "off-target sites." For each gene that was edited, there are four off-target sites (#1, #2, #3, #4) where off-target gene editing activity was quantified. The sites are well-established sentinel sites, or sites where off-target editing has been demonstrated previously with CRISPR-Cas9 nuclease editing in preclinical studies. The graphic shows the expected, and in some cases quite extensive, resulting off-target edits caused by CRISPR-Cas9. In contrast, the results from Prime Editing using identical conditions generally was very low, minimal or at undetectable levels at all genes and sites. The only exception was off-target site #3 of the HEK4 gene locus, where Prime Editing resulted in some off-target edits. However, as described below, we believe Prime Editing has the ability to optimize guides and other parameters to improve editing. As is shown for pegRNA#1 at the same site and gene, an "optimized" pegRNA was selected with markedly less off target activity.

The actual significance of off-target editing activity is not fully understood, but we believe that the less it occurs, the more likely this will result in a long-term safety advantage to patients. Recent publications have shown that CRISPR-Cas9 editing can be optimized for limited off-target activity, but the ability to do that widely across programs is not clear. We believe that markedly lower levels of off-target activity, along with the greater opportunity to optimize pegRNAs to attain even lower levels, is a major advantage of the Prime Editing technology.

Cas9 Editing Can Result in Significant Off-Target Indels (Top); Prime Editing Has Minimal Off-Target Indels and Use of Different pegRNAs Can Further Mitigate Off-Target Effects (Bottom)



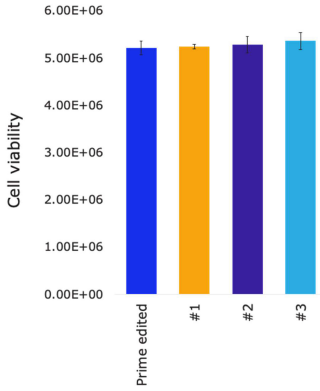
Our off-target validation approaches are described in more detail in Specificity in Prime Editing: On-and-off target unwanted edits below, where we also describe our unbiased genome-wide analysis of off-target editing for our chronic granulomatous disease program. As of the date of this prospectus, no off-target editing has been identified in this program. See "--Specificity in Prime Editing: On-and-off target unwanted edits."

The Importance of Avoiding Double-Stranded DNA Breaks

Unlike first-generation nuclease-based technologies, Prime Editors do not generate double-stranded DNA breaks. Emerging literature supports that double-stranded DNA breaks can result in many disadvantages, including:

- Lack of editing precision at the target site, leading to many indels.
- More likely to cause off-target edits elsewhere in the genome.
- Can lead to large deletions, structural rearrangements, and chromosomal translocations.
- Can activate p53, leading to apoptosis, and may select for somatic cells with p53 inactivation.
- Can reduce cell viability in edited cells.

As shown below in a preclinical experiment, cell viability was observed to be similar with or without Prime Editing, which we believe means that Prime Editing does not affect cell viability.



In this experiment to test cell viability, cells underwent identical procedures with full Prime Editing (left), then with inactive Prime Editing components that prevented Prime Editing correction to occur (#1: inactive reverse transcriptase; #2: inactive Cas9 nuclease; #3 inactive Cas9). The results show similar cell viability in the presence and absence of Prime Editing.

In conclusion, Prime Editing is highly precise and specific, and we believe that these advantageous features of Prime Editing will potentially contribute to better patient outcomes and improved overall safety.

Efficiency

We believe that with a single treatment, Prime Editing could create permanent, positive corrections of disease- causing mutations, resulting in restoration of the gene back to its wild-type healthy sequence. A corrected gene would persist in an edited cell, working naturally and being passed along to daughter cells, resulting in a potentially durable cure or therapeutic outcome. Unlike some other gene editing approaches, Prime Editing occurs in situ, or at the site in a gene where they naturally occur, which preserves a normal number of copies of the gene in the cell, allows for normal physiology, or activity, and gene regulation, normal splice variants and proteins isoforms. All of these benefits have the potential for optimal gene regulation, which we believe could result in long-lasting benefits to patients.

Although Prime Editing is a developing technology and is not yet validated in clinical studies, it has been validated in extensive preclinical testing, both by our company and in over 50 papers published in primary scientific literature to date. Our Prime Editors have demonstrated in preclinical studies the ability to repair mutations with comparable or superior editing efficiency relative to nuclease-based approaches such as Cas9- initiated homology-directed-repair. Continued modifications and optimization aims to further increase the editing efficiency of Prime Editors.

Breadth

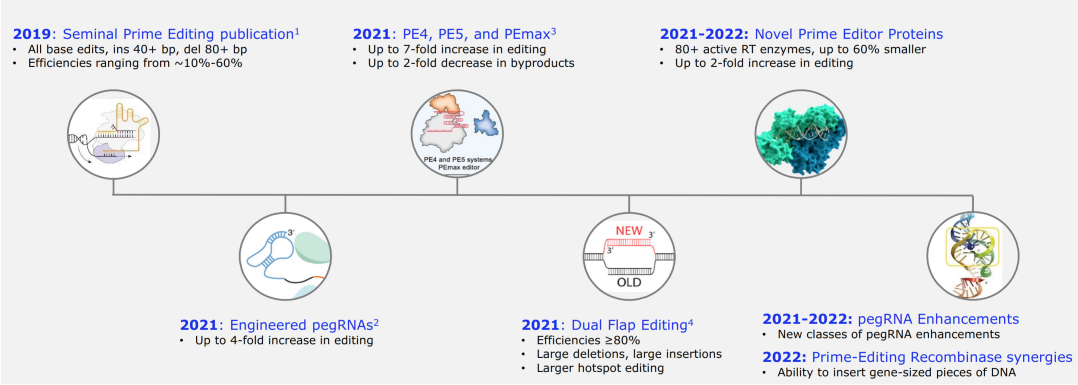
Prime Editing is a compelling approach for a wide range of therapeutic applications at the genomic level, and can make precise, targeted edits in an array of cell types, tissues and organs. We believe this breadth in applications and ability to target multiple cell types will enable Prime Editing to bring potentially curative gene editing approaches to a broader set of diseases, beyond genetic disease and towards severe, chronic, and acute diseases.

Further Enhancing the Prime Editing Platform

Over the last two years since Prime Editing was first described, an increase in efficiency as well as an expansion in the scope of applications have been demonstrated and reported in multiple publications and abstracts as well as contributions from our team. The figure below summarizes some of these key advances. The versatile nature of Prime Editing allows for the selection of the right tools for a specific gene edit from up to ten thousand potential

choices to optimize for desired effects with high efficiency and precision at the targeted site, while minimizing off-target edits at more distant chromosomal sites.

Prime Medicine holds foundational IP and has filed for IP protection for each technological advancement



[1] Anzalone, et al, Nature 2019. [2] Nelson, et al, Nat. Biotechnol. 2021. [3] Chen, et al, Cell 2021. [4] Anzalone, et al, Nat. Biotechnol. 2021

An important element of our capability is leveraging high-throughput screening and machine learning, coupled with automation of workflow, to build a data-driven model for designing optimized Prime Editing systems that can potentially accelerate our therapeutic candidate development and enhance efficiency. We have also optimized individual subcomponents of our Prime Editors to enhance their capability beyond the first generation of Prime Editors. Some notable developments include engineered pegRNAs and DNA mismatch repair modulation to further enhance efficiency of our Prime Editors where appropriate and expanding the array of gene edits by incorporating recent innovations in Prime Editing, including dual-flap Prime Editing and targeted integration, deletion and inversion of gene-sized DNA, all of which are highlighted in the figure above.

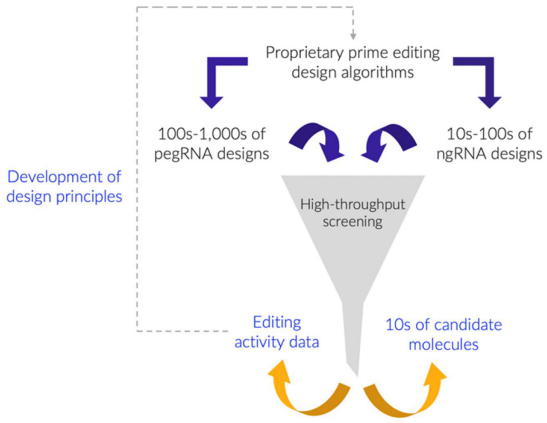
We believe that we have built a leading position in Prime Editing by consolidating technology and intellectual property in the field as well as by establishing extensive internal capabilities to deliver on the promise of this next generation gene editing technology. It is our belief that performing Prime Editing with high efficiency and precision, unlocking its broad applications in different genetic settings, and rapidly progressing towards clinical therapeutics requires great skill, know-how, and knowledge of the intricacies of Prime Editing. We think this expertise differentiates us from the other gene editing platforms, and could allow us to rapidly and efficiently deliver on the promise of Prime Editing.

Enhancements to Improve Efficiency

Automated Screening and Know-How

We are building a high-throughput automated screening engine to rapidly test up to thousands of pegRNAs and hundreds of ngRNAs, for every target edit of interest. Because pegRNA and ngRNA sequences can be chosen from a very large number of possible sequence designs, and since the choice of these designs can meaningfully influence Prime Editing efficiency, identifying the best performing molecules requires both expertise in pegRNA and ngRNA design as well as high- throughput screening capabilities for testing their activities. The figure below depicts the current screening and know-how acquisition engine, which continues to evolve. This process enables identification of optimized Prime Editing systems for a desired target edit, and it provides data that can be used to develop proprietary machine learning algorithms for pegRNA and ngRNA activity prediction, as described below.

We Employ Proprietary High-Throughput Screening and Design Algorithms to Identify Optimal pegRNA and ngRNA Sequences



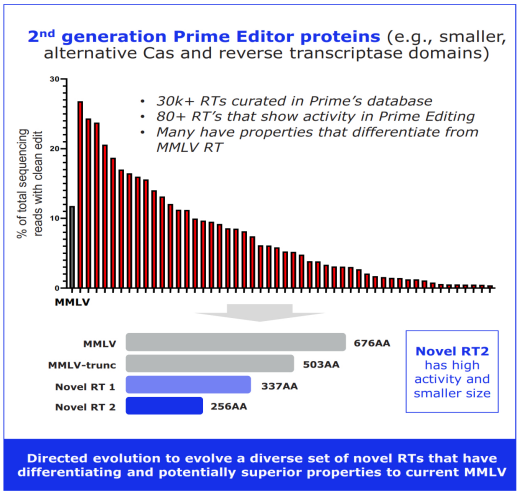
Machine Learning

PegRNAs contain multiple sequence elements that can be optimized in isolation or together to improve Prime Editing efficiency and specificity. For each target edit, there may be as many as tens of search sequence options, and for each of those, there exist tens to hundreds of possible replace sequences, tens of possible 3' RNA motifs, and tens of additional options for varying other sequence elements. As a result, the combinatorial design space for pegRNAs that target a particular mutation could reach the tens of thousands. One arm of our approach to improving pegRNA design is to assemble our large collection of data derived from our high-throughput screening platform, then use those data to train machine learning algorithms that can accurately predict highly active pegRNA molecules. This algorithm, known as PEGASUS™, allows us to more quickly screen and identify highly active pegRNAs in silico starting from a vast sequence space containing tens of thousands of pegRNA designs. PEGASUS has already achieved a 76% reduction in testing of pegRNA during screening, and efforts to achieve further improvement are ongoing. This capability is greatly enhancing our ability to efficiently and rapidly identify pegRNA sequences with the highest activity and specificity.

Novel and Improved Prime Editor Proteins

We have developed several generalizable proprietary enhancements to our first-generation Prime Editor proteins, that on average have provided more than double the level of activity. We have developed a curated database of more than 30,000 reverse transcriptases, or RTs, which we have screened to identify novel and differentiated Prime Editing ability. The figure below shows 80 novel RTs that efficiently perform Prime Editing in conjunction with a pegRNA and Cas domain. Many of these have properties that differentiate from Moloney Murine Leukemia Virus, or MMLV-RT, and are as small as one-third the size of the MMLV-RT used in our first generation

Prime Editor proteins. We are improving these novel RTs along with several different Cas domains using powerful protein engineering and evolution methods to work with high efficiency in Prime Editing.



MMLV – Moloney murine leukemia virus; trunc = truncated

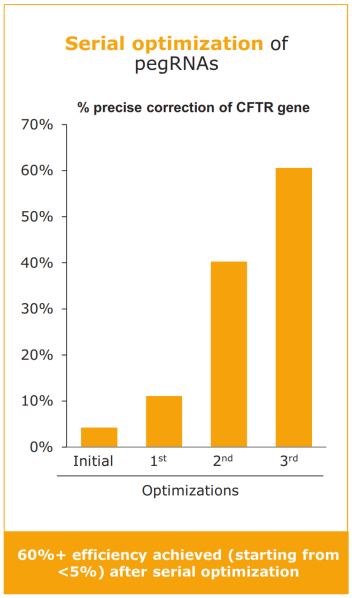
Engineered pegRNAs

Professor David Liu's laboratory at Broad Institute recently developed epegRNAs that can improve Prime Editing efficiency by 3-fold or more in multiple human cell types, an enhancement that is now being incorporated into our research activities. In addition to the elements found in standard pegRNAs, epegRNAs have an extra element called a 3' RNA motif. We believe that 3' RNA motifs stabilize the replace sequence of pegRNA in cells, extending the duration of Prime Editing, and thereby leading to higher editing efficiency. Multiple classes and sequences of 3' RNA motifs can be used in epegRNAs, and therefore represent another lever that we can apply to optimize Prime Editing efficiency. We have exclusively in-licensed and adopted the use of these epegRNAs and are actively developing our own classes of epegRNAs to enhance Prime Editing.

Other Improvements to pegRNA Design

We have developed several other generalizable proprietary enhancements to our first-generation Prime Editing systems through optimization of our Prime Editor pegRNAs. By using powerful RNA engineering methods, we have established different generalized optimizations that can be applied to pegRNAs to improve their activity. As shown

in the figure below, these optimization processes can yield marked increases in activity, and have been observed to lead to a more than 10-fold increase in pegRNA activity.

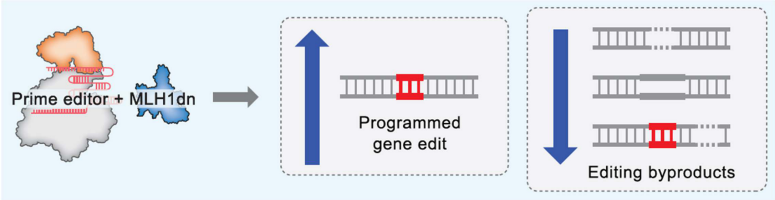


We believe combining these enhancements and others will enable us to build next-generation Prime Editors that are optimized for efficiency, breadth, precision, and therapeutic delivery. We outline what we believe to be other, important additional improvements below.

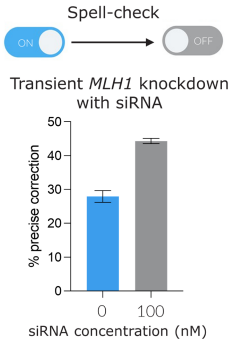
DNA Mismatch Repair Modulation

Recently, it has been shown in *in vitro* experiments that a DNA surveillance system, which is variably active across cells of the body, called mismatch repair pathway, or MMR, can influence Prime Editing outcomes. Transient suppression of MMR, specifically a part of the system called MLH1, in the tissue where Prime Editing is occurring, can moderately boost efficiency, as shown in the figures below. As a result, although many of these approaches require further validation, we are developing approaches to transiently modify MMR so that desired Prime Edits are favored, and any undesired by-products are minimized. We are evaluating several different approaches to modulating the MMR response including active pharmaceutical ingredients, such as siRNA, or small interfering RNA, or other approaches that transiently modulate MMR activity which could be co-administered with a Prime Editor. While inherited mutations in genes encoding the protein factors in the MMR pathway can increase the risk of neoplasms of epithelial tissues including colon and skin appearing in adulthood, we believe short term (days) suppression of MMR is likely to be generally well-tolerated. Safety studies will be required to establish a safety profile of transient MMR suppression.

Suppressing the MMR Pathway, For Example By Inhibiting MLH1, Can Boost Editing Efficiency and Minimize By-Products



Co-Administration of siRNA with our Prime Editors was Observed to Increase Editing Efficiency



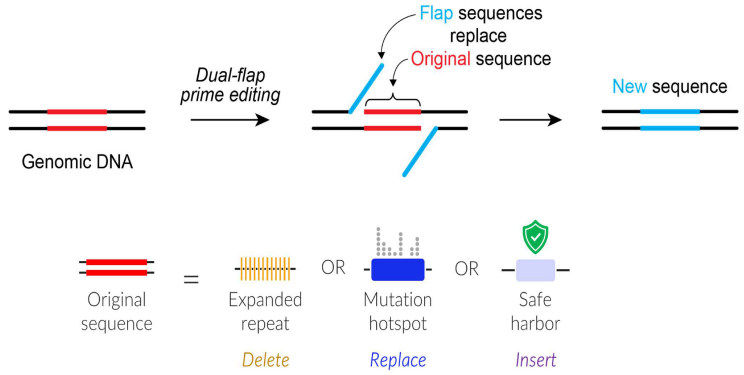
Enhancements to Broaden the Universe of Edits for Prime Editing

Dual-flap Prime Editing

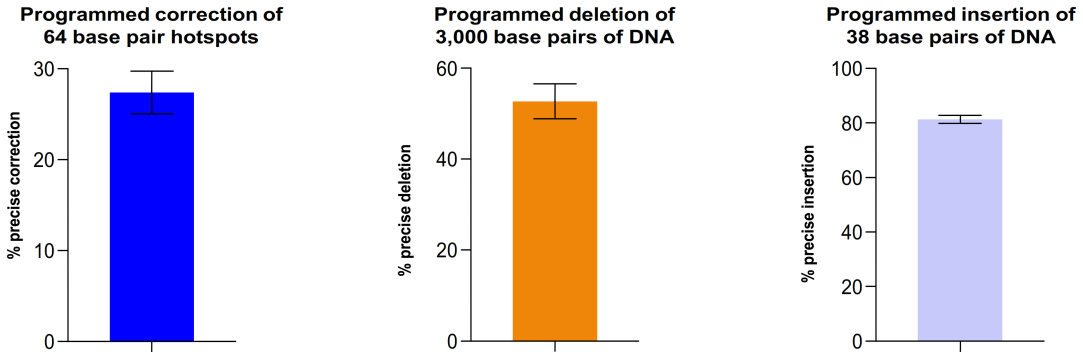
We have in-licensed certain dual-flap Prime Editing technology developed by David Liu's laboratory at Broad Institute, and expanded and improved on its uses. Compared to traditional Prime Editing, dual-flap Prime Editing uses two Prime Editors instead of one. In different places, each of the Prime Editors creates a nick in the DNA and creates a flap; the two flaps are designed to bind tightly to each other. This results in the looping out of the DNA between the Prime Editors, with replacement of new DNA. Dual-flap Prime Editing is designed to achieve efficient editing of a broader range of edit types, including the precise replacement or insertion of DNA sequences that are a hundred bases or more in length with potentially higher efficiency than standard Prime Editing. In addition, dual-flap Prime Editing can precisely delete up to thousands of bases of DNA, as shown in the data for repeat expansion diseases (see below in Portfolio section). In addition to its high efficiency, it achieves the same level of precision, and we believe it results in minimal off-target editing, as shown in preclinical studies, similar to the more standard forms of Prime Editing.

As illustrated in the figure below, dual-flap Prime Editing could be used to delete expanded repeat sequences like those that occur in repeat expansion diseases, to replace mutation hotspots with corrected sequences, or to insert sequences at safe harbor or other locations in the genome. The figure below depicts examples that use dual-flap Prime Editing to: replace a 64-base mutation hotspot in the gene that causes the metabolic disorder, Phenylketonuria, delete approximately 3,000 bases, or insert 38 bases at a targeted location in the genome.

Dual-Flap Prime Editing Uses Two pegRNAs to Potentially Broaden Applications



Dual-Flap Prime Editing Precisely Corrects a Gene with a Human Mutational Hotspot, Precisely Removes Large Sequence of Pathogenic DNA and Precisely Inserts a 38 Base Pair Sequence into the Human Genome



Note: Error bars represent standard error of N=5 experiments.

Programmable Gene-sized DNA Insertion, Inversion, and Deletion

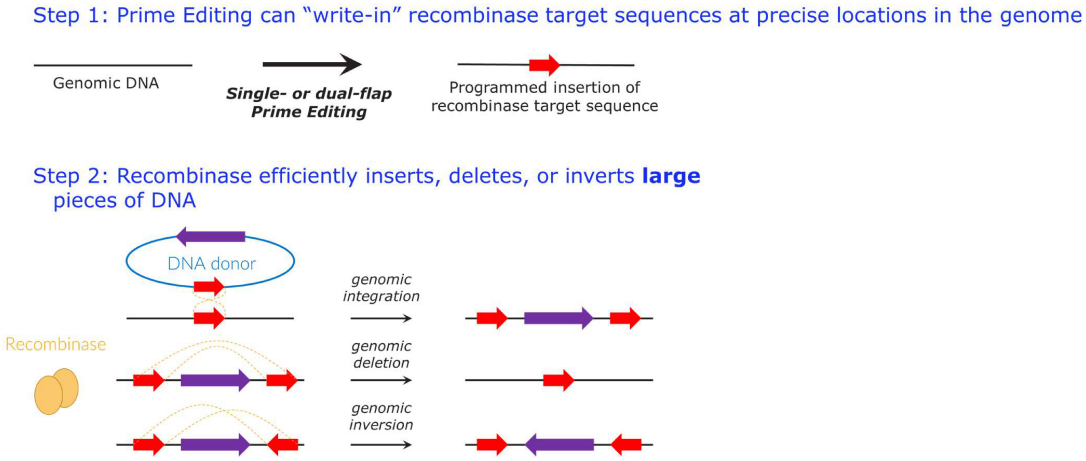
We are excited about newly developed technology that allows us to expand our gene editing toolbox to include programmable insertion, deletion, or inversion of thousands of bases of DNA. This technology combines the programmability of Prime Editing with another class of genome editing tools called site-specific recombinase enzymes, or SSRs, also known as integrases. Although SSRs have long been used as biology research tools to insert large pieces of DNA into the genome, to perform large inversions of DNA, or to make large deletions of DNA, their use in therapeutic applications has been limited by the extremely challenging task of engineering SSRs to be programmable, or to target specific sequences, such as a desired DNA sequence in a gene or genome. While dual-flap can loop out very large pieces of DNA, up to many kilobases in size, currently it can only precisely insert a much smaller number of base pairs of DNA, approximately one hundred base pairs as of today. Therefore, in circumstances where a larger modification is required, this programmable technique is designed to insert or invert multi-kilobase-sized pieces of DNA. In addition, similar to dual-flap, this technique can also delete similarly large pieces of DNA.

Our technology leverages the programmability of Prime Editing to insert recombinase recognition sequences at precisely chosen targeted locations in the genome, as shown in the figure above. Then, an SSR, either fused to the Prime Editor, or transiently delivered as a separate enzyme into target cells, locates the recognition sequence or sequences and carries out DNA recombination at those recognition sequences, resulting in the desired large DNA

sequence edit at the desired location in the genome. We believe that such a technology has the potential to precisely insert “gene-sized” pieces of DNA, at a predetermined and specific site in the genome, is a clear differentiator.

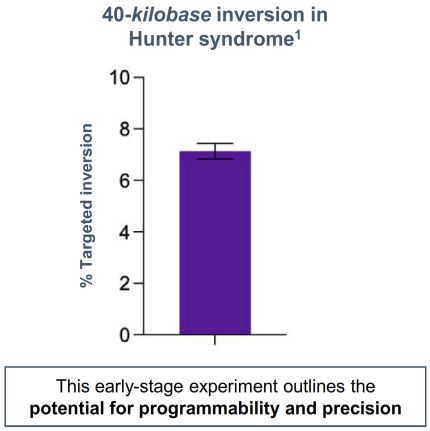
As shown in the figure below, Prime Editing can insert a recombinase recognition sequence at a targeted location in the genome, which can then be used by an SSR to insert DNA that contains a therapeutic gene, potentially such as a chimeric antigen receptor, or CAR. Using multiplex Prime Editing, two recombinase recognition sequences can be inserted so that SSRs can insert, replace, delete, or invert the intervening DNA sequences. We call this Prime Editing enhancement PASSIGE™ (Prime Assisted Site-Specific Integrase Gene Editing). Together, these editing capabilities enable therapeutic opportunities to potentially treat genetic variants that are caused by changes to large sequences of DNA sequences, and methods to engineer cell therapies to treat disease.

Combining Site-Specific Recombinase (SSR) Enzymes with Prime Editing Can Effectuate Insertion, Deletion or Inversion of Large DNA Sequences



As shown in the figure below, short recombinase recognition sequences known as attB and attP, used by the site specific recombinase known as Bxb1, were inserted in introns flanking a 40 kilobase inversion mutation in the IDS gene that causes a serious childhood multisystem disorder, called Hunter syndrome. In this early proof-of-concept

experiment, delivery of the Bxb1 recombinase to mutated cells resulted in precise correction of the 40 kilobase inversion in 7 percent of cells, with the remainder left unchanged.



1 attB and attP recombinase sites were introduced on either side of the inversion by dual-flap Prime Editing, followed by transfection with Bxb1 recombinase, in non-genetically modified human cells.

Multiple enhancements to our Prime Editing platform, including engineered pegRNAs, enhanced Prime Editors, and DNA mismatch repair modulation, provide us with a versatile toolbox for applying Prime Editing to a wide range of diseases. In addition, our focus on high-throughput screening and machine learning are allowing us to grow our internal technical expertise for Prime Editing optimization, and are being used to develop Prime Editors that are both more efficient and more precise. Finally, we are broadening the types of edits that we can make by incorporating recent innovations in Prime Editing, including dual-flap Prime Editing, and programmable insertion, deletion, and inversion of gene-sized DNA sequence.

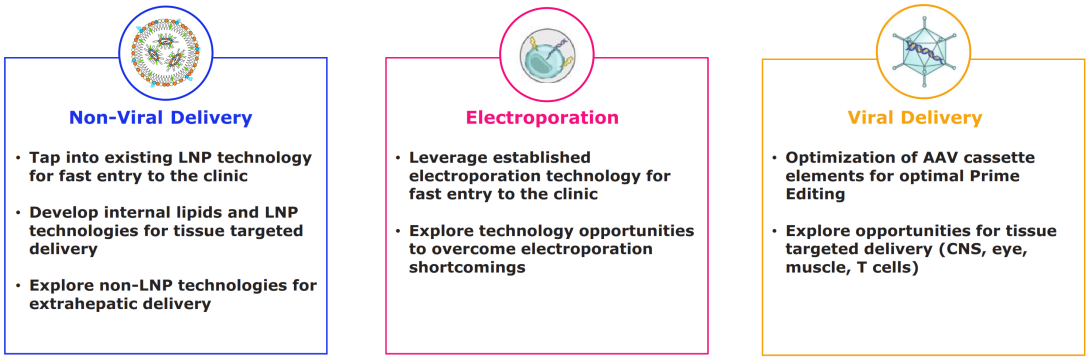
Translating Prime Editors into Product Candidates

Multi-modality Delivery of Prime Editors

The efficient delivery of our Prime Editors is critical for the development of our therapeutic pipeline indications. We are investing in a broad, multi-modal delivery approach and establishing in-house capabilities, tools, and partnerships to pursue a comprehensive suite of validated delivery technologies, and we continue to evaluate novel experimental delivery approaches. For each program in our pipeline, we evaluate the best options for delivery, and select the delivery technology with the most compelling biodistribution for a given tissue type. Our initial programs rely on three distinct delivery methodologies: (i) LNPs for non-viral *in vivo* delivery to the liver, lung, and potentially other organs, as well as *ex vivo* cells; (ii) electroporation for efficient delivery to blood and immune cells *ex vivo*; and (iii) AAV for viral delivery *in vivo* to the eye, ear, CNS and muscle. By leveraging these diverse delivery technologies in parallel, we believe we could avoid overreliance on any single delivery method and create optionality by advancing a broad portfolio.

We believe these delivery technologies are foundational to successfully bringing our pipeline programs to the clinic and we are actively building capabilities and investing in development and optimization of the delivery technologies to accelerate our pipeline progress. Moreover, we also continue to evaluate and leverage the many

advancements in novel and experimental delivery approaches that are being made in the cell and gene therapy field, and intend to license complementary delivery technologies, as appropriate.



Our multi-pronged delivery strategy to enable our portfolio includes the following:

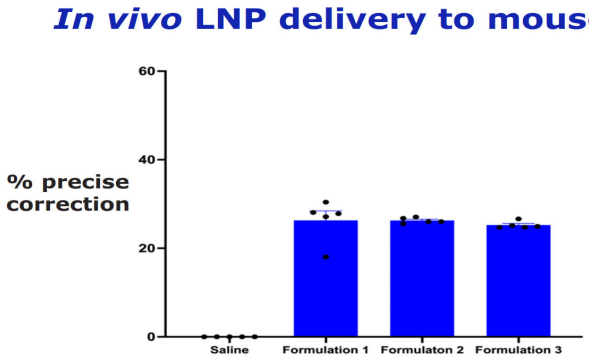
- *Non-Viral Delivery.* We are designing Prime Editing product candidates to provide a "once and done" treatment and we see a non-viral future for delivery. Initially, we are utilizing existing LNP formulations and technologies for *in vivo* delivery to the liver. We have also established end-to-end capabilities across our R&D organization consisting of lipid synthesis, high throughput LNP screening using bar coding technology, formulation process development for tissue targeted delivery and production to support our preclinical studies.
- *Electroporation*. A second delivery approach is electroporation for transfecting *ex vivo* cells. Electroporation is being used for our chronic granulomatous disease program with *ex vivo* CD34 cells. In the future, we plan to transition to *in vivo* editing of stem cells and other lymphocytes in the future.
- *Viral Delivery*. Finally, we are using viral delivery to tissues and locations that can only currently be reached with AAV. We consider this a stop gap measure until we can identify a highly specific, non-persisting delivery approach.

Non-Viral Delivery In Vivo with Lipid Nanoparticles

LNPs are multicomponent and encapsulate the Prime Editor cargo to prevent its degradation by the ubiquitous endonucleases present in biological fluids, thereby enabling the transient delivery and expression of the Prime Editor in cells. We are investing strategically to build our LNP formulations for delivery as a platform technology to enable target tissue delivery. Specifically, we are establishing end-to-end capabilities including design and synthesis of proprietary lipids, high-throughput LNP screening *in vivo* using complementary and orthogonal approaches such as DNA bar coding and next generation sequencing, or NGS, LNP formulation process development, manufacturing of preclinical formulations, and *in vivo* evaluation of LNP delivered Prime Editors. We are integrating automation, analytical quality control, and characterization data, *in vitro* and *in vivo* preclinical data, along with data knowledge management tools such as machine learning to develop correlative analyses that we believe can expedite LNP discovery and inform drug product formulation development and drug product specification setting. We believe that building an iterative and integrated system will increase efficiencies in identifying potent and safe LNPs capable of delivering Prime Editors to extra-hepatic tissues.

For our first *in vivo* Prime Editor program, we are leveraging existing LNP technology that we believe will allow us to move the program in to the clinic quickly and establish proof of concept. Already, a pilot study using a control Prime Editor targeting the mouse Dnmt1 gene control site, was formulated using three different formulations biodegradable ionizable lipids to assess Prime Editing *in vivo* in mouse liver. As shown in the figure below, these results show approximately 25% precise editing of the Dnmt1 gene, using LNP delivery methods, in rodent species.

Our LNP-based delivery system encapsulates mRNA, pegRNA and ngRNA into nanoparticles for *in vivo* delivery of the Prime Editor as a single dose. We are systematically optimizing the Prime Editor components and LNP formulation to further improve *in vivo* Prime Editing efficiency, and to build a LNP delivery platform. By changing the pegRNA and ngRNA pairs, we are applying this LNP formulation to our Wilson's Disease and Glycogen Storage Disease liver programs.



Graph showing Prime Editing (% precise correction) at a control site in the Dnmt1 gene in whole mouse liver 7 days after intravenous injection of Prime Editor formulated in 3 different LNPs. Saline injection is a control. Each dot represents a separate animal.

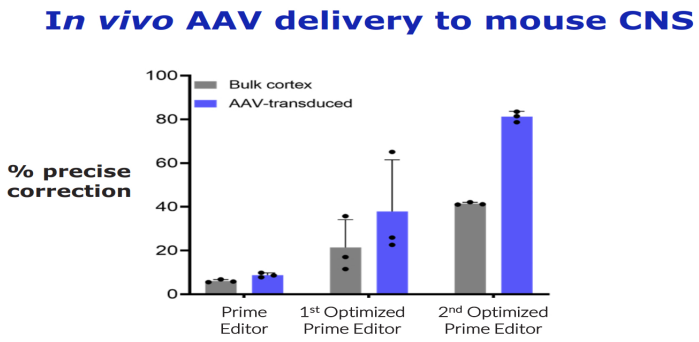
Electroporation

Electroporation is a clinically validated technology for *ex-vivo* delivery of a therapeutic payload such as mRNA into cells, which are then reinfused back into the patient(s). Electroporation utilizes electrical pulses to increase the cell membrane permeability. We are using electroporation to deliver the Prime Editor components (peg/nick RNA pairs, and mRNA, or guide pairs with purified protein as a ribonucleoprotein complex) into blood cells and immune cells. We have established electroporation delivery capabilities, and the analytical characterization for the transfected cells to support of our leading cell therapy program(s). We are also monitoring and evaluating novel technologies that can be a viable alternative to electroporation that will improve process efficiencies and product quality.

Viral delivery In Vivo with Adeno-Associated Virus or AAV

AAV is a validated viral vector that is non-pathogenic to humans and does not integrate into the genome. For AAV delivery, we are optimizing AAV with respect to serotype, promoter capsids, and other aspects of the Prime Editing cassette. We are employing internal and external process development and analytical QC to progress our preclinical development of our dual AAV mediated PE programs. In the figure below, successful Prime Editing is demonstrated from initial proof of concept experiments using three different Prime Editors to edit the Dnmt1 gene control site by *in vivo* AAV delivery to the CNS via an intracerebral-ventricular injection in a mouse model. By

changing the pegRNA sequences, a similar AAV delivery platform is being applied to our CNS indications, and work on Friedreich's Ataxia is currently underway.



Graph showing Prime Editing (% precise correction) at a control site in the Dnmt1 gene in the mouse central nervous system by intracerebroventricular injection of three different Prime Editors delivered as a dual AAV. Grey bars show total editing in whole brain cortex (bulk cortex), blue bars show total editing in cells that were transduced, or actually received, the Prime Editor cargo from the AAV injection. Optimizing Prime Editors increased editing 10-fold (from 8% to 80%) in transduced cells (blue bars) isolated from bulk cortex (gray bars).

Overall, these preliminary experiments with two key delivery technologies planned for our clinical programs, demonstrate Prime Medicine's expanding capabilities for delivery of our Prime Editors.

Specificity in Prime Editing: On- and off-target unwanted edits

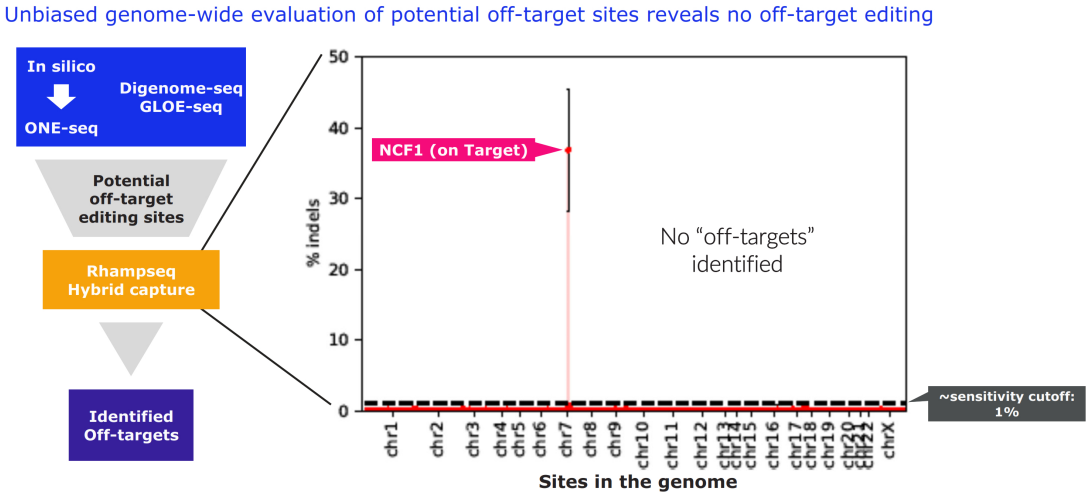
A key element of evaluating safety in gene-editing relates to the specificity of the edits: is the edit precise at the targeted site, and/or are there off-target edits, or unwanted edits, at more distant locations in the genome, that are the result of gene editing? In particular, the ability to demonstrate the absence of low, even minimal, levels of off-target editing is a major differentiator for Prime Editing compared to most other gene editing technologies, and we believe may result in a more benign safety profile for Prime Editing.

A robust and unbiased evaluation of all potential off-target activities is a critical element of our efforts. Our approach to minimizing off-target editing is to start by screening for Prime Editor candidates with very low off-target activity. We then use comprehensive, sensitive, and state-of-the-art methods to identify all putative off-target sites by identifying places where a Prime Editor has a possibility (no matter how small) to nick the DNA. We are developing multiple, complementary, but distinct, methods to measure such possible events. Our approach includes evaluation, among other methods, of: (a) off-target activity in the genome that is specific to the sequence of a particular pegRNA or the ngRNA; (b) similar activity that is independent of the pegRNA or ngRNA sequences; and (c) genomic rearrangements.

To establish a preliminary set of potential off-target sites, we initially evaluate our promising pegRNAs with computer algorithms that identify other sites in the genome with some degree of sequence similarity. In parallel, we identify a comprehensive set of putative sites where the Prime Editor could nick the DNA, as determined by several experiments performed in cell-free conditions with DNA. Combining these sets of sites, we then evaluate each of those locations extensively using sequencing methods to identify the potential for very low frequency off-target edits and perform the evaluation in cells that are relevant to the disease for which the Prime Editor is intended. From these parallel methods, there may be up to thousands of potential sites evaluated for off-target activity for each potential Prime Editor and we are able to quantify the absence or presence of Prime Editing at these sites.

As an example from our chronic granulomatous disease program, we have performed preliminary evaluation of a Prime Editor from the program using one of these key methods. We identified 569 potential off-target sites in the genome to evaluate for guide-dependent off-target activity, where the Prime Editor might be predicted to cause a

nick. We evaluated these 569 sites in healthy donor CD34+ HSCs following Prime Editing and did not identify any Prime Editing at these potential sites.



Left panel shows some of the steps for our guide-dependent off-target editing evaluations using 3 different methods to identify potential sites in the genome. Prime Editing is then performed in CD34 HSCs and the potential sites are amplified and sequenced to identify actual off-target edits that occurred, referred to as % indels on the Y axis. The X axis shows all 569 potential sites assessed, arranged by chromosome order. Note only the planned, "on-target" precise correction at the NCF gene was identified, whereas no off-target editing was identified.

To evaluate off-target effects independent of the pegRNA or ngRNA sequences, we Prime Edit stem cells, and then expand populations of single cell clones, or cells that are genetically identical. From this large pool, we have the ability to evaluate very low frequency events, such as rare off-target edits, using unbiased methods. Each clone undergoes whole genome sequencing and is compared to appropriate controls, which allows evaluation of locations that are not predicted from the pegRNA sequence or genomic location.

Using this same type of approach, we also are employing a combination of methods to look for genomic rearrangements, including targeted or random rearrangements, using whole genome sequencing of clonally expanded Prime Edited stem cells.

Manufacturing Prime Editor Product Candidates

Due to the breadth of potential therapeutic indications that can be served by Prime Editing, we are developing broad manufacturing capabilities and know-how needed to support the rapid advancement of parallel programs into clinical studies. We are investing in building a strong technical development and operations team with extensive Chemistry, Manufacturing and Controls or CMC experience providing a good line of sight to BLA and commercialization. This gives us the ability to develop the manufacturing processes and analytical controls needed to produce reliable and high-quality Prime Editing drug products focusing on the most critical CMC activities early.

Early and strategic CMC investment is critical for cell and gene therapy success. We have 3 key strategies that guide our early CMC investments described in the figure below.

Early CMC Investment to Build Foundational Capabilities for Delivering Prime's Pipeline

Early CMC investment in areas such as identifying critical manufacturing process parameters and developing functional potency assays help to provide deep process and product knowledge that is crucial for facilitating tech transfer, troubleshooting manufacturing and supporting future regulatory comparability strategies. New manufacturing technologies may be incorporated to improve scalability, reliability, and cost of goods of the manufacturing process in the future. We are also employing automation, data management, and machine learning that will be important for gaining the insights needed to optimize and ensure reliable control of our manufacturing processes, as well as for supporting justification of specifications needed for product regulatory approvals. Collaboration and relationship building with external contract manufacturers and partners are underway.

As explained above, our preferred configuration for the Prime Editor complex comprises two main components. The first component is the Prime Editor protein comprising a Cas nickase domain fused to a reverse transcriptase domain. The Prime Editor protein is generated either by i) recombinant DNA technology or by ii) *in vivo* expression from mRNA which is made via *in vitro* transcription, or IVT. The second component is synthetic guide RNA referred to as Prime Editing guide RNA or pegRNA, and nick guide RNA, or ngRNA. We have established internal capabilities and external partnerships to synthetically produce guide RNA by solid phase synthesis. We are also designing new chemistry routes along with purification steps to improve scalability, purity, throughput, and modularity.

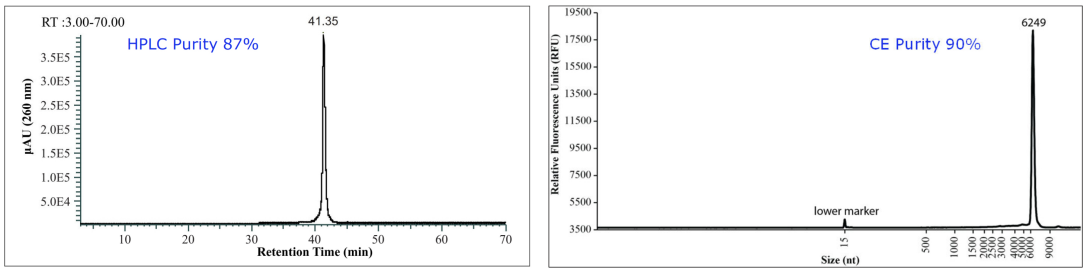
Prime Editor proteins are produced using an optimized microbial system. The proteins are purified, quality controlled, and activity is tested using various biophysical measurements. The Prime Editor ribonucleoprotein or RNP is formulated by mixing the protein with the pegRNA and ngRNA pair. Prime Editing has been achieved by electroporation of HSC cells *ex vivo*, as well as demonstrated by LNP delivery in primary hepatocyte cells, and other targeted tissues in vitro.

For mRNA production, our efforts are focused on designing mRNA modifications to improve stability, half-life and expression, developing robust purification steps, and evaluating new technologies aimed at speed, purity, and reduced cost.

We have been focused on developing the manufacturing processes both internally and partnering with suppliers to ensure the quality of the Prime Editor components needed for preclinical studies, and IND submission. In the figure below, the high purity of our pegRNA is shown by high performance liquid chromatography, or HPLC. On the right panel, the electropherogram similarly shows the high purity of the mRNA that has been produced. We

believe that the quality of these materials demonstrates our ability to meet our internal Prime Editing requirements, and the regulatory expectations for IND submission.

Internal testing confirms high purity of pegRNAs ***High-quality mRNA lots produced internally***



The high purity of pegRNA produced in partnership with our preferred external supplier and internally analyzed by HPLC is shown on the left. and a capillary electrophoresis electropherogram shows the high purity of a lot of mRNA produced internally.

We will continue to leverage the significant advances and progress that are being made in the field of manufacturing sciences and analytical controls of genetic medicines and therapies, while focusing specifically on the application and optimization of those technologies for Prime Editing. In addition, our collaboration with Beam allows us access to specified know-how, methods, and intellectual property in certain fields that we believe will be useful to these activities.

Our overall strategy is to design manufacturing platforms to make the Prime Editing components and associated delivery systems with high throughput, high quality and purity, modularity, and scalability. Manufacturing platforms will provide the framework for rapidly developing Prime Editors for subsequent new target indications. Modularity refers to a collection of components which can be rapidly recombined for the construction of a new product candidate. For example, we believe that once a Prime Editor is established, a new drug product candidate may only require the relevant pegRNA and ngRNA (or encoded for AAV) to be replaced. Similarly, we believe that the pegRNA and ngRNA will be able to be produced with modularity.

We intend to collaborate seamlessly with various strategic partners to license their technologies and leverage their capabilities and expertise. We intend to establish strategic partnerships with contract manufacturing organizations with established Good Manufacturing Practice, or GMP, manufacturing capabilities and relevant manufacturing experience in genetic medicines, and where we will bring our Prime Editing process and product knowledge and technical expertise. Over the longer term, we may decide to build our own manufacturing facilities, especially for critical Prime Editing components where we may decide to leverage our core capabilities in process and product characterization.

Our Portfolio

We believe that Prime Editing has transformative potential that could change the course of how disease is treated. To maximize the potential of Prime Editing to provide one-time curative therapies to the broadest set of diseases possible, we have purposefully built a diversified portfolio organized around four strategic indication categories, each set of indications chosen to deliver a different strategic goal. We have constructed our portfolio of 18 programs, including one partnered program, across our strategic indication categories in disease settings where the unique characteristics of Prime Editing could offer compelling advantages over current standard-of-care and novel therapeutic modalities in development.

Our Four Strategic Indication Categories

1. *Immediate Target Indications*

Our immediate target indications were chosen as potentially the fastest, most direct paths to demonstrate technological success of Prime Editing in humans. We prioritized and advanced programs in this strategic category

based on a number of criteria including high unmet medical need where the underlying genetic pathogenesis, or cause of the disease, is well-understood, and where there were well-characterized delivery methods targeting specific organs or tissues. We also considered the availability of strong clinical and preclinical biomarkers, well-established animal models, a readily accessible patient population, and the regulatory path. In most cases, the correction of the target gene is initially focused on a predominant mutation or set of mutations, and we intend to expand to additional mutations within each indication. We also intend on moving quickly into similar follow-on programs in each target organ as we achieve therapeutic success.

For our initial immediate target indications, we have focused on diseases of the blood via *ex vivo* delivery to hematopoietic stem cells, the liver and the eye. We have initiated six preclinical programs across these organs/tissues, in addition to one program partnered with Beam and other programs in earlier stages of development. In addition, we have initiated two preclinical programs for undisclosed indications in the ear. We believe each of these programs has the potential to deliver rapid preclinical and clinical proof-of-concept for Prime Editing in patients.

2. Differentiation Target Indications

Our differentiation target indications are focused on areas where Prime Editing can potentially overcome limitations of other gene therapies and editing approaches, with the ability to do precise and much more diverse, targeted edits, in a broader array of organs, tissues and types of cells. We also focus on areas where our technology has a special impact on a category of genetic diseases, such as the ability to loop out unwanted repeat sequences. While several potential indications in this category also rely on validated delivery methods, some of our longer-term targets may require novel delivery development.

Programs in this category include:

- repeat expansion diseases, most of which are CNS diseases, or neuro-muscular diseases with pathological, or disease-causing expanded numbers of DNA repeat sequences. These diseases are particularly tailored for Prime Editing approaches, in that Prime Editing can loop out large numbers of unwanted repeats, so pathologic repeats of different lengths can, in principle, be contracted to a single, healthy repeat sequence
- diseases characterized by mutational hotspots
- diseases caused by mutations in extremely large genes, which we refer to as “big gene” diseases
- diseases in difficult to edit cell types
- multiplex editing without the introduction of double-stranded breaks
- edits to regulatory sequences modulating physiological pathways
- diseases requiring precise physiologic control, where too much or too little activity would be a concern
- extremely high-fidelity locations

We have initiated four preclinical programs for repeat expansion diseases, including Friedreich’s Ataxia, Myotonic Dystrophy type 1, Amyotrophic Lateral Sclerosis and Fuch’s Endothelial Corneal Dystrophy. In addition we have programs in three undisclosed repeat expansion disease indications, and two additional undisclosed differentiation target indication programs in earlier stages of development. We believe these programs have the potential to address difficult and complex diseases of great unmet medical need, which are often not accessible to other forms of gene editing approaches.

3. “Blue Sky” Target Indications

Our “blue sky” target indications category pushes new and innovative technological developments in Prime Editing to extend its application outside of rare genetic diseases and towards our goal of broadly addressing human disease. We have already conducted a process of enhancements, some of which are being implemented in potential new programs, and we are committed to continue to push the frontier of innovation in genomic medicines by

optimizing and expanding our Prime Editing technology and capabilities further. We believe these advancements to our technology should allow us to proceed more rapidly into opportunities beyond rare genetic diseases, including:

- transforming chronic therapies into a single-dose, one-time permanent therapeutic correction
- preventing serious diseases by targeting the causes before the onset
- treating the genetic basis of common diseases
- inserting or replacing whole exons or genes
- treating infectious diseases
- treating cancers by correcting underlying germline or other mutations or by broadening the reach of immunological approaches to cancers
- using multiplex editing to treat immunological diseases
- treating diseases that require insertion, replacement or inversion of large sequences, enabling novel cell therapies
- enabling other important technologies such as xenotransplantation

While these programs remain in the early stages of conception, we expect this category to become an increasing focus for our company over the next few years.

4. "March Up the Chromosome" Approaches

As part of our commitment to patients, we envision a truly personalized medicine approach in which we can treat every individual patient with a given disease by "marching up a chromosome," correcting each individual mutation in a gene. Because Prime Editing can search and replace, by simply swapping out the pegRNA while keeping other elements of a program the same, such as clinical trial design and manufacturing, we believe we will be able to march from mutation to mutation, or from hotspot to hotspot, along a single gene, and eventually treat every individual patient with a specific disease, not just the few with the most prevalent mutations.

This effort will require a multi-year, multi-step strategic approach to identify a limited set of data to support registration across the set of mutations within a gene. This category can overlap with other strategic indication categories, where we are designing each of our previously-described strategic indications with this approach in mind. As such, most of our disclosed indications have a plan that can accommodate expansion opportunities to address additional mutations in that disease.

Our Pipeline

Our current portfolio is focused primarily on the first two strategic indication categories, and includes the following 18 programs, including the Sickle Cell Disease program which is partnered with Beam.

STRATEGIC CATEGORY	TARGET TISSUE	INDICATION	DELIVERY	DISCOVERY	IND-ENABLING	Phase 1	Phase 2	Phase 3	PARTNER
IMMEDIATE	BLOOD	Sickle Cell Disease	*ex vivo*						Beam
		Chronic Granulomatous Disease	*ex vivo*						
		Fanconi Anemia	*ex vivo*						
	LIVER	Wilson's Disease	LNP						
		Glycogen Storage Disease 1b	LNP						
	EYE	Retinitis Pigmentosa/Rhodopsin	AAV						
		Retinitis Pigmentosa/Usher Syndrome	AAV						
	EAR	Usher Syndrome Type 3	AAV						
		Non-Syndromic Hearing Loss – GJB2	AAV						
DIFFERENTIATION: REPEAT EXPANSION DISEASES	NEURO-MUSCULAR	Friedreich's Ataxia	viral/non-viral						
		Myotonic Dystrophy Type 1	viral/non-viral						
		Amyotrophic Lateral Sclerosis	viral/non-viral						
		Oculopharyngeal Muscular Dystrophy	LNP						
		Fragile X Syndrome	viral/non-viral						
		Huntington's Disease	TBD						
	EYE	Fuchs' Endothelial Corneal Dystrophy	viral/non-viral						
DIFFERENTIATION: OTHER	MUSCLE	Duchenne Muscular Dystrophy	AAV						
	LUNG	Cystic Fibrosis	LNP						

Initially focused on our first two strategic indication categories in diseases where Prime Editing could offer compelling advantages over current standard-of-care and novel therapeutic modalities in development

Note: AAV = adeno-associated viral vectors; LNP = lipid nanoparticles; TBD = to be determined

Prime Milestones

We expect that key upcoming events will continue to drive the Prime Medicine platform forward. The following outlines a summary of select ongoing activities and next steps for Prime Medicine. All our *in vivo* studies are preliminary to date. We will continue to expand preclinical proof-of-concept *in vivo*, including data from *in vivo* rodent studies and non-human primate studies in several programs in . If successful, we will initiate IND-enabling studies for several of our lead programs in , leading to initial IND filings in , with the potential for our lead programs to move faster. Since we are in early stages of product candidate development, we will provide an update on our timelines moving forward, with the potential to accelerate these programs. We also anticipate continuing to name additional programs as they advance over the next few years.

In the near-term, we plan to define the early-stage manufacturing processes and controls to produce representative drug product using our multi-modal delivery approaches consisting of electroporation for our *ex vivo* programs, LNP, as well as AAV. Key steps in our company growth include announcing shortly our permanent site in Cambridge that will enable us to grow beyond 200 people, anticipated in . We are also investing in a dedicated chemistry facility for medicinal chemistry, process development, and analytical chemistry groups, including a non-GMP piloting lab for making guide RNA, mRNA and synthesizing lipids to support our research activities.

Immediate Target Indications

OUR BLOOD PROGRAMS

Chronic Granulomatous Disease – Our program using *ex vivo* electroporation of hematopoietic stem cells

The Disease

Chronic granulomatous disease, or CGD, is a rare inherited hematologic disorder that results in a failure of immune defense against extracellular pathogens. In CGD patients, myeloid cells lack a functional NADPH oxidase, or NOX2, complex, which renders patients susceptible to prolonged and recurrent bacterial and fungal infections and inflammatory complications. NOX2 is only produced by certain types of bone marrow-derived myeloid cells.

CGD causative mutations occur in approximately one in 200,000 births in the United States, and most children are diagnosed within the first three years of life. Approximately 60 percent of patients with CGD reach age 30 and Aspergillus infection is the leading cause of mortality.

The NOX2 protein complex has five domains encoded by five separate genes. Loss-of-function mutations in any of these genes can present as CGD. The most common form, which represents approximately 65 percent of cases, is caused by mutations in the CYBB gene encoding the $gp91^{phox}$ protein. We have identified hotspots in exons 7 and 9 that are amenable to Prime Editing. The second most common form, which represents approximately 25 percent of cases, is caused by biallelic loss-of-function mutations, in both copies of the *NCF1* gene encoding the $p47^{phox}$ protein. More than 78 percent of $p47^{phox}$ CGD patients have a specific, 2-nucleotide deletion, or ΔGT, in the *NCF1* gene. The *NCF1* gene location is complex, and also contains pseudogenes, or non-functioning copies of the *NCF1* gene. Preclinical studies have demonstrated that correcting just one copy of the ΔGT mutation restores protein expression and full NOX2 activity.

Limitations of Current Approaches

For individuals with an HLA-matched donor, an allogenic CD34+ hematopoietic stem cell transplant, or HSCT, may provide a possible cure, but the three-year event-free survival rate for patients that receive HSCT may be as low as 70 percent and patients often experience many frequent, debilitating complications, such as graft versus host disease. Many patients are not able to find a suitable donor for the hematopoietic stem cells and, without transplantation, 50 percent of patients will die by the fourth decade of life. Antibiotics also provide important supportive care.

Our Approach and Results: Direct correction of prevalent CGD mutations or hotspots

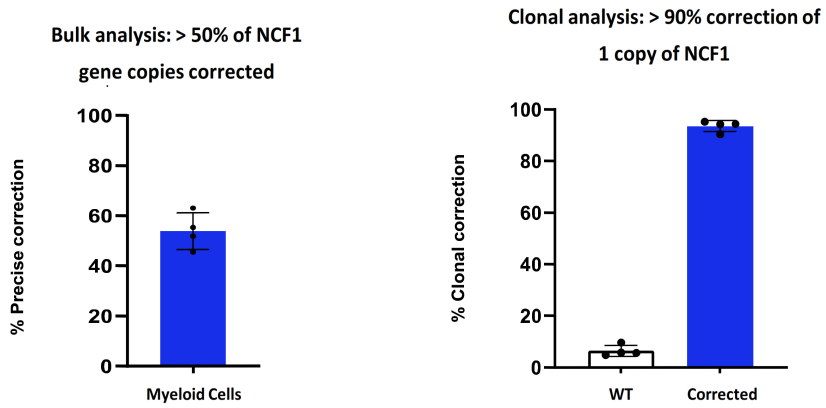
We are using Prime Editing in *in vitro* studies to precisely correct the ΔGT mutation in one copy of the *NCF1* gene to restore $p47^{phox}$ protein expression and NOX2 activity. Our approach is to mobilize a patient's CD34+ cells into the blood stream followed by apheresis, and separation of these cells by *ex vivo* enrichment. Prime Editing components will then be delivered to these CD34+ cells *ex vivo* via electroporation. These Prime Edited cells are cryopreserved, quality control tested, and the thawed cells are injected intravenously back to the patient for engraftment. A critical element of assessing this approach is the presence of long-term engraftment, which is discussed below under Sickle Cell Disease. Using the programmable features of our Prime Editing technology and ability to address hotspots, our plan is to expand our targets to include key mutations of the more common CYBB gene.

We have screened pegRNA and ngRNA to identify Prime Editing guides and guide pairs that have high activity and perform precise editing at the *NCF1* locus. Initial experiments have utilized healthy donor mobilized CD34+ hematopoietic stem cells, or HSCs, which are readily available, and we measure precise editing of ΔGT as a surrogate for editing in patient CD34+ HSCs. We have performed a series of optimizations to tailor activity for editing at this locus, and several different, high activity Prime Editor proteins remain under evaluation.

The Prime Editor complex is delivered to CD34+ HSCs using electroporation by an established method. The Prime Editor mRNA is generated by *in vitro* transcription, and the pegRNA and ngRNA are generated by solid phase RNA synthesis. The Prime Editor complex is delivered by simultaneously electroporating mRNA encoding the Prime Editor protein along with pegRNA and ngRNA. The mRNA is translated into the Prime Editor protein during a period of incubation, then the Prime Editor protein assembles with pegRNA or ngRNA, and the complex enters the nucleus with Prime Editing commencing at the target site in the genome.

We have identified a series of Prime Editor complexes that demonstrate approximately 55 percent precise correction at the NCF gene copies in the target cells, or human primary HSCs, as shown in the figure on the left side. Following cloning of myeloid-differentiated clones after 14 days, in this study, clonal analysis showed that nearly 90 percent of clones had received at least one precise corrective edit to ΔGT, as shown in the figure on the right side

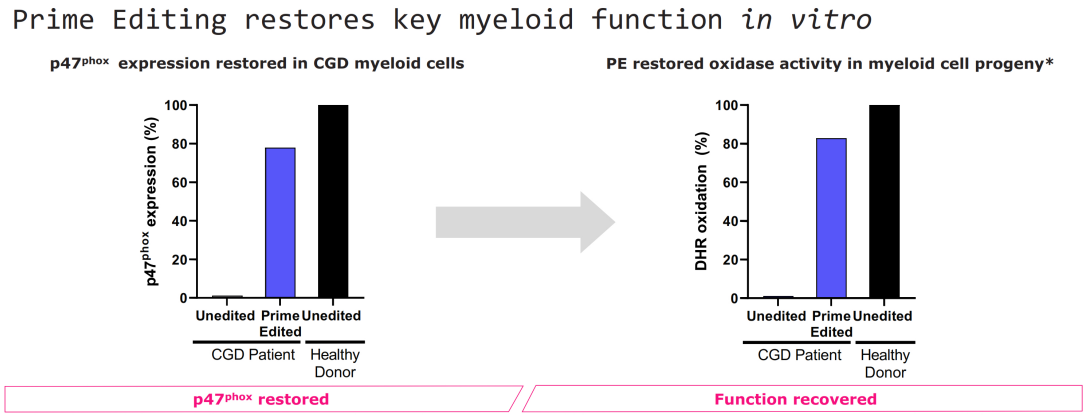
below. This greatly exceeds the approximately 15 percent precise editing target threshold that is predicted to provide a clinical benefit.



Note that each data point represents the result from a different, individual Prime Editor, with the average percent precise correction of cells shown in the bar graph.

In a second study, we have edited HSCs from patients with the ΔGT mutation, and again demonstrated approximately 80% correction of 1 or more copy of NCF1. The figure below (left panel) shows that when control (CGD patient, unedited) patient HSCs are differentiated into myeloid cells, they do not produce p47^{phox} protein, while cells from healthy donors show 100% of cells expressing p47phox, as expected (healthy donors, unedited). In contrast, following Prime Editing, approximately 80% of the patient cells demonstrated normal expression of the p47^{phox} protein (CGD patient, Prime Edited). These results demonstrate that precise correction by Prime Editing restores the missing protein.

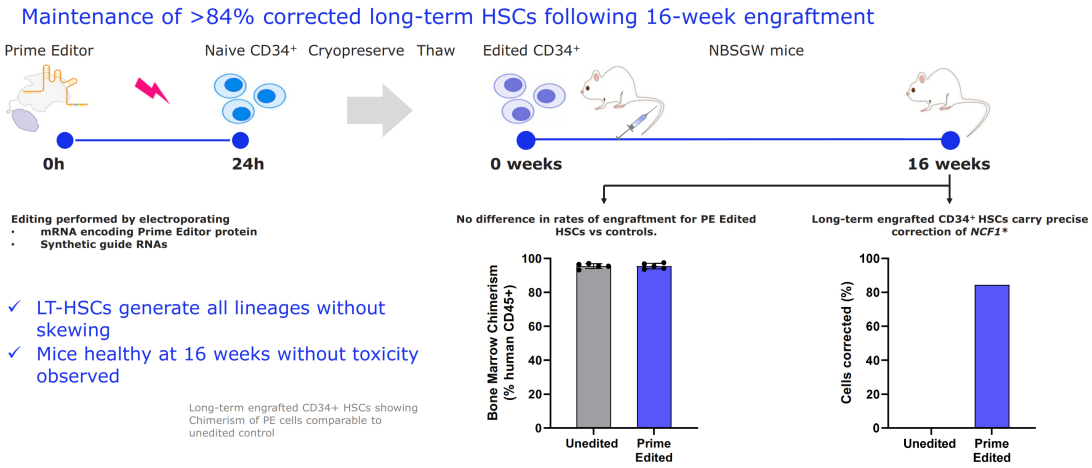
The same Prime Edited myeloid cells were tested for a normally functioning NOX2 protein complex by the ability of NOX2 to produce oxygen radicals (oxidase activity), the key functional activity that is missing in patients. As shown in the figure below, approximately 80% of the Prime Edited patient cells had fully restored normal NOX2 oxidase activity (right panel). This NOX2 assay measures directly the functional defect that causes the disease is used to diagnose patients with CGD, and we anticipate using this assay in the clinical trial for diagnostic as well as clinical efficacy evaluation. The results support that the genetic correction of the gene has the desired effect of restoring production of the missing protein and restoring the function of the missing protein complex.



The next step is to transition to evaluating engraftment of Prime Edited long-term HSCs, or LT-HSCs *in vivo*. We edit CD34 HSCs with Prime Editor, cryopreserve, or freeze, the cells, transfer, thaw cells and infuse. In these experiments we infuse into immunodeficient mice. LT-HSCs take up permanent residence in the bone marrow and produce blood lineages (e.g. red blood cells, white blood cells, platelets) if they engraft and remain healthy. HSCs Prime Edited with the Prime Editor to correct the NCF1 gene demonstrated long-term and high-level engraftment of the edited HSCs in bone marrow in mice.

The figure below outlines an experiment in rodents that demonstrates, we believe, the potential feasibility of a similar approach for CGD patients in clinical trials.

- In this experiment shown below, HSC cells are Prime Edited via *ex vivo* electroporation to correct the ΔGT mutation in NCF1 genes, and then cryopreserved.
- After thawing, the edited cells are introduced in mice, and allowed to engraft in the bone marrow.
- Mice are studied for 16 weeks. After 16 weeks, *only* LT-HSCs remain in the bone marrow, and produce blood cells.
- The proportion of precisely edited cells is evaluated at the beginning of the experiment, and after 16 weeks, looking for evidence that edited cells have long-term durability.
- Prime Edited HSCs showed similar level of engraftment to unedited healthy donor HSC cells (bottom panel left), showing the robustness of the engraftment.
- Prime Edited HSCs produced all blood lineages at 16 weeks, similarly to unedited healthy donor CD34 HSCs.
- At 16 weeks, 84% of the LT-HSC population were Prime Edited, similar to the level in the CD34 HSCs delivered to mice at 0 weeks, indicating LT-HSCs are efficiently Prime Edited, and that the Prime Edited LT-HSCs remain healthy.
- Finally the LT-HSCs at 16 weeks generated all blood lineages in the normal proportions, consistent with Prime Edited LT-HSCs retaining fully multipotency.
- Animals were healthy without any evidence of toxicity.



Next Steps

As shown in the figure, edited cells were shown to have long term duration with no decrease in the percent of precisely edited cells. This is a critical proof-of-concept that Prime Edited HSC cells successfully can engraft, and once engrafted, permanently populate the bone marrow. We believe these results greatly increase the probability of success of any HSC-based Prime Editing clinical indication.

Based on these results, we will select a development candidate from a selection of leading Prime Editors for this program and initiate IND-enabling studies. In addition, we will also evaluate alternative approaches to delivery, and have begun developing Prime Editors targeted to CYBB mutational hotspots or replace the whole CYBB gene using Prime Editing with recombinase approach known as PASSIGE.

Sickle Cell Disease (partnered with Beam)

We are partnering with Beam on the preclinical efforts related to the Prime-Edited Sickle Cell Disease, a program which they have licensed from us. Some of the results from these efforts provide important proof-of-concept for key aspects of our Prime Editing technology, which is the focus of the description below.

The Disease

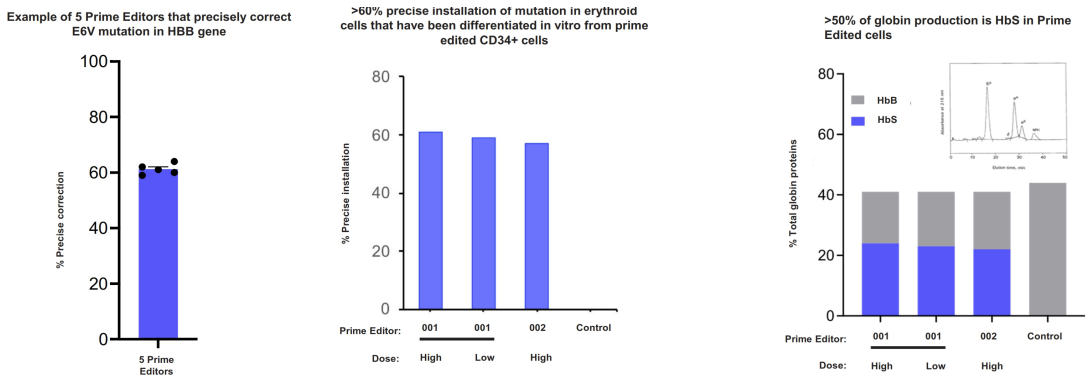
Sickle cell disease, or SCD, is a serious inherited autosomal recessive blood disorder caused by a single point mutation in the beta globin gene HBB at the sixth amino acid. The mutant protein is also known as hemoglobin S, or HbS. The mutation causes the beta globin protein to aggregate in long rigid biomolecules that bend red blood cells into a sickle shape when oxygen concentrations are low. The sickled red blood cells obstruct small blood vessels and have a shortened life span. This results in anemia, severe pain crises, tissue infarctions, local and systemic infections, stroke, and premature death. SCD is the most common inherited blood disorder in the United States affecting approximately 100,000 individuals. Current therapeutics are very limited.

The Prime Editing Approach and Results: Direct correction of the actual disease-causing point mutation in Sickle Cell Disease

We and our partner, Beam, which has conducted all studies described in this section, are using Prime Editing in *in vitro* studies to precisely correct the disease-causing HbS mutation back to the normal genomic sequence, resulting in wild type hemoglobin. The approach is similar to that described above for CGD. Published studies suggest that a 20 percent correction may be sufficient to cure the disease. Prime Editing is differentiated from other genetic approaches in that it can precisely correct the HbS mutation, restoring normal hemoglobin and directly addressing the underlying cause of SCD, without causing double-stranded breaks. Double-stranded breaks may result in detrimental insertions or deletions of sequence at this gene location. In addition, correction of the HBB gene at its natural site leads to permanent, physiological production of normal hemoglobin directly.

To achieve proof-of-concept and demonstrate precision editing and safety in primary HSCs, we have screened pegRNAs and ngRNAs to identify guides and guide pairs that have high activity and perform precise editing at the HBB locus. We have created an SCD model using readily available healthy donor mobilized CD34+ HSCs to install the HBB E6V mutation, thereby creating the SCD mutation and phenotype and acting as a surrogate for Prime Editing at that unique location in the gene. As noted in the below, these Prime Editors have demonstrated approximately 60 percent precise edits at the HBB locus (left), and when differentiated into red blood cells, under various conditions, they retain the approximately 60 percent editing (middle), and contain more than 50 percent of hemoglobin as HbS, showing we have created the phenotype of SCD.

Active Prime Editors That Correct E6V HBB Mutation Identified. Prime Editing to Install the E6V Mutation in Erythroid Cells Resulted in HbS Production

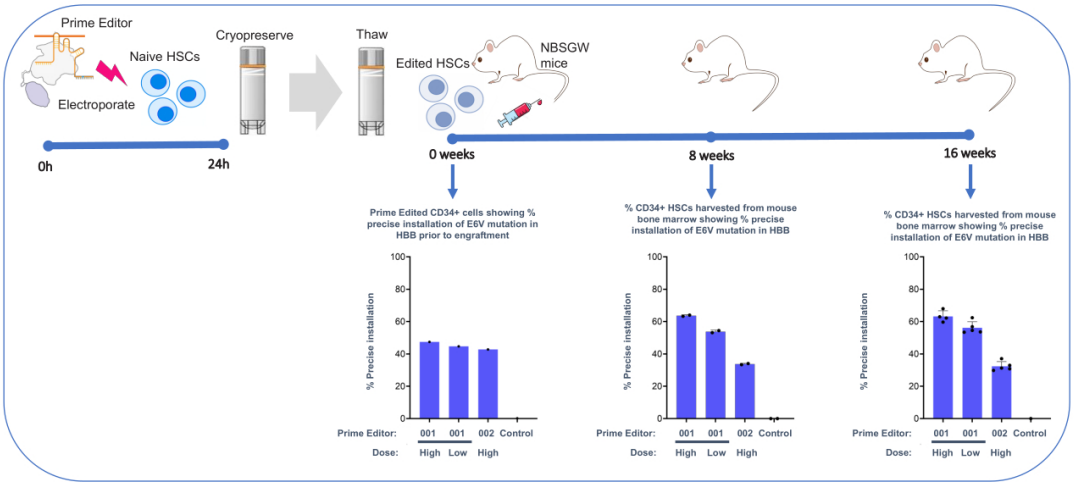


Note: 001 and 002 represent the two Prime Editors that were screened and install the E6V mutation.

Importantly, the Prime-Edited SCD program demonstrated long-term and high-level engraftment of the edited HSCs in bone marrow. The figure below outlines an experiment in rodents that represents the approach planned for humans:

- In this experiment, HSC cells are Prime Edited via *ex vivo* electroporation to introduce the disease-causing sickle mutation, and then cryopreserved.
- After thawing, the edited cells are introduced back in mice, and allowed to engraft in the bone marrow.
- The proportion of precisely edited cells is evaluated at the beginning of the experiment, after eight weeks, and then again after 16 weeks, looking for evidence that edited cells have long-term durability.

Ex Vivo Prime Editing of Mobilized Peripheral Blood Human CD34+ Cells to Install the E6V HBB Resulted in Long Term (16 Week) Engraftment of Precisely Edited Hematopoietic Stem Cells *In Vivo*



Note: In this experiment, each data point represents the results from a single mouse. 001 and 002 represent the two Prime Editors that were screened.

As shown in the figure, edited cells were shown to have long term duration with no decrease in the percent of precisely edited cells. This is a critical proof-of-concept that Prime Edited HSC cells can successfully engraft, and once engrafted, permanently populate the bone marrow. We believe these results greatly increase the probability of success of any HSC-based Prime Editing clinical indication, such as CGD described above.

Fanconi Anemia: Another indication using *ex vivo* electroporation of HSC cells

The Disease

Fanconi anemia, or FA, is a rare and life-threatening DNA repair disorder that arises from loss-of-function mutations in any of 23 genes whose protein products are involved in the Fanconi Anemia/Breast Cancer DNA repair pathway. The FA core complex comprises 10 individual proteins. Almost all cases of FA result from inactivation of FA genes on both chromosomes. The protein products of FA genes form the Fanconi complex, which responds to and repairs DNA breaks that occur naturally during cellular replication or in response to radiation or DNA crosslinking agents. Clinical presentation includes congenital anomalies, loss of many types of blood cells and progressive bone marrow failure, as well as a predisposition to cancers such as leukemia and head and neck cancers. The majority of FA patients show serious disease within the first decade of life.

Limitations of Current Approaches

Allogeneic hematopoietic stem cell transplant, or allo-HSCT, is currently considered the standard of care for FA and can result in hematologic correction of the disorder. However, HSCT is associated with both acute and long-term risks, including transplant-related mortality, graft versus host disease as well as increased risk of subsequent cancers. Additionally, the sensitivity of FA patient cells to DNA damage complicates allo-HSCT because of the reliance on alkylating agents and radiation for pre-transplant conditioning. Median survival for all FA patients, despite standard of care, is 24 years.

Our Approach and Results

Inherited pathogenic variants in FANCA, FANCC or FANCG genes, all members of the FA core complex, account for approximately 90 percent of FA cases. Among these, mutations in FANCA account for more than 60 percent of patients, FANCC for 15 percent of patients and FANCG for 10 percent of patients. We are initially focusing on two predominant FANCC mutations and two predominant FANCA mutations with our initial approach to design Prime Editors to correct each predominant FANCC or FANCA mutation independently. We are targeting 50 percent correction as heterozygotes have no disease, but evidence suggests moderately lower rates of correction have the potential to be therapeutic due to a survival advantage of corrected cells. Unlike most *ex vivo* HSC indications, there is strong clinical evidence that engraftment of HSC can occur without the need for strong bone marrow conditioning.

Our preliminary screening process has identified Prime Editors that achieve approximately 40 percent precise editing in preclinical studies.

Next Steps

Our initial Prime Editors have not yet been optimized for FA, nor have they been tested with enhancements such as ngRNAs. We intend to continue to optimize these Prime Editors to improve the efficiency of the edits. In addition, Prime Editors targeted at the second predominant mutation within the FANCC and the FANCA genes are currently under evaluation. Ultimately, we intend to develop Prime Editors to address all known mutations in FA across the three genes.

Expansion Opportunities in Hematology Pipeline

We plan to add additional hematology-related indications to our pipeline. In addition to establishing the indications above, the experience and methods developed with Prime Editing should enable our ability to advance other hematology programs. This highlights the versatility and modularity of our platform that potentially enables the rapid creation of new product candidates by merely replacing the pegRNA and ngRNA components.

OUR LIVER PROGRAMS

Wilson's Disease: Our lead Prime Editing liver program using LNP delivery technology

The Disease

Wilson's disease, or WD, is a devastating rare disease of the liver, with manifestations throughout the body, that is caused by copper accumulation. Most people are diagnosed with WD between ages five and 35 years and with reported prevalence rates ranging between 1/10000 and 1/30000, it is expected to affect upwards of 35,000 to 100,000 patients in the United States and Europe. It is also understood that there may be significant under-diagnosis of WD, which could increase the prevalence substantially.

Normally, excessive copper is excreted through the liver as bile. For patients with WD, copper is not eliminated correctly and accumulates to toxic levels. While the key site of pathology is the liver, and many patients present with liver disease, patients often show persistent neurological problems including involuntary movements, tremor, gait disturbance, and kidney, hematological or psychiatric problems.

WD is caused by mutations in both genomic copies of the ATP7B gene, which encodes a copper transporter that removes excess copper. Two predominant mutations have been described in WD:

(1) H1069Q, found in approximately 40 percent of all patients in the United States and 18 to 72 percent in Europe; and

(2) R778L, frequently found in Asian patients and those of Asian ancestry, reported in 46 percent of Chinese, 38 percent of Korean, and 25 percent of Japanese WD patients.

Both of these mutations lie adjacent to hotspots or areas with other pathogenic mutations, for which we are currently designing Prime Editors.

Genotyping of ATP7B is not routinely performed during diagnosis and is used to confirm the symptomatic diagnosis when necessary.

Limitations of Current Approaches

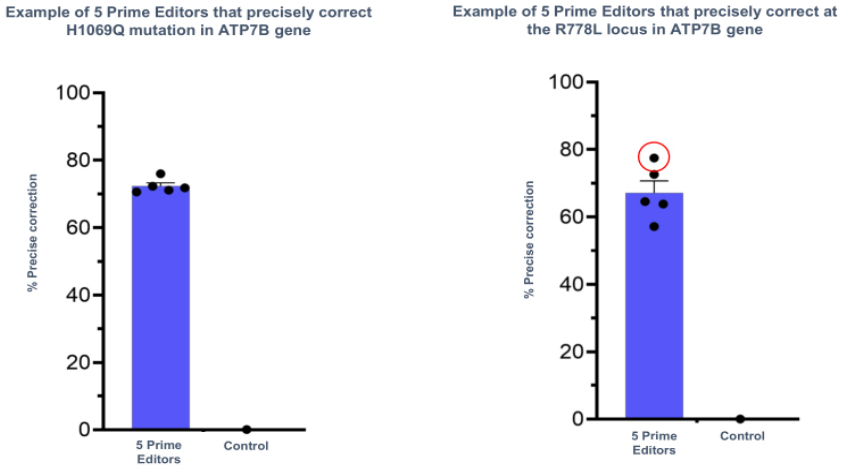
There are no therapies that target the underlying cause of WD. Current therapy includes removal of copper from the body using copper chelators d-penicillamine and Trientine and prevention of dietary absorption of copper in the intestine using zinc. In five to 10 percent of the patients that present with severe or sudden onset, or fulminant, WD, liver transplantation is the primary treatment option. The disease is fatal if undiagnosed and/or untreated. Most patients improve on chelator therapies; nevertheless, a lack of compliance is associated with rapid progression to death, and treatments can include significant and intolerable side effects. Patients are eligible for liver transplant if they have fulminant liver failure or severe progressive liver cirrhosis. Successful transplant has a good response with many patients but requires life-long immunosuppression, and five-year patient survival after transplant has been reported to be 65 percent.

Our Approach and Results: Direct correction of prevalent ATP7B mutations

Our initial approach to Wilson's disease is to correct the prevalent mutations ATP7B H1069Q and R778L in hepatocytes of the liver at their genomic location. A Prime Editor that corrects R778L will also correct R778W and R778G mutations, rarer mutations that are seen in the U.S. and Europe. We have performed pegRNA and ngRNA screens and identified guide combinations that correct the disease-causing point mutations. Correction of the gene in the liver should address all aspects of the disease by normalizing the process in which the body removes copper in the liver.

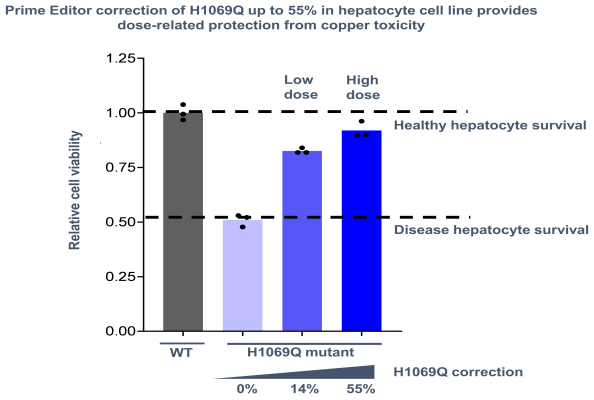
In a hepatocyte cell line with the human Wilson's disease mutation, we have identified Prime Editors that demonstrate precise correction of H1069Q ATP7B in 77 percent of cells as shown in the figure below on the left.

We have observed similar results in primary human hepatocytes with the R778L mutation, which is shown in the figure below on the right.



Note that each data point represents the result from a different, individual Prime Editor, with the average percent precise correction of cells shown in the bar graph and the red circle highlights the best performing Prime Editor from the 5 demonstrated.

This high level of precise editing in primary hepatocytes meets our threshold of 25-50 percent for predicted clinically relevant effects. To support this, we performed a copper toxicity challenge in liver cells that are normal and liver cells with a pathogenic H1069Q mutation with varying degrees of precise editing correction. As shown in the figure below, we observed a marked difference in cell survival in the presence of high levels of copper between healthy cells (WT; left bar) and liver cells with a pathogenic mutation that are unedited (0 percent; 2nd bar). The third and fourth bars show that with different degrees of precise correction, such as 14 percent and 55 percent, the ability of Prime Edited cells to survive copper toxicity returns towards normal levels the greater the level of correction.



Next Steps

We are currently conducting preclinical studies to confirm the ability to correct the human R778L sequence and the human H1069Q sequence in humanized mouse models, using LNP delivery technology that we have demonstrated to efficiently deliver Prime Editing to the liver *in vivo* as described in the *Translating Prime Editors*

into Product Candidates section. We are also currently optimizing LNP formulations for validation of Prime Editing experiments in non-human primates.

Glycogen Storage Disease 1b: Another Prime Edited liver indication using LNP delivery technology

The Disease

Glycogen Storage Disease 1b, or GSD1b, is a rare, serious progressive disease affecting approximately 1,500 patients and caused by impaired glycogen metabolism. This autosomal recessive disease is caused by mutations in the glucose-6-phosphate transporter, G6PT also known as SLC37A4. Deficiencies in this transporter result in hypoglycemia or low blood glucose levels which can be fatal if patients do not adhere to a strict regimen of slow-release glucose including overnight feeding. Most patients experience symptoms within the first six months of life presenting with hypoglycemia, lactic acidosis or with a large liver. They also can manifest seizures and low white blood cell levels, resulting in recurrent bacterial infections and oral and intestinal mucosa ulceration. Many patients have liver tumors, which can progress to liver carcinoma. Multiple other serious manifestations can occur.

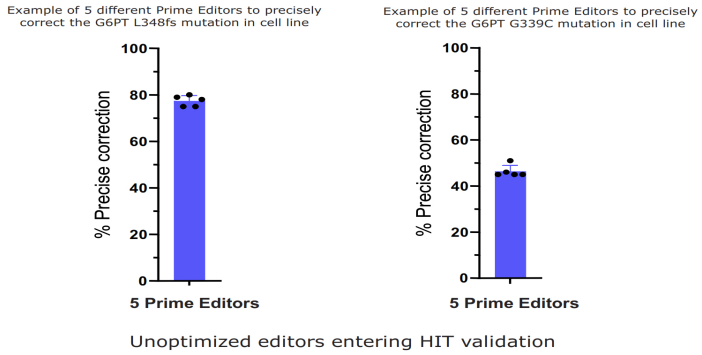
Limitations of Current Approaches

Current care focuses on nutritional therapy to avoid fasting hypoglycemia with small, frequent feedings high in complex carbohydrates, and limitation of fructose, sucrose, and lactose. There are no disease modifying therapies for patients with GSD1b. Others are developing genetic therapies for patients with a similar disease, GSD1a.

Our Approach and Results: Direct correction of prevalent mutations in SLC37A4

Our initial approach to treating patients with GSD1b is to apply Prime Editing via LNP delivery to hepatocytes in the liver to correct the two most prevalent mutations that cause the disease, which are located very close to each other in the gene. In Caucasian populations, these two predominant mutations together are found in 45 percent of patients. Based on prevalence data we estimate there are approximately 650 patients in the United States and 1,450 patients in Europe with GSD1b, and we estimate there are approximately 950 patients with these mutations. Heterozygote carriers have no disease and animal studies of GSD1b suggest that little as 11 percent of normal activity has the potential to restore normoglycemia.

As shown in the figure below, in our initial screening studies, we have identified Prime Editors that demonstrate editing of the first mutation with approximately 80 percent efficiency (left), before any optimization. Similarly, initial screening studies have identified Prime Editors that demonstrate editing of the second mutation with approximately 50 percent efficiency (right), also prior to optimization.



Next Steps

We are currently evaluating whether a single Prime Editor could correct both prevalent mutations (hotspot editing) since the mutations are only 26 base pairs separated in the gene. We are establishing patient-derived hepatocyte cultures to establish a genotype-phenotype biomarker response, and have established novel mouse models harboring the human gene. We will use LNP delivery technology that we have demonstrated to efficiently

deliver Prime Editing to the liver *in vivo* (see *Delivery* section). We also plan to capitalize on the learnings from the Wilson's disease program to formulate Prime Editors within LNPs for delivery to the liver. In addition, we are evaluating whether Prime Editing could address additional patients with GSD1b.

Expansion Opportunities in the Liver Pipeline

Now that we have established the ability to deliver Prime Editors via LNPs to hepatocytes, we could potentially advance other Prime Editing liver programs to the clinic quickly. This highlights the versatility and modularity of our platform, which potentially enables the rapid creation of new product candidates by merely changing Prime Editing guide RNAs. In addition, in each of our liver indications, our "march up the chromosome" personalized medicine approach allows expansion opportunities into the larger set of pathological mutations that exist in patients with these debilitating diseases.

OUR EYE PROGRAMS

Retinitis Pigmentosa Caused by Rhodopsin Mutations: Our lead eye indication using AAV delivery technology

The Disease

Retinitis pigmentosa, or RP, is a subset of related inherited retinal diseases, or IRDs, where disease progression is characterized by loss of night vision in childhood or early adulthood, followed by loss of peripheral vision in adulthood characterized by constricting visual field and eventual loss of central vision leading to blindness later in life. One of the most common IRDs is autosomal dominant RP, or adRP, caused by mutations in RHO which encodes the light sensitive Rhodopsin protein, or RhoP, expressed by rod photoreceptors of the retina. The disease is dominant, or manifests even with mutations to just one of the two gene copies in the genome, because mutant RhoP is toxic to rod photoreceptors, resulting in loss of function followed by rod death. Approximately six to seven thousand patients have adRP in the United States caused by RHO mutations. We are initially focused on one predominant mutation, P23H, which is highly prevalent in the United States and has been identified as causing disease in approximately 30 percent of all patients (approximately 2,000-2,500 patients). As we advance our portfolio, we believe that hotspots and other frequent mutations may also be suitable targets for Prime Editing.

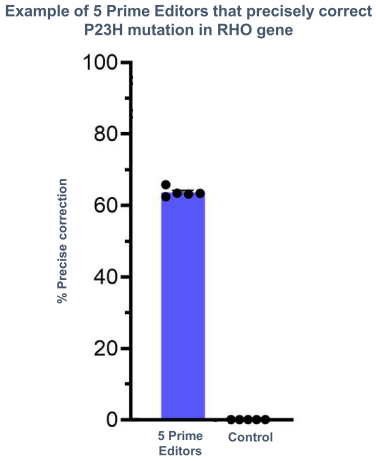
Limitations of Current Approaches

There are currently no disease modifying therapies for the P23H form of RHO, and patients are currently managed by supportive care.

Our Approach and Results: Directly correct prevalent mutations in the RHO gene in photoreceptors of the retina

Our initial approach to adRP is to correct the RHO P23H mutation in rod photoreceptors of the retina at their natural genomic location. We believe a Prime Editor that corrects P23H will also correct rarer, nearby P23L and P23A mutations. We have performed pegRNA and ngRNA screens and identified guide combinations that correct the disease-causing P23H point mutation. Natural history studies suggest that correction of only 25 percent of rod photoreceptors would have an important clinical impact, because when 25 percent or more of rods are preserved, there is full preservation of cone photoreceptors that are critical to central vision.

We have identified Prime Editors that demonstrate approximately 65 percent precise correction of the RHO P23H mutant locus.



Next Steps

To deliver our Prime Editors to the eye, we are initially leveraging the tropism of AAV capsids that efficiently transfect the retina to deliver our Prime Editor as a transgene along with our pegRNA (and ngRNA, if necessary) to rod photoreceptors. Given our lead Prime Editor is larger than AAV packaging capacity, we are using a split AAV system that delivers the Prime Editor with two AAV vectors. Once inside the rod photoreceptor, the two halves of the Prime Editor protein are recombined to create a functional Prime Editor protein.

We are currently conducting preclinical studies to confirm that Prime Editing of P23H will correct healthy donor human retinal explants. We also plan to evaluate our approach in non-human primate studies where the Prime Editors will be delivered by subretinal injections to mimic the anticipated route of administration in the clinic. In parallel, we are generating patient-stem cell derived human retinal organoids to evaluate Prime Editor potency in addressing the phenotypic changes in Rhodopsin localization and rod photoreceptor function. Finally, we have also generated new mouse models that have introduced the human RHO gene, replacing the mouse RHO gene.

While we are advancing the RHO P23H program, we are also identifying Prime Editors that can correct other prevalent mutations and hotspots in the RHO adRP gene as part of our “march up the chromosome” approach.

Retinitis Pigmentosa and Usher Syndrome: Our second eye indication using AAV delivery technology

The Disease

RP can also be caused by mutations in other genes different from RHO. Mutations in USH2A encoding the very large Usherin protein account for approximately 20 percent of autosomal recessive RP cases and can result in Usher syndrome. Approximately 14,300 patients in the United States have RP due to mutations in USH2A. While patients with various forms of RP present generally as described for RHO above, each type of RP has differences. In the case of Usher syndrome, patients present with ocular disease given normal usherin is involved in the regulation of protein transport in photoreceptors. Patients also present with severe hearing loss and potential vestibular defects, given normal usherin is involved in the maintenance of hair bundle formation during inner ear development in the inner ear.

In photoreceptors, usherin is involved in the regulation of protein transport, and in the inner ear, usherin is involved in the maintenance of hair bundle formation during inner ear development. The USH2A 2299delG mutation is the most prevalent mutation in the USH2A gene, accounting for approximately 16 to 44 percent of all USH2A mutant alleles. A second predominant mutation USH2A C759F accounts for approximately 15 percent of all

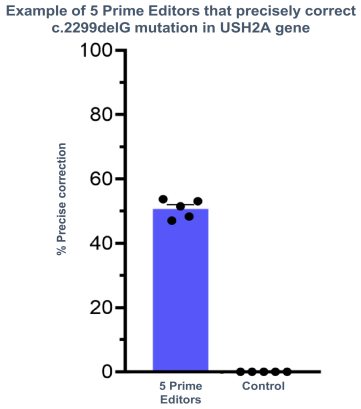
pathogenic USH2A alleles. These two mutations occur within a mutation hotspot. The precise number of rod and cone photoreceptors that need to be corrected is not known. Individuals with a single mutant copy of USH2A have no disease, therefore correcting 50 percent of all gene copies would restore patients to healthy gene function. Based on natural history studies from other genetic forms of RP and macular degeneration, correction of one gene copy in 10 percent and 25 percent of cone and rod photoreceptors respectively is sufficient to preserve vision. Therefore correcting mutations in 25 percent of rods and cones may be sufficient to halt disease.

Limitations of Current Approaches

There are currently no treatments available for USH2A RP, or Usher syndrome. However, hearing aids or cochlear impanation can be used to support hearing loss.

Our Approach and Results: Directly correct prevalent mutations in the USH2A gene in photoreceptors of the retina.

Our initial approach to USH2A RP is to correct the USH2A 2299delG mutation in rod and cone photoreceptors of the retina at their genomic location. We have performed pegRNA and ngRNA screens and identified guide combinations that correct the disease-causing nucleotide deletion. As shown in the figure below, through our initial screening approach, we have identified Prime Editors that demonstrate approximately 54 percent precise correction of the USH2A 2299delG mutation. Like with adRP, many of the selected pegRNAs are able to install a silent mutation (which does not affect the amino acid code) to disrupt the target site, which prevents further editing once successful corrective editing has occurred.



Next Steps

Our approach for USH2A is similar to our approach for adRP. While we are advancing the USH2A 2299delG project, as part of our “march up the chromosome” effort, we are identifying Prime Editors designed to correct other prevalent mutations and hotspots in the USH2A gene.

Expansion Opportunities in the Ophthalmic Pipeline

We plan to add additional eye-related indications to our pipeline. Once we have established delivery to the retina of a Prime Editor through AAV delivery, there are numerous other retinal diseases where our editing technologies could be applied. By merely changing the pegRNA and ngRNA sequences, we may be able to rapidly create new product candidates using the same AAV production and delivery approaches pioneered in these retinitis pigmentosa programs.

OUR EAR PROGRAMS

Our Approach to Genetic Hearing Loss

Genetic hearing loss consists of a group of diseases with high unmet need, despite the availability of current therapies. These diseases result in learning difficulties, behavioral problems and social isolation. We estimate that there are approximately 6,000 new cases each year in the United States alone, and approximately 470,000 individuals in the United States with genetic deafness. These diseases are all caused by mutations in proteins that are expressed by specialized cells of the inner ear or cochlea. Although mutations in many different genes have been identified, mutations in a small number of genes cause hearing loss in the majority of patients. Many of these mutated genes have prevalent or closely-clustered mutations. Similar to our other immediate indications, well-characterized delivery methods are established for delivery of genetic therapies to the inner ear and can be applied to Prime Editing. Methods to objectively measure changes in appreciation of sound may facilitate early detection of benefit for patients. Our initial approach is to correct prevalent mutations in genes causing progressive hearing loss, targeting delivery to the cells of the inner ear where those proteins are expressed. We are currently performing screens to identify Prime Editors that precisely correct prevalent mutations in several genes that cause hearing loss.

We have two initial hearing loss programs.

Usher's Syndrome Type III: Our First Hearing Loss Program

The Disease

Usher's syndrome type III, or USH3, is characterized by progressive post-lingual hearing loss, variable vestibular dysfunction, as well as adolescent-onset progressive vision loss due to retinitis pigmentosa. The hearing loss is progressive during childhood years, resulting in complete deafness in adolescents or early adults, learning difficulties, behavioral difficulties, and social isolation. Usher syndrome is found in 4 to 17 per 100,000 children.

USH3 is inherited recessively and caused by mutations in the Clarin 1 protein encoded by the CLRN1 gene. Clarin 1 is produced in inner and outer hair cells of the inner ear and, to a lesser extent, by the spiral ganglion cells, where it plays an important function in the maintenance of structures of the hair cells. In certain populations USH3 accounts for 40 to 50 percent of all Usher patients. N48K is a mutation commonly found in patients of Ashkenazi Jewish descent, whereas S50fs is commonly found in those descended from Northern Europeans and Y176X is commonly found in individuals of Finnish descent.

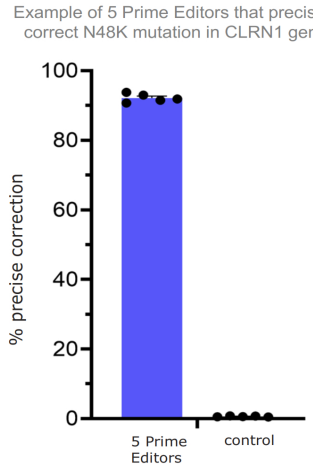
Limitations of Current Approaches

There are no disease modifying therapies for these patients. Hearing aids and speech therapy provide support. Cochlear implants have offered limited benefit to patients, likely because the disease usually manifests post-lingually.

Our Approach and Results: Correct prevalent mutations in the CLRN1 gene to restore normal Clarin 1 and hair cell function in the cochlea

Our initial approach to treating patients with USH3 is to apply Prime Editing via dual AAV delivery to hair cells in the organ of Corti in the cochlea or the inner ear to correct the most prevalent mutations that cause the disease, N48K and S50fs.

As shown in the figure below, following optimization from our initial screening studies, we have identified Prime Editors that demonstrate precise correction of the N48K mutation with more than 90% efficiency. We are currently exploring similar Prime Editors to correct the neighboring S50fs mutation.



Next Steps

To deliver our Prime Editors directly to the cochlea by local injection, we are initially leveraging the tropism of AAV capsids that efficiently transduce the supporting cells and hair cells to deliver our Prime Editor as a transgene along with our pegRNA. Similar to the retinal programs, we will initially use a dual AAV approach to deliver both the Prime Editor protein and pegRNA.

We are currently building preclinical assays using patient stem cells differentiated into hair cells to confirm that Prime Editing of N48K will correct Clarin 1 expression and hair cell function. In parallel we are developing assays to optimize delivery of Prime Editors to the cochlea.

Non-Syndromic Hearing Loss – GJB2: A Follow-On Hearing Loss Program

The Disease

Two thirds of genetic hearing loss is non-syndromic and is inherited recessively. The GJB2 gene, which encodes the connexin 26 protein, is expressed by supporting cells of the cochlea and contributes to the normal production of endolymph in the cochlea. GJB2 is the most commonly-mutated gene in non-syndromic hearing loss, found in 1:2,000 live births and accounting for approximately 1,875 newly diagnosed patients each year in the United States and similar number in Europe, with a very common mutation, c.35delG, found on average in 57% of these patients. Additional mutations are found in patients of Asian (c.235delC, V37I), Indian/European (W24X) and Ashkenazi Jewish descent (c.167delG). Since the widespread adoption of newborn and pre-school hearing screening for early diagnosis, many patients are diagnosed with abnormal but preserved hearing and show progressive disease. Because the disease can lead to profound hearing loss (complete deafness) in the first few years of life, patients suffer learning difficulties, speech difficulties, social isolation and behavioral problems.

Limitations of Current Approaches

There are no disease modifying therapies. Current therapies include hearing aids, cochlear implants and speech and language therapies. These approaches do not treat the cause of disease, with limited but important benefits. In particular, cochlear implants provide a partial restoration of sound but require extensive speech and language retraining with variable outcomes. Moreover, implants require permanent wearing of large external devices.

Our Approach: Correct prevalent mutations in the GJB2 gene to restore normal connexin 26 function in the cochlea and prevent hearing loss progression

Our initial screens are to find Prime Editors to precisely correct c.35delG. After identifying preliminary Prime Editors that show installation of the c.35delG mutation with good levels of efficiency, we are currently screening for Prime Editors to precisely correct this mutation.

Next Steps

We will leverage the work from our USH3 program to deliver Prime Editors to the cochlea with a focus on targeting support cells.

We are currently building preclinical assays using patient stem cells differentiated into inner ear cells to confirm that Prime Editing of c.35delG will correct GJB2 expression and connexin 26 function.

Expansion Opportunities in the Hearing Loss Pipeline

We plan to add additional hearing loss-related indications to our pipeline. Once we have established delivery to the cochlea of a Prime Editor through AAV delivery, we believe there are many other hearing loss diseases where our editing technologies could be applied. By merely changing the pegRNA and ngRNA sequences, we may be able to rapidly create new product candidates using the same AAV production and delivery approaches pioneered in these initial hearing loss indications.

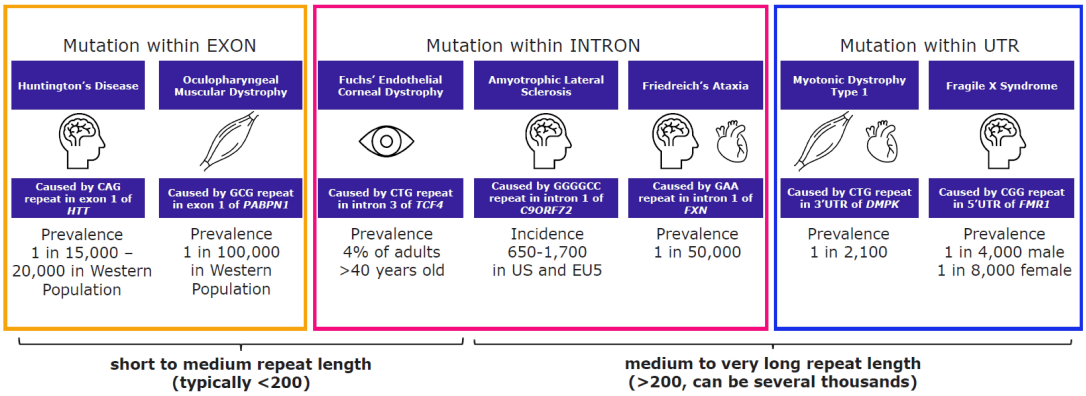
Differentiation Target Indications

OUR REPEAT EXPANSION DISEASE PROGRAMS

Our Approach to Repeat Expansion Diseases

Repeat Expansion Diseases, or REDs, are a collection of more than 50 progressive diseases, mainly affecting the CNS and musculoskeletal system. These diseases are all caused by mutations that are an expansion of repeat DNA sequences, often triplets of nucleotides, found in the normal genome. We believe these repeats can potentially be exponentially expanded from typically approximately five to 15 repeats in normal tissues to up to many thousands of repeats in diseased tissues. The repeats are found within parts of the coding region of genes, called exons; in non-coding regions of a gene between exons, called introns; and in non-coding regions of the gene, either at the beginning or end of a gene, that are not translated in RNA, called untranslated regions, or UTRs. In addition, sometimes REDs are described by the size of the expansion, ranging from short and medium repeats (often less than

200 extra repeats) to medium to long repeats (often more than 200 extra repeats to several thousand extra repeats), as described in the figure below.



The above figure exemplifies our initial approach to repeat expansion diseases, showing disease names, primary organs affected by disease, approximate estimates of prevalence or incidence, type of expansion mutation, gene where expansion mutation occurs, location and approximate length of expansion mutation within the gene.

In certain repeat expansion diseases, the repeats often cause a pathological gain-of-function, or a new deleterious impact, and are inherited dominantly. In other settings, the disease is inherited recessively. Prime Editing enables us to fix the underlying and fundamental causes of these diseases by precisely and completely removing the repeat expansion copies from the DNA, potentially replacing them with the normal, usually small number of healthy repeats, or possibly removing any repeats from the gene.

Our initial approach is to establish the utility and breadth of Prime Editing technology by precisely removing repeat sequences in the pathological target tissues. In settings where the repeats are in an exon, Prime Editing may be applied to remove the repeat and replace the repeat with the healthy coding sequence precisely. In other settings, such as repeats in introns, we have more flexibility to our approach.

To build the foundation for the potential correction of all 50 or more repeat expansion diseases, which would address a huge unmet medical need, we are evaluating many different types of these diseases to understand where Prime Editing can be efficient. For our initial studies, we broadly selected diseases of high unmet need with a path to deliver the Prime Editor to target tissues. We are studying repeats within exons, introns and the UTR regions, as well as diseases with small-to-medium and medium-to-very large numbers of expansion repeats. In each individual indication, beyond exploring the potential for Prime Editing to perform these precise corrections or completely remove the pathological repeats, we are also evaluating whether genetic correction will result in phenotypic or biochemical results consistent with a clinical improvement.

We have focused on REDs since inception of our initial preclinical program efforts. Independently published proof-of-concept of this idea was demonstrated in a repeat expansion disease called Fragile X syndrome, providing corroboration of the potential of this approach. More than 50 repeat expansion diseases are known to be pathogenic, and we believe our broad approach supports that most, if not all, of the diseases may be amenable to Prime Editing corrections of the target DNA, thereby potentially halting, preventing, or even curing such diseases.

In summary we have achieved predicted therapeutically relevant Prime Editing in almost all repeat expansion disease programs. The figure below shows the levels of editing achieved for each of the programs and current activity stage of these programs in our drug discovery work-flows.

Program	Precise Editing Achieved (%)	Hit identification	Hit Validation	Lead Optimization	IND-Enabling
FRDA [*FXN-(GAA)$_n$*]	>75%	✓	✓	—	—
DM1 [*DMPK-(CTG)$_n$*]	>90%	✓	✓	—	—
ALS [*C9ORF72-(G4C2)$_n$*]	>90%	✓	✓	—	—
Fragile X [*FMR1-(CGG)$_n$*]	>80%	✓	—	—	—
FECD [*TCF4-(CTG)$_n$*]	>80%	✓	—	—	—
HD [*HTT-(CAG)$_n$*]	>40%	✓	—	—	—
OPMD [*PABPN1-(GCG)$_n$*]	>25%	✓	—	—	—

FRDA = Friedreich's Ataxia; DM1 = Myotonic Dystrophy Type 1; ALS = Amyotrophic Lateral Sclerosis; FECD = Fuchs' Endothelial Dystrophy; OPMD = Oculopharyngeal muscular dystrophy; HD = Huntington's Disease; Editing % is estimated by internal dual-flap analysis

Friedreich's Ataxia: Our lead repeat expansion disease indication

The Disease

Friedreich's Ataxia, or FRDA, is a multisystem, autosomal recessive neurodegenerative disorder affecting the central and peripheral nervous system as well as the heart and other organs. FRDA significantly reduces survival for patients, with the mean age of death being 39 years. FRDA is characterized by progressive ataxia, or lack of muscle control or coordination of voluntary movements, with mean age at onset of approximately five to 16 years. A vast majority of patients progress to loss of unsupported sitting within two years and loss of ambulation on average 10 to 15 years from diagnosis. In addition, patients develop cardiomyopathy, or heart failure or dysfunction, which is the most common cause of premature death. In the United States, it is estimated that around 4,000 individuals are affected by FRDA, while there are estimated to be 15,000 to 94,000 patients globally.

FRDA is caused by GAA-repeat nucleotide sequence expansions in the 1st intron of the FXN gene encoding the frataxin protein, which plays important roles in mitochondria. The expanded repeats occur early in the gene, and cause disruptions in transcribing the FXN gene into RNA resulting in low levels of the frataxin protein, the pathogenesis of the clinical disease. Published literature shows that removal of expanded repeats can restore frataxin expression *in vitro*.

Limitations of Current Approaches

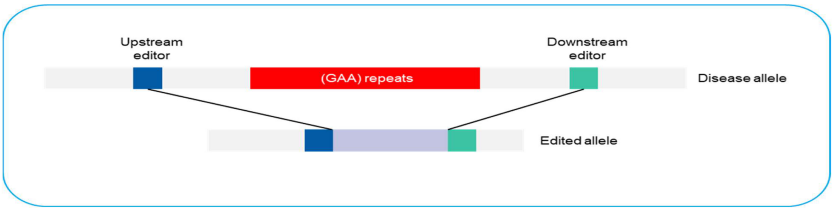
There is no approved disease-modifying therapy, and current clinical management guidelines mainly focus on symptom management.

Our Approach and Results: Directly and precisely remove the pathogenic GAA repeats in the FXN gene

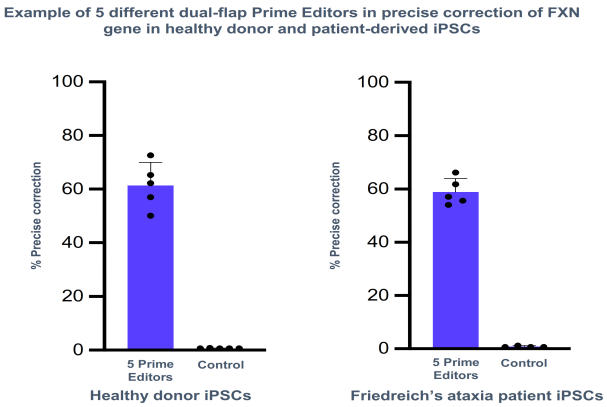
Our Prime Editing technology enables us to precisely remove the expanded repeat sequences that cause FRDA. Using the dual-flap technology with a Prime Editor targeted both upstream, or before the GAA pathological repeats, and downstream, or after the repeats, our goal is to precisely remove the repeat sequence from intron 1 of the FXN gene to restore normal FXN regulation and normal expression of frataxin; the approach is shown in the figure below. Removal of repeats from FXN in the myocardium is also highly desirable to prevent cardiomyopathy and reduce

mortality. The primary target tissues are for areas of the brain and spinal cord, but we plan to address cardiomyocytes as well.

Our Approach to Restore Normal FXN Regulation and Normal Expression of Frataxin



We have performed screens to identify the pegRNA pairs that achieve highly efficient and precise removal of the expanded repeats. We have demonstrated removal of pathological repeats from healthy donors, who have only a short length of repeats. We show up to 77 percent precise editing which results in the total removal of the pathogenic repeat region, without errors, as shown in the figure below on the left, where each dot represents an individual candidate Prime Editor. In addition, the figure on the right shows approximately 60 percent precise editing in FRDA patient-derived induced Pluripotent Stem Cells, or iPSCs, which contain larger numbers of pathological repeats, numbering from 420 to 541 nucleotide triplet repeats. In later, preliminary experiments, some of our Prime Editors have achieved greater than 80 percent precise editing out of the pathogenic repeat region. Remarkably, the total length of sequence precisely removed can be more than 7,000 nucleotides, or seven kilobase, using dual-flap Prime Editing.



Our initial experiments are encouraging. In our models in donor- and patient-derived iPSCs we measure the amount of frataxin expression in both FRDA patient cells, as well as cells derived from healthy donors. As expected, and as shown in first panel of the figure below, we show that patient cells have low levels of frataxin (control; left bar), and healthy donor cells (both control and edited; right bars) have high levels of frataxin. When we Prime Edit the FRDA patient cells in this model, as indicated by the arrow, each of five individual Prime Editors, in association with high levels of precise correction, restore levels of frataxin towards that seen in healthy donor cells. As each data point, or dot, represents a different Prime Editor, our best candidate from this experiment can restore frataxin levels to approximately 80 percent of normal levels, which exceeds the 30 percent-of-normal threshold predicted to provide a potential clinical benefit to patients.

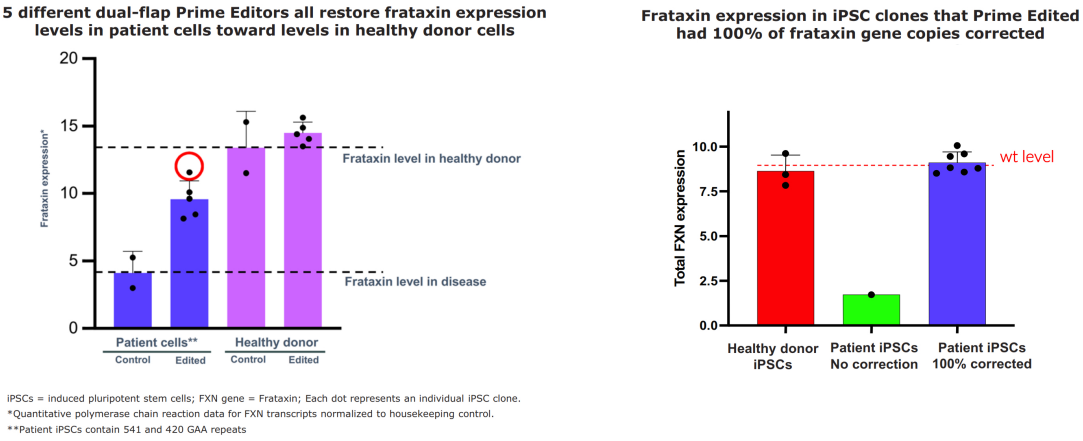
The objective of precisely removing expanded repeats from the FXN gene with Prime Editing is to restore normal expression of frataxin mRNA and protein. To test the effect of Prime Editors on frataxin expression, we edited patient cells with different Prime Editors and, as shown in the figure below, left panel. In addition, we have established a tight correlation between the efficiency of editing among different Prime Editors and the restoration of

frataxin levels with Prime Editors that demonstrated high editing activity showing restoration of frataxin to within 80-90% of normal levels, as shown in the left panel below.

The results below, right panel, demonstrate that when we isolated and cloned cells, so that the whole cell population had precise correction of the unwanted repeats, frataxin levels returned completely to normal without over expression.

Since we can correct the gene defect at the physiological site in the genome, an important element is to evaluate all different forms, or isoforms, of frataxin to determine if all potentially important mRNA messages from this gene are restored. We were able to demonstrate the key frataxin isoforms were restored in this experiment, providing confidence that we believe supports that this approach may potentially be able to provide a genetic cure by Prime Editing to patients with Friedreich's Ataxia.

Dual-Flap Prime Editors restores FXN expression to normal levels in primary patient cells



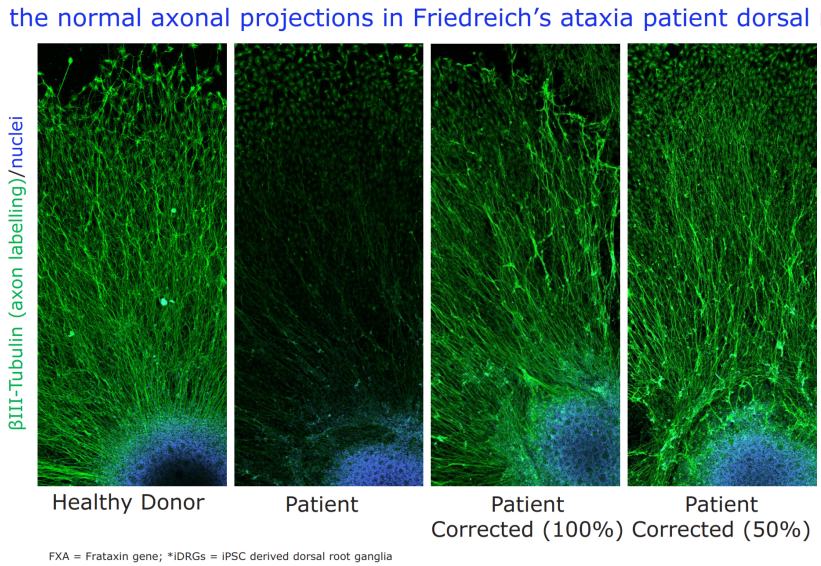
iPSCs = induced pluripotent stem cells; FXN gene = Frataxin; Each dot represents an individual iPSC clone.
*Quantitative polymerase chain reaction data for FXN transcripts normalized to housekeeping control.
**Patient iPSCs contain 541 and 420 GAA repeats

*Quantitative polymerase chain reaction data for FXN transcripts normalized to housekeeping control.
**Patient iPSCs contain 541 and 420 GAA repeats.

One of the hallmarks of Friedreich's Ataxia is the degeneration of the dorsal root ganglia, or DRGs. These structures of the central nervous system contain sensory neurons transmitting information to the brain cortex. To evaluate the effect of Prime Editing on the ability of DRG sensory neurons to grow and function, we have developed DRG organoids derived from patient stem cells, a model for growth of the sensory nervous system. These DRGs are multicellular 3D structures and model the growth of a patient DRG. In the figure below, unedited patient DRG organoids (Patient) produce many fewer axons, shown as green fibers, than healthy donor organoids (Healthy Donor).

We next edited patient DRG organoids with one of our FXN Prime Editors. When we correct 100% of the copies of FXN gene there is complete restoration of the sensory axon growth from the patient DRGs (Patient 100% Corrected). Even, when we correct 50% of the copies of the FXN gene there is also complete restoration of the

sensory axon growth from the DRGs. These results indicate that Prime Editors can restore normal function of patient sensory neurons.



Fluorescence microscopy images at low magnification of dorsal root ganglia, or DRG from healthy donor or patient, showing cell nuclei (blue) and axons (green). Patient DRG shows very few axons compared to healthy donors. Following Prime Editing to remove the expanded repeats and precisely correct the FXN gene, patient DRGs show normal axon growth.

Next Steps

The heart is a second organ affected by Friedreich's Ataxia. We have established preliminary methods to deliver Prime Editors to terminally differentiated patient cardiomyocytes and plan to test editing and recovery of cardiomyocyte function and frataxin expression in this cell system. Then, to ultimately deliver Prime Editors to heart and other tissues, we expect initially to rely on the tropism of AAV capsids, each optimized to deliver our Prime Editors to the central nervous system or heart. We have established an AAV delivery system for efficient delivery of Prime Editing to neurons and glial cells *in vivo*, as demonstrated in the *Translating Prime Editors into Product Candidates* section described above. We are now optimizing this system and planning to evaluate our Prime Editors in a disease model in mice which contain the human frataxin gene with pathological repeats. While AAV delivery is our primary route of delivery for early programs such as this, we are actively determining whether a non-viral delivery system could be used to efficiently deliver the Prime Editor to one or more of our key target organs.

Myotonic Dystrophy Type 1: Another repeat expansion disease indication

The Disease

Myotonic Dystrophy type I, or DM1, is a common autosomal dominant muscular dystrophy among people of European ancestry and is principally a muscle disease affecting skeletal and cardiac muscle with multisystem manifestations. Patients often initially present with muscle weakness. Recent newborn screening studies indicate that the true prevalence of DM1 is 1:2,100 (approximately 140,000 patients in the United States). Patients can be clinically divided into three groups: congenital DM1; childhood/juvenile DM1, and adult-onset DM1. Congenital DM1, where patients typically have more than 800 repeats, often occurs from asymptomatic parents and presents at birth with severe weakness, hyporeflexia, or lack of reflexes, and respiratory insufficiency, and has a 40 percent mortality, with cardiac conduction abnormalities accounting for approximately 70 percent of that mortality. Survivors have distal weakness, cognitive impairment, and neuropsychological disorders. Childhood/juvenile DM1 is more similar to adult disease presenting at ages of five to 15 years with developmental delays and speech and

learning difficulties. In adolescent patients, muscle weakness, myotonia, or the inability for muscles to relax, and GI symptoms are most prominent.

DM1 is caused by expanded CTG repeats in the 3' UTR of one copy of the DMPK gene. When transcribed into RNA, the expanded repeat nucleotides in the RNA, in the case of DM1, form toxic RNA *foci* in the nucleus, sequester critical nuclear splicing factors, thereby preventing the correct function of many genes that regulate cell function.

Limitations of Current Approaches

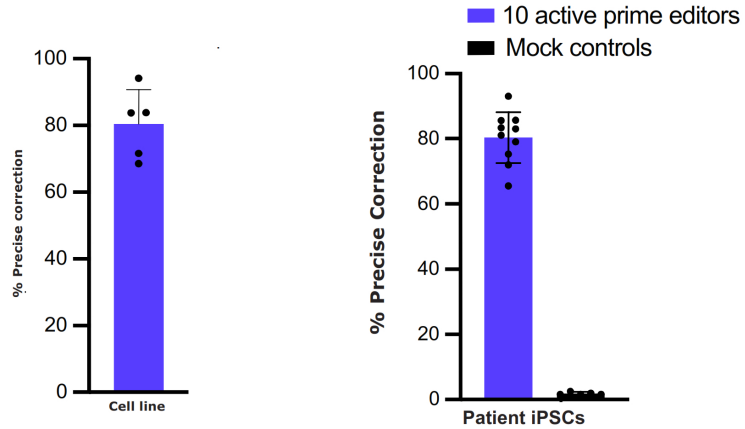
Current therapy includes supportive care to manage symptoms, though many experimental approaches are under consideration.

Our Approach and Results: Directly and precisely remove the pathological repeats in the DMPK gene

Our dual-flap Prime Editing technology enables the removal of the expanded repeat sequences that cause disease. Our goal in DM1 is to leverage our Prime Editing technology to precisely remove the repeat sequence from the UTR region of the DMPK gene, to restore DMPK regulation and expression of DMPK protein back to normal levels. The primary target tissues are cardiac and skeletal muscle, which we believe could have a transformative effect on patients; CNS is an important secondary target tissue.

We have performed screens to identify pegRNA pairs that achieve highly efficient and precise removal of the expanded repeats and have demonstrated precise removal of pathological repeats from the DMPK gene. In the example provided in the figure on the left below, we have established precise removal of the smaller number of repeats in healthy cell lines with more than 80 percent efficiency. In a second set of experiments as shown in the figure on the right, in patient derived iPSCs, which contain approximately 1,600 pathological repeats, we have demonstrated precise removal of repeats, with our best Prime Editors achieving more than 90 percent precise editing and removal of the pathological repeats. These data are also shown in the figure on the right, with each dot representing the data of a different individual Prime Editor.

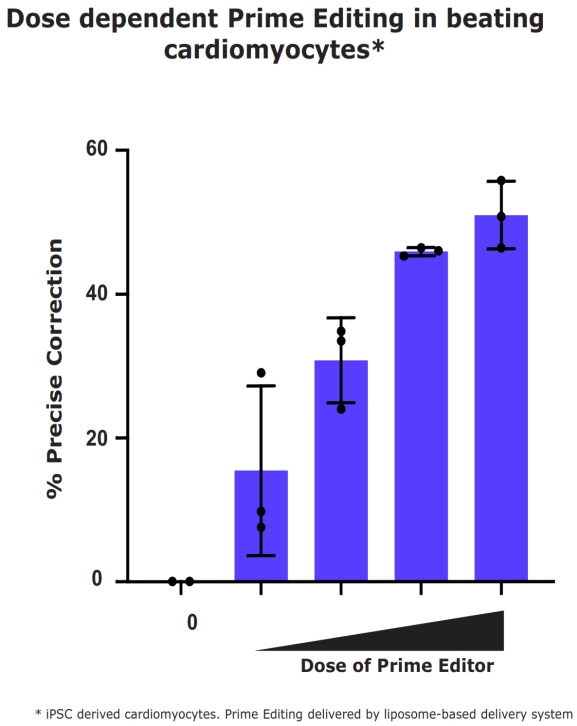
Example of 5 different dual-flap Prime Editors in precise correction of DMPK gene in cell line, and patient-derived iPSCs



* iPSCs = induced pluripotent stem cells; DMPK gene = myotonic dystrophy protein kinase
Patient iPSCs have >1600 repeats in the DMPK gene

DM1 is primarily a disease of muscle. A key target tissue is the cardiac muscle, or myocardium of the heart comprising cardiomyocytes, a terminally differentiated cell-type. We developed systems to generate terminally differentiated and functioning cardiomyocytes from patient cells that rhythmically contract and relax, or beat. This patient tissue can be used to test our ability to achieve high efficiency of Prime Editing in these cells and to test the

ability of Prime Editors to correct cardiomyocyte function. The figure below shows dose dependent Prime Editing in cardiomyocytes, demonstrating high efficiency can be achieved.

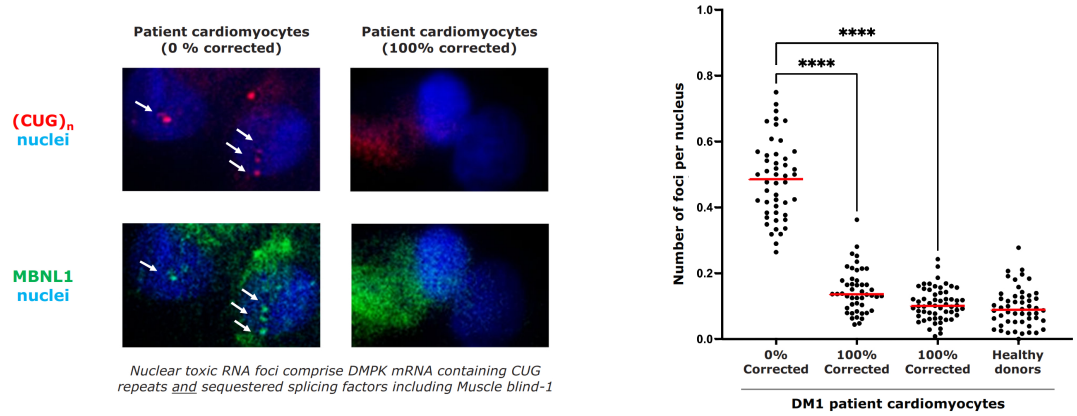


* iPSC derived cardiomyocytes. Prime Editing delivered by liposome-based delivery system

As mentioned above, a hallmark of the disease is toxic RNA *foci*, formed from the repeats, that sequester key splicing factors in the cells with this disease. For example, muscleblind-1, or MBLN1, is a known splicing factor that is deficient in these patient cells.

We have developed assays to identify these toxic RNA repeats. As shown in the left side of the figure below, toxic repeats of repetitive CUG sequence, or (CUG)n, can be identified in nuclei of patient cardiomyocytes (left column, top) but not seen in healthy donor cardiomyocytes (not shown). These toxic (CUG)n repeats sequester MBLN1, as expected (left column, bottom). We edited patient cardiomyocytes to remove the pathological repeats with one of our Prime Editors and evaluated the impact on the formation of toxic RNA repeats. As is also shown in the left side of the figure below, cardiomyocytes that have 100% of pathological DMPK gene corrected, RNA *foci* are no longer detectable (right column, top); nor is MBNL1 staining detectable (right column, bottom) with only background staining detectable. The right side shows a quantification and analysis of the results, with 100% correct patient cells showing levels of RNA *foci* similar to those in healthy donor cells.

Prime Edited patient cardiomyocytes show lack of RNA foci, similar to healthy donor controls



Cardiomyocytes (CMs) were differentiated from patientl DM1 pt iPSCs with ~1600 CTG repeats. RNA foci defined by co-localization of CUG and MBLN1 in focus in nucleus. *Muscle blind-1 (*MBLN1) is a key splicing factor sequestered by RNA foci; Right graph - Each dot represents the average of number of foci/nuclei in each image

Left hand panel shows fluorescence microscopy images at high magnification of patient cardiomyocyte nuclei. The cardiomyocytes are co-stained to show the RNA (CUG)n repeats (red) and MBLN1 splicing factor (green) in toxic RNA foci. Cardiomyocytes without Prime Editing shown in far left column images or after Prime Editing shown in right column images. The arrows indicate (CUG)n RNA repeats co-localized with sequestered MBLN1 in the nuclei (blue). After Prime Editing the toxic RNA foci are not visible. The graph, right panel shows results of RNA foci per nucleus from automated high content imaging analysis of the cardiomyocytes. Columns showing patient cardiomyocytes 100% corrected or 0% corrected (unedited) and healthy donors.

Next Steps

We are evaluating the ability of Prime Editing to correct the mis-splicing of a panel of genes that are known to be mis-spliced as a result of the toxic RNA *foci*. In parallel, we will perform similar experiments in patient-derived skeletal muscle cells. Then, to ultimately deliver Prime Editors to heart and skeletal muscle, we expect initially to rely on the tropism of AAV capsids, optimized to deliver our Prime Editors to the heart and skeletal muscle. We have established an AAV system for efficient delivery of Prime Editing in neurons and glial cells *in vivo*, as demonstrated in the *Translating Prime Editors into Product Candidates* section described above. We are now optimizing this system for the DM1 program and planning to evaluate our Prime Editors in a disease model in mice which contain the human DMPK gene with pathological repeats. While AAV delivery is our primary route of delivery for early programs such as this, we are actively determining whether a non-viral delivery system could be used to efficiently deliver the Prime Editor to muscle.

Amyotrophic Lateral Sclerosis: Another repeat expansion disease indication

The Disease

Amyotrophic lateral sclerosis, or ALS, is a rapidly progressive neurodegenerative disease characterized by progressive motor neuron loss. Mean age of onset for ALS is 58 to 60 years, with mean survival of three to four years after onset. The disease selectively results in dysfunction of upper and lower motor neurons, which later degenerate and die. Degeneration of these cells primarily causes impairment of motor function, and leads to muscle weakness, changes in speech, and difficulty breathing and swallowing, with death caused by paralysis and respiratory failure. Overall ALS prevalence in the United States and Europe is approximately 40,000 patients.

Approximately 11 percent of ALS cases have pathological expansions of the hexa repeat GGGGCC in intron 1 of the ALS C9orf72 gene. The same repeat expansions have been found in a study to cause as high as 53 percent of frontal temporal dementia and an overlap syndrome known as ALS/FTD; in addition, C9orf72 is thought to be causative in a proportion of Parkinson's disease, Huntington's disease, Corticobulbar syndrome and Olivopontocerebellar degeneration.

Eleven or fewer repeats are normal, but the disease is associated with expansion to hundreds or even thousands of repeats. Longer repeats are associated with earlier onset and more severe disease. The primary pathology is thought to be a toxic RNA gain-of-function by which the mRNA sequesters nuclear factors in a different but analogous way to the repeats in DM1.

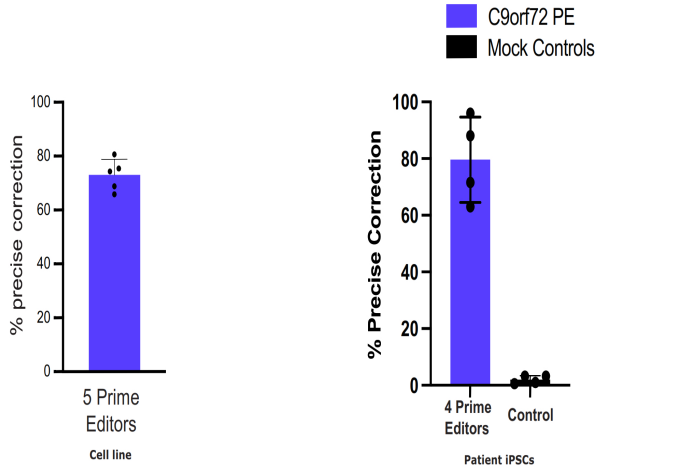
Limitations of Current Approaches

Currently resveratrol is the only approved therapy for ALS which modestly slows disease and may function as an anti-oxidant. All other therapies are supportive.

Our Approach and Results: Directly and precisely remove the pathological repeats in the C9orf72 gene

Our initial approach is the correction of the C9orf72 mutation by removing the GGGGCC repeat expansion tract using dual-flap Prime Editing, thereby restoring normal C9orf72 regulation and expression. We have performed screens to identify pegRNAs pairs that achieve highly efficient and precise removal of the repeats in the 1st intron of C9orf72. As shown in the example provided in the figure below, left panel, we have established precise removal of repeats in healthy cell lines with more than 80 percent efficiency. The panel on the right shows that Prime Editors are highly efficient in removing repeats from patient iPSCs with more than 160 pathological repeats of GGGGCC sequence.

Example of 5 different dual-flap Prime that precisely remove the GGGGCC repeats in intron 1 of the C9orf72 gene in healthy cell line (left), and patient-derived iPSCs (right)



Each dot represents a separate Prime Editor . Patient iPSCs have 163 G4C2 repeats in C9ORF72 (normal <25 repeats)

Next Steps

We have developed ALS patient-derived motor neuron cultures and are building assays to establish the impact of Prime Editing on patient-derived motor neuron function. Our approach to delivery is similar to that of other repeat expansion diseases, such as FRDA described above. Similarly, we will assess editing efficiency in mouse models, eventually progressing to non-human primate studies.

Fuch's Endothelial Corneal Dystrophy: Another repeat expansion disease indication

The Disease

Fuch's Endothelial Corneal Dystrophy, or FECD, is a common disease of the cornea of the eye leading to progressive corneal opacification and blindness. FECD patients present with blurred vision, visual acuity loss, bright light sensitivity and presence of extracellular matrix excrescences called guttae, which can cause pain. The disease

starts with degeneration of the corneal endothelial cells which supply nutrients to the inner layer of the cornea and maintain transparency.

FECD is estimated to affect over 600,000 patients in the United States, usually presenting in patients over 40 years of age. We estimate that between 14,000 and 14,500 cases annually progress to visual deterioration in the United States sufficient to require corneal transplantation.

Approximately 79 percent of FECD patients have a mutation in the TCF4 gene, with expanded nucleotide triplet repeats; the repeats result in aggregates that sequester cell splicing factors, such as in patients with Myotonic Dystrophy.

Limitations of Current Approaches

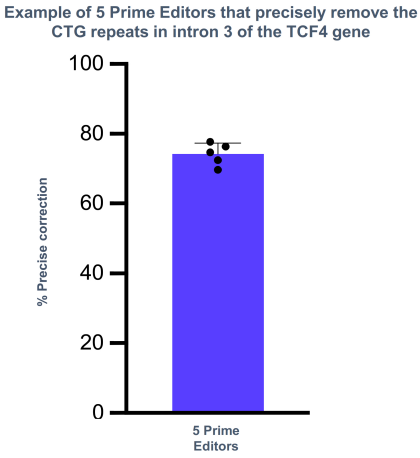
Early treatment is localized, but as the disease progresses, surgical management becomes necessary.

Current approaches are surgical and require corneal grafts, which are sourced from cadavers and are in scarce supply. Surgery is also complicated by graft loss; there is only approximately 64 percent graft survival at 10 years following surgery. The procedure requires general anesthesia, may require immunosuppression, long periods off work, may be complicated by infections, glaucoma, cataract, astigmatism, and it can still take up to one year following the procedure for full sight restoration.

Our Approach and Results: Correct the TCF4 mutation in corneal endothelial cells

Our initial approach is to deliver Prime Editors to the anterior chamber of the eye to correct the TCF4 mutation in corneal endothelial cells by looping out the pathological repeats. The advantages include avoiding surgery and the lack of requirement for cadaveric tissue, among others, as well as the potential to achieve a permanent correction.

We have performed screens to identify dual-flap Prime Editors that can achieve highly efficient and precise removal of the repeats in the TCF4 gene, achieving precise removal of repeats from healthy cell lines with more than 70 percent efficiency, as shown in the figure below.



Next Steps

Our next steps include validating the activity of these Prime Editors in patient-derived endothelial cells. Our goal is to deliver Prime Editors to the corneal endothelial cells before degeneration of the capillary network. Our initial approach will be to encapsulate Prime Editors, to be delivered as either ribonucleoprotein or RNA, and deliver to the endothelium by anterior chamber microinjection.

Oculopharyngeal Muscular Dystrophy: Another Repeat Expansion Disease Indication

The Disease

Oculopharyngeal muscular dystrophy, or OPMD, is a rare autosomal dominant disease, characterized by progressive weakness in the muscles around the eyelids as well as in the tongue and pharynx. This weakness manifests as difficulties with vision, swallowing and speaking. As the disease progresses it affects the neck, shoulders and the limbs, resulting in difficulty in walking. The disease is often first diagnosed in adults in their 40's with a small minority ultimately requiring a wheelchair. Major manifestations include eyelid drooping, dysphagia (difficulty swallowing) and facial muscle weakness. Dysphagia can result in malnutrition, aspiration and pneumonia.

OPMD is often identified in individuals of French Canadian descent, Ashkenazi Jewish, and Latino populations from central and northern America where prevalence may be high (e.g. in French Canadian populations it is 1 in 1,000). Overall prevalence estimates in Europe are approximately 1 in 100,000.

OPMD is caused by expansion of a GCG repeat sequence in the 1st exon of the PABPN1 gene which encodes the poly-A binding nuclear protein-1. The GCG repeat encodes a short track of alanine residues with 7 CGC repeats. Short expansions of 11 to 18 repeats are sufficient to cause disease. OPMD affects all voluntary muscles but appears to spare smooth and cardiac muscle. The disease is characterized histologically by intranuclear inclusions in muscle comprising aggregated PABPN1 protein. Aggregation of the mutant PABPN1 protein is thought to be an important part of the pathological mechanism, due to sequestration of normal PABPN1 or a toxic gain-of-function to the formation of poly-Alanine protein.

Limitations of Current Approaches

Current therapies are supportive and may involve surgical procedures to the eyelids and esophagus including local botulinum toxin injections. There are currently no disease modifying agents.

Our Approach: Precisely remove the repeats from the mutant PABPN1 gene and replace with healthy sequence to restore normal PABPN1 function in the eyelid and pharyngeal muscles.

Our initial approach is the correction of the *PABPN1* mutation by removing the GCG repeat expansion tract using Prime Editing and replacing with a sequence encoding 7 alanine amino acids, thereby restoring normal function to the PABPN1 gene. This is an early-stage program, where we are performing initial screens and identifying Prime Editors that achieve efficient and precise removal of the repeats while simultaneously recoding the normal alanine repeat.

Next Steps

We plan to perform additional screens and to optimize currently identified Prime Editors to increase efficiency, then validate Prime Editors in patient-derived cells and demonstrate correction of the PABMP1 localization protein function. We are currently evaluating whether a local therapeutic approach to inject muscles of the eyelid, pharynx and tongue using a LNP encapsulating Prime Editor cargo of an mRNA and pegRNAs would provide a strong therapeutic benefit to patients.

Fragile X Syndrome: Another Repeat Expansion Disease Indication

The Disease

Fragile X syndrome, or FXS, is an X-linked dominant rare disease, which is the most common monogenic cause of childhood intellectual disability and autism. Patients have cognitive, behavioral, and sensory deficits, and may have cardiac and skeletal manifestations. FXS is found globally, and is estimated to affect 40,000 to 60,000 in the United States, with a similar number in Europe.

FXS is caused by expansion of a CGG repeat tract in the 5' untranslated region of the FMR1 gene, leading to aberrant gene silencing and loss of the Fragile X mental retardation protein (FMRP), a protein important for brain

development. Loss of FMRP leads to abnormal protein synthesis from many genes involved in synaptic function leading to abnormal synaptic signaling and abnormal morphology of neurons.

CGG is repeated more than 200 times in FXS patients, whereas 5-40 repeats regularly occur in healthy people. More than 200 repeats usually leads to aberrant hypermethylation of both the promoter region and the expanded repeat itself, and this results in transcriptional silencing of FMR1. Some FXS patients with a full mutation but unmethylated FMR1 gene may only have anxiety and/or behavioral issues without intellectual disability. Individuals carrying a premutation (between 55 to 200 repeats) are associated with increased risk for Fragile X associated tremor/ataxia syndrome which has later onset.

Limitations of Current Approaches

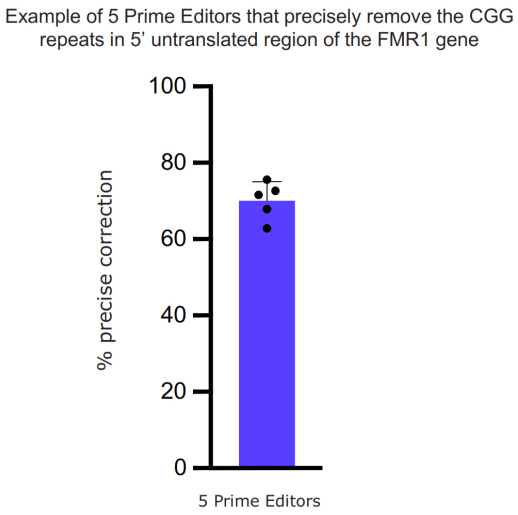
Current approaches are aimed at reducing symptoms. Several therapies are in development including small molecules targeting symptoms and gene therapies, but the level of expression is FMR1 protein is tightly regulated and over-expression can be toxic. Therefore there a few if any therapies in development to restore gene function.

Our Approach and Results: Correct the FMR1 mutation in neurons

Our initial approach is to deliver Prime Editors to neurons of the CNS to correct the mutation in the FMR1 gene, restoring normal expression of the FMRP protein and synaptic function. The Prime Editor will be designed to loop out the pathological repeats in the FMR1 gene. This approach aims to correct the underlying cause of disease and has the potential to achieve a permanent correction. We are focusing on particular regions to deliver Editors including caudate nucleus, hippocampus and various areas of the cortex. Guided by human genetics, we believe restoration of FMRP to 15 to 20 percent of normal FMRP may be sufficient to restore normal function to patients.

We have performed screens to identify dual-flap Prime Editors that can achieve highly efficient and precise removal of repeats in the FMR1 gene, achieving precise removal of repeats from healthy cell lines with more than 80 percent efficiency, as shown in the figure below. In addition, we have demonstrated Prime Editors can remove pathological repeats from patient cells containing more than 450 CGG repeats with high efficiency.

More importantly, early experiments have shown that precise removal of pathological repeats from patient cells restores the expression of the FMR1 mRNA. Previous approaches to restore FMR1 expression have been elusive; therefore we believe that these important new results provide impetus for Prime Medicine to pursue Prime Editing approaches for patients with Fragile-X syndrome.



Next Steps

We are validating the activity of these Prime Editors in patient-derived neurons to demonstrate restoration of normal FMRP protein expression and normal synaptic function. Our goal is to deliver Prime Editors to the cortical and deep brain structures. Similar to our delivery approach for Friedreich's ataxia, we will initially evaluate a dual AAV system to deliver the Prime Editor, but we are actively evaluating non-viral delivery approaches as an alternative.

Huntington's Disease: Another Repeat Expansion Disease Indication

The Disease

Huntington's disease, or HD, is an autosomal dominant progressive neurodegenerative disease affecting teenagers through middle aged adults. Most individuals are diagnosed by age 45, with approximately 15 percent of patients diagnosed as teenagers. Prevalence estimates are 1 in 10,000, suggesting between 20,000 to 40,000 individuals in the United States have the disease. It is characterized by progressive loss of motor and cognitive function often with involuntary limb movements and fine motor impairments which progress steadily. Natural history studies indicate substantial preservation of brain parenchyma (functional tissue) at the time of diagnosis, and in those with prodromal disease suggest cellular dysfunction precedes loss of neurons. The first tissues to degenerate in the CNS are the striatum, followed by the cortex. More than 95 percent of neurons in the striatum are medium spiny neurons which control muscle movement of limbs, body, eyes, as well as reward reinforcement and aversion responses. These specialized neurons are the first to degenerate. Typical progression to end-stage disease occurs over 10 years.

HD is caused by an expansion of a CAG repeat sequence in the 1st exon of the HTT gene which encodes the huntingtin protein. The repeat encodes a run of glutamate amino acids. Whereas 5 to 35 repeats are found in healthy individuals, having more than 40 repeats is considered pathological, with repeats often expanding well beyond 120 and with as many as 700 repeats observed in individual disease-affected cells. Many distinct toxic or pathological consequences of the expanded repeat sequence occurring in the HTT mRNA or huntingtin protein have been documented. These include toxic protein fragments and protein aggregation, transcriptional dysregulation, disrupted protein homeostasis, mitochondrial dysfunction, altered synaptic plasticity and defects in axonal transport. These findings suggest mutant huntingtin has widespread pathological effects on neurons.

Limitations of Current Approaches

There are supportive measures and therapies to modify symptoms, but there are currently no disease modifying agents.

Our Approach: Precisely remove the repeats from the mutant HTT gene and replace with healthy sequence to restore normal huntingtin function in the CNS

Our initial approach is the correction of the HTT mutation by removing the CAG repeat expansion tract using dual-flap Prime Editing or single long flap Prime Editing, and replacing with a sequence encoding 5 glutamate amino acids, thereby restoring normal function to the HTT gene. We are evaluating the best method to deliver Prime Editing to deep brain structures including the striatum (caudate nucleus, putamen, nucleus accumbens), as well as the hippocampus, thalamus and cerebral cortex. This is an early-stage program, where we have performed initial screens and identified Prime Editors that achieve efficient and precise removal of the repeats in the first exonic sequence while simultaneously recoding the normal 5 glutamate repeat or 10 glutamate repeats with some Prime Editors achieving up to 40% precise correction. We are currently performing optimizations to the Prime Editors to increase efficiency above 50%.

Next Steps

Similar to our other programs, we will evaluate promising Prime Editors in patient cells and differentiate patient-derived stem cells into medium spiny neurons in order to evaluate the impact of correction of HTT on

normal huntingtin protein function. Such assays include the restoration of normal huntingtin protein, as well as detection and quantification of inclusion bodies.

Expansion Opportunities in Repeat Expansion Diseases

In five of our repeat expansion diseases, including the four described in detail above, we have identified in our preliminary experiments at least one candidate Prime Editor that can achieve greater than 75 percent precise editing at each gene locus.

In particular for repeat expansion diseases, our approach has been to pick important surrogate examples, so that progress in the pipeline would considerably increase the probability of success for others of the approximately 50 repeat expansion diseases. We plan to use our knowledge from existing programs to expand our pipeline of preclinical candidates, based on rapid progress in looping out pathological repeats.

OUR OTHER INITIAL DIFFERENTIATION TARGETS

Duchenne Muscular Dystrophy: "Differentiation" Disease Indication

The Disease

Duchenne muscular dystrophy, or DMD, is an X-linked recessive disease affecting boys that is characterized by early onset progressive muscle weakness affecting limbs. It is frequently diagnosed between 2 to 3 years of age, and progresses to most patients being wheelchair bound by age 10. In teenage years patients develop progressive cardiomyopathy and respiratory weakness, and patients die in their early 20's from related complications. It is estimated to affect 1 in 3,500 live births with diagnosed prevalent cases in the United States of 16,000 to 17,000.

The disease is caused by loss-of-function mutations in the *DMD* gene, which is one of the largest genes in humans. The *DMD* gene encodes the dystrophin protein which is a critical protein component in the membrane of muscle fibers. Dystrophin stabilizes the membrane of muscle fibers and connects the actin-myosin muscle machinery to the cell membrane. In the absence of dystrophin, myofibers are susceptible to use injury. Use injury causes damage and inflammation of the myofibers resulting in myofiber degeneration, inflammation, fibrosis and fatty replacement.

Many of the mutations causing DMD are large deletions in the *DMD* gene resulting in out-of-frame gene sequence, complete loss-of-function, and the absence of any dystrophin protein. A smaller number of mutations are large duplications, and a small number of mutations are substitutions or small insertions/deletions.

A milder form of DMD, called Becker muscular dystrophy is caused by in-frame mutations in the *DMD* gene which produce shortened forms of the dystrophin protein. The Becker disease ranges from a milder form of DMD with teenage or adult onset, through to asymptomatic individuals with a normal lifespan. Asymptomatic individuals often have large deletions in the central region of the dystrophin protein, indicating that production of a truncated protein is compatible with normal or near normal muscle function. Because muscle is a syncytium (a single muscle fiber may be several feet in length containing several hundred nuclei), correction of the gene defect in a limited number of nuclei may be sufficient to completely restore protein expression in the muscle fiber. Studies of DMD in dogs suggest gene correction in as few as 11 percent of nuclei restores dystrophin to within 90 percent of normal levels.

Limitations of Current Approaches

In addition to supportive care, patients benefit from steroid therapy which reduces inflammation and has a modest impact slowing progression of disease. An oligonucleotide delivered by regular IV infusions, which promotes exon skipping of the 51st exon during mRNA splicing and can result in reframing of the DMD gene to result in a functional DMD protein, has offered minimal to modest benefits to some patients. Gene therapies in development that are delivering an engineered "microdystrophin" protein to patients have demonstrated effective protein delivery to muscle, but to date have resulted in limited or no functional benefit.

Our Approach: Precisely reframe the DMD gene to restore functional dystrophin protein in muscle

Prime Editing can precisely introduce or remove nucleotides from the DMD gene at pre-specified positions to reframe the gene so that a shortened but highly functioning protein is produced instead of no protein. Guided by human biology of patients with Becker muscular dystrophy, we have initially designed Prime Editors to reframe the DMD gene in positions such that many individuals with different mutations, particularly large deletions in the central region of the DMD gene, will achieve functional dystrophin protein restoration from a single Prime Editor. This is an early program, where we are performing screening to identify Prime Editors that demonstrate efficient and precise nucleotide insertion or deletion to reframe the gene. Based on known DMD mutations, a small number of different Prime Editors could reframe the DMD gene and restore functional protein for more than half of the DMD patients.

Next Steps

Following optimization of the Prime Editors we will use patient-derived cardiomyocytes to evaluate the efficacy of selected Editors to restore dystrophin protein and function. Using similar delivery methods to those we are establishing for delivery of Prime Editors to skeletal and cardiac muscle for Myotonic Dystrophy type I, such as a dual AAV delivery approach, we will deliver lead Prime Editors to a humanized animal model and establish their pharmacokinetic and pharmacodynamic properties.

Cystic Fibrosis: “Differentiation” Disease Indication

The Disease

Cystic fibrosis, or CF, is a progressive lung disease characterized by production of thick mucus lung secretions which lead to blockage of airways, inflammation, lung infection, progressing ultimately to lung failure. It also affects the pancreas gland and biliary system of the liver in a similar way, leading to exocrine pancreatic failure and mild to moderate cholestatic liver disease in some patients. Most patients are diagnosed before 2 years of age through newborn screening or because of symptoms of lung disease, combined by salty skin which can be confirmed using a sweat test. Through supportive care and antibiotic therapies patient median survival has increased to early 30’s before lung failure necessitates lung transplantation if available. Overall CF prevalence in the United States and Europe is approximately 70,000 to 90,000 patients.

The disease is inherited recessively and caused by loss of function mutations in a chloride protein transporter called cystic fibrosis transmembrane conductance regulator, or CFTR. Approximately 65 to 75 percent of CF patients have a three-nucleotide deletion in the CFTR gene known as F508del. The vast majority of remaining patients have one of several prevalent mutations in a small number of genetic hotspots in the CFTR gene, including mutations such as N1303K, W1282X, G542X, or G551D. F508del and several other mutations result in misfolding of the CFTR protein which fails to reach the plasma membrane, whereas other mutations lead to complete absence of protein or a protein which does not function even though it is localized at the correct site in the cell. The failure of CFTR to function at the cell surface leads to cell secretions that lack sufficient salt and water, resulting in high viscosity and inability to clear secretions from lung and pancreas.

Limitations of Current Approaches

In addition to supportive care, antibiotics and lung transplantation, patients also receive pancreatic enzyme supplements daily. Recently, a combination medicine containing 3 small molecules, known as Trikaftor has proven highly effective at correcting the folding of the CFTR protein which harbors either the F508del mutation or one of a few other mutations. Trikaftor has improved lung function and survival for those patients. For 15 to 30 percent of patients (those with CF caused by other mutations) there is currently no disease modifying therapy. In addition, adverse events and discontinuations reported for individuals taking Trikaftor (or one or more of the constituent active pharmaceutical ingredients), indicates patients with F508del also continue to have unmet need.

Our Approach: Correct prevalent mutations and mutational hotspots in the CFTR gene

We are using either classical Prime Editing or dual-flap Prime Editing to correct different CFTR mutations to restore CFTR protein regulation, expression and function. This is an early program, where we are performing screens to identify pegRNAs or pegRNA pairs that achieve efficient and precise correction of CFTR at multiple sites in the gene, including hotspots. Our goal is to identify Prime Editors to target mutations initially in 7 hotspots or at prevalent mutations in the CFTR gene. From these early screens we have identified Prime Editors with high activity at each of these 7 hotspots or prevalent mutations, with some Prime Editors achieving more than 60% precise correction.

Next Steps

Initially we will perform optimizations of the Prime Editors from the early screens to increase efficiency. We will deliver Prime Editors to patient-derived cells, such as iPSCs differentiated in intestinal organoids, and establish that mutation correction will restore CFTR function using several different assays of CFTR protein function. Humanized mice with CFTR mutations have been developed for us to deliver Prime Editors initially to the lung epithelial basal cells which contain a population of lung stem cells. Our initial approach to delivery of Prime Editors to the lung epithelium includes the use of lipid nanoparticles with tropism to basal cells of the lung airways.

Our Future Opportunities in Expanding the Prime Editing Pipeline

To maximize the potential of Prime Editing, we have purposefully built a diversified portfolio organized around four strategic indication categories: (1) immediate target indications, (2) differentiation target indications, (3) "blue sky" indications and (4) "march up the chromosome" approaches, with each set of indications chosen to deliver a different strategic goal.

We constructed our current portfolio of 18 programs, including one partnered program, across our first two strategic indication categories in disease settings where the unique characteristics of Prime Editing could offer compelling advantages over current standard-of-care and novel therapeutic modalities in development. We expect to achieve preclinical proof-of-concept *in vivo*, which would include data from *in vivo* rodent studies in several programs in and non-human primate studies in several programs in through . If successful, this will allow us to initiate investigational new drug, or IND, enabling studies for several of our lead programs beginning in , leading to initial IND filings beginning in . Since we are in early stages of product candidate development, we will provide an update on our timelines in , with the potential to accelerate these programs.

Beyond these current 18 programs, we believe we have the ability to advance quickly into similar follow-on programs in blood, liver, eye and ear as we achieve therapeutic success. We also will continue to invest in research around our "blue sky" target indications, which are intended to push new and innovative technological developments in Prime Editing and delivery and extend its application beyond rare genetic diseases and towards our goal of more broadly addressing human disease. These programs remain in the early stages of conception and will become an increasing focus over the next few years. Finally, our "march up the chromosome" approaches represent opportunities to deliver upon our overarching vision to ultimately treat all patients with a disease and correct the full set of mutations in a particular gene. Many of our disclosed indications across our other strategic categories have a plan that can accommodate expansion opportunities to address additional mutations in that disease.

Complementary retrotransposon mediated gene-insertion technology to enable an all-RNA approach to insert gene-sized DNA into the genome

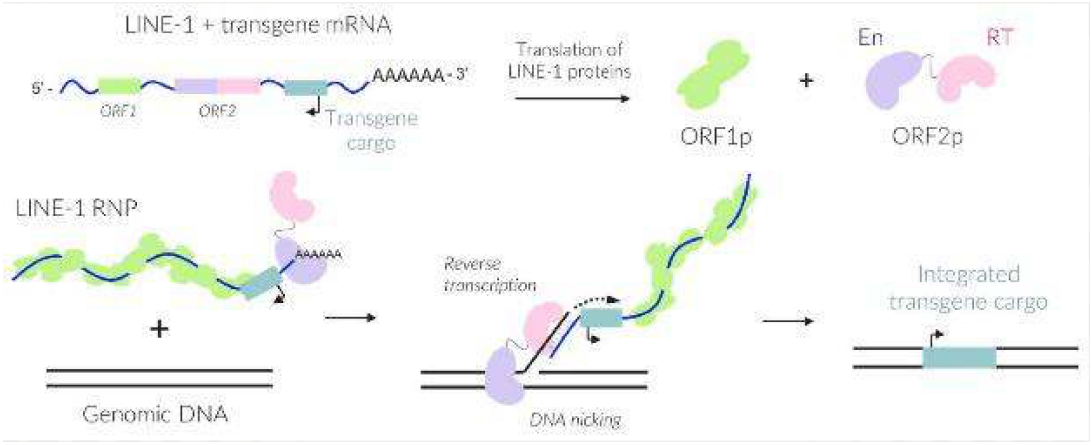
We are continuing to evaluate opportunities that we see as potentially uniquely-positioned to advance our gene editing toolbox, including new technologies to help us to fulfil our strategic goals across both our "blue sky indications" and "march up the chromosome" approaches. For these efforts to be successful, we believe it is important to pursue and to develop technologies that enable the targeted insertion of gene-sized pieces of DNA into the genome. In December 2021, we entered into the Myeloid Agreement with Myeloid, a company primarily focused on harnessing and reprogramming myeloid cells for treating cancers. Through this research collaboration, we received an exclusive option to obtain ownership of certain patent rights and know-how that relate to a new

retrotransposon-based technology to enable the insertion of gene-sized DNA sequences into the genome that, if successful, we believe this could open new opportunities for programmable gene editing. See “Our License and Collaboration Agreements—Research Collaboration, Option and License Agreement with Myeloid”

We believe this retrotransposon-based approach is complementary to Prime Editing and, if successfully deployed alongside Prime Editing, could expand the applicability of our Prime Editing technologies towards our goal of more broadly addressing human diseases. The Myeloid team includes experts in retrotransposon biology, complementing our deep in-house gene editing expertise. In addition, Myeloid maintains an intellectual property position in retrotransposon-based editing, which, if we exercise our option, can be transferred to us.

This emerging approach uses human LINE-1 retrotransposase, which has been engineered by Myeloid to insert transgenes into the genome when delivered as an RNA, without the need for co-administration of DNA. We believe this approach may be complementary to the combined Prime Editor with the SSR recombinase approach outlined above.

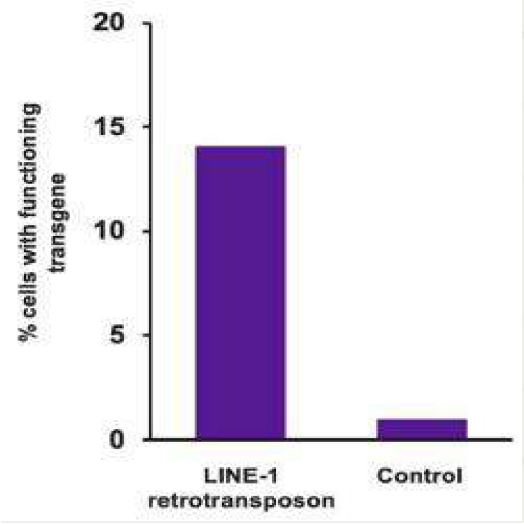
Genomic Integration of Transgenes (>3kb) Using LINE-1 mRNA (No Donor DNA Required)



Note: An mRNA carrying the LINE-1 genes (ORF1 and ORF2) and transgene cargo (teal) is delivered to the cell. Inside the cell, the LINE-1 mRNA is translated, producing ORF1p (green) and ORF2p (purple and pink) proteins. The ORF2p protein contains an endonuclease domain (En, purple) and a reverse transcriptase domain (RT, pink). The ORF1p and ORF2p proteins bind to the LINE-1 mRNA to form a ribonucleoprotein complex (LINE-1 RNP). At permissive sites in the genome, the LINE-1 RNP binds and nicks the DNA using the En domain, and then reverse transcribes the mRNA into the genome using the RT domain, thereby integrating the transgene sequence into the genome. En = endonuclease domain; RT = reverse transcriptase domain; RNP = ribonucleoprotein complex.

This retrotransposase technology is still at an early-stage of development and has not yet been optimized to operate with the same efficiency or programmability as Prime Editing (See Figure below). Using our protein engineering capabilities, we plan to adapt the LINE-1 retrotransposase technology to increase its programmability so that it can be directed to pre-specified, targeted site(s) in the genome, similar to a Prime Editor. Protein engineering and other methods, like those employed to increase the efficiency of Prime Editing, will also be used to increase the efficiency of transgene integration by the LINE-1 retrotransposon. If this research collaboration with Myeloid is successful, we intend to utilize this technology initially in *ex vivo* cell therapies, with the potential to expand and deliver *in vivo* to enable precise gene insertion.

Insertion of a Functioning Transgene using human LINE-1 Retrotransposon Technology



Note: Example of human LINE-1 retrotransposon inserting a green fluorescent protein transgene into primary human monocytes following electroporation of LINE-1 mRNA carrying the sequence for the transgene (Source: Myeloid)

Our License and Collaboration Agreements

Strategic relationship with Beam Therapeutics

In September 2019, we established a strategic, collaborative relationship with Beam Therapeutics Inc., or Beam, a biotechnology company developing precision genetic medicines. One of our founders, David Liu, is also a founder of Beam. Through our relationship, we collaborate with Beam on the research, development, manufacture and commercialization of certain prime editing products within a specified field and provide each other with access and licenses to certain proprietary technology to advance the other's progress.

Mutual access and licenses under the Beam Collaboration Agreement

We entered into a collaboration and license agreement with Beam, which we refer to as the Beam Collaboration Agreement, under which we agree to provide each other with access to, and licenses under, certain technology, know-how and patent rights controlled by each of us for a limited number of years after the effective date, known as the initial term, and certain improvements thereto. Certain licenses we grant to Beam are limited to exploiting licensed products in the Beam field, as further described below, and certain licenses Beam grants to us are limited to exploiting products in the Prime field, as further described below.

Under the Beam Collaboration Agreement, we grant to Beam an exclusive (even as to us and our affiliates), worldwide license under (i) certain prime editing technology, know-how and patent rights that we control during the initial term, and improvements thereto that we control for a specified number of years following the initial term, and (ii) our interest in certain jointly-owned collaboration technology, in each case, solely to develop, make, have made, use, offer for sale, sell, import and commercialize licensed products only in the Beam field, which is limited to (a) the prevention, modification, improvement, amelioration or treatment of human disease, including cell-based therapies and the creation of one or more protective mutations, through administration of a licensed product that incorporates or contains a qualifying prime editing agent, which is a macromolecule or macromolecular complex that uses prime editing to make one or more transition point mutations (that is, C to T, T to C, A to G or G to A) in the sequence of one or more DNA targets, without intentionally making any non-transition mutations or other changes, including insertions, deletions, duplications, indels, transversions or combinations thereof, and does not incorporate or contain any other prime editing agent or other gene editing approach that is not a qualifying prime

editing agent or (b) the prevention, modification, improvement, amelioration or treatment of sickle cell disease through administration of a licensed product that incorporates or contains a more broadly defined prime editing agent. We refer to each of clause (a) and clause (b) of the Beam field as subfields. We also grant to Beam a non-exclusive, worldwide license under certain CRISPR or delivery-related technology, know-how and patent rights that we control during the initial term, and improvements thereto that we control for a specified number of years following the initial term, solely to develop, make, have made, use, offer for sale, sell, import and commercialize licensed products only in the Beam field.

Under the Beam Collaboration Agreement, Beam grants to us certain non-exclusive, worldwide licenses under certain technology, know-how and patent rights, including under certain CRISPR or delivery-related technology, know-how and patent rights, that it controls during the initial term, and improvements thereto that Beam controls for a specified number of years following the initial term, solely to develop, make, have made, use, offer for sale, sell, import and commercialize products only in the Prime field, which is limited to the prevention, modification, improvement, amelioration or treatment of human disease (excluding sickle cell disease), including cell-based therapies and the creation of one or more protective mutations, through administration of a product or service containing or incorporating a prime editing agent that is not a qualifying prime editing agent, but excluding (a) the Beam field, (b) the administration of any product or service containing or incorporating a base editor and (c) a field related to microbial cells in the human flora in certain Asia territories and the development of products targeting four named gene targets. For clarity, the Prime field includes products or services that contain or incorporate (x) at least one prime editing agent that is not a qualifying prime editing agent and (y) any other gene-editing approach, including other prime editing agents, which may include one or more qualifying prime editing agents, subject to the aforementioned exclusions. The licenses granted to us by Beam under the Beam Collaboration Agreement are subject to the terms of certain third party agreements and certain rights retained by third parties.

In addition to the ongoing licenses, under the Beam Collaboration Agreement, we are both obligated to adhere to a technology transfer plan, under which each of us agrees to disclose or otherwise share the technology, know-how and patent rights licensed to the other and to provide the other party with reasonable assistance in the exercise of its licenses.

The licenses granted to each party under the Beam Collaboration Agreement are sublicensable to affiliates and third parties, subject to certain requirements, including providing the other party a copy of each executed sublicense agreement, and ensuring any sublicensee comply with the terms of the Beam Collaboration Agreement.

Beam's development and commercialization of licensed products in the Beam field

Unless we exercise our profit sharing option for a licensed product, as described below, Beam is solely responsible for the development and commercialization of licensed products in the Beam field under the Beam Collaboration Agreement. Beam is required to use commercially reasonable efforts to develop and seek marketing approval for at least one licensed product in each subfield of the Beam field in each of (a) the United States and (b) one other specified major market country, and to commercialize any such licensed product that achieves marketing approval. As described further below, we are entitled to receive ongoing milestone and royalty payments from Beam based on Beam's development and commercialization of each licensed product.

Our profit sharing option

Subject to the provisions in the next paragraph, on a licensed product-by-licensed product basis, we have the right to elect to share equally with Beam in the profits and losses in the United States for Beam's licensed products. We may exercise such right for each licensed product within a specified period of time. Any such licensed product for which we exercise such right we refer to as a collaboration product. If we exercise such right, we agree to share equally in the costs, profits and losses of each such collaboration product in the United States, rather than receiving milestones and royalties based on development and sales thereof by Beam in the United States. For clarity, we are still entitled to receive milestones and royalties on the development and sales of each such collaboration product outside of the United States. We also have the right to elect, within a specified time period, to co-promote with Beam each collaboration product in the United States, in addition to sharing in the profits and losses. To the extent we exercise our co-promote option with respect to a given collaboration product, we and Beam must use

commercially reasonable efforts to commercialize such collaboration product, in each case, in the Beam field in the major markets in which marketing authorization has been obtained. After we have exercised our right to profit share on a collaboration product, we are able to, at any time during the term of the Beam Collaboration Agreement, on a collaboration product-by-collaboration product basis, opt-out of the profit and loss share and co-promotion activities with respect to any collaboration product with prior written notice to Beam within a certain time period.

Notwithstanding the rights described above, at any time prior to or within 30 days of the filing of an IND for a licensed product, Beam may designate up to a mid-single digit number of licensed products for which (i) we are not permitted to exercise our profit sharing right, and (ii) Beam assumes sole control and decision-making authority and bears all costs and expenses, with respect to the development and commercialization of such products. Under the Beam Collaboration Agreement, a "protected product" is a licensed product for which either (a) we have not exercised our profit share option or (b) Beam has designated as a protected product pursuant to the foregoing sentence. For clarity, we are entitled to ongoing milestones and royalties from Beam based on its development and commercialization of protected products worldwide. Upon Beam's designation of a licensed product as a protected product, Beam is required to pay us $5.0 million if the product is developed for non-sickle cell disease or $10.0 million if the product is developed for sickle cell disease.

Consideration

As partial consideration for the licenses and rights granted to each other under the Beam Collaboration Agreement, Beam issued to us $5.0 million in shares of its common stock and we issued to Beam an aggregate of 5,000,000 shares of our common stock. Beam is also entitled to appoint a representative to our board of directors, which right expires after a certain period of time or upon the occurrence of various events, including upon our initial public offering. Beam initially appointed its CEO, John Evans, to our board of directors. Mr. Evans resigned from our board of directors effective September 13, 2022.

We are entitled to receive development milestone payments from Beam on Beam's development of protected products (which, for clarity, includes any licensed product for which we have not exercised our profit share option) and collaboration products. For protected products, we are entitled to receive up to a total of $35.5 million on a protected product-by-protected product basis based on Beam's development of such protected product and, for collaboration products, up to a total of approximately $17.8 million on a collaboration product-by-collaboration product basis based on Beam's development of such collaboration product outside of the United States, in each case, with such amounts lowered if such licensed product achieves a given milestone for use in treating an orphan disease. We are also entitled to receive sales-based milestone payments from Beam based on net sales of licensed products. For protected products, we are entitled to receive up to a total of $84.5 million on a protected product-by-protected product basis based on net sales of such protected product worldwide, and, for collaboration products, up to a total of approximately $42.3 million on a collaboration product-by-collaboration product basis based on net sales of collaboration products outside of the United States.

The sickle cell disease product partnered with Beam is a licensed product under the Beam Collaboration Agreement. Beam has not designated this product as a protected product and we have not received any development or sales-based milestones with respect to Beam's exploitation thereof.

Beam is obligated to pay to us tiered royalties ranging from a high-single digit percentage to a low double-digit percentage, but less than teens on net sales of protected products worldwide on a protected product-by-protected product basis and net sales of collaboration products outside of the United States on a collaboration product-by-collaboration product basis. Our royalties are subject to customary offsets and reductions, to a floor that takes into account any royalties we are obligated to pay to our third party licensors, including Broad Institute. In addition, certain of the rights licensed under the Beam Collaboration Agreement are sublicensed from third parties, and Beam agrees to reimburse us for certain payments we are required to make to our third party licensors attributable to Beam's exercise of any sublicense we grant to Beam, including payments we make to Broad Institute under the Broad License Agreement.

If we develop a product that is covered by the technology, know-how or patent rights that Beam licenses to us under the Beam Collaboration Agreement, which we refer to as a Prime product, we are obligated to pay to Beam a

low single digit percentage royalty on our worldwide net sales of such any product on a Prime product-by-Prime product and country-by-country basis, subject to certain customary reductions, to a floor.

Each party's obligation to pay the other royalties expires on a country-by-country and product-by-product basis on the latest of (a) the expiration of the last to expire valid claim of an issued patent or pending patent application within the applicable licensed patent rights that cover such product in such country, (b) the expiration of regulatory exclusivity for such product in such country or (c) ten (10) years after the first commercial sale of such product in such country.

If we exercise our option to profit share on collaboration products, we share equally in the profits and losses of any such collaboration product in the United States and share in a lower portion of any development or commercialization costs attributable to such collaboration product outside of the United States.

Intellectual property ownership and patent prosecution

Under the Beam Collaboration Agreement, Beam assigns ownership to us of certain improvements Beam makes, itself or jointly with us or others, to certain technology, know-how and patent rights we license to Beam, and we assign to Beam ownership of all improvements we make, ourselves or jointly with Beam or others, certain technology, know-how and patent rights Beam licenses to us. Each party grants back to the other certain exclusive and non-exclusive licenses to such improvements. Except for any such improvements, each party owns any other inventions that it developed under the Beam Collaboration Agreement and an equal, undivided interest with the other party in any inventions jointly developed.

We are responsible for prosecution and maintenance of the patent rights we license to Beam, while keeping Beam reasonably informed and providing Beam the opportunity to provide comments and make requests of us, in each case regarding the patent rights that we exclusively license to Beam in the field of the exclusive license. Beam has a step-in right to the extent we decline or fail to prosecute any patent rights that are exclusively licensed to Beam and applicable to the Beam field. Beam is responsible for prosecution and maintenance of the patent rights it licenses to us, while keeping us reasonably informed and providing us the opportunity to provide comments and make requests of us, in each case with respect to any patent rights that Beam exclusively licenses to us in the field of the exclusive license.

Beam has the first right to enforce any patent rights we exclusively license to Beam in the Beam field against any third party developing a product in the Beam field that is competitive with a licensed product Beam is developing under the Beam Collaboration Agreement. We have a step-in right on any such enforcement to the extent Beam declines or fails to initiate such enforcement action.

Term and termination

Unless earlier terminated in accordance with its terms, the Beam Collaboration Agreement will expire on the later of (a) expiration of the last royalty term for a product on which a party is obligated to pay royalties to the other party or (b) with respect to any collaboration product, the date on which neither party is developing or commercializing any such collaboration product in the United States.

After expiration of the initial term, Beam can terminate the Beam Collaboration Agreement for convenience in its entirety, or on a licensed product-by-licensed product or subfield-by-subfield basis, with ninety (90) days' prior written notice to Prime. Each party may terminate the Beam Collaboration Agreement for (a) the other party's uncured material breach within ninety (90) days of notice of such breach, (b) upon the insolvency or bankruptcy of the other party if such proceeding is not dismissed within ninety (90) days after the filing thereof or (c) immediately to the extent the other party (or its affiliates or sublicensees) challenges a patent right licensed to such party.

License agreement with Broad Institute

In September 2019, we entered into a license agreement with Broad Institute, and in May 2020 and February 2021, we entered into amendments to the license agreement. We refer to the amended license agreement as the Broad License Agreement. Under the Broad License Agreement, Broad Institute grants to us certain rights and

licenses under certain patent rights it owns or controls related to editing of deoxyribonucleic acid (DNA) sequences using a Prime Editor. Certain of the licensed patent rights are co-owned by Broad Institute with MIT and Harvard.

License rights under the Broad License Agreement

The licenses Broad Institute grants to us under the Broad License Agreement are limited to the field of prevention or treatment of human disease, and most licenses granted to us under the Broad License are further limited to the prevention or treatment of human disease by editing (including modifying or converting) or targeting DNA *ex vivo*, *in vivo*, or through xeno-transplantation methods. We refer to this field as the Prime Broad Field. The Prime Broad Field specifically excludes the prevention or treatment of human disease using small or large molecules that are not otherwise "prime editor products" and other specified agricultural and livestock applications of the technology covered by the licensed patent rights. Under the Broad License Agreement, "prime editors" are macromolecules or macromolecule complexes intended to insert DNA sequence into, delete DNA sequence from, or replace one or more bases of a target DNA sequence, using a combination of (i) natural or engineered reverse transcriptase(s) or any other nucleic acid polymerase enzyme and (ii) a nucleic acid binding protein that can be programmed to bind to a DNA sequence to be so changed. "Prime editor products" are products that combine Prime Editors and nucleic acid molecules that bind to and direct the Prime Editors to specified DNA sequences and that contain template sequences for introducing the intended alteration into the specified DNA sequences.

Under the Broad License Agreement, Broad Institute grants to us (i) an exclusive, worldwide license under the licensed patent rights solely to offer for sale, sell, have sold and import products covered by such licensed patent rights, or licensed products, solely for use within the Prime Broad Field (subject to certain specified limitations and exclusions with respect to certain applications), (ii) a non-exclusive, worldwide license under the licensed patent rights solely to make, have made, offer for sale, sell, have sold, and import licensed products solely for use in the Prime Broad Field, (iii) a non-exclusive, worldwide license under the licensed patent rights solely to make, have made, offer for sale, sell, have sold and import other products that are enabled by (a) the licensed patent rights or (b) the use of certain materials transferred to us by Broad Institute, solely for the prevention or treatment of human diseases and (iv) a non-exclusive, worldwide license solely for internal research. Further, with respect to DNA delivery or targeting applications covered by the licensed patent rights, the exclusive license granted to us by Broad Institute is limited only to "prime editor" products and specifically excludes applications relating to the production or processing of small or large molecules, including for the prevention or treatment of human disease.

All of the above license grants (i) specifically exclude (a) human germline modification, (b) the stimulation of biased inheritance of particular genes or traits within a plant or animal population and (c) certain modifications of the tobacco plant, and (ii) are subject to certain retained rights of Broad Institute, MIT and Harvard and the U.S. federal government. Broad Institute also retains certain rights for itself, MIT and Harvard and for other non-for-profit research organizations and government agencies to practice the licensed patent rights for research, teaching, educational and scholarly purposes. In addition, because an employee of HHMI was an inventor on certain of the licensed patent rights, the licenses granted to us with respect to such patent rights are subject to a non-exclusive, irrevocable, worldwide license to HHMI to exercise any such patent rights for research purposes.

We are permitted to sublicense the licensed patent rights to our affiliates and third parties, subject to certain requirements, including that any such sublicense agreement be in compliance with and be consistent with the terms of the Broad License Agreement. In addition, any such sublicense agreement must include certain customary provisions to ensure our ability to comply with the Broad License Agreement. We are also responsible for any breaches of a sublicense agreement by the applicable sublicensee and for all payments due to Broad Institute under the Broad License Agreement by operation of any such sublicense.

Our licenses are subject to Broad Institute's inclusive innovation model, pursuant to which Broad Institute retains the right, under specified circumstances, to grant to third parties (other than specified competitors of ours) licenses under the licensed patent rights that would otherwise fall within the scope of the exclusive license granted to us. If a third party provides Broad Institute with a bona fide proposal to develop a product covered by the licensed patents and directed to a particular gene target, Broad Institute may notify us of the proposal, including the identity of such gene target and the proposing third party. Broad Institute is not required to share any other information provided by the requester with us in connection with the inclusive innovation model. Within a specified time period

following such notification, we may provide Broad Institute with evidence that either (i) we (ourselves, or through our affiliates or sublicensees) are currently developing one or more licensed products directed to the applicable gene target or (ii) we have a good faith interest in developing licensed products directed to such gene target (ourselves, or through our affiliates or sublicensees) or sublicensing our rights to such gene target directly to such third party or another third party. If we notify Broad Institute that we are currently developing licensed products directed to such gene target or that we have a good faith interest in developing licensed products directed to such gene target, we have a specified period of time to evidence such activities or interest by providing Broad Institute with a development plan and either continuing or commencing, respectively, such activities under such development plan. We must continue to use commercially reasonable efforts to continue to progress such activities. If we notify Broad Institute that we have a good faith interest in sublicensing our rights to such third party or another third party, we have a specified period of time to negotiate and enter into a sublicense agreement with a third party. If we (i) notify Broad Institute that we are not interested in developing such product (internally or with another third party) or do not respond to the proposed product notice, or (ii) notify Broad Institute of our interest as outlined above and do not complete or, for an internal program, commence, those activities within the specified time periods, Broad Institute has the right, subject to certain conditions, to terminate our rights to such gene target and may grant to such proposing third party an exclusive or non-exclusive license under the patent rights to exploit products covered by the licensed patent rights and directed to such gene target, which we refer to as a march-in license.

In addition to the inclusive innovation model, our licenses are also subject to Broad Institute's right to designate a single-digit number of gene targets per year in which it has a good faith interest in reserving for its own development of products covered by the patent rights directed to such gene targets. Such reserved gene targets are referred to as a reserved Broad Institute targets. If Broad Institute notifies us that it desires to exercise such right for a given gene target, and we do not, within a specified time period, evidence that we (ourselves or through an affiliate or sublicensee) have an on-going program or good faith interest in pursuing a program for Prime Editor products for such gene target, Broad Institute may terminate our license with respect to such gene target, with such gene target becoming a reserved Broad Institute target. We have a right to negotiate a sublicense with a third party for-profit company interested in licensing the rights to such reserved Broad Institute targets, which we must complete within a specified period of time, after which Broad Institute may grant such rights to such third party. Broad Institute has not yet exercised its right to designate any reserved gene targets.

Under the Broad License Agreement, we are required to use commercially reasonable efforts to develop licensed products in the Prime Broad Field in accordance with a development plan that we prepared and submitted to Broad Institute. This includes several developmental milestones that we are required to meet with respect to licensed products within a specified number of years. We may update the development plan from time to time if we believe, in our good faith judgment, that such update is needed to improve our ability to meet such development milestones. Broad Institute has the right to terminate the Broad License Agreement if we fail to use commercially reasonable efforts or to achieve a development milestone, subject to our right to extend or amend such milestone in accordance with certain procedures. If, despite using commercially reasonable efforts, we will not achieve a development milestone, we may request an extension of the development milestone timelines by providing a reasonable explanation for the extension and a reasonable, detailed, written plan for promptly achieving such reasonable extended or amended milestone to Broad Institute, and following Broad Institute's approval of the request to delay, the applicable milestone deadline will be automatically amended (to the extent we request an extension of less than a specified number of years). We have not yet requested any such extension and have met the deadlines for diligence milestones that have already occurred. In addition to the diligence obligations to achieve the milestones in the development plan, for any products that attain regulatory approval, we are required to use commercially reasonable efforts to introduce any such licensed product into the commercial market and to commercialize and make such licensed products reasonably available to the public.

Consideration under the Broad License Agreement

As partial consideration for the rights granted to us under the Broad License Agreement, we paid Broad Institute an upfront fee of $0.5 million, and issued Broad Institute an aggregate of 1,938,429 shares of our common stock.

We also are obligated to pay to Broad Institute an annual license maintenance fee ranging from the low- to mid-five figures to the low six-figures, depending on the particular calendar year, for the term of the Agreement. Broad

Institute is also entitled to receive clinical and regulatory milestone payments up to a total of $20.0 million per licensed product, depending on the patient population to be treated by the licensed product achieving the applicable milestone. If we undergo a change of control at any time during the term of the Broad License Agreement, certain of the clinical and regulatory milestone payments will increase by a specified percentage. Broad Institute is also entitled to sales-based milestone payments up to a total of $54.0 million per licensed product, depending on the patient population to be treated by the licensed product achieving the applicable milestone. Broad Institute is entitled to lower payments to the extent the clinical and regulatory milestones or sales-based milestones are achieved by enabled products, rather than licensed products.

Broad Institute is entitled to receive mid-single digit percentage royalties on net sales of licensed products, and low single-digit percentage royalties of enabled products. Royalties payable to Broad Institute are subject to customary offsets and reductions with respect to a product in a given country, to a floor. On a country-by-country and product-by-product basis, the royalty term for a product in a country will terminate on the latest of: (i) the expiration of the last to expire valid claim of an issued patent or pending patent application within the licensed patent rights covering such product in such country, (ii) the period of regulatory exclusivity for such product in such country or (iii) ten (10) years after the first commercial sale of such product in such country. As of July 2022, we estimate the last patent right licensed under the Broad License Agreement will expire in 2041, without giving effect to any potential patent term extensions or patent term adjustments. Broad Institute is also entitled to a percentage of consideration that we receive from our sublicensees, with such percentage at low double-digits and decreasing to high single digits, dependent on the development stage of products under the Broad License Agreement at the time of sublicense execution. If we (or one of our affiliates or sublicensees) initiate a patent challenge of the licensed patent rights, among other things, our payment obligations could be doubled and we could lose exclusivity of our license.

Prosecution and enforcement of licensed patent rights under the Broad License Agreement

Broad Institute is responsible for the prosecution and maintenance of all licensed patent rights, although we are entitled to certain consultation, comment and review rights with respect to such prosecution and maintenance activities of the exclusively licensed patent rights. We are obligated to reimburse Broad Institute for its documented, out-of-pocket costs incurred while prosecuting and maintaining such licensed patent rights.

So long as we remain the exclusive licensee of licensed patent rights in the Prime Broad Field, we have the first right to enforce the licensed patent rights in the Prime Broad Field, where we reasonably determine that a third party is marketing or has specific plans and is preparing to market an infringing product in any country that competes with one of our licensed products in the Prime Broad Field. Broad Institute has a step in right to the extent we decline to exercise such first right to enforce.

Term and termination of the Broad License Agreement

Unless earlier terminated, the Broad License Agreement will remain in effect until the later of (i) the last to expire valid claim of an issued patent or pending patent application within the licensed patent rights covering our licensed products or (ii) the expiration of the last royalty term for a licensed product in a country.

We can terminate the Broad License Agreement for our convenience following prior written notice to Broad Institute. Each party may terminate the Broad License Agreement for the other party's uncured material breach. Broad Institute may also immediately terminate the Broad License Agreement (i) to the extent we (or our affiliates or sublicensees) challenge a licensed patent right, (ii) upon our bankruptcy or insolvency or (iii) if we fail to procure and maintain insurance.

Amendments to the Broad License Agreement

We amended the Broad License Agreement in May 2020 to correct an error to an exhibit to the Broad License Agreement and amended the Broad License Agreement in February 2021 to include additional licensed patent rights. Under the February 2021 amendment, as partial consideration for the addition of licensed patent rights relating to prime editing improvements, we paid Broad Institute an amendment fee of approximately $0.1 million.

Option Agreement with Broad Institute

In May 2021, we executed an exclusive option agreement with Broad Institute, pursuant to which Broad Institute granted to us an exclusive option to negotiate an amendment to the Broad License Agreement to include certain additional patent rights relating to prime editing improvements to our license thereunder (subject to certain specified limitations and exclusions with respect to certain applications). In connection with the option agreement, Broad Institute also granted to us, during the option period, a limited, non-exclusive license under the new patent rights solely for research purposes to evaluate whether to exercise our option (subject to certain specified exceptions). Our option expires in November 2022, unless we mutually agree in writing with Broad Institute to extend such expiration date. Our option is subject to certain reserved rights by (i) Broad Institute, Harvard, other not-for-profit research organizations and government agencies and certain other third parties, (ii) the US government and (iii) HHMI. Under the option agreement, we own any research data we generate while exercising our evaluation license. If we conceive of any inventions other than research data, Broad Institute (and institutional co-owners of these patent rights) owns such inventions and we assign all of our right, title and interest in such other inventions to Broad Institute. Broad Institute is responsible for the prosecution and maintenance of the patent rights and we agreed to reimburse Broad Institute up to an aggregate of a mid-five figure amount for the out-of-pocket costs it incurs, or has incurred, in prosecuting the applicable patent rights. We also paid Broad Institute an upfront payment of $50,000 upon execution of the option agreement. We can terminate the option agreement for convenience by providing prior written notice to Broad Institute, while Broad Institute can terminate if we (i) fail to make a payment to Broad Institute under the option agreement and fail to cure such non-payment within a certain time period, (ii) are otherwise in material breach of the option agreement and fail to cure within a certain time period, or (iii) become insolvent.

Pledge to Broad Institute and Harvard

In February 2021, we committed to donate $5.0 million to Broad Institute and Harvard annually for 14 years, commencing in 2021, or the Pledge. The Pledge is intended to be used for research and development related to new genome editing technologies, for example Prime Editing, improve on existing genome-editing technologies, identify delivery mechanisms for these technologies and apply these technologies to the understanding and treatment of rare genetic diseases. Initially, one half of the Pledge made to Broad Institute is allocated to Broad Institute and the other half is transferred to Harvard. The division of the Pledge may change at our discretion. The funds may be used by David Liu's laboratory, consistent with the purpose of the Pledge.

We can terminate the Pledge at our discretion, subject to providing one year of funding from the date of termination. We will evaluate and approve the Pledge annually, and will consider in our annual granting decisions, if the previous year's grant was used for the intended purpose, and if David Liu has continued in good standing on his active agreements with Prime Medicine.

Research Collaboration, Option and License Agreement with Myeloid

In December 2021, we entered into a research collaboration and exclusive option agreement with Myeloid Therapeutics Inc., or Myeloid, and such agreement, the Myeloid Agreement. Under the Myeloid Agreement, we collaborate with Myeloid, a related party, on the research and development of LINE-1 retrotransposon technology. This retrotransposon-based approach is complementary to Prime Editing and, if successfully deployed alongside Prime Editing, could expand the applicability of our technologies towards our goal of more broadly addressing human diseases. In connection with the Myeloid Agreement, we also entered into a subscription agreement with Myeloid under which we were obligated to issue an aggregate of 3,424,422 shares of our common stock as additional consideration for the license.

Myeloid grants to us an exclusive option, exercisable during the research term and for 60 days thereafter, to obtain ownership of certain patent rights and know-how owned by Myeloid that relate to LINE-1 retrotransposon technology. If we exercise our option, in addition to assigning us ownership of the applicable patent rights and know-how, Myeloid also agrees to grant us certain exclusive and non-exclusive licenses, including to certain improvements and other enabling technology.

Following the exercise of our option, we agree to grant Myeloid, in addition to certain other licenses, an exclusive, worldwide license under the assigned patent rights and know-how to develop and commercialize products in the field of myeloid cells and myeloid cell engineering, or the Myeloid Field. As of June 30, 2022, we have not exercised our option.

Upon entering into the Myeloid Agreement, Myeloid was entitled to receive an upfront payment of $30.0 million in cash and an aggregate of 3,424,422 shares of our common stock, with a then fair value of $12.0 million, both of which Myeloid received in January 2022. If the research agreement meets its goals, then (i) during the research term, Myeloid is entitled to cash payments of up to $35.0 million in the aggregate upon the achievement of certain milestones reflecting the technology's development; and (ii) if we exercise our option, we agree to pay to Myeloid an option exercise fee of $80.0 million in cash, and shares of our common stock with a then fair value of $30.0 million. Additionally, if the research collaboration meets its goal and we exercise our option, and we are able to proceed with the development and commercialization of a product that is covered by (a) the patent rights or know-how subject to our option or (b) the patent rights or know-how developed by one or both of the parties during the research term related to LINE-1 retrotransposon technology, or, collectively, a Prime Product, Myeloid would be eligible to receive, for the first five Prime Products, development and regulatory milestone payments of up to $120.0 million on a Prime Product-by-Prime Product basis and sales-based milestone payments of up to $210.0 million on a Prime Product-by-Prime Product basis.

Myeloid is also eligible to receive tiered low to mid single-digit percentage royalties on our annual aggregate global net sales of Prime Products on a Prime Product-by-Prime Product and country-by-country basis, subject to customary offsets and reductions to a floor. On a country-by-country and Prime Product-by-Prime Product basis, the period during which royalties will be paid will continue until the latest of (i) the expiration date of the last to expire valid claim of an issued patent or pending patent application within the patent rights subject to our option or the patent rights developed by one or both of the parties during the research term related to LINE-1 retrotransposon technology, in each case, covering the applicable Prime Product, (ii) loss of regulatory exclusivity for such Prime Product in such country, or (iii) ten (10) years after the first commercial sale of such Prime Product in such country.

Following the exercise of our option and for a period of two years thereafter, Myeloid will have the right to select up to three targets, subject to certain exclusions, for the development and commercialization of products directed at such targets in all fields and we will be eligible to receive the development, regulatory and sales-based milestone payments and royalty payments as set forth above from Myeloid with respect to such products.

Unless earlier terminated based on customary termination rights, the Myeloid Agreement will continue on a Prime Product-by-Prime Product and country-by-country basis until the expiration of the royalty term for such Prime Product in such country. If we exercise our option, neither party will have the right to terminate the Myeloid Agreement for any reason.

Our Business Development and Partnering Strategy

Our vision is to establish Prime Medicine as a leader in the field of gene editing by building a fully integrated biopharmaceutical company utilizing our Prime Editing platform to pioneer the discovery, development and commercialization of Prime Editing therapeutics that can have a transformative impact on the treatment of a wide spectrum of diseases with high unmet medical need. The potential therapeutic applications of our Prime Editing technology are broad, and we aspire to fully develop that potential.

To achieve our vision, and in addition to independently discovering, developing, and commercializing Prime Editing products, we will seek to selectively enter strategic collaborations to maximize the potential of the Prime Editing platform. Such collaborations may also facilitate our entry into additional therapeutic or geographic areas by leveraging the established capabilities of our partners as well as by funding the development of new Prime Editing platform or corporate capabilities which we can then utilize for additional Prime Medicine products outside such partnerships. In certain cases, we may use partnerships to create value in areas which we may not intend to enter ourselves in the near term. In our collaborations, we may cooperatively develop and commercialize products with our partners, have options to do so, or out-license products for development and commercialization by our partners. In each case, we expect to receive value in the form of upfront payments and milestones which will provide us with

additional capital in the nearer term as well as royalties and where applicable, profit sharing, to participate in the value created through commercializing Prime Editing products.

We may also seek to access or develop enabling technologies or specific capabilities through licenses or partnerships. We will evaluate partnerships with both academic and corporate entities, and these potential collaborations may vary in both structure and scope. Technologies that may enable the application of Prime Editing may include viral and non-viral delivery modalities, manufacturing, and technologies which may be synergistic with Prime Editing or Prime Editing products.

Competition

The pharmaceutical and biotechnology industries, including the gene therapy and gene editing fields, are characterized by rapidly advancing technologies, intense competition and a strong defense of intellectual property. We believe that our Prime Editing technology is highly differentiated and that our considerable expertise in Prime Editing and expanding its capabilities, as well as our team's extensive drug development and manufacturing experience, together with exclusive licenses to this technology have positioned us at the forefront of the field of advanced precision genetic medicines and provided us with significant competitive advantages. Nevertheless, we face potential competition from a variety of companies. There are several companies utilizing CRISPR/Cas9 nuclease technology, including Caribou Biosciences, Inc., Editas Medicine, Inc., CRISPR Therapeutics AG, Intellia Therapeutics, Inc. and Graphite Bio, Inc., among others. Several additional companies such as Sangamo Therapeutics, Inc., Precision BioSciences, Inc. and bluebird bio, Inc. utilize alternative nuclease-based genome editing technologies, including Zinc Fingers, Meganucleases and TAL Nucleases. Beam Therapeutics Inc. utilizes base editing technology. In addition, other private companies such as Tessera Therapeutics, Inc. and Tome Biosciences, Inc. have announced their work in recombinase DNA and RNA gene writers, although little is known publicly about their science or portfolio. Other companies have announced intentions to enter the gene editing field, such as Moderna, Inc. and Pfizer Inc. Most recently, new epigenetic editing companies have emerged, such as Chroma Medicine, Inc. and Tune Therapeutics, Inc. In addition, we face competition from companies utilizing gene therapy, oligonucleotides and cell therapy therapeutic approaches. Several companies such as Arbor Biotechnologies, Inc., Scribe Therapeutics Inc., Mammoth Biosciences, Inc. and Metagenomi, Inc. are actively searching for novel genome editing components and have reported the discovery of new DNA-cutting enzymes. Other companies are active in LNP delivery technologies and advancing those into therapeutics using genetic therapies, including Recode Therapeutics, Inc., Verve Therapeutics, Inc., Generation Bio Co. and Beam Therapeutics Inc., among others.

Any product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future that are approved to treat the same diseases for which we may obtain approval for our product candidates. This may include gene editing companies with other approaches to editing, as well as other types of therapies, such as small molecule, RNAi, antibody and/or protein therapies.

In addition, many of our current or potential competitors, either alone or with their collaboration partners, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials and approved products than we do today. Mergers and acquisitions in the pharmaceutical, biotechnology and gene therapy industries may result in resources becoming increasingly concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. We also compete with these companies in recruiting, hiring and retaining qualified scientific and management talent, establishing clinical trial sites and patient registration for clinical trials, obtaining manufacturing slots at contract manufacturing organizations and in acquiring technologies complementary to, or necessary for, our programs. Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, particularly if they represent cures, have fewer or less severe side effects, are more convenient, or are less expensive than any products that we may develop. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. The key competitive factors affecting the success of all of our programs are likely to be their efficacy, safety, convenience and availability of reimbursement.

Manufacturing

We currently have no commercial manufacturing capabilities. For our initial wave of clinical programs, we intend to use qualified third-party contract manufacturing organizations, or CMOs, with relevant manufacturing experience in genetic medicines. We plan to partner with suppliers and CMOs to produce or process critical raw materials, bulk compounds, formulated compounds, viral vectors or engineered cells for IND-supporting activities and early-stage clinical trials. At the appropriate time in the product development process, we will determine whether to establish in-house GMP manufacturing capabilities for some core technologies or continue to rely on third parties to manufacture commercial quantities for any products that we may successfully develop.

Intellectual Property

On September 20, 2022, we achieved a major milestone as the USPTO issued the ‘770 Patent, covering methods of using Prime Editors. The ‘770 Patent is the first issued Prime Editing patent in our licensed patent portfolio and we believe it will be instrumental in protecting our Prime Editing platform and pipeline of gene editing programs.

Our success depends in large part on our ability to obtain and maintain additional intellectual property protection for our platform technology, our programs and know-how related to our business, defend and enforce our intellectual property rights, in particular, our patent rights, preserve the confidentiality of our trade secrets and other confidential or proprietary information and operate without infringing, misappropriating or otherwise violating any intellectual property rights of others. We seek to protect our proprietary position by, among other things, exclusively licensing U.S. and certain foreign patent applications and an issued patent and filing patent applications related to our platform technology, existing and planned programs and improvements that are important to the development of our business, where patent protection is available. While we in-license the ‘770 Patent, we do not currently own any, or in-license any other, issued patents in any jurisdiction covering our Prime Editing technology or product candidates. Notwithstanding our efforts, we cannot be sure that any additional patents will be issued with respect to any patent applications we have licensed or filed or may license or file in the future, and we cannot be sure that any patents that are licensed to us, or that may be licensed or issued to us in the future will not be challenged, invalidated, narrowed in scope, rendered unenforceable or circumvented or that such patents will be commercially useful in protecting our technology. For more information regarding the risks related to our intellectual property, please see “Risk Factors—Risks Related To Our Intellectual Property.”

Our wholly owned patent applications and our in-licensed issued patent and patent applications cover various aspects of our Prime Editing platform and our programs, including:

- Prime Editors
- Prime Editing guide RNA, or pegRNA, and modified pegRNAs
- Prime Editing complexes and methods
- Dual-Flap Prime Editing technology
- Program-specific pegRNAs and therapeutic methods
- Prime Editors with enhanced activity
- Engineered pegRNAs
- Delivery modalities

We intend to continue to pursue, when possible, additional patent protection, including composition of matter, method of use, delivery modality and process claims, directed to our platform technology and the programs in our portfolio. We also intend to expand and extend our Prime Editing platform and programs, as well as obtain rights to delivery modalities, through one or more licenses from third parties.

As of July 31, 2022, we owned approximately 24 pending U.S. provisional patent applications, five pending PCT applications and one pending U.S. non-provisional patent application. Our owned patent applications are generally related to our Prime Editing technology, including claims to modified pegRNAs, Prime Editors with enhanced activities (e.g., improved Prime Editing efficiency), methods of using such Prime Editors and pegRNAs, program-specific pegRNAs directed to targeting and correcting specific mutations and methods of using such pegRNAs therapeutically. The provisional patent applications are not eligible to become issued patents until, among other things, we file non-provisional patent applications within 12 months of filing one or more of our related provisional patent applications. Any U.S. non-provisional patent applications timely filed based on any of these U.S. provisional patent applications, if issued, and if the appropriate maintenance or annuity fees are paid, are expected to expire in 2043, excluding any additional term for patent term adjustments or patent term extensions or similar provisions in foreign jurisdictions. Our current owned U.S. non-provisional and PCT patent applications, if issued and if the appropriate maintenance or annuity fees are paid, are expected to expire as early as 2042, excluding any additional term for patent term adjustments or patent term extensions or similar provisions in foreign jurisdictions. On September 20, 2022, the ‘770 Patent, which is in-licensed to us, was issued by the USPTO to Broad Institute. The ‘770 Patent covers methods of using Prime Editors and is expected to expire in 2040. As of July 31, 2022, we have in-licensed approximately five pending U.S. non-provisional patent applications, two pending PCT applications, one pending U.S. provisional applications and 42 pending ex-U.S. patent applications, in each case, related to Prime Editing, from Broad Institute. The patent applications outside of the United States were filed in the European Patent Office, Japan, China and certain other foreign jurisdictions. The issued patent and patent applications from our in-licensed portfolio for Prime Editing are generally related to Prime Editors, pegRNAs, Prime Editing complexes and systems; compositions including the Prime Editors, pegRNAs and Prime Editing complexes as a component; methods of using such Prime Editors, pegRNAs and Prime Editing complexes and systems, including methods for therapeutic indications; pegRNAs that target and correct therapeutically relevant DNA sequences; and delivery modalities for Prime Editing systems, including the use of adeno-associated viral vectors, or AAV, in a split AAV system for viral delivery of a Prime Editor. The in-licensed issued patent and patent applications cover various aspects related to the Prime Editing platform technology, including Prime Editors that employ CRISPR-Cas protein domains, such as Cas9 nickases and DNA polymerase domains, such as reverse transcriptase domains. The exclusive in-licensed patent applications also cover dual-flap Prime Editing technology, including dual-flap Prime Editing compositions and methods of using such technology for therapeutic indications and engineered pegRNAs, including compositions and methods comprising such pegRNAs. Our current in-licensed U.S. and foreign patent applications, if issued and if the appropriate maintenance or annuity fees are paid, are expected to expire as early as 2040, excluding any additional term for patent term adjustments or patent term extensions or similar provisions in foreign jurisdictions.

The term of individual patents depends upon the legal term for patents in the countries in which they are granted. In most countries, including the United States, the patent term is 20 years from the earliest claimed filing date of a non-provisional patent application in the applicable country. However, the actual protection afforded by a patent varies from country to country and depends upon many factors, including the type of patent, the scope of its coverage, the availability of regulatory-related extensions, the availability of legal remedies in a particular country and the validity and enforceability of the patent. In the United States, a patent’s term may, in certain cases, be lengthened by patent term adjustment, or PTA, which compensates a patentee for administrative delays by the USPTO in examining and granting a patent or may be shortened, e.g., if a patent is terminally disclaimed over a commonly owned patent having an earlier expiration date. In some instances, such a PTA may result in a U.S. patent term extending beyond 20 years from the earliest date of filing a non-provisional patent application related to the U.S. patent. Patent term extensions, or PTE, under the Drug Price Competition and Patent Term Restoration Act of 1984, commonly known as the Hatch-Waxman Amendments, are also possible for patents that cover an FDA-approved drug as compensation for the patent term lost during the FDA regulatory review process. The Hatch-Waxman Amendments permit a PTE of up to five years beyond the expiration of the patent. The length of the PTE is related to the length of time the drug is under regulatory review. PTE cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, only one patent per product may be extended and only those claims covering an approved product, a method for using it or a method of manufacturing it, may be extended. Similar provisions are available in Europe and certain other jurisdictions to extend the term of a patent that covers an approved drug. In the future, if our products receive regulatory approval, we may be eligible to apply for PTEs on patents covering such products, however there is no guarantee that the applicable authorities, including the FDA in

the United States, will agree with our assessment of whether such PTE should be granted, and if granted, the length of such PTE. For more information regarding the risks related to our intellectual property, please see "Risk Factors—Risks Related To Our Intellectual Property."

We also rely on trade secrets, know-how, continuing technological innovation and confidential information to develop and maintain our proprietary position and protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection. We seek to protect our proprietary technology and processes, in part, by confidentiality agreements with our employees, consultants, scientific advisors and contractors. We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have implemented measures to protect and preserve our trade secrets, such measures can be breached, and we may not have adequate remedies for any such breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. For more information regarding the risks related to our intellectual property, please see "Risk Factors—Risks Related To Our Intellectual Property."

Government Regulation

In the United States, biological products, including gene therapy products, are subject to regulation under the Federal Food, Drug, and Cosmetic Act, or FD&C Act, and the Public Health Service Act, or PHS Act, and other federal, state, local and foreign statutes and regulations. Both the FD&C Act and the PHS Act and their corresponding regulations govern, among other things, the research, development, clinical trial, testing, manufacturing, safety, efficacy, labeling, packaging, storage, record keeping, distribution, reporting, advertising and other promotional practices involving biological products. Each clinical trial protocol for a gene therapy product must be reviewed by the FDA. FDA approval must be obtained before the marketing of biological products. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources and we may not be able to obtain the required regulatory approvals.

Ethical, social and legal concerns about gene therapy, genetic testing and genetic research could result in additional laws and regulations restricting or prohibiting the processes we may use. Federal and state legislatures, agencies, congressional committees and foreign governments have expressed interest in further regulating biotechnology. More restrictive laws and regulations or interpretations of existing laws or regulations, or claims that our products are unsafe or pose a hazard, could prevent us from commercializing any products. New government requirements may be established that could delay or prevent regulatory approval of our product candidates under development. It is impossible to predict whether legislative changes will be enacted, regulations, policies or guidance changed, or interpretations by agencies or courts changed, or what the impact of such changes, if any, may be.

U.S. Biological Products Development Process

The process required by the FDA before a biological product may be marketed in the United States generally involves the following:

- completion of nonclinical laboratory tests and animal studies according to good laboratory practices, or GLPs, unless justified and applicable requirements for the humane use of laboratory animals or other applicable regulations;
- submission to the FDA of an application for an investigational new drug application, or IND, which must become effective before human clinical trials may begin;
- approval of the protocol and related documentation by an independent institutional review board, or IRB, or ethics committee at each clinical trial site before each study may be initiated;
- performance of adequate and well-controlled human clinical trials according to the FDA's regulations commonly referred to as good clinical practices, or GCPs, and any additional requirements for the

protection of human research subjects and their health information, to establish the safety and efficacy of the proposed biological product for its intended use;

- submission to the FDA of a biologics license application, or BLA, for marketing approval that includes sufficient evidence of establishing the safety, purity and potency of the proposed biological product for its intended indication, including from results of nonclinical testing and clinical trials;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities where the biological product is produced to assess compliance with current good manufacturing practice, or cGMP, to assure that the facilities, methods and controls are adequate to preserve the biological product's identity, strength, quality and purity and, if applicable, the FDA's current good tissue practices, or CGTPs, for the use of human cellular and tissue products;
- potential FDA audit of the nonclinical study and clinical trial sites that generated the data in support of the BLA in accordance with any applicable expedited programs or designations;
- review of the product candidate by an FDA advisory committee, where appropriate or if applicable;
- payment of user fees for FDA review of the BLA (unless a fee waiver applies); and
- FDA review and approval, or licensure, of the BLA.

Before testing any biological product candidate, including a gene therapy product, in humans, the product candidate enters the preclinical testing stage. Preclinical tests, also referred to as nonclinical studies, include laboratory evaluations of product biological characteristics, chemistry, toxicity and formulation, as well as animal studies to assess the potential safety and activity of the product candidate. The conduct of the preclinical tests must comply with federal regulations and requirements including GLPs.

An IND is an exemption from the FD&C Act that allows an unapproved product candidate to be shipped in interstate commerce for use in an investigational clinical trial and a request for FDA authorization to administer such investigational product to humans. Such authorization must be secured prior to interstate shipment and administration of any product candidate that is not the subject of an approved BLA. In support of a request for an IND, applicants must submit a protocol for each clinical trial and any subsequent protocol amendments must be submitted to the FDA as part of the IND. In addition, the results of the preclinical tests, together with manufacturing information, analytical data, any available clinical data or literature and plans for clinical trials, among other things, must be submitted to the FDA as part of an IND. The FDA requires a 30-day waiting period after the filing of each IND before clinical trials may begin. This waiting period is designed to allow the FDA to review the IND to determine whether human research subjects will be exposed to unreasonable health risks. At any time during this 30-day period the FDA may raise concerns or questions about the conduct of the trials as outlined in the IND and impose a clinical hold or partial clinical hold. In this case, the IND sponsor and the FDA must resolve any outstanding concerns before clinical trials can begin.

Following commencement of a clinical trial, the FDA may also place a clinical hold or partial clinical hold on that trial. A clinical hold is an order issued by the FDA to the sponsor to delay a proposed clinical investigation or to suspend an ongoing investigation. A partial clinical hold is a delay or suspension of only part of the clinical work requested under the IND. No more than 30 days after imposition of a clinical hold or partial clinical hold, the FDA will provide the sponsor a written explanation of the basis for the hold. Following issuance of a clinical hold or partial clinical hold, an investigation may only resume after the FDA has notified the sponsor that the investigation may proceed. There also are requirements governing the reporting of ongoing clinical trials and completed clinical trial results to public registries. Information about certain clinical trials, including clinical trial results, must be submitted within specific timeframes for publication on the www.clinicaltrials.gov website.

A sponsor may choose, but is not required, to conduct a foreign clinical trial under an IND. When a foreign clinical trial is conducted under an IND, all FDA IND requirements must be met unless waived. When a foreign clinical trial is not conducted under an IND, the sponsor must ensure that the study complies with certain regulatory requirements of the FDA in order to use the study as support for an IND or application for marketing approval or

licensing. In particular, such studies must be conducted in accordance with GCP, including review and approval by an independent ethics committee, or IEC, and informed consent from subjects. The FDA must be able to validate the data through an onsite inspection, if deemed necessary by the FDA.

An IRB representing each institution participating in the clinical trial must review and approve the plan for any clinical trial before it commences at that institution, and the IRB must conduct continuing review and reapprove the study at least annually. The IRB must review and approve, among other things, the study protocol and informed consent information to be provided to study subjects. An IRB must operate in compliance with FDA regulations. An IRB can suspend or terminate approval of a clinical trial at its institution, or an institution it represents, if the clinical trial is not being conducted in accordance with the IRB's requirements or if the product candidate has been associated with unexpected serious harm to patients.

Some trials are overseen by an independent group of qualified experts organized by the trial sponsor, known as a data safety monitoring board or committee, or DSMB. This group provides authorization as to whether or not a trial may move forward at designated check points based on access that only the group maintains to available data from the study.

In addition to the submission of an IND to the FDA before initiation of a clinical trial in the United States, certain human clinical trials involving recombinant or synthetic nucleic acid molecules are subject to oversight of IBCs, as set forth in the NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules, or NIH Guidelines. Under the NIH Guidelines, recombinant and synthetic nucleic acids are defined as: (i) molecules that are constructed by joining nucleic acid molecules that can replicate in a living cell (i.e., recombinant nucleic acids); (ii) nucleic acid molecules that are chemically or by other means synthesized or amplified, including those that are chemically or otherwise modified but can base pair with naturally occurring nucleic acid molecules (i.e., synthetic nucleic acids); or (iii) molecules that result from the replication of those described in (i) or (ii). Specifically, under the NIH Guidelines, supervision of human gene transfer trials includes evaluation and assessment by an IBC, a local institutional committee that reviews and oversees research utilizing recombinant or synthetic nucleic acid molecules at that institution. The IBC assesses the safety of the research and identifies any potential risk to public health or the environment, and such review may result in some delay before initiation of a clinical trial. While the NIH Guidelines are not mandatory unless the research in question is being conducted at or sponsored by institutions receiving NIH funding for recombinant or synthetic nucleic acid molecule research, many companies and other institutions not otherwise subject to the NIH Guidelines voluntarily follow them.

Information about clinical trials must be submitted within specific timeframes to the NIH for public dissemination on its ClinicalTrials.gov website.

Clinical trials typically are conducted in three sequential phases that may overlap or be combined:

- Phase 1. The biological product is initially introduced into healthy human subjects and tested for safety. In the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients.
- Phase 2. The biological product is evaluated in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance, optimal dosage and dosing schedule.
- Phase 3. Clinical trials are undertaken to further evaluate dosage, clinical efficacy, potency and safety in an expanded patient population at geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the product and provide an adequate basis for approval and product labeling.

Post-approval clinical trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. These clinical trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication, particularly for long-term safety follow-up. The FDA generally recommends that sponsors of human gene therapy products integrating vectors such as gammaretroviral and lentiviral vectors and

transposon elements as well as genome editing products observe subjects for potential gene therapy-related delayed adverse events for up to a 15-year period, including five years of annual examinations followed by ten years of annual queries, either by telephone or by questionnaire, of study subjects.

Both the FDA and the European Medicines Agency, or EMA, provide expedited pathways for the development of drug product candidates for treatment of rare diseases, particularly life-threatening diseases with high unmet medical need. Such drug product candidates may be eligible to proceed to registration following a single clinical trial in a limited patient population, sometimes referred to as a Phase 1/2 trial, but which may be deemed a pivotal or registrational trial following review of the trial's design and primary endpoints by the applicable regulatory agencies. Determination of the requirements to be deemed a pivotal or registrational trial is subject to the applicable regulatory authority's scientific judgement and these requirements may differ in the U.S. and the European Union, or EU.

During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data, and clinical trial investigators. Annual progress reports detailing the results of the clinical trials must be submitted to the FDA. Written IND safety reports must be promptly submitted to the FDA, the NIH and the investigators for serious and unexpected adverse events, any findings from other studies, tests in laboratory animals or *in vitro* testing that suggest a significant risk for human subjects, or any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure. The sponsor must submit an IND safety report within 15 calendar days after the sponsor determines that the information qualifies for reporting. The sponsor also must notify the FDA of any unexpected fatal or life-threatening suspected adverse reaction within 7 calendar days after the sponsor's initial receipt of the information. Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, if at all. The FDA or the sponsor, acting on its own or based on a recommendation from the sponsor's data safety monitoring board may suspend a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the biological product has been associated with unexpected serious harm to patients.

Human gene therapy products are still a relatively new category of therapeutics. Because this is a still an expanding area of novel therapeutic interventions, there can be no assurance as to the length of the study period, the number of patients the FDA will require to be enrolled in the studies in order to establish the safety, purity and potency of human gene therapy products, or that the data generated in these studies will be acceptable to the FDA to support marketing approval.

Concurrent with clinical trials, companies usually complete additional animal studies and also must develop additional information about the physical characteristics of the biological product as well as finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. To help reduce the risk of the introduction of adventitious agents with use of biological products, the PHS Act emphasizes the importance of manufacturing control for products whose attributes cannot be precisely defined. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, the sponsor must develop methods for testing the identity, strength, quality, potency and purity of the final biological product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the biological product candidate does not undergo unacceptable deterioration over its shelf life.

U.S. Review and Approval Processes

After the completion of clinical trials of a biological product, FDA approval of a BLA must be obtained before commercial marketing of the biological product. The BLA must include results of product development, laboratory and animal studies, human studies, information on the manufacture and composition of the product, proposed labeling and other relevant information. The testing and approval processes require substantial time and effort and there can be no assurance that the FDA will accept the BLA for filing and, even if filed, that any approval will be granted on a timely basis, if at all.

Within 60 days following submission of the application, the FDA reviews a BLA submitted to determine if it is substantially complete before the FDA accepts it for filing. The FDA may refuse to file any BLA that it deems incomplete or not properly reviewable at the time of submission and may request additional information. In this event, the BLA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing. In most cases, the submission of a BLA is subject to a substantial application user fee, although the fee may be waived under certain circumstances. Under the performance goals and policies implemented by the FDA under the Prescription Drug User Fee Act, or PDUFA, for original BLAs, the FDA targets ten months from the filing date in which to complete its initial review of a standard application and respond to the applicant, and six months from the filing date for an application with priority review. The FDA does not always meet its PDUFA goal dates, and the review process is often significantly extended by FDA requests for additional information or clarification. This review typically takes twelve months from the date the BLA is submitted to the FDA because the FDA has approximately two months to make a ‘‘filing’’ decision. The review process and the PDUFA goal date may be extended by three months if the FDA requests or the BLA sponsor otherwise provides additional information or clarification regarding information already provided in the submission within the last three months before the PDUFA goal date.

Once the submission is accepted for filing, the FDA begins an in-depth substantive review of the BLA. The FDA reviews the BLA to determine, among other things, whether the proposed product is safe, pure and potent, for its intended use, and whether the product is being manufactured in accordance with cGMP to ensure the continued safety, purity and potency of such product. The FDA may refer applications for novel biological products or biological products that present difficult or novel questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions. During the biological product approval process, the FDA also will determine whether a Risk Evaluation and Mitigation Strategy, or REMS, is necessary to assure the safe use of the biological product. If the FDA concludes a REMS is needed, the sponsor of the BLA must submit a proposed REMS; the FDA will not approve the BLA without a REMS, if required.

Before approving a BLA, the FDA typically will inspect the facilities at which the product is manufactured. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. For a gene therapy product, the FDA also will not approve the product if the manufacturer is not in compliance with the CGTPs. These are FDA regulations that govern the methods used in, and the facilities and controls used for, the manufacture of human cells, tissues and cellular and tissue-based products, or HCT/Ps, which are human cells or tissue intended for implantation, transplant, infusion, or transfer into a human recipient. The primary intent of the CGTP requirements is to ensure that cell and tissue-based products are manufactured in a manner designed to prevent the introduction, transmission and spread of communicable disease. FDA regulations also require tissue establishments to register and list their HCT/Ps with the FDA and, when applicable, to evaluate donors through appropriate screening and testing. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites to assure that the clinical trials were conducted in compliance with IND study requirements and GCP requirements. During the ongoing COVID-19 pandemic, restrictions preventing the conduct or completion of facility or clinical site inspections can lead to FDA deferred action on marketing applications or the issuance of complete response letters. To assure cGMP, CGTP and GCP compliance, an applicant must incur significant expenditure of time, money and effort in the areas of training, record keeping, production and quality control.

Under the Pediatric Research Equity Act, or PREA, a BLA or supplement to a BLA for a novel product (e.g., new active ingredient, new indication, etc.) must contain data to assess the safety and effectiveness of the biological product for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may grant deferrals for submission of data or full or partial waivers. Unless otherwise required by regulation, PREA does not apply to any biological product for an indication for which orphan designation has been granted.

Notwithstanding the submission of relevant data and information, the FDA may ultimately decide that the BLA does not satisfy its regulatory criteria for approval and deny approval. Data obtained from clinical trials are not always conclusive and the FDA may interpret data differently than we interpret the same data. If the FDA decides not to approve the BLA in its present form, the FDA will issue a complete response letter that usually describes all of the specific deficiencies in the BLA identified by the FDA. The deficiencies identified may be minor, for example, requiring labeling changes, or major, for example, requiring additional clinical trials. Additionally, the complete response letter may include recommended actions that the applicant might take to place the application in a condition for approval. If a complete response letter is issued, the applicant may either resubmit the BLA, addressing all of the deficiencies identified in the letter or withdraw the application.

If a product receives regulatory approval, the approval may be significantly limited to specific diseases and dosages or the indications for use may otherwise be limited, including to subpopulations of patients, which could restrict the commercial value of the product. Further, the FDA may require that certain contraindications, warnings precautions or interactions be included in the product labeling. The FDA may impose restrictions and conditions on product distribution, prescribing or dispensing in the form of a REMS, or otherwise limit the scope of any approval. In addition, the FDA may require post-marketing clinical trials, sometimes referred to as Phase 4 clinical trials, designed to further assess a biological product's safety and effectiveness, and testing and surveillance programs to monitor the safety of approved products that have been commercialized.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biological product intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and making a drug or biological product available in the United States for this type of disease or condition will be recovered from sales of the product. Orphan product designation must be requested before submitting a BLA. After the FDA grants orphan product designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA.

Orphan product designation does not convey any advantage in or shorten the duration of the regulatory review and approval process. Orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers. If a product that has orphan designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications to market the same drug or biological product for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan exclusivity. Competitors, however, may receive approval of different products for the indication for which the orphan product has exclusivity or obtain approval for the same product but for a different indication for which the orphan product has exclusivity. Orphan product exclusivity also could block the approval of one of our products for seven years if a competitor obtains approval of the same biological product for the same use or indication, and we are unable to demonstrate that our product is clinically superior to the previously approved drug for the same use or indication. If a drug or biological product designated as an orphan product receives marketing approval for an indication broader than what is designated, it may not be entitled to orphan product exclusivity. Orphan drug status in the European Union has similar, but not identical, benefits.

Rare Pediatric Disease Designation and Priority Review Vouchers

Under the FD&C Act, the FDA incentivizes the development of drugs and biological products that meet the definition of a "rare pediatric disease," defined to mean a serious or life-threatening disease in which the serious of life-threatening manifestations primarily affect individuals aged from birth to 18 years and the disease affects fewer than 200,000 individuals in the United States or affects more than 200,000 in the United States and for which there is no reasonable expectation that the cost of developing and making in the United States a drug or biological product for such disease or condition will be received from sales in the United States of such drug or biological product. The sponsor of a product candidate for a rare pediatric disease may be eligible for a voucher that can be used to obtain a priority review for a subsequent human drug or biological product application after the date of approval of the rare

pediatric disease drug or biological product, referred to as a priority review voucher, or PRV. A sponsor may request rare pediatric disease designation from the FDA prior to the submission of its BLA. A rare pediatric disease designation does not guarantee that a sponsor will receive a PRV upon approval of its BLA. Moreover, a sponsor who chooses not to submit a rare pediatric disease designation request may nonetheless receive a PRV upon approval of their marketing application if they request such a voucher in their original marketing application and meet all of the eligibility criteria. If a PRV is received, it may be sold or transferred an unlimited number of times. Congress has extended the PRV program through September 30, 2024, with the potential for PRVs to be granted through September 30, 2026.

Expedited Development and Review Programs

The FDA has various programs, including fast track designation, breakthrough therapy designation, accelerated approval and priority review, that are intended to expedite or simplify the process for the development and FDA review of drugs and biologics that are intended for the treatment of serious or life-threatening diseases or conditions. These programs do not change the standards for approval but may help expedite the development or approval process. To be eligible for fast track designation, new drugs and biological products must be intended to treat a serious or life-threatening condition and demonstrate the potential to address unmet medical needs for the condition. Fast track designation applies to the combination of the product and the specific indication for which it is being studied. The sponsor of a new drug or biologic may request the FDA to designate the drug or biologic as a fast track product at any time during the clinical development of the product. One benefit of fast track designation, for example, is that the FDA may consider for review sections of the marketing application for a product that has received fast track designation on a rolling basis before the complete application is submitted.

Under the FDA's breakthrough therapy program, products intended to treat a serious or life-threatening disease or condition may be eligible for the benefits of the fast track program when preliminary clinical evidence demonstrates that such product may have substantial improvement on one or more clinically significant endpoints over existing therapies. Additionally, the FDA will seek to ensure the sponsor of a breakthrough therapy product receives timely advice and interactive communications to help the sponsor design and conduct a development program as efficiently as possible.

Any product is eligible for priority review if it has the potential to provide safe and effective therapy where no satisfactory alternative therapy exists or a significant improvement in the treatment, diagnosis or prevention of a disease compared to marketed products. The FDA will attempt to direct additional resources to the evaluation of an application for a new drug or biological product designated for priority review in an effort to facilitate the review. Under priority review, the FDA's goal is to review an application in six months once it is filed, compared to ten months for a standard review.

Additionally, a product may be eligible for accelerated approval. Drug or biological products studied for their safety and effectiveness in treating serious or life-threatening illnesses and that provide meaningful therapeutic benefit over existing treatments may receive accelerated approval, which means that they may be approved on the basis of adequate and well-controlled clinical trials establishing that the product has an effect on a surrogate endpoint that is reasonably likely to predict a clinical benefit, or on the basis of an effect on an intermediate clinical endpoint other than survival or irreversible morbidity. As a condition of approval, the FDA may require that a sponsor of a drug or biological product receiving accelerated approval perform adequate and well-controlled post-marketing clinical trials. In addition, the FDA currently requires as a condition for accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

RMAT Designation

As part of the 21st Century Cures Act, enacted in December 2016, Congress amended the FD&C Act to facilitate an efficient development program for, and expedite review of regenerative medicine advanced therapy, or RMAT, which include cell and gene therapies, therapeutic tissue engineering products, human cell and tissue products and combination products using any such therapies or products. RMAT do not include those HCT/Ps regulated solely under section 361 of the PHS Act and 21 CFR Part 1271. This program is intended to facilitate efficient development and expedite review of regenerative medicine therapies, which are intended to treat, modify,

reverse, or cure a serious or life-threatening disease or condition and qualify for RMAT designation. A drug sponsor may request that FDA designate a drug as a RMAT concurrently with or at any time after submission of an IND. FDA has 60 calendar days to determine whether the drug meets the criteria, including whether there is preliminary clinical evidence indicating that the drug has the potential to address unmet medical needs for a serious or life-threatening disease or condition. A BLA for a regenerative medicine therapy that has received RMAT designation may be eligible for priority review or accelerated approval through use of surrogate or intermediate endpoints reasonably likely to predict long-term clinical benefit, or reliance upon data obtained from a meaningful number of sites. Benefits of RMAT designation also include early interactions with FDA to discuss any potential surrogate or intermediate endpoint to be used to support accelerated approval. A regenerative medicine therapy with RMAT designation that is granted accelerated approval and is subject to post-approval requirements may fulfill such requirements through the submission of clinical evidence from clinical trials, patient registries, or other sources of real world evidence, such as electronic health records; the collection of larger confirmatory data sets; or post-approval monitoring of all patients treated with such therapy prior to its approval. Like some of the FDA's other expedited development programs, RMAT designation does not change the standards for approval but may help expedite the development or approval process.

Post-Approval Requirements

Maintaining substantial compliance with applicable federal, state and local statutes and regulations requires the expenditure of substantial time and financial resources. Rigorous and extensive FDA regulation of biological products continues after approval, particularly with respect to cGMP. We currently rely, and may continue to rely, on third parties for the production of clinical and commercial quantities of any products that we may commercialize. Manufacturers of our products are required to comply with applicable requirements in the cGMP regulations, including quality control and quality assurance and maintenance of records and documentation. Other post-approval requirements applicable to biological products, include reporting of cGMP deviations that may affect the identity, potency, purity and overall safety of a distributed product, record-keeping requirements, reporting of adverse effects, reporting updated safety and efficacy information, and complying with electronic record and signature requirements. After a BLA is approved, the product also may be subject to official lot release. As part of the manufacturing process, the manufacturer is required to perform certain tests on each lot of the product before it is released for distribution. If the product is subject to official release by the FDA, the manufacturer submits samples of each lot of product to the FDA together with a release protocol showing a summary of the history of manufacture of the lot and the results of all of the manufacturer's tests performed on the lot. The FDA also may perform certain confirmatory tests on lots of some products, such as viral vaccines, before releasing the lots for distribution by the manufacturer. In addition, the FDA conducts laboratory research related to the regulatory standards on the safety, purity, potency and effectiveness of biological products.

We also must comply with the FDA's advertising and promotion requirements, such as those related to direct-to-consumer advertising, the prohibition on promoting products for uses or in patient populations that are not described in the product's approved labeling (known as "off-label use"), industry-sponsored scientific and educational activities, and promotional activities involving the internet. Discovery of previously unknown problems or the failure to comply with the applicable regulatory requirements may result in restrictions on the marketing of a product or withdrawal of the product from the market as well as possible civil or criminal sanctions. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval, may subject an applicant or manufacturer to administrative or judicial civil or criminal sanctions and adverse publicity. FDA sanctions could include refusal to approve pending applications, withdrawal of an approval, clinical holds, warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, mandated corrective advertising or communications with doctors or other stakeholders, debarment, restitution, disgorgement of profits, or civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on us.

Biological product manufacturers and other entities involved in the manufacture and distribution of approved biological products are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP and other laws. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain cGMP compliance. Discovery of problems with a product after approval may result

in restrictions on a product, manufacturer, or holder of an approved BLA, including withdrawal of the product from the market. In addition, changes to the manufacturing process or facility generally require prior FDA approval before being implemented and other types of changes to the approved product, such as adding new indications and additional labeling claims, are also subject to further FDA review and approval.

U.S. Patent Term Restoration and Marketing Exclusivity

Depending upon the timing, duration and specifics of the FDA approval of the use of our product candidates, some U.S. patents that may issue from our pending patent applications may be eligible for limited patent term extension under the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent term restoration period is generally one-half the time between the effective date of an IND and the submission date of a BLA plus the time between the submission date of a BLA and the approval of that application, except that the review period is reduced by any time during which the applicant failed to exercise due diligence. Only one patent applicable to an approved biological product is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent. In addition, only those claims covering the approved product, a method for using it, or a method for manufacturing it may be extended, and a patent can only be extended once and only for a single product. The USPTO, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we may apply for restoration of patent term for one of the patents that may issue from our pending patent applications, if and as applicable, to add patent life beyond its current expiration date, depending on the expected length of the clinical trials and other factors involved in the filing of the relevant BLA. However, there can be no assurance that our pending patent applications will issue or that we will benefit from any patent term extension or favorable adjustments to the terms of any patents we may own or in-license in the future.

A biological product can obtain pediatric market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods, including some regulatory exclusivity periods tied to patent terms. This six-month exclusivity, which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric study in accordance with an FDA-issued "Written Request" for such a study.

The ACA, signed into law on March 23, 2010, includes a subtitle called the Biologics Price Competition and Innovation Act of 2009 which created an abbreviated approval pathway for biological products shown to be similar to, or interchangeable with, an FDA-licensed reference biological product. This amendment to the PHS Act attempts to minimize duplicative testing. Biosimilarity, which requires that there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity and potency, can be shown through analytical studies, animal studies and a clinical trial or trials. Interchangeability requires that a product is biosimilar to the reference product and the product must demonstrate that it can be expected to produce the same clinical results as the reference product and, for products administered multiple times, the biologic and the reference biologic may be switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic.

A reference biological product is granted four- and 12-year exclusivity periods from the time of first licensure of the product. FDA will not accept an application for a biosimilar or interchangeable product based on the reference biological product until four years after the date of first licensure of the reference product, and FDA will not approve an application for a biosimilar or interchangeable product based on the reference biological product until twelve years after the date of first licensure of the reference product. "First licensure" typically means the initial date the particular product at issue was licensed in the United States. Date of first licensure does not include the date of licensure of (and a new period of exclusivity is not available for) a biological product if the licensure is for a supplement for the biological product or for a subsequent application by the same sponsor or manufacturer of the biological product (or licensor, predecessor in interest, or other related entity) for a change (not including a modification to the structure of the biological product) that results in a new indication, route of administration, dosing schedule, dosage form, delivery system, delivery device or strength, or for a modification to the structure of the biological product that does not result in a change in safety, purity, or potency. Therefore, one must determine

whether a new product includes a modification to the structure of a previously licensed product that results in a change in safety, purity, or potency to assess whether the licensure of the new product is a first licensure that triggers its own period of exclusivity. Whether a subsequent application, if approved, warrants exclusivity as the "first licensure" of a biological product is determined on a case-by-case basis with data submitted by the sponsor.

Additional Regulation

In addition to the foregoing, state and federal laws regarding environmental protection and hazardous substances, including the Occupational Safety and Health Act, the Resource Conservancy and Recovery Act and the Toxic Substances Control Act, affect our business. These and other laws govern our use, handling and disposal of various biological, chemical and radioactive substances used in, and wastes generated by, our operations. If our operations result in contamination of the environment or expose individuals to hazardous substances, we could be liable for damages and governmental fines. We believe that we are in material compliance with applicable environmental laws and that continued compliance therewith will not have a material adverse effect on our business. We cannot predict, however, how changes in these laws may affect our future operations.

U.S. Foreign Corrupt Practices Act

The U.S. Foreign Corrupt Practices Act, to which we are subject, prohibits corporations and individuals from engaging in certain activities to obtain or retain business or to influence a person working in an official capacity. It is illegal to pay, offer to pay or authorize the payment of anything of value to any foreign government official, government staff member, political party or political candidate in an attempt to obtain or retain business or to otherwise influence a person working in an official capacity.

Government Regulation Outside of the United States

In addition to regulations in the United States, we are subject to a variety of regulations in other jurisdictions governing, among other things, research and development, clinical trials, testing, manufacturing, safety, efficacy, labeling, packaging, storage, record keeping, distribution, reporting, advertising and other promotional practices involving biological products as well as authorization and approval of our products. Because biologically sourced raw materials are subject to unique contamination risks, their use may be restricted in some countries.

The requirements and process governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, the clinical trials must be conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki. If we fail to comply with applicable foreign regulatory requirements, we may be subject to, among other things, fines, suspension of clinical trials, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

European Union Clinical Trials Regulation

In April 2014, the European Union adopted a new Clinical Trials Regulation (EU) No 536/2014, which came into effect and replaced the current Clinical Trials Directive 2001/20/EC on January 31, 2022 and overhauled the system of approvals for clinical trials in the European Union. Specifically, the new Regulation, which is directly applicable in all Member States (meaning that no national implementing legislation in each European Union Member State is required), aims at simplifying and streamlining the approval of clinical trials in the European Union. For instance, the new Clinical Trials Regulation provides for a streamlined application procedure via a single entry point and strictly defined deadlines for the assessment of clinical trial applications.

European Union Drug Review and Approval

In the European Union, medicinal products can only be commercialized after obtaining a marketing authorization. To obtain regulatory approval of a medicinal product in the European Union, we must submit a marketing authorization application, or MAA. A centralized marketing authorization is issued by the European Commission through the centralized procedure, based on the opinion of the Committee for Medicinal Products for Human Use, or CHMP, of the EMA, and is valid throughout the European Union, and in the additional Member

States of the EEA (Norway, Iceland and Liechtenstein). The centralized procedure is mandatory for certain types of products, such as biotechnology medicinal products, orphan medicinal products, advanced-therapy medicinal products (gene-therapy, somatic cell-therapy or tissue-engineered medicines), and medicinal products containing a new active substance indicated for the treatment of HIV, AIDS, cancer, neurodegenerative disorders, diabetes, auto-immune and other immune dysfunctions, and viral diseases. The centralized procedure is optional for products containing a new active substance not yet authorized in the European Union, or for products that constitute a significant therapeutic, scientific or technical innovation or which are in the interest of public health in the European Union.

Under the centralized procedure the maximum timeframe for the evaluation of an MAA by the EMA is 210 days, excluding clock stops, when additional written or oral information is to be provided by the applicant in response to questions asked by the CHMP. Clock stops may extend the timeframe of evaluation of an MAA considerably beyond 210 days. Where the CHMP gives a positive opinion, it provides the opinion together with supporting documentation to the European Commission, who make the final decision to grant a marketing authorization, which is issued within 67 days of receipt of the EMA's recommendation. Accelerated assessment might be granted by the CHMP in exceptional cases, when a medicinal product is expected to be of major public health interest, particularly from the point of view of therapeutic innovation. The timeframe for the evaluation of an MAA under the accelerated assessment procedure is 150 days, excluding clock stops, but it is possible that the CHMP may revert to the standard time limit for the centralized procedure if it determines that the application is no longer appropriate to conduct an accelerated assessment.

Now that the UK (which comprises Great Britain and Northern Ireland) has left the European Union, Great Britain is no longer covered by centralized marketing authorizations (under the Northern Ireland Protocol, centralized marketing authorizations will continue to be recognized in Northern Ireland). All medicinal products with a current centralized marketing authorization were automatically converted to Great Britain marketing authorizations on January, 1 2021. For a period of two years from January 1, 2021, the Medicines and Healthcare products Regulatory Agency, or MHRA, the UK medicines regulator, may rely on a decision taken by the European Commission on the approval of a new marketing authorization in the centralized procedure, in order to more quickly grant a new Great Britain marketing authorization. A separate application will, however, still be required.

Periods of Authorization and Renewals

A marketing authorization is valid for five years, in principle, and it may be renewed after five years on the basis of a re-evaluation of the risk benefit balance by the EMA for a centrally authorized product, or by the competent authority of the authorizing Member State for a nationally authorized product. Once renewed, the marketing authorization is valid for an unlimited period, unless the European Commission or the competent authority decides, on justified grounds relating to pharmacovigilance, to proceed with one additional five-year renewal period. Any authorization that is not followed by the placement of the drug on the EU market (in the case of the centralized procedure) or on the market of the authorizing Member State for a nationally authorized product within three years after authorization, or if the drug is removed from the market for three consecutive years, ceases to be valid (the so-called sunset clause).

Data and Marketing Exclusivity

The European Union also provides opportunities for market exclusivity. Upon receiving marketing authorization in the European Union, innovative medicinal products generally receive eight years of data exclusivity and an additional two years of market exclusivity. If granted, data exclusivity prevents generic or biosimilar applicants from referencing the innovator's preclinical and clinical trial data contained in the dossier of the reference product when applying for a generic or biosimilar marketing authorization in the European Union, during a period of eight years from the date on which the reference product was first authorized in the European Union. During the additional two-year period of market exclusivity, a generic or biosimilar marketing authorization can be submitted and the innovator's data may be referenced, but no generic or biosimilar product can be marketed until the expiration of the market exclusivity period. The overall ten-year period will be extended to a maximum of eleven years if, during the first eight years of those ten years, the marketing authorization holder obtains an authorization for one or more new therapeutic indications which, during the scientific evaluation prior to authorization, is held to

bring a significant clinical benefit in comparison with existing therapies. Even if an innovative medicinal product gains the prescribed period of data exclusivity, another company may market another version of the product if such company obtained a marketing authorization based on an MAA with a complete independent data package of pharmaceutical tests, preclinical tests and clinical trials. There is, however, no guarantee that a product will be considered by the European Union's regulatory authorities to be an innovative medicinal product, and products may therefore not qualify for data exclusivity.

Orphan Drug Designation and Exclusivity

The criteria for designating an "orphan medicinal product" in the European Union are similar in principle to those in the United States. Under Article 3 of Regulation (EC) 141/2000, a medicinal product may be designated as an orphan medicinal product if it meets the following criteria: (1) it is intended for the diagnosis, prevention or treatment of a life-threatening or chronically debilitating condition; and (2) either the prevalence of such condition must not be more than five in 10,000 persons in the European Union when the application is made, or without the benefits derived from orphan status, it must be unlikely that the marketing of the medicine would generate sufficient return in the European Union to justify the investment needed for its development; and (3) there exists no satisfactory method of diagnosis, prevention or treatment of such condition authorized for marketing in the European Union, or if such a method exists, the product will be of significant benefit to those affected by the condition, as defined in Regulation (EC) 847/2000. Orphan medicinal products are eligible for financial incentives such as reduction of fees or fee waivers. The application for orphan drug designation must be submitted before the application for marketing authorization. The applicant will receive a fee reduction for the MAA if the orphan drug designation has been granted, but not if the designation is still pending at the time the marketing authorization is submitted. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process.

Products with an orphan designation in the European Union can receive ten years of market exclusivity, during which time no "similar medicinal product" for the same indication may be placed on the market. A "similar medicinal product" is defined as a medicinal product containing a similar active substance or substances as contained in an authorized orphan medicinal product, and which is intended for the same therapeutic indication. An orphan product can also obtain an additional two years of market exclusivity in the European Union where an agreed pediatric investigation plan for pediatric studies has been complied with. No extension to any supplementary protection certificate can be granted on the basis of pediatric studies for orphan indications.

The 10-year market exclusivity may be reduced to six years if, at the end of the fifth year, it is established that the product no longer meets the criteria for orphan designation, for example, if the product is sufficiently profitable not to justify maintenance of market exclusivity. Otherwise, orphan medicine marketing exclusivity may be revoked only in very select cases, such as if:

- a second applicant can establish that its product, although similar, is safer, more effective or otherwise clinically superior;
- the marketing authorization holder of the authorized orphan product consents to a second orphan medicinal product application; or
- the marketing authorization holder of the authorized orphan product cannot supply enough orphan medicinal product.

Pediatric Development

In the European Union, companies developing a new medicinal product must agree upon a Pediatric Investigation Plan, or PIP, with the EMA's Pediatric Committee, or PDCO, and must conduct pediatric clinical trials in accordance with that PIP, unless a waiver applies, (e.g., because the relevant disease or condition occurs only in adults). The PIP sets out the timing and measures proposed to generate data to support a pediatric indication of the drug for which marketing authorization is being sought. The marketing authorization application for the product must include the results of pediatric clinical trials conducted in accordance with the PIP, unless a waiver applies or a deferral has been granted by the PDCO of the obligation to implement some or all of the measures of the PIP until

there are sufficient data to demonstrate the efficacy and safety of the product in adults, in which case the pediatric clinical trials must be completed at a later date. Products that are granted a marketing authorization with the results of the pediatric clinical trials conducted in accordance with the PIP are eligible for a six month extension of the protection under a supplementary protection certificate even where the trial results are negative. In the case of orphan medicinal products, a two year extension of the orphan market exclusivity may be available. This pediatric reward is subject to specific conditions and is not automatically available when data in compliance with the PIP are developed and submitted.

PRIME Designation

In March 2016, the EMA launched an initiative to facilitate development of product candidates in indications, often rare, for which few or no therapies currently exist. The PRIority MEdicines, or PRIME, scheme is intended to encourage drug development in areas of unmet medical need and provides accelerated assessment of products representing substantial innovation, where the marketing authorization application will be made through the centralized procedure. Eligible products must target conditions for which where is an unmet medical need (there is no satisfactory method of diagnosis, prevention or treatment in the EEA or, if there is, the new medicine will bring a major therapeutic advantage) and they must demonstrate the potential to address the unmet medical need by introducing new methods of therapy or improving existing ones. Products from small- and medium-sized enterprises may qualify for earlier entry into the PRIME scheme than larger companies. Many benefits accrue to sponsors of product candidates with PRIME designation, including but not limited to, early and proactive regulatory dialogue with the EMA, frequent discussions on clinical trial designs and other development program elements and accelerated marketing authorization application assessment once a dossier has been submitted. Importantly, a dedicated Agency contact and rapporteur from the CHMP or CAT are appointed early in PRIME scheme facilitating increased understanding of the product at EMA's Committee level. A kick-off meeting initiates these relationships and includes a team of multidisciplinary experts at the EMA to provide guidance on the overall development and regulatory strategies. Where, during the course of development, a medicine no longer meets the eligibility criteria, support under the PRIME scheme may be withdrawn.

Post-Approval Controls

Following approval, the holder of the marketing authorization is required to comply with a range of requirements applicable to the manufacturing, marketing, promotion and sale of the medicinal product. These include the following:

- The holder of a marketing authorization must establish and maintain a pharmacovigilance system and appoint an individual qualified person for pharmacovigilance, who is responsible for oversight of that system. Key obligations include expedited reporting of suspected serious adverse reactions and submission of periodic safety update reports, or PSURs.
- All new MAAs must include a risk management plan, or RMP, describing the risk management system that the company will put in place and documenting measures to prevent or minimize the risks associated with the product. The regulatory authorities may also impose specific obligations as a condition of the marketing authorization. Such risk-minimization measures or post-authorization obligations may include additional safety monitoring, more frequent submission of PSURs or the conduct of additional clinical trials or post-authorization safety studies. RMPs and PSURs are routinely available to third parties requesting access, subject to limited redactions.
- All advertising and promotional activities for the product must be consistent with the approved Summary of Product Characteristics and therefore all off-label promotion is prohibited. Direct-to-consumer advertising of prescription medicines is also prohibited in the European Union. Although general requirements for advertising and promotion of medicinal products are established under European Union directives, the details are governed by regulations in each European Union Member State and can differ from one country to another.

Brexit and the Regulatory Framework in the United Kingdom

In June 2016, the electorate in the United Kingdom voted in favor of leaving the European Union (commonly referred to as "Brexit"). Thereafter, in March 2017, the country formally notified the European Union of its intention to withdraw pursuant to Article 50 of the Lisbon Treaty. The United Kingdom formally left the European Union on January 31, 2020. A transition period began on February 1, 2020, during which European Union pharmaceutical law remained applicable to the United Kingdom. This transition period ended on December 31, 2020. Since the regulatory framework in the United Kingdom covering quality, safety and efficacy of pharmaceutical products, clinical trials, marketing authorization, commercial sales and distribution of pharmaceutical products is derived from European Union Directives and Regulations, Brexit could materially impact the future regulatory regime which applies to products and the approval of product candidates in the United Kingdom as United Kingdom legislation now has the potential to diverge from European Union legislation. It remains to be seen how Brexit will impact regulatory requirements for product candidates and products in the United Kingdom in the long-term. The MHRA, the United Kingdom medicines and medical devices regulator, has recently published detailed guidance for industry and organizations to follow from January 1, 2021 now that the transition period is over, which will be updated as the United Kingdom's regulatory position on medicinal products evolves over time. Brexit has also created uncertainty with regard to data protection regulation in the United Kingdom, and in particular, how data transfers from the European Union to the United Kingdom will be regulated. The European Union and the United Kingdom have agreed a bridging period of up to 6 months to allow the continued free flow of data from the European Union to the United Kingdom, during which time the European Commission will assess whether the United Kingdom will be granted adequacy status. There is no certainty that an adequacy decision will be granted. If it is not, legal uncertainties regarding the flow of data across borders could increase the complexity and cost of transferring personal data from the European Union to the United Kingdom.

Other Healthcare Laws and Compliance Requirements

Insurance and Coverage

In the United States and markets in other countries, patients generally rely on third-party payors to reimburse all or part of the costs associated with their treatment. Adequate coverage and reimbursement from governmental healthcare programs, such as Medicare and Medicaid, and commercial payors is critical to new product acceptance. Our ability to successfully commercialize our product candidates will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from government health administration authorities, private health insurers and other organizations. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which medications they will pay for and establish reimbursement levels. The availability of coverage and extent of reimbursement by governmental and private payors is essential for most patients to be able to afford treatments such as gene therapy products. Sales of these or other product candidates that we may identify will depend substantially, both domestically and abroad, on the extent to which the costs of our product candidates will be paid by health maintenance, managed care, pharmacy benefit and similar healthcare management organizations, or reimbursed by government health administration authorities, private health coverage insurers and other third-party payors. If coverage and adequate reimbursement is not available, or is available only to limited levels, we may not be able to successfully commercialize our product candidates. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize a sufficient return on our investment.

There is also significant uncertainty related to the insurance coverage and reimbursement of newly approved products and coverage may be more limited than the purposes for which the medicine is approved by the FDA or comparable foreign regulatory authorities. In the United States, the principal decisions about reimbursement for new medicines are typically made by the Centers for Medicare & Medicaid Services, or CMS, an agency within the U.S. Department of Health and Human Services, or HHS. CMS decides whether and to what extent a new medicine will be covered and reimbursed under Medicare and private payors tend to follow CMS to a substantial degree. Factors payors consider in determining reimbursement are based on whether the product is:

- a covered benefit under its health plan;

- safe, effective and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

In addition, many third-party payors are increasingly limiting both coverage and the level of reimbursement of new drugs. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. We cannot be sure that reimbursement will be available for any product candidate that we commercialize and, if reimbursement is available, the level of reimbursement. In addition, many pharmaceutical manufacturers must calculate and report certain price reporting metrics to the government, such as average sales price, or ASP, and best price. Penalties may apply in some cases when such metrics are not submitted accurately and timely. Further, these prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs. Net prices for drugs may be also reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States.

Further, due to the COVID-19 pandemic, millions of individuals have lost/will be losing employer-based insurance coverage, which may adversely affect our ability to commercialize our products, As noted above, in the U.S., we plan to have various programs to help patients afford our products, including patient assistance programs and co-pay coupon programs for eligible patients.

Other healthcare laws and compliance requirements

In the United States, our current and future operations are subject to regulation by various federal, state and local authorities in addition to the FDA, including but not limited to, CMS, other divisions of HHS (such as the Office of Inspector General, Office for Civil Rights and the Health Resources and Service Administration), the U.S. Department of Justice, or DOJ, and individual U.S. Attorney offices within the DOJ, and state and local governments. For example, our clinical research, sales, marketing and scientific/educational grant programs may have to comply with the anti-fraud and abuse provisions of the Social Security Act, the false claims laws, the privacy and security provisions of the Health Insurance Portability and Accountability Act of 1996, or HIPAA, and similar state laws, each as amended, as applicable:

- the federal Anti-Kickback Statute, which prohibits, among other things, knowingly and willfully soliciting, receiving, offering or paying any remuneration (including any kickback, bribe, or rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce, or in return for, either the referral of an individual, or the purchase, lease, order, arrangement or recommendation of any good, facility, item or service for which payment may be made, in whole or in part, under a federal healthcare program, such as the Medicare and Medicaid programs; a person or entity does not need to have actual knowledge of the federal Anti-Kickback Statute or specific intent to violate it to have committed a violation. This statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand, and prescribers, purchasers and formulary managers, among others, on the other. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act or federal civil money penalties statute;
- the federal civil and criminal false claims laws and civil monetary penalty laws, including the False Claims Act, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, false or fraudulent claims for payment to, or approval by, Medicare, Medicaid, or other federal healthcare programs, knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim or obligation to pay or transmit money or property to the federal government, or knowingly concealing or knowingly and improperly avoiding or decreasing or concealing an obligation to pay money to the federal government. A claim that includes items or services resulting

from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim under the False Claims Act. Manufacturers can be held liable under the False Claims Act even when they do not submit claims directly to government payors if they are deemed to "cause" the submission of false or fraudulent claims. The False Claims Act also permits a private individual acting as a "whistleblower" to bring actions on behalf of the federal government alleging violations of the False Claims Act and to share in any monetary recovery;

- HIPAA, which created additional federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false, fictitious, or fraudulent statements or representations in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;

- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, including the Final Omnibus Rule published in January 2013, which impose requirements on certain covered healthcare providers, health plans, and healthcare clearinghouses as well as their respective business associates that perform services for them that involve the use, or disclosure of, individually identifiable health information, relating to the privacy, security and transmission of individually identifiable health information. HITECH also created new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions;

- the federal transparency requirements under the Affordable Care Act, or ACA, including the provision commonly referred to as the Physician Payments Sunshine Act, and its implementing regulations, which require applicable manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to CMS, information related to payments or other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Effective January 1, 2022, these reporting obligations extended to include transfers of value made to certain non-physician providers such as physician assistants and nurse practitioners;

- federal government price reporting laws, which require us to calculate and report complex pricing metrics in an accurate and timely manner to government programs;

- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers; and

- analogous state and foreign law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by any third-party payor, including commercial insurers or patients; state laws that require pharmaceutical companies to comply with the industry's voluntary compliance guidelines and the applicable compliance guidance promulgated by the federal government or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state and local laws that require the licensure of sales representatives; state laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures and pricing information; data privacy and security laws and regulations in foreign jurisdictions that may be more stringent than those in the United States (such as the European Union, which adopted the General Data Protection Regulation, which became effective in May 2018); state laws governing the privacy and security of health information in

certain circumstances, many of which differ from each other in significant ways and may not have the same effect; and state laws related to insurance fraud in the case of claims involving private insurers.

Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available, it is possible that some of our business activities could be subject to challenge under one or more of such laws.

Law enforcement authorities are increasingly focused on enforcing fraud and abuse laws, and it is possible that some of our practices may be challenged under these laws. Efforts to ensure that our current and future business arrangements with third parties, and our business generally, will comply with applicable healthcare laws and regulations will involve substantial costs. If our operations, including our arrangements with physicians and other healthcare providers, are found to be in violation of any of such laws or any other governmental regulations that apply to us, we may be subject to penalties, including, without limitation, administrative, criminal and/or civil penalties, damages, fines, disgorgement, reputational harm, imprisonment, the exclusion or suspension from federal and state healthcare programs such as Medicare and Medicaid and debarment from contracting with the U.S. government, and/or the curtailment or restructuring of our operations, as well as additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws. If any of the physicians or other healthcare providers or entities with whom we expect to do business are found to be not in compliance with applicable laws, they may be subject to similar penalties.

The risk of our being found in violation of these laws is increased by the fact that many of these laws have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. The shifting compliance environment and the need to build and maintain a robust system to comply with multiple jurisdictions with different compliance and reporting requirements increases the possibility that a healthcare company may violate one or more of the requirements. Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial cost.

Healthcare reform

In the United States and some foreign jurisdictions, there have been, and likely will continue to be, a number of legislative and regulatory changes and proposed changes regarding the healthcare system directed at broadening the availability of healthcare, improving the quality of healthcare, and containing or lowering the cost of healthcare. For example, in March 2010, the ACA, was enacted which includes changes to the coverage and payment for products under government health care programs. Among other things, the ACA:

- increases the minimum Medicaid rebates owed by most manufacturers under the Medicaid Drug Rebate Program;
- addresses a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected;
- extends the Medicaid Drug Rebate Program to utilization of prescriptions of individuals enrolled in Medicaid managed care plans;
- establishes annual fees and taxes on manufacturers of certain branded prescription drugs;
- creates a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50 percent (increased to 70 percent pursuant to the Bipartisan Budget Act of 2018, effective as of 2019) point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D.;
- expanded the entities eligible for discounts under the PHS Act's pharmaceutical pricing program, also known as the 340B Drug Pricing Program;

There have been executive, judicial and congressional challenges to certain aspects of the ACA. On February 10, 2021, the Biden administration withdrew the federal government's support for overturning the ACA. On June 17, 2021, the U.S. Supreme Court dismissed the most recent judicial challenge to the ACA brought by several states without specifically ruling on the constitutionality of the ACA. Prior to the Supreme Court's decision, President Biden issued an executive order that initiated a special enrollment period for purposes of obtaining health insurance coverage through the ACA marketplace, from February 15, 2021 through August 15, 2021. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. It is unclear how other healthcare reform measures of the Biden administration or other efforts, if any, to challenge, repeal, or replace the ACA will impact our business. There is no assurance that federal or state health care reform will not adversely affect our future business and financial results, and we cannot predict how future federal or state legislative, judicial or administrative changes relating to healthcare reform will affect our business.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted. For example, on March 22, 2021, President Biden signed the American Rescue Plan Act of 2021 into law, which eliminates the statutory Medicaid drug rebate cap, currently set at 100 percent of a drug's average manufacturer price, for single source and innovator multiple source drugs, beginning January 1, 2024. Further, in August 2011, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. Specifically, the Joint Select Committee on Deficit Reduction, asked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers of up to 2 percent per fiscal year, which went into effect in April 2013, and, due to subsequent legislative amendments, will remain in effect through 2030 unless additional Congressional action is taken. However, COVID-19 relief legislation suspended the 2 percent Medicare sequester reductions from May 1, 2020 through December 31, 2021. On January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. The Bipartisan Budget Act, or BBA, also amended the ACA, effective January 1, 2019, by increasing the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D and closing the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole."

Furthermore, the prices of prescription pharmaceuticals in the United States and foreign jurisdictions is subject to considerable legislative and executive actions and could impact the prices we obtain for our products, if and when licensed. At the U.S. federal level, the former Trump administration used several means to propose or implement drug pricing reform, including through federal budget proposals, executive orders and policy initiatives. For example, on July 24, 2020 and September 13, 2020, the Trump administration announced several executive orders related to prescription drug pricing that seek to implement several of the administration's proposals. As a result, the FDA released a final rule on September 24, 2020, effective November 30, 2020, providing guidance for states to build and submit importation plans for drugs from Canada. Further, on November 20, 2020, HHS finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Medicare Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The implementation of the rule has been delayed by the Biden administration from January 1, 2022 to January 1, 2023 in response to ongoing litigation. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a new safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers, the implementation of which have also been delayed until January 1, 2023. On November 20, 2020, CMS, issued an interim final rule implementing the Trump administration's Most Favored Nation executive order, which would tie Medicare Part B payments for certain physician-administered drugs to the lowest price paid in other economically advanced countries, effective January 1, 2021.

On December 28, 2020, the U.S. District Court in Northern California issued a nationwide preliminary injunction against implementation of the interim final rule. It is unclear whether the Biden administration will work

to reverse these measures or pursue similar policy initiatives. In addition to pricing regulations, reforms of regulatory approval frameworks may adversely affect our pricing strategy. For example, on July 9, 2021, President Biden issued an executive order directing the FDA to, among other things, continue to clarify and improve the approval framework for biosimilars, including the standards for interchangeability of biological products, facilitate the development and approval of biosimilar and interchangeable products, clarify existing requirements and procedures related to the review and submission of BLAs, and identify and address any efforts to impede biosimilar competition. Individual states in the United States have also become increasingly active in passing legislation and implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. It is difficult to predict the future legislative landscape in healthcare and the effect on our business, results of operations, financial condition and prospects. However, we expect that additional state and federal healthcare reform measures will be adopted in the future, particularly in light of the new presidential administration. Further, it is possible that additional governmental action is taken in response to the ongoing COVID-19 pandemic. At the state level, legislatures have also been increasingly passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

Employees and Human Capital Resources

As of June 30, 2022, we had 137 full-time employees, of which 75 have M.D. or Ph.D. degrees. Within our workforce, 115 employees are engaged in research and development and 22 are engaged in business development, finance, legal, and general management and administration. None of our employees are represented by labor unions or covered by collective bargaining agreements. We consider our relationship with our employees to be good.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and new employees, advisors and consultants. The principal purposes of our equity incentive plans are to attract, retain and reward personnel through the granting of equity-based compensation awards in order to increase shareholder value and the success of our company by motivating such individuals to perform to the best of their abilities and achieve our objectives.

Facilities

Our corporate headquarters is located in Cambridge, Massachusetts, where we lease and occupy approximately 10,000 square feet of office space at 21 Erie Street, Cambridge, MA 02139. The current term of our lease expires in March 14, 2023. The company also occupies approximately 13,000 square feet of office space at 38 Sidney Street, Cambridge, MA 02139 and, as of April 2022, we occupied approximately 27,000 square feet of combined laboratory and office space at 64 Sidney Street, Cambridge, MA 02139. As of May 2022, we also leased approximately 16,000 square feet of combined laboratory and office space at 480 Arsenal Street, Watertown, MA 02472. In addition, we have secured approximately 148,941 square feet in new office and laboratory space at 60 First Street, Cambridge, MA 02141 that we do not expect to occupy until 2024.

We believe that our facilities are adequate for our current needs and for the foreseeable future. To meet the future needs of our business, we may lease additional or alternate space. We believe that suitable additional or substitute space at commercially reasonable terms will be available as needed to accommodate any future expansion of our operations.

Legal proceedings

From time to time, we may become involved in litigation or other legal proceedings arising in the ordinary course of business. We are not currently a party to any litigation or legal proceedings that, in the opinion of our management, are probable to have a material adverse effect on our business. Regardless of outcome, litigation can

have an adverse impact on our business, financial condition, results of operations and prospects because of defense and settlement costs, diversion of management resources and other factors.

MANAGEMENT

The following table sets forth information about our executive officers, significant employees and directors as of the date of this prospectus.

Name	Age	Position(s)
Executive Officers and Significant Employees		
Keith Gottesdiener, M.D.	68	President, Chief Executive Officer and Director
Jeremy Duffield, M.D. Ph.D., FRCP	54	Chief Scientific Officer
Ann Lee, Ph.D.	61	Chief Technical Officer
Carman Alenson	57	Interim Chief Financial Officer and Chief Accounting Officer
Meredith Goldwasser, Sc.D.	51	Senior Vice President, Strategy and Corporate Operations
Andrew Anzalone	36	Senior Scientist II, Head of Prime Editing Platform
Richard Brudnick	66	Chief Business Officer
Non-Employee Directors		
Robert Nelsen[1]	59	Director
Thomas Cahill, M.D., Ph.D.[2][3]	36	Director
David Schenkein, M.D.[1][3]	65	Director
Wendy Chung, M.D., Ph.D.[2][3]	53	Director
Michael Kelly[2]	65	Director
Kaye Foster[1]	62	Director

(1) Member of our compensation committee
(2) Member of our audit committee
(3) Member of our nominating and corporate governance committee

The following is a biographical summary of the experience of our executive officers and directors. There are no family relationships among any of our executive officers or directors.

Executive Officers and Significant Employees

Keith Gottesdiener, M.D. has served as our Chief Executive Officer and a member of our board of directors since July 2020. Prior to that, from October 2011 until March 2020, Dr. Gottesdiener served as the Chief Executive Officer and a director of Rhythm Pharmaceuticals, Inc., a biopharmaceutical company. Dr. Gottesdiener joined Rhythm after 16 years at Merck Research Laboratories, where he held positions of increasing responsibility, including serving as a leader of Merck's late clinical development organization from 2006 to 2011 and leading Merck's early clinical development across all therapeutic areas from 2001 through early 2006. Dr. Gottesdiener currently serves as a director of Intercept Pharmaceuticals, Inc., and Cardurion Pharmaceuticals, both biotechnology companies. He received his M.D. from the University of Pennsylvania and his B.A. in Applied Mathematics from Harvard College.

We believe that Dr. Gottesdiener is qualified to serve on our board of directors based on his extensive experience as a senior executive in the pharmaceutical industry, his drug development and regulatory affairs expertise, his research work for both medical and academic institutions, his public company experience, as well as his knowledge of our company based on his role as our President and Chief Executive Officer.

Jeremy Duffield, M.D., Ph.D., FRCP, has served as our Chief Scientific Officer since January 2021. Prior to that, he served at Vertex Pharmaceuticals Incorporated, a biopharmaceutical company, as Vice President of Business Development from December 2018 to January 2021 and Global Head of Human Biology from July 2016 to November 2018, where his team worked on discovering and advancing candidates to clinical studies in rare diseases. Dr. Duffield also practiced Internal Medicine and Nephrology at Massachusetts General Hospital from November 2013 to September 2019. Prior to that, he served as Senior Research Fellow and Vice President at Biogen Inc. and as

a member of the faculty at University of Washington and Harvard Medical School. Dr. Duffield received his Ph.D. in Immunology from the University of Edinburgh in the laboratory of Sir John Savill, and his M.D. (B.M., B.Ch.) and B.A. in Physiological Sciences from Oxford University.

Ann L. Lee, Ph.D., has served as our Chief Technical Officer since October 2021. Prior to that, Dr. Lee served as Senior Vice President and Head of Cell Therapy Development and Operations at Bristol-Myers Squibb Company, a biopharmaceutical company, from November 2019 to July 2021, as Executive Vice President of Cell Therapy Development and Operations at Celgene Corporation, a biopharmaceutical company, from April 2018 to November 2019 and as Executive Vice President of Technical Operations at Juno Therapeutics, Inc., a biotechnology company, from November 2017 to April 2018. From April 2009 to November 2017, Dr. Lee served as Senior Vice President and Global Head of Pharma Technical Development at Genentech, Inc., a Roche Group subsidiary and a biotechnology company. Dr. Lee received her Ph.D. in biochemical engineering from Yale University and her B.S. in chemical engineering from Cornell University.

Carman Alenson, CPA, M.B.A., has served as our interim Chief Financial Officer and Chief Accounting Officer since September 2022 and has served as our Senior Vice President, Finance since January 2022. Ms. Alenson joined Prime Medicine in August 2021 as Vice President, Finance. Prior to that, she served as Vice President, Accounting, Treasury and Tax at Agios Pharmaceuticals, Inc., a biopharmaceutical company, from November 2016 to July 2021. Prior to that, from April 2015 to October 2016, she was Executive Director of Accounting, Controller, and Assistant Treasurer at AMAG Pharmaceuticals, Inc., a specialty pharmaceuticals company, where she managed the corporate accounting group. Ms. Alenson is a certified public accountant, and received her M.B.A. and B.A. in Economics and Business Administration from Boston University.

Meredith Goldwasser, Sc.D., has served as our Head of Strategy and Corporate Operations since September 2020. Prior to that, Dr. Goldwasser held leadership roles at Agios Pharmaceuticals, Inc., including Vice President and Development Lead for the IDH Hematology program from November 2017 to September 2020 as well as Oncology Business Development Lead from July 2019 to September 2020. She was also Vice President and Head of Biometrics and Data Management at Agios from August 2014 to July 2019. From February 2011 to July 2014, Dr. Goldwasser served as the U.S. Group Head of Biostatistics and Oncology Translational Medicine at Novartis International AG. Dr. Goldwasser received her Sc.D. in Biostatistics from Harvard. She holds a B.A. in Psychology from the University of Pennsylvania.

Andrew Anzalone, M.D., Ph.D., joined Prime Medicine in August 2020 as Co-Founder and Head of the Prime Editing Platform. Prior to this, Dr. Anzalone was a postdoctoral researcher as a Jane Coffin Childs Memorial Fund Postdoctoral Fellow at Broad Institute. Dr. Anzalone received his Sc.B. in Chemistry from Brown University and his M.D. and Ph.D. from Columbia University.

Richard Brudnick has served as our Chief Business Officer since July 2022. Prior to that, he served as Chief Business Officer and Head of Corporate Strategy of Codiak BioSciences, Inc., a clinical-stage biopharmaceutical company, from June 2018 to July 2022 and as the Executive Vice President, Business Development of Bioverativ Inc., a biotechnology company, from May 2016 to March 2018. From July 2009 to May 2016, Mr. Brudnick worked at Biogen Inc., a biotechnology company, where he held positions of increasing responsibility, including serving as Senior Vice President of Corporate Development from August 2014 to May 2016. Mr. Brudnick currently serves on the Board of Directors of InflaRx N.V., VolitionRx Limited and Tamarix Pharma Ltd. Mr. Brudnick received his B.S. and M.S. in Management Science from the Massachusetts Institute of Technology.

Non-Employee Directors

Robert Nelsen has served as a member of our board of directors since September 2020 pursuant to ARCH's right to appoint a representative to our board of directors under our Voting Agreement, dated as of September 26, 2019, in connection with our Series A preferred stock financing, which was amended and restated on April 20, 2021 in connection with our Series B preferred stock financing. Mr. Nelsen co-founded ARCH Venture Partners, L.P., a venture capital firm focused on early-stage technology companies, in 1986 and has served as a Managing Director of ARCH Venture Partners or its affiliated entities since 1994. Mr. Nelsen currently serves on the board of directors of Brii Biosciences Limited, Denali Therapeutics Inc., Vir Biotechnology, Inc., Sana Biotechnology, Inc., Lyell

Immunopharma, Inc., Revolution Healthcare Acquisition Corp., and Hua Medicine, Inc., each a public biotechnology company, and currently serves on the board of directors of a number of private companies. Mr. Nelsen previously served on the board of directors of a number of public biotechnology companies, including Unity Biotechnology, Inc. from 2015 to December 2020, Agios Pharmaceuticals, Inc. from 2007 to June 2017, Syros Pharmaceuticals, Inc. from 2012 to June 2018, Juno Therapeutics, Inc. (acquired by Celgene Corporation in January 2018) from 2013 to March 2018, Sienna Biopharmaceuticals, Inc. from 2015 to September 2018 and Gossamer Bio, Inc. from 2017 to December 2018 (prior to its initial public offering). Mr. Nelsen received his M.B.A. from the University of Chicago and his B.S. from the University of Puget Sound in Economics and Biology.

We believe that Mr. Nelsen is qualified to serve on our board of directors because of his extensive experience as a venture capitalist, building and serving boards of many public and private emerging companies, including multiple life sciences, biotechnology and pharmaceutical companies.

Thomas Cahill, M.D., Ph.D. has served as a member of our board of directors since November 2021. Dr. Cahill is the Founder and Managing Partner of Newpath Partners, a Boston based life science venture fund focused on therapeutic companies. Dr. Cahill is the founding investor and director of Chroma Medicine, Exo Therapeutics, Kisbee Therapeutics, Kojin Therapeutics, Magnet Biomedicine, Myeloid Therapeutics, and Resonance Medicine. Prior to Newpath Partners, Dr. Cahill served as an Advisor at Raptor Group Holdings, where he helped further establish and lead the life science and technology investment portfolio, from September 2016 to May 2018. Dr. Cahill received both his M.D. and Ph.D. from Duke University and his M.S. from Stanford University.

We believe that Dr. Cahill is qualified to serve on our board of directors based on his experience in the medical and venture capital industries.

David Schenkein, M.D. has served as a member of our board of directors since September 2019 pursuant to GV's right to appoint a representative to our board of directors under our Voting Agreement, dated as of September 26, 2019, in connection with our Series A preferred stock financing, which was amended and restated on April 20, 2021 in connection with our Series B preferred stock financing. Dr. Schenkein currently serves as a partner in GV, the venture capital investment arm of Alphabet Inc., which he joined in February 2019. Previously, Dr. Schenkein served as President and Chief Executive Officer of Agios Pharmaceuticals from August 2009 to February 2019. From April 2006 to July 2009, Dr. Schenkein served as a Senior Vice President of Oncology Development at Genentech Inc. Dr. Schenkein currently serves as the Executive Chairman of the board of directors of Agios Pharmaceuticals and as a member of the board of directors of Denali Therapeutics Inc. Previously, Dr. Schenkein served on the board of directors of Foundation Medicine, Inc. and bluebird bio, Inc. He also currently serves as an adjunct attending physician in hematology at Tufts Medical Center. Dr. Schenkein received his M.D. from the State University of New York Upstate Medical School and his B.A. in Chemistry from Wesleyan University.

We believe that Dr. Schenkein is qualified to serve on our board of directors because of his extensive background in the biotechnology industry and leadership experience as a senior executive and director of biotechnology companies.

Wendy Chung, M.D., Ph.D., has served as a member of our board of directors since November 2021. Dr. Chung is an American Board of Medical Genetics certified clinical and molecular geneticist and leads the Precision Medicine Resource in the Irving Institute at Columbia University, a position she has held since February 2014. Dr. Chung has been on the faculty at Columbia University since 2002, most recently as the Kennedy Family Professor of Pediatrics and Medicine at Columbia University, a position she has held since July 2017. Prior to that, from June 2014 to July 2017, she was an Associate Professor at Columbia University. She received her B.A. in Biochemistry from Cornell University, her M.D. from Cornell University Medical College, and her Ph.D. in Genetics from The Rockefeller University.

We believe that Dr. Chung is qualified to serve on our board of directors because of her extensive experience in medicine and genetics research.

Michael A. Kelly has served as a member of our board of directors since November 2021. Mr. Kelly is currently acting as Founder & President of Sentry Hill Partners, LLC, a global life sciences transformation and management consulting business founded by Mr. Kelly in January 2018. From February 2003 to December 2017 he was a senior

executive of Amgen, Inc., a biotechnology company, where he most recently served as Senior Vice President, Global Business Services and Vice President & Chief Financial Officer, International Commercial Operations. He also serves on the boards of directors of: Amicus Therapeutics, Inc., a biotechnology company, which he joined in December 2020; Aprea Therapeutics, Inc., a biotechnology company, which he joined in September 2020; DMC Global Inc., a composite materials and oil field products company, which he joined in July 2020; NeoGenomics Laboratories, Inc., a genetics testing company, which he joined in July 2020; and Hookipa Pharma Inc., a biopharmaceutical company, which he joined in February 2019. Mr. Kelly has also held positions at Tanox, Inc., Biogen, Inc., and Nutrasweet Kelco Company, a division of Monsanto Life Sciences. He also serves on the Council of Advisors and was the former audit committee chairman for Direct Relief, a humanitarian aid organization focused on health outcomes and disaster relief. Mr. Kelly received his B.Sc. in Business Administration from Florida A&M University, concentrating in Finance and Industrial Relations.

We believe that Mr. Kelly is qualified to serve on our board of directors because of his extensive experience in managing and growing global healthcare and biotechnology companies.

Kaye Foster has served as a member of our board of directors since December 2021. Ms. Foster has been a Senior Advisor at the Boston Consulting Group since August 2014. Previously, she was Senior Vice President, Global Human Resources at Onyx Pharmaceuticals, Inc., an Amgen, Inc. subsidiary and a biopharmaceutical company, from October 2010 to January 2014. At Onyx, she led all aspects of human resources for U.S. and global operations. Prior to joining Onyx, Ms. Foster was Global Vice President of Human Resources and an Executive Committee member at Johnson and Johnson Corporation, a healthcare company, from May 2003 to March 2010. Before Johnson and Johnson, Ms. Foster held several senior human resources executive positions with Pfizer Inc., a pharmaceuticals company. She currently serves on the board of directors and compensation and community equity committees of Resilience Inc.; on the board of directors and real estate and nominations committees of Stanford Health Care, a hospital and healthcare system; on the board of trustees and the human resources committee of Spelman College; and chairs the Glide Memorial Foundation Board of Trustees. She received her B.B.A. in Business Administration from Baruch College of the City University of New York and her M.B.A. from Columbia University, Graduate School of Business.

We believe Ms. Foster is qualified to serve on our board of directors because of her extensive experience as an executive in the pharmaceuticals industry, including her experience in people management, compensation planning and driving and maintaining corporate culture.

Board Composition

Our board of directors currently consists of seven members, each of whom is a member pursuant to the board composition provisions of our current certificate of incorporation and agreements with our stockholders, which agreements are described in the section of this prospectus entitled “Certain Relationships and Related Person Transactions.” These board composition provisions will terminate upon the closing of this offering. Upon the termination of these provisions, there will be no further contractual obligations regarding the election of our directors. Our nomination and corporate governance committee and our board of directors may therefore consider a broad range of factors relating to the qualifications and background of nominees. Our nomination and corporate governance committee’s and our board of directors’ priority in selecting board members is identification of persons who will further the interests of our stockholders through their established record of professional accomplishment, the ability to contribute positively to the collaborative culture among board members, knowledge of our business, understanding of the competitive landscape, professional and personal experiences and expertise relevant to our growth strategy. Our directors hold office until their successors have been elected and qualified or until their earlier resignation or removal. Our third amended and restated certificate of incorporation that will become effective immediately prior to the closing of this offering and our amended and restated bylaws that will become effective upon the effectiveness of the registration statement of which this prospectus is a part, also provide that our directors may be removed only for cause by the affirmative vote of the holders of at least two-thirds of the votes that all our stockholders would be entitled to cast in an annual election of directors, and that any vacancy on our board of directors, including a vacancy resulting from an enlargement of our board of directors, may be filled only by vote of a majority of our directors then in office.

Staggered Board

In accordance with the terms of our third amended and restated certificate of incorporation that will become effective immediately prior to the closing of this offering and our amended and restated bylaws that will become effective upon the effectiveness of the registration statement of which this prospectus is a part, our board of directors will be divided into three staggered classes of directors and each director will be assigned to one of the three classes. At each annual meeting of the stockholders, one class of directors will be elected for a three-year term to succeed the directors of the same class whose terms are then expiring. The terms of the directors will expire upon the election and qualification of successor directors at the annual meeting of stockholders to be held during the years 2023 for Class I directors, 2024 for Class II directors and 2025 for Class III directors.

- Our Class I directors will be Michael Kelly and David Schenkein;
- Our Class II directors will be Kaye Foster, Wendy Chung and Keith Gottesdiener; and
- Our Class III directors will be Thomas Cahill and Robert Nelsen.

Our third amended and restated certificate of incorporation that will become effective immediately prior to the closing of this offering and our amended and restated bylaws that will become effective upon the effectiveness of the registration statement of which this prospectus is a part provide that the number of our directors shall be fixed from time to time by a resolution of the majority of our board of directors.

The division of our board of directors into three classes with staggered three-year terms may delay or prevent stockholder efforts to effect a change of our management or a change in control.

Director Independence

We have applied to list our common stock on The Nasdaq Global Market. Under the Nasdaq listing rules, independent directors must comprise a majority of a listed company's board of directors within twelve months from the date of listing. In addition, the Nasdaq listing rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and governance committees be independent within twelve months from the date of listing. Audit committee members must also satisfy additional independence criteria, including those set forth in Rule 10A-3 under the Securities Exchange Act of 1934, or the Exchange Act, and compensation committee members must also satisfy the independence criteria set forth in Rule 10C-1 under the Exchange Act. Under Nasdaq listing rules, a director will only qualify as an "independent director" if, in the opinion of that company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In order to be considered independent for purposes of Rule 10A-3 under the Exchange Act, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors, or any other board committee: (i) accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries, other than compensation for board service; or (ii) be an affiliated person of the listed company or any of its subsidiaries. In order to be considered independent for purposes of Rule 10C-1, the board of directors must consider, for each member of a compensation committee of a listed company, all factors specifically relevant to determining whether a director has a relationship to such company which is material to that director's ability to be independent from management in connection with the duties of a compensation committee member, including, but not limited to: the source of compensation of the director, including any consulting advisory or other compensatory fee paid by such company to the director, and whether the director is affiliated with the company or any of its subsidiaries or affiliates.

In February 2022, our board of directors undertook a review of the composition of our board of directors and its committees and the independence of each director. Based upon information requested from and provided by each director concerning his background, employment and affiliations, including family relationships, our board of directors has determined that all members of our board of directors, except Keith Gottesdiener, are independent directors, including for purposes of Nasdaq and the SEC rules. In making that determination, our board of directors considered the relationships that each director has with us and all other facts and circumstances the board of directors deemed relevant in determining independence, including the potential deemed beneficial ownership of our

capital stock by each director, including non-employee directors that are affiliated with certain of our major stockholders. Upon the completion of this offering, we expect that the composition and functioning of our board of directors and each of our committees will comply with all applicable requirements of Nasdaq and the rules and regulations of the SEC. There are no family relationships among any of our executive officers and directors.

We intend to adopt a policy, subject to and effective upon the effectiveness of the registration statement of which this prospectus forms a part, that outlines a process for our securityholders to send communications to the board of directors.

Board Committees

Our board of directors has established an audit committee, a compensation committee and a nomination and corporate governance committee, each of which will operate pursuant to a charter to be adopted by our board of directors and will be effective upon the effectiveness of the registration statement of which this prospectus forms a part. We believe that the composition and functioning of all of our committees will comply with the applicable requirements of Nasdaq, the Sarbanes-Oxley Act of 2002 and SEC rules and regulations that will be applicable to us. We intend to comply with future requirements to the extent they become applicable to us.

Following the consummation of this offering, the full text of our audit committee charter, compensation committee charter and nomination and corporate governance committee charter will be posted on the investor relations portion of our website at https://www.primemedicine.com. We do not incorporate the information contained on, or accessible through, our corporate website into this prospectus, and you should not consider it a part of this prospectus.

Audit Committee

Upon the effectiveness of the registration statement of which this prospectus forms a part, our audit committee will consist of Michael Kelly, Thomas Cahill and Wendy Chung and will be chaired by Mr. Kelly. The functions of the audit committee will include:

- appointing, approving the compensation of, and assessing the independence of our independent registered public accounting firm;
- pre-approving auditing and permissible non-audit services, and the terms of such services, to be provided by our independent registered public accounting firm;
- reviewing the overall audit plan with our independent registered public accounting firm and members of management responsible for preparing our financial statements;
- reviewing and discussing with management and our independent registered public accounting firm our annual and quarterly financial statements and related disclosures as well as critical accounting policies and practices used by us;
- coordinating the oversight and reviewing the adequacy of our internal control over financial reporting;
- establishing policies and procedures for the receipt and retention of accounting-related complaints and concerns;
- recommending based upon the audit committee's review and discussions with management and our independent registered public accounting firm whether our audited financial statements shall be included in our Annual Report on Form 10-K;
- monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to our financial statements and accounting matters;
- preparing the audit committee report required by SEC rules to be included in our annual proxy statement;

- reviewing all related person transactions for potential conflict of interest situations and approving all such transactions; and
- reviewing quarterly earnings releases.

All members of our audit committee will meet the requirements for financial literacy under the applicable rules and regulations of the SEC and the Nasdaq listing rules. Our board of directors has determined that Michael Kelly qualifies as an "audit committee financial expert" within the meaning of applicable SEC regulations. In making this determination, our board of directors considered the nature and scope of experience that Michael Kelly has previously had with public reporting companies, including service as a principal financial officer and principal accounting officer. Our board of directors has determined that all of the directors that will become members of our audit committee upon the effectiveness of the registration statement of which this prospectus forms a part satisfy the relevant independence requirements for service on the audit committee set forth in the rules of the SEC and the Nasdaq listing rules. Both our independent registered public accounting firm and management will periodically meet privately with our audit committee.

Compensation Committee

Upon the effectiveness of the registration statement of which this prospectus forms a part, our compensation committee will consist of Kaye Foster, David Schenkein and Robert Nelsen, and will be chaired by Ms. Foster. The functions of the compensation committee will include:

- annually reviewing and recommending to the board of directors the corporate goals and objectives relevant to the compensation of our Chief Executive Officer;
- evaluating the performance of our Chief Executive Officer in light of such corporate goals and objectives and based on such evaluation (i) reviewing and determining the cash compensation of our Chief Executive Officer and (ii) reviewing and approving grants and awards to our Chief Executive Officer under equity-based plans;
- reviewing and approving the compensation of our other executive officers;
- reviewing and establishing our overall management compensation, philosophy and policy;
- overseeing and administering our compensation and similar plans;
- evaluating and assessing potential and current compensation advisors in accordance with the independence standards identified in the applicable Nasdaq listing rules;
- reviewing and approving our policies and procedures for the grant of equity-based awards;
- reviewing and recommending to the board of directors the compensation of our directors;
- preparing our compensation committee report if and when required by SEC rules;
- reviewing and discussing annually with management our "Compensation Discussion and Analysis," if and when required, to be included in our annual proxy statement; and
- reviewing and approving the retention or termination of any consulting firm or outside advisor to assist in the evaluation of compensation matters.

Each member of our compensation committee will be a non-employee director, as defined in Rule 16b-3 promulgated under the Exchange Act, and an outside director, as defined pursuant to Section 162(m) of the Internal Revenue Code of 1986, as amended (the Code).

Nominating and Corporate Governance Committee

Upon the effectiveness of the registration statement of which this prospectus forms a part, our nominating and corporate governance committee will consist of David Schenkein, Wendy Chung and Thomas Cahill and will be chaired by Mr. Schenkein. The functions of the nominating and corporate governance committee will include:

- developing and recommending to the board of directors criteria for board and committee membership;
- establishing procedures for identifying and evaluating board of director candidates, including nominees recommended by stockholders;
- reviewing the composition of the board of directors to ensure that it is composed of members containing the appropriate skills and expertise to advise us;
- identifying individuals qualified to become members of the board of directors;
- recommending to the board of directors the persons to be nominated for election as directors and to each of the board's committees;
- developing and recommending to the board of directors a code of business conduct and ethics and a set of corporate governance guidelines; and
- overseeing the evaluation of our board of directors and management.

Our board of directors may from time to time establish other committees.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee is, or has at any time during the prior three years been, one of our officers or employees. None of our executive officers currently serve, or have in the past fiscal year served, as a member of the board of directors or compensation committee of any entity that has one or more of its executive officers serving as a member of our board of directors or our compensation committee.

Code of Business Conduct and Ethics

Our board of directors intends to adopt, subject to and effective upon the effectiveness of the registration statement of which this prospectus forms a part, a Code of Business Conduct and Ethics in connection with this offering. The Code of Business Conduct and Ethics will apply to all of our employees, officers (including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions), agents and representatives, including directors and consultants.

We intend to disclose future amendments to certain provisions of our Code of Business Conduct and Ethics and our Code of Ethics on our website identified below. Upon the completion of this offering, the full text of our Code of Business Conduct and Ethics and our Code of Ethics will be posted on our website at https://www. primemedicine.com. The inclusion of our website address in this prospectus does not include or incorporate by reference the information on our website into this prospectus, and you should not consider that information a part of this prospectus.

Limitations on Liability and Indemnification Agreements

As permitted by Delaware law, provisions in our third amended and restated certificate of incorporation, which will become effective immediately prior to the closing of this offering, and our amended and restated bylaws, which will become effective upon the effectiveness of the registration statement of which this prospectus is a part, limit or eliminate the personal liability of directors for a breach of their fiduciary duty of care as a director. The duty of care generally requires that, when acting on behalf of the corporation, a director exercise an informed business judgment based on all material information reasonably available to him or her. Consequently, a director will not be personally

liable to us or our stockholders for monetary damages or breach of fiduciary duty as a director, except for liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- any act related to unlawful stock repurchases, redemptions or other distributions or payments of dividends; or
- any transaction from which the director derived an improper personal benefit.

These limitations of liability do not limit or eliminate our rights or any stockholder's rights to seek non-monetary relief, such as injunctive relief or rescission. These provisions will not alter a director's liability under other laws, such as the federal securities laws or other state or federal laws. Our third amended and restated certificate of incorporation that will become effective immediately prior to the closing of this offering also authorizes us to indemnify our officers, directors and other agents to the fullest extent permitted under Delaware law.

As permitted by Delaware law, our amended and restated bylaws to be effective upon the effectiveness of the registration statement of which this prospectus is a part will provide that:

- we will indemnify our directors, officers, employees and other agents to the fullest extent permitted by law;
- we must advance expenses to our directors and officers, and may advance expenses to our employees and other agents, in connection with a legal proceeding to the fullest extent permitted by law; and
- the rights provided in our amended and restated bylaws are not exclusive.

If Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a director or officer, then the liability of our directors or officers will be so eliminated or limited to the fullest extent permitted by Delaware law, as so amended. Our amended and restated bylaws will also permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in connection with their services to us, regardless of whether our amended and restated bylaws permit such indemnification. We have obtained such insurance.

In addition to the indemnification that will be provided for in our third amended and restated certificate of incorporation and amended and restated bylaws, we plan to enter into separate indemnification agreements with each of our directors and executive officers, which may be broader than the specific indemnification provisions contained in the Delaware General Corporation Law. These indemnification agreements may require us, among other things, to indemnify our directors and executive officers for some expenses, including attorneys' fees, expenses, judgments, fines and settlement amounts incurred by a director or executive officer in any action or proceeding arising out of his service as one of our directors or executive officers or any other company or enterprise to which the person provides services at our request. We believe that these provisions and agreements are necessary to attract and retain qualified individuals to serve as directors and executive officers.

This description of the indemnification provisions of our third amended and restated certificate of incorporation, our amended and restated bylaws and our indemnification agreements is qualified in its entirety by reference to these documents, each of which is attached as an exhibit to the registration statement of which this prospectus forms a part.

Insofar as indemnification for liabilities arising under the Securities Act, may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable.

There is no pending litigation or proceeding naming any of our directors or officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

EXECUTIVE COMPENSATION

The following discussion contains forward looking statements that are based on our current plans, considerations, expectations and determinations regarding our future compensation programs. The actual amount and form of compensation and the compensation policies and practices that we adopt in the future may differ materially from currently planned programs as summarized in this discussion.

As an emerging growth company, we have opted to comply with the executive compensation disclosure rules applicable to "smaller reporting companies," as such term is defined in the rules promulgated under the Securities Act. The compensation provided to our named executive officers for the fiscal years ended December 31, 2020 and December 31, 2021 are detailed in the 2021 Summary Compensation Table and accompanying footnotes and narrative that follow. Our named executive officers for the fiscal year ended December 31, 2021 are:

- Keith Gottesdiener, M.D., President and Chief Executive Officer;
- Jeremy S. Duffield, M.D., Ph.D., FRCP, Chief Scientific Officer; and
- Ann L. Lee, Ph.D., Chief Technical Officer.

To date, the compensation of our named executive officers has consisted of a combination of base salary, cash bonuses and long-term incentive compensation in the form of restricted stock awards and stock options. Our named executive officers, like all our full-time employees, are eligible to participate in our health and welfare benefit plans. As we transition from a private company to a publicly traded company, we intend to evaluate our compensation values and philosophy and compensation plans and arrangements as circumstances require.

2021 Summary Compensation Table

The following table shows the total compensation awarded to, earned by, or paid to, our named executive officers for services rendered to us in all capacities during the fiscal years indicated.

Name and Principal Position	Year	Salary ($)	Bonus ($)[1]	Stock Awards ($)[2]	Option Awards ($)[3]	Non-Equity Incentive Plan Compensation ($)	All Other Compensation ($)	Total ($)
Keith Gottesdiener, MD	2021	524,000	327,500	—	2,072,325	—	15,608[4]	2,939,433
President and Chief Executive Officer	2020	252,068	257,500	323,943	—	—	101,413	934,924
Jeremy Duffield, MD, PhD[5]	2021	428,400	566,000	264,000	138,155	—		1,396,555
Chief Scientific Officer								
Ann Lee, PhD[6]	2021	108,750	54,247	—	4,144,650	—	8,193[7]	4,315,840
Chief Technical Officer								

(1) The amounts reflect discretionary bonuses earned by our named executive officers during the fiscal years ended December 31, 2021 and December 31, 2020, as applicable. Dr. Duffield's bonus amount also reflects a $350,000 signing bonus paid to him at the time of hire.

(2) The amounts reported represent the aggregate grant date fair value of the restricted stock awards granted to our named executive officers during the applicable fiscal year, calculated in accordance with Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 718. Such grant date fair values do not take into account any estimated forfeitures. The assumptions used in calculating the grant date fair value of the restricted stock awards reported in this column are set forth in note 8 of our consolidated financial statements included elsewhere in this prospectus. The amounts reported in this column reflect the accounting cost for these awards and do not correspond to the actual economic value that may be received by our named executive officers upon the vesting of the awards or any sale of the underlying shares of common stock. For Dr. Gottesdiener's performance-based restricted stock awards, the grant date fair values based on probable level of achievement of the applicable performance metrics were $0.00 for his 2021 and 2020 grants and the grant date fair values of such awards based on maximum level of achievement of the applicable performance metrics were $66,000 and $64,786, for his 2021 and 2020 grants, respectively. For Dr. Duffield's performance-based restricted stock award, the grant date fair value based on probable level of achievement of the applicable performance metrics was $0.00 and the grant date fair value of such award based on maximum level of achievement of the applicable performance metrics was $66,000.

(3) The amounts reported represent the aggregate grant date fair value of the stock options granted to our named executive officers during the applicable fiscal year, calculated in accordance with FASB ASC Topic 718. Such grant date fair values do not take into account any estimated forfeitures. The assumptions used in calculating the grant date fair value of the stock options reported in this column are set forth in note 8 of our consolidated financial statements included elsewhere in this prospectus. The amounts reported in this column reflect the

accounting cost for these awards and do not correspond to the actual economic value that may be received by our named executive officers upon the exercise of the awards or any sale of the underlying shares of common stock. One third of Dr. Lee's performance-based stock option to purchase 250,000 shares of common stock granted on October 27, 2021 will vest based on the Company's achievement of a third performance-based milestone requiring the building of a chemistry facility, initiation of pegRNA piloting operations, and production of a GLP toxicology lot suitable for *in vivo* non-human primate studies. This performance-based milestone was not determined in 2021, and was determined in 2022. As such, there was no grant date fair value associated with this tranche of the performance-based stock option for 2021. For the remainder of Dr. Lee's performance-based stock option, the grant date fair value based on probable level of achievement of the applicable performance metrics was $0.00 and the grant date fair value of such award based on maximum level of achievement of the applicable performance metrics was $1,381,550.

(4) Includes (i) $14,408 for reimbursements for commuting expenses incurred by Dr. Gottesdiener in 2021 for travel to and from New York, New York to our corporate headquarters in Cambridge, Massachusetts and (ii) $1,200 for reimbursements for cell phone expenses.

(5) Dr. Duffield commenced employment with us on January 4, 2021 and his 2021 base salary was pro-rated accordingly. His annual base salary rate for 2021 was $432,000. Dr. Duffield's 2021 annual bonus was not pro-rated, per the terms of his offer letter.

(6) Dr. Lee commenced employment with us on October 4, 2021 and her 2021 base salary was pro-rated accordingly. Her annual base salary for 2021 was $450,000. Dr. Lee's 2021 annual bonus was pro-rated per the terms, per the terms of her offer letter.

(7) Includes reimbursements for $5,530 in relocation expenses incurred by Dr. Lee in 2021 for travel from her residence in Seattle, Washington to our corporate headquarters in Cambridge, Massachusetts, house hunting trips and $2,663 in tax-gross up expenses on her relocation benefits.

Narrative Disclosure to Summary Compensation Table

2021 Base Salaries

Our named executive officers each receive a base salary to compensate them for services rendered to our Company. The base salary payable to each named executive officer is intended to provide a fixed component of compensation reflecting the executive's skill set, experience, role and responsibilities. Base salaries may be adjusted from time to time to realign salaries with market levels after taking into account individual responsibilities, performance and experience.

2021 Cash Bonuses

For the fiscal year ended December 31, 2021, each of the named executive officers was eligible to earn a discretionary annual cash bonus determined by our board of directors in its sole discretion, based on corporate and/or individual performance. The target annual bonus for each of our named executive officers for the fiscal year ended December 31, 2021 was equal to the percentage of the executive's respective annual base salary specified below:

Name	Target Bonus Percentage
Keith Gottesdiener, M.D.	50 %
Jeremy S. Duffield, M.D., Ph.D., FRCP	40 %
Ann Lee, Ph.D.	40 %

In addition, in the fiscal year ended December 31, 2021, Dr. Duffield received (i) a $350,000 signing bonus payable pursuant to the terms of his offer letter with the Company and (ii) a milestone bonus equal to $300,000, which can be earned and payable based on achievement of the following milestones, subject to Dr. Duffield's continued employment with the Company on each such date: one-third of the bonus will be earned and payable upon achievement of proof of concept in lead indication, one-third of the bonus will be earned and payable upon IND acceptance, and the remaining one-third of the bonus will be earned and payable upon the consummation of the Company's initial public offering. The initial one-third of such bonus became earned and payable upon achievement of proof concept in lead indication in May 2022.

Equity-Based Compensation

Although we do not yet have a formal policy with respect to the grant of equity incentive awards to our executive officers, we believe that equity grants provide our executives with a strong link to our long-term performance, create an ownership culture and help to align the interests of our executives and our stockholders. In addition, we believe that equity grants promote executive retention because they incentivize our executive officers to remain in our employment during the vesting period. Accordingly, our board of directors periodically

reviews the equity incentive compensation of our named executive officers and may grant equity incentive awards to them from time to time. In furtherance of these goals, in 2021 each of our named executive officers was granted restricted stock award(s) and/or stock option(s). For additional information regarding outstanding equity awards held by our named executive officers as of December 31, 2021, see the "Outstanding Equity Awards at 2021 Fiscal Year End" table below.

Perquisites/Personal Benefits

Perquisites or other personal benefits are not a significant component of our executive compensation program. Accordingly, we do not provide significant perquisites or other personal benefits to our executive officers, including our named executive officers, except for reimbursements for relocation, commuting and/or cell phone expenses for certain named executive officers, as described above in the "2021 Summary Compensation Table".

401(k) Plan

We maintain a retirement savings plan, or 401(k) plan, that is intended to qualify for favorable tax treatment under Section 401(a) of the Code, and contains a cash or deferred feature that is intended to meet the requirements of Section 401(k) of the Code. U.S. employees are generally eligible to participate in the 401(k) plan, subject to certain criteria. Participants may make pre-tax and certain after-tax (Roth) salary deferral contributions to the plan from their eligible earnings up to the statutorily prescribed annual limit under the Code. Participants who are 50 years of age or older may contribute additional amounts based on the statutory limits for catch-up contributions. Participant contributions are held in trust as required by law. In the fiscal year ended December 31, 2021, we did not provide any matching contributions under our 401(k) plan.

Outstanding Equity Awards at 2021 Fiscal Year End

The following table lists all outstanding equity awards held by our named executive officers as of December 31, 2021.

			Options[1]					Stock Awards[1]			
Name	Grant Date	Vesting Commencement Date	Number of Securities Underlying Unexercised Option (#) Exercisable	Number of Securities Underlying Unexercised Option (#) Unexercisable	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Option (#)	Option Exercise Price	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested ($)[2]	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested ($)[2]
Keith Gottesdiener, M.D.	10/27/2021	10/27/2021	31,250[3]	718,750[3]		1.18	10/26/2031				
	3/4/2021									600,000[4]	2,106,000
	7/28/2020	6/20/2020						6,748,816[5]	23,688,344		
	7/28/2020									2,159,621[4]	7,580,270
Jeremy Duffield, M.D., Ph.D.	10/27/2021	10/27/2021	2,083[3]	47,917[3]		1.18	10/26/2031				
	1/16/2021	1/4/2021						2,400,000[5]	8,424,000		
	1/16/2021									600,000[4]	2,106,000
Ann Lee, Ph.D.	10/27/2021	10/4/2021	—[6]	1,500,000		1.18	10/26/2031				
	10/27/2021				750,000[7]	1.18	10/26/2031				

(1) Each equity award was granted under the Company's 2019 Stock Option and Grant Plan, or the 2019 Plan.

(2) Assumes a market value of $3.51 per share, based on an independent valuation report in effect as of December 31, 2021.

(3) The shares underlying these options vest in equal monthly installments over 48 months commencing on the vesting commencement date, subject to the applicable named executive officer's continuous service relationship with the Company through each applicable vesting date. In the event of a termination of Dr. Gottesdiener's employment by the Company without Cause or by Dr. Gottesdiener for Good Reason (such terms as defined in Dr. Gottesdiener's offer letter), in either case within three months prior to or 12 months after a Sale Event (as defined in the 2019 Plan), all unvested shares will immediately vest as of the date of such termination event or Sale Event, as applicable. In addition, if upon a Sale Event, Dr. Gottesdiener is offered substantially equivalent employment terms by the successor and he remains employed by the Company or its successor for up to 6 months, all unvested shares will vest upon the 6- month anniversary of the Sale

Event. In the event of a termination of Dr. Duffield's employment by the Company without Cause or by Dr. Duffield for Good Reason (such terms as defined in Dr. Duffield's offer letter), in either case on or within 12 months after a Sale Event (as defined in the 2019 Plan), all unvested shares will immediately vest as of the date of such termination event.

(4) The underlying shares vest upon achievement of the following pre-determined milestone: one-third of the shares will vest upon achievement of proof of concept in lead indication, one-third will vest upon IND acceptance, and the remaining one-third will vest upon the consummation of the Company's initial public offering. The initial one-third of such shares vested upon achievement of proof concept in lead indication in May 2022. 100 percent of the underlying shares will immediately vest upon a Sale Event (as defined in the 2019 Plan) if (i) a Sale Event occurs prior to the date the Board determines in good faith that the milestones are achieved and prior to the Company's initial public offering or the Company otherwise becoming a public company, (ii) the per share proceeds distributable to the holders of preferred stock of the Company upon the consummation of such Sale Event is at least equal to the original issue price of the Company's most recently completed preferred stock financing and (iii) the applicable named executive officer continuous to have a service relationship with the Company at such time.

(5) The restricted shares vest as follows: 25 percent vest on the one year anniversary of the vesting commencement date, and 1/48th of the shares vest on a monthly basis thereafter, in each case subject to the applicable named executive officer's continuous service relationship with the Company through each applicable vesting date. In the event of a termination by the Company without Cause or by Dr. Gottesdiener for Good Reason (such terms as defined in Dr. Gottesdiener's offer letter), in either case within three months prior to or twelve months after a Sale Event (as defined in the 2019 Plan), all unvested shares will immediately vest as of the date of such termination event or Sale Event, as applicable. In addition, if upon a Sale Event, Dr. Gottesdiener is offered substantially equivalent employment terms by the successor and he remains employed by the Company or its successor for up to 6 months, all unvested shares will vest upon the six-month anniversary of the Sale Event. In the event of a termination of Dr. Duffield's employment by the Company without Cause or by Dr. Duffield for Good Reason (such terms as defined in Dr. Duffield's offer letter), in either case on or within 12 months after a Sale Event (as defined in the 2019 Plan), all unvested shares will immediately vest as of the date of such termination event.

(6) The shares underlying this option vest as follows: 25 percent vest on the one year anniversary of the vesting commencement date, and 1/48th of the shares vest on a monthly basis thereafter, in each case subject to Dr. Lee's continuous service relationship with the Company through each applicable vesting date. In the event of a termination by the Company without Cause or by Dr. Lee for Good Reason (such terms as defined in Dr. Lee's offer letter), in either case on or within 12 months after a Sale Event (as defined in the 2019 Plan), all unvested shares will immediately vest as of the date of such termination event.

(7) The underlying shares vest upon achievement of the following milestones: one-third will vest upon IND acceptance, one-third will vest upon the consummation of the Company's initial public offering and the remaining one-third will vest upon the achievement of a performance-based milestone requiring the building of a chemistry facility, initiation of pegRNA piloting operations, and production of a GLP toxicology lot suitable for *in vivo* non-human primate studies.

Executive Compensation Arrangements

We have entered into offer letters with each of our named executive officers. Each offer letter provides for "at-will" employment and the compensation and benefits described below. In connection with this offering, we entered into new employment agreements with our named executive officers that were effective as of July 2022.

Employment Arrangements in Place Prior to The Offering for Named Executive Officers

Keith M. Gottesdiener, M.D.

On June 24, 2020, we entered into an offer letter with Dr. Gottesdiener, or the Gottesdiener Offer Letter, for the position of President and Chief Executive Officer. The Gottesdiener Offer Letter provides for Mr. Gottesdiener's at-will employment. Dr. Gottesdiener's current base salary is $542,340 and he is eligible to receive an annual bonus with an annual target amount of 50 percent of his annual base salary. Dr. Gottesdiener is eligible to participate in the employee benefit plans available to our employees, subject to the terms of such plan and is entitled to reimbursement for commuting expenses between New York, New York and Cambridge, Massachusetts for the first three years of his employment. In accordance with the Gottesdiener Offer Letter, the Company paid Dr. Gottesdiener a bonus of $100,000 in 2020 to cover personal taxes incurred in 2020 from the grants of restricted stock awards made to him in 2020. In addition, the Gottesdiener Offer Letter provides that in the event of a Qualified Departure (as defined in the Gottesdiener Offer Letter), the post-termination exercise period of any vested options on such date will be extended until 12 months after such termination, inclusive of any period of consulting service. Furthermore, upon a Qualified Departure other than due to death or disability, the Company will negotiate in good faith to establish a non-exclusive consulting relationship with Dr. Gottesdiener for a period of up to one year after the date of such termination pursuant to which Dr. Gottesdiener will receive no cash compensation other than severance benefits as described below. In the event Dr. Gottesdiener's employment is terminated by us without Cause or he resigns for Good Reason (as such terms are defined in the Gottesdiener Offer Letter), in each case, within three months prior to or 12 months after a Sale Event (as such term is defined in the 2019 Plan), then all of the unvested portion of Dr. Gottesdiener's initial time-based restricted stock grant for 10,798,106 shares of Company common stock (the "Initial Time-Based Award") will immediately vest as of the date of such termination

event or Sale Event, as applicable. Notwithstanding the foregoing, if upon a Sale Event, Dr. Gottesdiener agrees, if offered substantially equivalent employment terms, to remain employed by the Company (or any successor) for up to six months, the unvested portion of the Initial Time-Based Award shall vest upon the 6-month anniversary of the Sale Event (unless otherwise vested upon a Qualified Departure).

Upon a termination of Dr. Gottesdiener's employment by us without Cause or his resignation for Good Reason, subject to his execution and non-revocation of a separation agreement, including, without limitation, a general release of claims in favor of the Company and, in the Company's discretion, a one year post-employment noncompetition agreement, Dr. Gottesdiener will be entitled to (i) a payment equal to the sum of 12 months of his base salary and annual target bonus, and (ii) if Dr. Gottesdiener is participating in the Company's group health plan immediately prior to his last day of employment and he elects COBRA health continuation, a monthly cash payment to the group health plan provider, COBRA provider or him until the earlier of (A) the 12-month anniversary of his termination, (B) his eligibility for group health plan benefits under any other employer's group health plan, or (C) the end of his COBRA continuation rights period, in an amount equal to the monthly employer contribution the Company would have paid to provide him with health insurance had he remained employed. If Dr. Gottesdiener's employment is terminated prior to a Sale Event, such severance amounts will be paid out in substantially equal installments in accordance with the Company's payroll practice over 12 months. Notwithstanding the foregoing, if a Sale Event occurs during the 12-month period during which the Company is paying severance, then such remaining severance amounts will be paid in a lump sum within 10 business days after the Sale Event. If the termination occurs on or after a Sale Event, then the severance amounts will be paid in a lump sum within 60 days after the date of such termination.

Dr. Gottesdiener has entered into an Employee Confidentiality, Assignment and Nonsolicitation Agreement that contains various restrictive covenants, including, nonsolicitation provisions that apply during his employment and for up to one year thereafter (or, in certain situations, for up to two years thereafter).

Jeremy Duffield, M.D., Ph.D., FRCP

On December 8, 2020, we entered into an offer letter with Dr. Duffield, or the Duffield Offer Letter, for the position of Chief Scientific Officer beginning January 4, 2021. The Duffield Offer Letter provides for Dr. Duffield's at-will employment. Dr. Duffield's current base salary is $447,120 and he is eligible to receive an annual bonus with an annual target amount of 40 percent of his annual base salary. Dr. Duffield is eligible to participate in the employee benefit plans available to our employees, subject to the terms of such plans. In accordance with the Duffield Offer Letter, the Company (i) paid Dr. Duffield a one-time signing bonus of $350,000 in 2021, and (ii) committed to an additional $300,000 bonus that will be earned and payable as follows: one-third of the bonus became earned and payable upon achievement of proof of concept in lead indication in May 2022, one-third of the bonus will be earned and payable upon IND acceptance, and the remaining one-third of the bonus will be earned and payable upon the consummation of the Company's initial public offering, in each case subject to Dr. Duffield's continued employment with us through the date of achievement of the applicable milestone.

Upon a termination of Dr. Duffield's employment by us without Cause or his resignation for Good Reason (as such terms are defined in the Duffield Offer Letter, subject to his execution and non-revocation of a separation agreement, including, without limitation, a general release of claims in favor of the Company and, in the Company's discretion, a one year post-employment noncompetition agreement, Dr. Duffield is entitled to (i) a payment equal to 12 months of his base salary, reduced by any amount he may receive pursuant to the Restrictive Covenants Agreement (as defined in the Duffield Offer Letter), and (ii) if Dr. Duffield is participating in the Company's group health plan immediately prior to his last day of employment and he elects COBRA health continuation, a monthly cash payment to the group health plan provider, COBRA provider or him until the earlier of (A) the 12 month anniversary of his termination, (B) his eligibility for group health plan benefits under any other employer's group health plan, or (C) the end of his COBRA continuation rights period, in an amount equal to the monthly employer contribution the Company would have paid to provide him with health insurance had he remained employed. Such severance amounts will be paid out in substantially equal installments in accordance with the Company's payroll practice over 12 months. In addition, in the event Dr. Duffield's employment is terminated by us without Cause or he resigns for Good Reason, in each case, on or within 12 months after a Sale Event (as such term is defined in the

2019 Plan), then all of the unvested portion of his new hire grant of time-based restricted stock shall immediately vest as of the date of such termination.

Dr. Duffield has entered into an Employee Confidentiality, Assignment, Nonsolicitation and Noncompetition Agreement that contains various restrictive covenants, including, noncompetition and nonsolicitation provisions that apply during his employment and for up to one year thereafter (or, in certain situations, for up to two years thereafter).

Ann L. Lee, Ph.D.

On September 21, 2021, we entered into an offer letter with Dr. Lee, or the Lee Offer Letter, for the position of Chief Technical Officer. The Lee Offer Letter provides for Dr. Lee's at-will employment. Dr. Lee's current base salary is $453,797 and she is eligible to receive an annual bonus with an annual target amount of 40 percent of her annual base salary, prorated for 2021 based on her October 4, 2021 start date. Dr. Lee is eligible to participate in the employee benefit plans available to our employees, subject to the terms of such plans. In addition, Dr. Lee is also eligible to receive certain relocation benefits pursuant to the Lee Offer Letter, including (i) temporary living accommodations paid by the Company in the greater Boston/Cambridge area beginning for a period of four months starting on January 2022, (ii) reasonable cost for bi-weekly travel to Dr. Lee's current residence on the West Coast, (iii) two house hunting trips for her spouse, including reasonable expense for travel, meal, hotel and other accommodations and (iv) net relocation benefit of up to $150,000, to be used towards eligible costs for ongoing living expenses and (collectively, the "relocation benefits"). The Company will provide a tax gross-up for the relocation benefits.

Upon a termination of Dr. Lee's employment by us without Cause or her resignation for Good Reason (as such terms are defined in the Lee Offer Letter, subject to her execution and non-revocation of a separation agreement, including, without limitation, a general release of claims in favor of the Company and, in the Company's discretion, a one year post-employment noncompetition agreement, Dr. Lee is entitled to (i) a payment equal to six months of her base salary, reduced by any amount she may receive pursuant to a Noncompete Agreement (as defined in the Lee Offer Letter), and (ii) if Dr. Lee is participating in the Company's group health plan immediately prior to her last day of employment and she elects COBRA health continuation, a monthly cash payment to the group health plan provider, COBRA provider or her until the earlier of (A) the six month anniversary of her termination, (B) her eligibility for group health plan benefits under any other employer's group health plan, or (C) the end of her COBRA continuation rights period, in an amount equal to the monthly employer contribution the Company would have paid to provide her with health insurance had she remained employed. Such severance amounts will be paid out in substantially equal installments in accordance with the Company's payroll practice over six months. In addition, in the event Dr. Lee's employment is terminated by us without Cause or she resigns for Good Reason, in each case, on or within twelve months after a Sale Event (as such term is defined in the 2019 Plan), then all of the unvested portion of her new hire time-based option grant shall immediately vest as of the date of such termination.

Dr. Lee has entered into an Employee Confidentiality, Assignment and Nonsolicitation Agreement that contains various restrictive covenants, including, nonsolicitation provisions that apply during her employment and for up to one year thereafter (or, in certain situations, for up to two years thereafter).

New Employment Agreements for Our Named Executive Officers

In July 2022, we entered into employment agreements with each of Dr. Gottesdiener, Dr. Duffield and Dr. Lee, pursuant to which the executives will continue to serve as our Chief Executive Officer, Chief Scientific Officer and Chief Technical Officer, respectively, as summarized below.

Each of Dr. Gottesdiener, Dr. Duffield and Dr. Lee are subject to standard confidentiality and nondisclosure, assignment of intellectual property work product and post-termination nonsolicitation of employees, consultants and customers covenants and, in certain circumstances, noncompetition covenants.

Keith M. Gottesdiener, M.D.

The employment agreement with Dr. Gottesdiener, or the Gottesdiener Employment Agreement, provides for at-will employment. The agreement also sets forth initial base salary, initial annual target bonus and eligibility to participate in our benefit plans generally. Effective upon the IPO, the base salary for Dr. Gottesdiener will be $542,340, and the annual target bonus will be equal to 55% of his annual base salary. In addition, Dr. Gottesdiener will be entitled to reimbursement for commuting expenses for three (3) years from the commencement of his employment with the Company, which include all reasonable costs for his commute between his family's residence in New York, New York and our corporate headquarters in Cambridge, Massachusetts.

Pursuant to the Gottesdiener Employment Agreement, in the event Dr. Gottesdiener is terminated by us without "cause" or he resigns for "good reason" (as such terms are defined in the Gottesdiener Employment Agreement), in each case subject to the delivery of and compliance with a fully effective separation agreement that shall include, without limitation, a release of claims, reaffirmation of applicable restrictive covenants and, in the Company's discretion, a one year noncompetition agreement, Dr. Gottesdiener will be entitled to (i) an amount equal to the sum of (A) 12 months of his then-current base salary plus (B) 1.0 times his target annual bonus for the then current year, in each case subject to reductions by any amount received by him pursuant to a restrictive covenant agreement, (ii) subject to Dr. Gottesdiener's copayment of premium amounts at the applicable active employees' rate and proper election to continue COBRA health coverage, payment of the portion of the premium equal to the amount we would have paid to provide health insurance had he remained employed by us until the earliest of (A) 12 months following his termination, (B) his eligibility for group medical plan benefits under any other employer's group medical plan or (C) the end of his COBRA health continuation period. These amounts shall be paid out in substantially equal installments in accordance with the Company's payroll practice over a period of 12 months. In addition, subject to the delivery of the fully effective separation agreement, the bonus amount (if any) that Dr. Gottesdiener would have been paid if he had remained employed through the payment date, if such termination occurs on or after January 1 but before the date bonuses are paid for the prior year to the Company's other executives, will be paid to Dr. Gottesdiener on the date the Company's other executives receive their bonuses. In addition, the Company has agreed to negotiate in good faith a non-exclusive limited consulting relationship with Dr. Gottesdiener for a period up to one year under similar terms as described above pursuant to the Gottesdiener Offer Letter.

In the event Dr. Gottesdiener is terminated by us without cause or he resigns for good reason, in each case within 12 months following a change in control (as defined in the Gottesdiener Employment Agreement), or 3 months prior to such change in control, subject to the delivery of and compliance with a fully effective separation agreement as described above, Dr. Gottesdiener will be entitled to the following, in lieu of the benefits above: (i) a lump sum cash payment equal to the sum of (A) 18 months of his then-current base salary (or his base salary in effect immediately prior to the change in control, if higher) plus (B) 1.5 times his target annual bonus for the then current year (or target in effect immediately prior to the change in control, if higher), in each case subject to reductions by any amount received by him pursuant to a restrictive covenant agreement, (ii) subject to Dr. Gottesdiener's copayment of premium amounts at the applicable active employees' rate and proper election to continue COBRA health coverage, payment of the portion of the premium equal to the amount we would have paid to provide health insurance had he remained employed by us until the earliest of (A) 18 months from the date of his separation, (B) his eligibility for group medical plan benefits under any other employer's group medical plan or (C) the end of his COBRA health continuation period, and (iii) the bonus amount (if any) that Dr. Gottesdiener would have been paid if he had remained employed through the payment date, if such termination occurs on or after January 1 but before the date bonuses are paid for the prior year to the Company's other executives. In addition, in the event Dr. Gottesdiener is terminated by us without cause or he resigns for good reason, in each case within 12 months following a change in control, or 3 months prior to such change in control, all of the then-outstanding and unvested portion of his stock options and other stock-based awards that (i) are subject solely to time-based vesting or (ii) were granted to Dr. Gottesdiener prior to the effective date of the Gottesdiener Employment Agreement and are subject to performance-based vesting shall become fully vested and exercisable or nonforfeitable immediately as of the date of termination or, if later, the change in control event, with any such performance-based awards vesting at target.

The payments and benefits provided under the Gottesdiener Employment Agreement in connection with a change in control may not be eligible for federal income tax deduction for the Company pursuant to Section 280G of

the Code. These payments and benefits may also be subject to an excise tax under Section 4999 of the Code. If the payments or benefits payable to Dr. Gottesdiener in connection with a change in control would be subject to the excise tax imposed under Section 4999 of the Code, then those payments or benefits will be reduced if such reduction would result in a higher net after-tax benefit to him.

Jeremy Duffield, M.D., Ph.D., FRCP

The employment agreement with Dr. Duffield, or the Duffield Employment Agreement, provides for at-will employment. The agreement also sets forth initial base salary, initial annual target bonus and eligibility to participate in our benefit plans generally. Effective upon the IPO, the base salary for Dr. Duffield will be $447,120, and the annual target bonus will be equal to 40% of his annual base salary. In addition, Dr. Duffield will remain eligible to receive the milestone bonuses set forth in the Duffield Offer Letter.

Pursuant to the Duffield Employment Agreement, in the event Dr. Duffield is terminated by us without "cause" or he resigns for "good reason" (as such terms are defined in the Duffield Employment Agreement), in each case subject to the delivery of and compliance with a fully effective separation agreement that shall include, without limitation, a release of claims, reaffirmation of applicable restrictive covenants and, in the Company's discretion, a one year noncompetition agreement, Dr. Duffield will be entitled to (i) an amount equal to the sum of (A) 9 months of his then-current base salary plus (B) 0.75 times his target annual bonus for the then current year, in each case subject to reductions by any amount received by him pursuant to a restrictive covenant agreement, (ii) subject to Dr. Duffield's copayment of premium amounts at the applicable active employees' rate and proper election to continue COBRA health coverage, payment of the portion of the premium equal to the amount we would have paid to provide health insurance had he remained employed by us until the earliest of (A) 12 months following his termination, (B) his eligibility for group medical plan benefits under any other employer's group medical plan or (C) the end of his COBRA health continuation period. These amounts shall be paid out in substantially equal installments in accordance with the Company's payroll practice over a period of 9 months. In addition, subject to the delivery of the fully effective separation agreement, the bonus amount (if any) that Dr. Duffield would have been paid if he had remained employed through the payment date, if such termination occurs on or after January 1 but before the date bonuses are paid for the prior year to the Company's other executives, will be paid to Dr. Duffield on the date the Company's other executives receive their bonuses.

In the event Dr. Duffield is terminated by us without cause or he resigns for good reason, in each case within 12 months following a change in control (as defined in the Duffield Employment Agreement), subject to the delivery of and compliance with a fully effective separation agreement (as described above), Dr. Duffield will be entitled to the following, in lieu of the benefits above: (i) a lump sum cash payment equal to the sum of (A) 12 months of his then-current base salary (or his base salary in effect immediately prior to the change in control, if higher) plus (B) 1.0 times his target annual bonus for the then current year (or target in effect immediately prior to the change in control, if higher), in each case subject to reductions by any amount received by him pursuant to a restrictive covenant agreement, (ii) subject to Dr. Duffield's copayment of premium amounts at the applicable active employees' rate and proper election to continue COBRA health coverage, payment of the portion of the premium equal to the amount we would have paid to provide health insurance had he remained employed by us until the earliest of (A) 12 months from the date of his separation, (B) his eligibility for group medical plan benefits under any other employer's group medical plan or (C) the end of his COBRA health continuation period, and (iii) the bonus amount (if any) that Dr. Duffield would have been paid if he had remained employed through the payment date, if such termination occurs on or after January 1 but before the date bonuses are paid for the prior year to the Company's other executives. In addition, in the event Dr. Duffield is terminated by us without cause or he resigns for good reason, in each case within 12 months following a change in control, all of the then-outstanding and unvested portion of his stock options and other stock-based awards that (i) are subject solely to time-based vesting or (ii) were granted to Dr. Duffield prior to the effective date of the Duffield Employment Agreement and are subject to performance-based vesting shall become fully vested and exercisable or nonforfeitable immediately as of the date of termination, with any such performance-based awards vesting at target.

The payments and benefits provided under the Duffield Employment Agreement in connection with a change in control may not be eligible for federal income tax deduction for the Company pursuant to Section 280G of the Code. These payments and benefits may also be subject to an excise tax under Section 4999 of the Code. If the payments

or benefits payable to Dr. Duffield in connection with a change in control would be subject to the excise tax imposed under Section 4999 of the Code, then those payments or benefits will be reduced if such reduction would result in a higher net after-tax benefit to him.

Ann L. Lee, Ph.D.

The employment agreement with Dr. Lee, or the Lee Employment Agreement, provides for at-will employment. The agreement also sets forth initial base salary, initial annual target bonus and eligibility to participate in our benefit plans generally. Effective upon the IPO, the base salary for Dr. Lee will be $453,797, and the annual target bonus will be equal to 40% of her annual base salary. Dr. Lee will also be entitled to a temporary relocation benefit, which includes (i) living accommodations in the greater Boston/Cambridge area beginning in January 2022 and continuing for four (4) months, (ii) reasonable costs for bi-weekly travel to her residence on the West Coast and rental car or other transportation as needed in the Boston/Cambridge area, and (iii) the cost of two house hunting trips. In addition, Dr. Lee will also be entitled to a net relocation benefit of up to $150,000, which can be used towards eligible costs for ongoing living expenses, including rental assistance or home purchase of a new Massachusetts primary residence and current home sale. The Company will cover additional tax-gross-up costs on the provided benefit expenses.

Pursuant to the Lee Employment Agreement, in the event Dr. Lee is terminated by us without "cause" or she resigns for "good reason" (as such terms are defined in the Lee Employment Agreement), in each case subject to the delivery of and compliance with a fully effective separation agreement that shall include, without limitation, a release of claims, reaffirmation of applicable restrictive covenants and, in the Company's discretion, a one year noncompetition agreement, Dr. Lee will be entitled to (i) an amount equal to the sum of (A) 9 months of her then-current base salary plus (B) 0.75 times her target annual bonus for the then current year, in each case subject to reductions by any amount received by her pursuant to a restrictive covenant agreement, and (ii) subject to Dr. Lee's copayment of premium amounts at the applicable active employees' rate and proper election to continue COBRA health coverage, payment of the portion of the premium equal to the amount we would have paid to provide health insurance had she remained employed by us until the earliest of (A) 9 months following her termination, (B) her eligibility for group medical plan benefits under any other employer's group medical plan or (C) the end of her COBRA health continuation period. These amounts shall be paid out in substantially equal installments in accordance with the Company's payroll practice over a period of 9 months. In addition, subject to the delivery of the fully effective separation agreement, the bonus amount (if any) that Dr. Lee would have been paid if she had remained employed through the payment date, if such termination occurs on or after January 1 but before the date bonuses are paid for the prior year to the Company's other executives, will be paid to Dr. Lee on the date the Company's other executives receive their bonuses.

In the event Dr. Lee is terminated by us without cause or she resigns for good reason, in each case within 12 months following a change in control (as defined in the Lee Employment Agreement), subject to the delivery of and compliance with a fully effective separation agreement (as described above), Dr. Lee will be entitled to the following, in lieu of the benefits above: (i) a lump sum cash payment equal to the sum of (A) 12 months of her then-current base salary (or her base salary in effect immediately prior to the change in control, if higher) plus (B) 1.0 times her target annual bonus for the then current year (or target in effect immediately prior to the change in control, if higher), in each case subject to reductions by any amount received by her pursuant to a restrictive covenant agreement, (ii) subject to Dr. Lee's copayment of premium amounts at the applicable active employees' rate and proper election to continue COBRA health coverage, payment of the portion of the premium equal to the amount we would have paid to provide health insurance had she remained employed by us until the earliest of (A) 12 months from the date of her separation, (B) her eligibility for group medical plan benefits under any other employer's group medical plan or (C) the end of her COBRA health continuation period, and (iii) the bonus amount (if any) that Dr. Lee would have been paid if she had remained employed through the payment date, if such termination occurs on or after January 1 but before the date bonuses are paid for the prior year to the Company's other executives. In addition, in the event Dr. Lee is terminated by us without cause or she resigns for good reason, in each case within 12 months following a change in control (as defined in the Lee Employment Agreement), all of the then-outstanding and unvested portion of her stock options and other stock-based awards that (i) are subject solely to time-based vesting or (ii) were granted to Dr. Lee prior to the effective date of the Lee Employment Agreement and are subject

to performance-based vesting shall become fully vested and exercisable or nonforfeitable immediately as of the date of termination, with any such performance-based awards vesting at target.

The payments and benefits provided under the Lee Employment Agreement in connection with a change in control may not be eligible for federal income tax deduction for the Company pursuant to Section 280G of the Code. These payments and benefits may also be subject to an excise tax under Section 4999 of the Code. If the payments or benefits payable to Dr. Lee in connection with a change in control would be subject to the excise tax imposed under Section 4999 of the Code, then those payments or benefits will be reduced if such reduction would result in a higher net after-tax benefit to her.

Employee Benefit and Equity Compensation Plans

2019 Stock Option and Grant Plan

Our 2019 Plan was approved by our board of directors and our stockholders on September 26, 2019, and most recently amended on April 19, 2021. Under the 2019 Plan, we have reserved for issuance an aggregate of 35,943,372 shares of our common stock. The number of shares of common stock reserved for issuance is subject to adjustment in the event of any merger, consolidation, sale of all or substantially all of our assets, reorganization, recapitalization, reclassification, stock split, stock dividend, reverse stock split or other similar transaction.

The shares of common stock underlying awards that are forfeited, canceled, reacquired by us prior to vesting, satisfied without the issuance of stock or otherwise terminated (other than by exercise) and shares of common stock that are withheld upon exercise of an option or settlement of an award to cover the exercise price or tax withholding are currently added back to the shares of common stock available for issuance under the 2019 Plan.

Our board of directors has acted as administrator of the 2019 Plan. The administrator has full power to select, from among the individuals eligible for awards, the individuals to whom awards will be granted, and to determine the specific terms and conditions of each award, subject to the provisions of the 2019 Plan. Persons eligible to participate in the 2019 Plan are those employees, officers and directors of, and consultants and advisors to, our company as selected from time to time by the administrator in its discretion.

The 2019 Plan permits the granting of (1) options to purchase common stock intended to qualify as incentive stock options under Section 422 of the Internal Revenue Code of 1986, as amended, or the Code, and (2) options that do not so qualify. The per share exercise price of each option is determined by the administrator but may not be less than 100 percent of the fair market value of the common stock on the date of grant. The term of each option is fixed by the administrator but may not exceed 10 years from the date of grant. The administrator determines at what time or times each option may be exercised. In addition, the 2019 Plan permits the granting of restricted shares of common stock, unrestricted shares of common stock, and restricted stock units.

The 2019 Plan provides that upon the occurrence of a "sale event," as defined in the 2019 Plan, all outstanding stock options will terminate at the effective time of such sale event, unless the parties to the sale event agree that such awards will be assumed or continued by the successor entity. In the event of a termination of the 2019 Plan and all options issued thereunder in connection with a sale event, optionees will be provided an opportunity to exercise options that are then exercisable or will become exercisable as of the effective time of the sale event within a specified period of time prior to the consummation of the sale event. In addition, we have the right to provide for cash payment to holders of options, in exchange for the cancellation thereof, in an amount per share equal to the difference between the value of the consideration payable per share of common stock in the sale event and the per share exercise price of such options. In the event of, and subject to the consummation of, a sale event, restricted stock and restricted stock units (other than those becoming vested as a result of the sale event) will be forfeited immediately prior to the effective time of a sale event unless such awards are assumed or continued by the successor entity. In the event that shares of restricted stock are forfeited in connection with a sale event, such shares of restricted stock shall be repurchased at a price per share equal to the original per share purchase price of such shares. We have the right to provide for cash payment to holders of restricted stock or restricted stock units, in exchange for the cancellation thereof, in an amount per share equal to the value of the consideration payable per share of common stock in the sale event.

Additionally, the 2019 Plan provides for certain drag along rights pursuant to which grantees may be obligated to, on the request of the Company or the accepting requisite holder, sell, transfer and deliver, or cause to be sold, transferred and delivered, to a buyer, their shares in the event the Company or the accepting requisite holder determine to enter into a sale event with a buyer.

The board of directors may amend or discontinue the 2019 Plan at any time, subject to stockholder approval where such approval is required by applicable law. The administrator of the 2019 Plan may also amend or cancel any outstanding award, provided that no amendment to an award may adversely affect a participant's rights without his or her consent. The administrator of the 2019 Plan is specifically authorized to exercise its discretion to reduce the exercise price of outstanding stock options or effect the repricing of such awards through cancellation and re-grants.

The 2019 Plan will automatically terminate upon the earlier of 10 years from the date on which the 2019 Plan was initially adopted by our board of directors or 10 years from the date the 2019 Plan was initially approved by our stockholders. As of , 2022, options to purchase shares of common stock and restricted share awards were outstanding under the 2019 Plan. Our board of directors has determined not to make any further awards under the 2019 Plan following the closing of this offering.

2022 Stock Option and Incentive Plan

Our 2022 Plan was adopted by our board of directors on February 9, 2022, approved by our stockholders on , 2022 and will become effective upon the date immediately preceding the date on which the registration statement of which this prospectus is part is declared effective by the SEC. The 2022 Plan will replace the 2019 Plan as our board of directors has determined not to make additional awards under the 2019 Plan following the closing of our initial public offering. However, the 2019 Plan will continue to govern outstanding equity awards granted thereunder. The 2022 Plan allows us to make equity-based and cash-based incentive awards to our officers, employees, directors and consultants.

We have initially reserved the sum of (i) shares plus (ii) the number of shares available for grants under the 2019 Plan, as of the effective date, for the issuance of awards under the 2022 Plan, or the Initial Limit. The 2022 Plan provides that the number of shares reserved and available for issuance under the 2022 Plan will automatically increase on January 1, 2023 and each January 1 thereafter, by five percent of the outstanding number of shares of our common stock on the immediately preceding December 31 or such lesser number of shares as determined by our compensation committee, or the Annual Increase. The number of shares reserved under the 2022 Plan is subject to adjustment in the event of a stock split, stock dividend or other change in our capitalization.

The shares we issue under the 2022 Plan will be authorized but unissued shares or shares that we reacquire. The shares of common stock underlying any awards under the 2022 Plan and the 2019 Plan that are forfeited, cancelled, held back upon exercise or settlement of an award to satisfy the exercise price or tax withholding, reacquired by us prior to vesting, satisfied without the issuance of stock, expire or are otherwise terminated (other than by exercise) will be added back to the shares of common stock available for issuance under the 2022 Plan.

The maximum number of shares of common stock that may be issued in the form of incentive stock options shall not exceed the Initial Limit, cumulatively increased on January 1, 2023 and on each January 1 thereafter by the lesser of the Annual Increase for such year or shares of common stock, in each case subject to adjustment in the event of a stock split, stock dividend or other change in our capitalization.

The grant date fair value of all awards made under our 2022 Plan and all other cash compensation paid by us to any non-employee director in any calendar year for services as a non-employee director shall not exceed $1,000,000; provided, however, that such amount shall be $1,600,000 for the calendar year in which the applicable non-employee director is initially elected or appointed to the board of directors.

The 2022 Plan will be administered by our compensation committee. Our compensation committee has the full power to select, from among the individuals eligible for awards, the individuals to whom awards will be granted and the number of shares subject to such awards, to make any combination of awards to participants, to accelerate at any time the exercisability or vesting of any award and to determine the specific terms and conditions of each award,

subject to the provisions of the 2022 Plan. Persons eligible to participate in the 2022 Plan will be those full or part-time officers, employees, non-employee directors and consultants as selected from time to time by our compensation committee in its discretion.

The 2022 Plan permits the granting of both options to purchase common stock intended to qualify as incentive stock options under Section 422 of the Code and options that do not so qualify. The option exercise price of each option will be determined by our compensation committee but generally may not be less than 100 percent of the fair market value of our common stock on the date of grant unless the option (i) is granted pursuant to a transaction described in, and in a manner consistent with Section 424(a) of the Code, (ii) is granted to an individual who is not subject to U.S. income tax or (iii) complies with Section 409A of the Code. The term of each option will be fixed by our compensation committee and may not exceed 10 years from the date of grant. Our compensation committee will determine at what time or times each option may be exercised.

Our compensation committee may award stock appreciation rights under the 2022 Plan subject to such conditions and restrictions as it may determine. Stock appreciation rights entitle the recipient to shares of common stock, or cash, equal to the value of the appreciation in our stock price over the exercise price. The exercise price of each stock appreciation right will be determined by our compensation committee but generally may not be less than 100 percent of the fair market value of our common stock on the date of grant unless the stock appreciation right (i) is granted pursuant to a transaction described in, and in a manner consistent with Section 424(a) of the Code, (ii) is granted to an individual who is not subject to U.S. income tax or (iii) complies with Section 409A of the Code. The term of each stock appreciation right will be fixed by our compensation committee and may not exceed 10 years from the date of grant. Our compensation committee will determine at what time or times each stock appreciation right may be exercised.

Our compensation committee may award restricted shares of common stock and restricted stock units to participants subject to such conditions and restrictions as it may determine. These conditions and restrictions may include the achievement of certain performance goals and/or continued employment with us through a specified vesting period. Our compensation committee may also grant shares of common stock that are free from any restrictions under the 2022 Plan. Unrestricted stock may be granted to participants in recognition of past services or for other valid consideration and may be issued in lieu of cash compensation due to such participant.

Our compensation committee may grant dividend equivalent rights to participants that entitle the recipient to receive credits for dividends that would be paid if the recipient had held a specified number of shares of common stock.

Our compensation committee may grant cash bonuses under the 2022 Plan to participants, subject to the achievement of certain performance goals and/or continued employment or service relationship with us through a specified vesting period.

The 2022 Plan provides that upon the effectiveness of a "sale event," as defined in the 2022 Plan, an acquirer or successor entity may assume, continue or substitute outstanding awards under the 2022 Plan. To the extent that awards granted under the 2022 Plan are not assumed or continued or substituted by the successor entity, upon the effective time of the sale event, such awards shall terminate. In such case, except as may be otherwise provided in the relevant award agreement, all awards with time-based vesting, conditions or restrictions shall become fully vested and nonforfeitable as of the effective time of the sale event and all awards with conditions and restrictions relating to the attainment of performance goals may become vested and nonforfeitable in connection with a sale event in the plan administrator's discretion or to the extent specified in the relevant award agreement. In the event of such termination, (i) individuals holding options and stock appreciation rights will be permitted to exercise such options and stock appreciation rights (to the extent exercisable) within a specified period of time prior to the sale event or (ii) we may make or provide for a payment, in cash or in kind, to participants holding vested and exercisable options and stock appreciation rights equal (A) the difference between the per share cash consideration payable to stockholders in the sale event and the per share exercise price of the options or stock appreciation rights, multiplied by (B) the number of shares subject to such outstanding vested and exercisable options and stock appreciation rights (to the extent exercisable at prices not in excess of the per share cash consideration), and we may

make or provide for a payment, in cash or in kind, to participants holding other vested awards equal to the per share cash consideration multiplied by the number of vested shares underlying such awards.

Our board of directors may amend or discontinue the 2022 Plan and our compensation committee may amend or cancel outstanding awards for purposes of satisfying changes in law or any other lawful purpose, but no such action may adversely affect rights under an award without the holder's consent. Certain amendments to the 2022 Plan require the approval of our stockholders. The plan administrator cannot, without prior stockholder approval, reduce the exercise price of outstanding stock options or stock appreciation rights or effect the repricing of such awards through cancellation and re-grants or cancellation of stock options or stock appreciation rights in exchange for cash or other awards. No awards may be granted under the 2022 Plan after the date that is 10 years from the effective date of the 2022 Plan. No awards under the 2022 Plan have been made prior to the date of this prospectus.

2022 Employee Stock Purchase Plan

Our ESPP was adopted by our board of directors on February 9, 2022, approved by our stockholders on , 2022 and will become effective on the date immediately preceding the date on which the registration statement of which this prospectus forms a part is declared effective by the SEC. The ESPP is intended to qualify as an "employee stock purchase plan" within the meaning of Section 423 of the Code. The ESPP initially reserves and authorizes the issuance of up to a total of shares of our common stock to participating employees. The ESPP provides that the number of shares reserved and available for issuance will automatically increase on January 1, 2023 and each January 1 thereafter through January 1, 2032, by the least of (i) shares of our common stock, (ii) one percent of the outstanding number of shares of our common stock on the immediately preceding December 31, or (iii) such number of shares of common stock as determined by the administrator of the ESPP. The number of shares reserved under the ESPP is subject to adjustment in the event of a stock split, stock dividend or other change in our capitalization.

All employees who are customarily employed by us or one of our designated subsidiaries for more than twenty hours per week and who we have employed for at least 6 months are eligible to participate in the ESPP. However, any employee who owns five percent or more of the total combined voting power or value of all classes of our stock will not be eligible to purchase shares of common stock under the ESPP.

We may make one or more offerings each year to our employees to purchase shares under the ESPP. The plan administrator may, in its discretion, designate the start and end dates of any offering; provided, that no offering will exceed twenty-seven months in duration. Each eligible employee may elect to participate in any offering by submitting an enrollment form at least fifteen business days before the applicable offering date.

Each employee who is a participant in the ESPP may purchase shares of our common stock by authorizing contributions of between one and fifteen percent of his or her eligible compensation during an offering period. Unless the participating employee has previously withdrawn from the offering, his or her accumulated contributions will be used to purchase shares of our common stock on the last business day of the offering period at a price equal to 85 percent of the fair market value of the shares of our common stock on the first business day or the last business day of the offering period, whichever is lower, provided that no more than 7,000 shares of common stock (or a lesser number as established by our plan administrator in advance of the offering period) may be purchased by any one employee during each offering period. In addition, under applicable tax rules, an employee may purchase no more than $25,000 worth of shares of our common stock, valued at the start of the offering period, under the ESPP for each calendar year in which a purchase right is outstanding.

The accumulated payroll deductions of any employee who is not a participant on the last day of an offering period will be refunded. An employee's rights under the ESPP terminate upon voluntary withdrawal from the plan or when the employee ceases employment with us for any reason.

In the case of and subject to the consummation of a "sale event," the plan administrator, in its discretion, and on such terms and conditions as it deems appropriate, is hereby authorized to take any one or more of the following actions under the ESPP or with respect to any right under the ESPP or to facilitate such transactions or events: (i) to provide for either (A) termination of any outstanding option in exchange for an amount of cash, if any, equal to the amount that would have been obtained upon the exercise of such option had such option been currently exercisable

or (B) the replacement of such outstanding option with other options or property selected by the plan administrator in its sole discretion; (ii) to provide that the outstanding options under the ESPP shall be assumed by the successor or survivor corporation, or a parent or subsidiary thereof, or shall be substituted for similar options covering the stock of the successor or survivor corporation, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and prices; (iii) to make adjustments in the number and type of shares of common stock (or other securities or property) subject to outstanding options under the ESPP and/or in the terms and conditions of outstanding options and options that may be granted in the future; (iv) to provide that the offering with respect to which an option relates will be shortened by setting a new exercise date on which such offering will end; and (v) to provide that all outstanding options shall terminate without being exercised and all amounts in the accounts of participants shall be promptly refunded.

The ESPP may be terminated or amended by our board of directors at any time. An amendment that increases the number of shares of our common stock authorized under the ESPP and certain other amendments require the approval of our stockholders. The plan administrator may adopt subplans under the ESPP for employees of our non-U.S. subsidiaries

Senior Executive Cash Incentive Bonus Plan

On February 9, 2022 our board of directors adopted the Senior Executive Cash Incentive Bonus Plan, or the Bonus Plan. The Bonus Plan provides for annual cash bonus payments based upon the attainment of Company and individual performance targets established by our compensation committee. The payment targets may be related to financial and operational measures or objectives with respect to our Company, or the Corporate Performance Goals, as well as individual performance objectives.

Our compensation committee may select Corporate Performance Goals from among the following: developmental, publication, preclinical, delivery and/or manufacturing, business development and/or partnering, translational, clinical or regulatory milestones; cash flow (including, but not limited to, operating cash flow and free cash flow); revenue; corporate revenue; earnings before interest, taxes, depreciation and amortization; net income (loss) (either before or after interest, taxes, depreciation and/or amortization); changes in the market price of our common stock; economic value-added; acquisitions, licenses, collaborations or strategic transactions; financing or other capital raising transactions; operating income (loss); return on capital, assets, equity, or investment; stockholder returns; return on sales; total shareholder return; gross or net profit levels; productivity; expense efficiency; margins; operating efficiency; customer satisfaction; working capital; earnings (loss) per share of the company's common stock; bookings, new bookings or renewals; sales or market shares; number of prescriptions or prescribing physicians; coverage decisions; leadership development, employee retention and recruiting and other human resources matters; operating income and/or net annual recurring revenue, any of which may be measured in absolute terms, as compared to any incremental increase, in terms of growth, as compared to results of a peer group, against the market as a whole, compared to applicable market indices and/or measured on a pre-tax or post-tax basis.

Each executive officer who is selected by the compensation committee to participate in the Bonus Plan will have a target bonus opportunity set for each performance period. The bonus criteria will be adopted in each performance period by the compensation committee and communicated to each executive. The Corporate Performance Goals will be measured at the end of each applicable performance period or such other appropriate time as the compensation committee determines. If the Corporate Performance Goals and/or individual performance objectives, as applicable are met, payments will be made as soon as practicable following the achievement of such goals or the end of each performance period, as applicable, but no later than two and one-half months after the end of the fiscal year in which such goals are met. Subject to the rights contained in any agreement between the executive officer and us, and unless otherwise determined by the compensation committee, an executive officer must be employed by us on the bonus payment date to be eligible to receive a bonus payment. The Bonus Plan also permits the compensation committee to approve additional bonuses to executive officers in its sole discretion.

DIRECTOR COMPENSATION

Prior to this offering, we did not have a formal non-employee director compensation policy. We have historically provided equity grants to certain of our non-employee directors not associated with ARCH Venture Partners, F-Prime Capital, Newpath Partners or GV. In 2021, we granted each of Mr. Kelly and Dr. Chung an option to purchase 42,000 shares of our common stock. The options vest in equal annual installments over three years, subject to continued service with the Company.

The following table presents the total compensation for each person who served as a non-employee member of our board of directors during the year ended December 31, 2021. Other than as set forth in the table and described more above, we did not pay any compensation, make any equity awards or non-equity awards to, or pay any other compensation to any of the non-employee members of our board of directors in 2021. We reimburse non-employee members of our board of directors for reasonable travel and out-of-pocket expenses incurred in attending meetings of our board of directors and committees of our board of directors. Dr. Gottesdiener, who is our Chief Executive Officer, did not receive any additional compensation for his service as a director. The compensation received by Dr. Gottesdiener, as a named executive officer of the Company, is presented in "Executive Compensation-2021 Summary Compensation Table" above.

Name	Fees Earned or Paid in Cash ($)	Option Awards ($)[1]	All Other Compensation ($)	Total ($)
Tom Cahill[2]	—	—	—	—
Wendy Chung[3]	—	96,134	—	96,134
John Evans[4]	—	—	—	—
Kaye Foster[5]	—	—	—	—
Michael Kelly[6]	—	96,134	—	96,134
Robert Nelson[7]	—	—	—	—
Stephen Knight[8]	—	—	—	—
David Schenkein[9]	—	—	—	—

(1) The amounts reported represent the aggregate grant date fair value of the stock options granted to our directors during the fiscal year, calculated in accordance with FASB ASC Topic 718. Such grant date fair values do not take into account any estimated forfeitures. The assumptions used in calculating the grant date fair value of the stock options reported in this column are set forth in note 8 of our consolidated financial statements included elsewhere in this prospectus. The amounts reported in this column reflect the accounting cost for these awards and do not correspond to the actual economic value that may be received by our directors upon the exercise of the awards or any sale of the underlying shares of common stock.
(2) As of December 31, 2021, Dr. Cahill did not hold any outstanding equity awards.
(3) As of December 31, 2021, Dr. Chung held options to purchase an aggregate of 42,000 shares of our common stock.
(4) As of December 31, 2021, Mr. Evans did not hold any outstanding equity awards. Mr. Evans resigned from our board of directors effective September 13, 2022.
(5) As of December 31, 2021, Ms. Foster did not hold any outstanding equity awards.
(6) As of December 31, 2021, Mr. Kelly held options to purchase an aggregate of 42,000 shares of our common stock.
(7) As of December 31, 2021, Mr. Nelson did not hold any outstanding equity awards.
(8) As of December 31, 2021, Mr. Knight did not hold any outstanding equity awards. Mr. Knight resigned from our board of directors effective September 22, 2022 and is now a board observer.
(9) As of December 31, 2021, Mr. Schenkein did not hold any outstanding equity awards.

Non-Employee Director Compensation Policy

In connection with this offering, we have adopted a new non-employee director compensation policy that will become effective as of the completion of this offering and will be designed to enable us to attract and retain, on a long term basis, highly qualified non-employee directors. Under the policy, our non-employee directors will be

eligible to receive cash retainers (which will be payable quarterly in arrears and prorated for partial years of service) and equity awards as set forth below:

Annual Retainer for Board Membership
$40,000 for general availability and participation in meetings and conference calls of our Board of Directors
Additional Annual Retainer for Committee Membership
Audit Committee Chairperson: $15,000
Audit Committee member (other than Chairperson): $7,500
Compensation Committee Chairperson: $12,000
Compensation Committee member (other than Chairperson): $6,000
Nominating and Corporate Governance Committee Chairperson: $10,000
Nominating and Corporate Governance Committee member (other than Chairperson): $5,000

In addition, our policy will provide that, upon initial election or appointment to our board of directors, each new non-employee director will be granted a one-time grant of a non-statutory stock option to purchase shares of our common stock equivalent to $800,000 in value on the date of such director's election or appointment to the board of directors, or the Director Initial Grant. The Director Initial Grant will vest in substantially equal annual installments over three years, subject to the non-employee director's continued services to the Company. On the date of each annual meeting of stockholders of our company following the completion of this offering, each non-employee director who has served as a director for at least 6 months prior to the annual meeting and will continue as a non-employee director following such meeting will be granted an annual award of a non-statutory stock option to purchase shares of common stock equivalent to $400,000 in value, or the Director Annual Grant. The Director Annual Grant will vest in full on the earlier of the one-year anniversary of the grant date or on the date of our next annual meeting of stockholders, subject to the non-employee director's continued services to the Company. Such awards are subject to full acceleration vesting upon the sale of our company.

The aggregate amount of compensation, including both equity compensation and cash compensation, paid to any non-employee director for service as a non-employee director in a calendar year period will not exceed $1,600,000 in the first calendar year such individual becomes a non-employee director and $1,000,000 in any other calendar year.

We will reimburse all reasonable out-of-pocket expenses incurred by directors for their attendance at meetings of our board of directors or any committee thereof.

Employee directors will receive no additional compensation for their service as a director.

CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS

The following is a description of transactions or series of transactions since our inception in September 2019, to which we were or will be a party, in which:

- the amount involved in the transaction exceeds, or will exceed, $120,000; and
- in which any of our executive officers, directors or holder of five percent or more of any class of our capital stock, including their immediate family members or affiliated entities, had or will have a direct or indirect material interest.

Compensation arrangements for our named executive officers and our directors are described elsewhere in this prospectus under "Executive Compensation" and "Director Compensation."

Series A Preferred Stock Financing

In 2019, 2020 and 2021, we sold an aggregate of 115,761,842 Series A convertible preferred shares in multiple closings at a purchase price of $1.00 per share for an aggregate amount of $115.8 million. The following table summarizes purchases of our Series A convertible preferred shares by related persons:

Stockholder	Shares of Series A convertible preferred shares	Total purchase price
F-Prime Capital Partners Life Sciences Fund VI LP[1]	33,333,331	$ 33,333,331
GV 2019, L.P.[2]	33,333,331	$ 33,333,331
Entities affiliated with ARCH Venture Partners[3]	33,333,331	$ 33,333,331
Newpath Partners, L.P.[4]	9,999,999	$ 9,999,999
David Liu[5]	1,000,001	$ 1,000,001

(1) Stephen Knight, formerly a member of our board of directors and now a board observer, is an affiliate of F-Prime Capital, of which F-Prime Capital Partners Life Sciences Fund VI LP is an affiliated fund. F-Prime Capital Partners Life Sciences Fund VI LP holds more than 5 percent of our voting securities.

(2) David Schenkein serves as a member of our board of directors and is an affiliate of GV, of which GV 2019, L.P. is an affiliated fund. Entities affiliated with GV collectively hold more than 5 percent of our voting securities.

(3) Represents 16,666,664 shares of Series A convertible preferred stock purchased by ARCH Venture Fund X Overage, L.P. and 16,666,667 shares of Series A convertible preferred stock purchased by ARCH Venture Fund X, L.P. Robert Nelsen serves as a member of our board of directors and is an affiliate of ARCH Venture Partners, of which ARCH Venture Fund X Overage, L.P. and ARCH Venture Fund X, L.P. are affiliated funds. Entities affiliated with ARCH Venture Partners collectively hold more than 5 percent of our voting securities.

(4) Thomas Cahill serves as a member of our board of directors and is an affiliate of Newpath Partners, of which Newpath Partners, L.P. is an affiliated fund. Newpath Partners, L.P. holds more than 5 percent of our voting securities.

(5) David Liu is our founder and holds more than 5 percent of our voting securities.

Series B Preferred Stock Financing

In 2021, we sold an aggregate of 45,658,957 Series B convertible preferred shares in multiple closings at a purchase price of $4.3803 per share for an aggregate amount of $200.0 million. The following table summarizes purchases of our Series B convertible preferred shares by related persons:

Stockholder	Shares of Series B convertible preferred shares	Total purchase price
F-Prime Capital Partners Life Sciences Fund VI LP[1]	2,282,948	$ 9,999,997
GV 2021, L.P.[2]	5,479,076	$ 23,999,997
Entities affiliated with ARCH Venture Partners[3]	2,282,948	$ 9,999,997
Newpath Partners, L.P.[4]	5,250,781	$ 22,999,996

(1) Stephen Knight, formerly a member of our board of directors and now a board observer, is an affiliate of F-Prime Capital, of which F-Prime Capital Partners Life Sciences Fund VI LP is an affiliated fund. F-Prime Capital Partners Life Sciences Fund VI LP holds more than 5 percent of our voting securities.
(2) David Schenkein serves as a member of our board of directors and is an affiliate of GV, of which GV 2021, L.P. is an affiliated fund. Entities affiliated with GV collectively hold more than 5 percent of our voting securities.
(3) Represents 1,141,474 shares of Series B convertible preferred stock purchased by ARCH Venture Fund X Overage, L.P. and 1,141,474 shares of Series B convertible preferred stock purchased by ARCH Venture Fund X, L.P. Robert Nelsen serves as a member of our board of directors and is an affiliate of ARCH Venture Partners, of which ARCH Venture Fund X Overage, L.P. is an affiliated fund. Entities affiliated with ARCH Venture Partners collectively hold more than 5 percent of our voting securities.
(4) Thomas Cahill serves as a member of our board of directors and is an affiliate of Newpath Partners, of which Newpath Partners, L.P. is an affiliated fund. Newpath Partners, L.P. holds more than 5 percent of our voting securities.

Consulting Agreement with David Liu

In September 2019, we entered into a consulting agreement with David Liu, which was amended in October 2022, or the Liu Consulting Agreement. Dr. Liu is a beneficial owner of more than 5 percent of our voting securities. Pursuant to the Liu Consulting Agreement, we agreed to pay Dr. Liu an annual fee of $150,000 and to reimburse Dr. Liu's reasonable business expenses. Dr. Liu agreed to provide services, including serving as Chairman of our Scientific Advisory Board and advisory services related to any and all gene editing and related technology for any and all human or prophylactic uses, including without limitation, participation in corporate and research and development strategy sessions, recruiting and interviewing activities, finding and establishing laboratory space, advising on the design of experiments and other research and development activities.

Pursuant to the Liu Consulting Agreement, for the term of the Liu Consulting Agreement and six months thereafter, Dr. Liu cannot directly provide material services to any third party in the field of gene editing for therapeutics or become an owner, partner, shareholder, consultant, agent, employee or co-venturer of any third party that has committed, or intends to commit, significant resources to that field, with certain exceptions, including a previous commitment with respect to Beam Therapeutics Inc., or Beam (see below).

The Liu Consulting Agreement does not prevent David Liu from conducting research funded by a third-party sponsor at the HHMI, Harvard or Broad Institute, or collectively, the Institutions, provided that any inventions conceived in the course of such research will be owned by such Institution. Furthermore, David Liu is not restricted from publishing the results of such research or providing education, clinical or other such services for an Institution. Additionally, pursuant to a consulting agreement entered into between Dr. Liu and Beam in March 2017, or the Beam Consulting Agreement, Dr. Liu is permitted to provide consulting services to Beam, subject to certain limitations, one of which includes not providing Beam services related to our Prime Editing technology. If there is any conflict between the Liu Consulting Agreement and the Beam Consulting Agreement, the Beam Consulting Agreement prevails. The current term of the Liu Consulting Agreement runs through September 2025, following which it may be terminated by either party with 30 days prior notice. As of December 31, 2021, we have paid Dr. Liu $345,000 under the Liu Consulting Agreement.

Agreement with Myeloid

In December 2021, we entered into the Myeloid Agreement. Newpath Partners, L.P. is a beneficial owner of more than 5 percent of our voting securities, and holds more than 5 percent of Myeloid's voting securities as well. Under the Myeloid Agreement, we collaborate with Myeloid on the research and development of LINE-1 retrotransposon technology. In connection with this agreement, Myeloid received an upfront payment of $30.0 million in cash and was issued an aggregate of 3,424,422 shares of our common stock.

See "Business—Our License and Collaboration Agreements—Research Collaboration, Option and License Agreement with Myeloid Therapeutics, Inc."

Agreements with Stockholders

In connection with our Series A preferred stock financing and Series B preferred stock financing, we entered into investors' rights, voting and right of first refusal and co-sale agreements containing registration rights, information rights, voting rights and rights of first refusal, among other things, with certain holders of our preferred

stock and certain holders of our common stock. These stockholder agreements will terminate upon the closing of this offering, except for the registration rights granted under our investors' rights agreement, as more fully described in "Description of Capital Stock—Registration Rights."

Stock Option Grants to Executive Officers

We have granted stock options to our named executive officers as more fully described in the section entitled "Executive Compensation."

Indemnification Agreements

In connection with this offering, we intend to enter into new agreements to indemnify our directors and executive officers. These agreements will, among other things, require us to indemnify these individuals for certain expenses (including attorneys' fees), judgments, fines and settlement amounts reasonably incurred by such person in any action or proceeding, including any action by or in our right, on account of any services undertaken by such person on behalf of our company or that person's status as a member of our board of directors to the maximum extent allowed under Delaware law.

Policies for Approval of Related Party Transactions

Our board of directors reviews and approves transactions with directors, officers and holders of five percent or more of our voting securities and their affiliates, each a related party. Prior to this offering, the material facts as to the related party's relationship or interest in the transaction were disclosed to our board of directors prior to their consideration of such transaction, and the transaction was not considered approved by our board of directors unless a majority of the directors who are not interested in the transaction approved the transaction. Further, when stockholders are entitled to vote on a transaction with a related party, the material facts of the related party's relationship or interest in the transaction were disclosed to the stockholders, who must approve the transaction in good faith.

In connection with this offering, we expect to adopt a written related party transactions policy that will provide that such transactions must be approved by our audit committee. This policy will become effective on the date on which the registration statement of which this prospectus forms a part is declared effective by the SEC. Pursuant to this policy, the audit committee has the primary responsibility for reviewing and approving or disapproving "related party transactions," which are transactions between us and related persons in which the aggregate amount involved exceeds or may be expected to exceed $120,000 and in which a related person has or will have a direct or indirect material interest. In reviewing any such proposal, our audit committee or other committee of independent directors are to consider the relevant facts of the transaction, including the risks, costs and benefits to us and whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances. For purposes of this policy, a related person will be defined as a director, executive officer, nominee for director, or greater than 5 percent beneficial owner of our common stock, in each case since the beginning of the most recently completed year, and their immediate family members.

PRINCIPAL STOCKHOLDERS

The following table sets forth, as of June 30, 2022, information regarding the beneficial ownership of our common stock by:

- each person, or group of affiliated persons, who is known by us to be the beneficial owner of five percent or more of our outstanding common stock (on an as-converted to common stock basis);
- each of our directors;
- each of our named executive officers; and
- all of our current directors and executive officers as a group.

The information in the following table is calculated based on 265,603,788 shares (which includes 37,293,160 shares of unvested restricted common stock) of common stock deemed to be outstanding before this offering and shares of common stock outstanding after this offering, assuming no exercise by the underwriters of their option to purchase additional shares of common stock. The number of shares outstanding is based on the number of shares of common stock outstanding as of June 30, 2022 as adjusted to give effect to:

- the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 161,420,799 shares of common stock upon the completion of this offering; and
- the sale of shares of common stock in this offering (assuming no exercise of the underwriters' option to purchase additional shares).

Each individual or entity shown on the table has furnished information with respect to beneficial ownership. Except as otherwise indicated below, the address of each officer, director and five percent stockholder listed below is c/o Prime Medicine, Inc., 21 Erie Street, Cambridge, MA 02139.

We have determined beneficial ownership in accordance with the rules of the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities as well as any shares of common stock that the person has the right to acquire within 60 days of June 30, 2022 through the exercise of stock options or other rights. These shares are deemed to be outstanding and beneficially owned by the person holding those options for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any

other person. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them.

	Shares of common stock beneficially owned	Percentage of shares beneficially owned	
		Before offering	After offering
5% or Greater Stockholders			
David Liu[(1)]	65,869,628	24.79 %	
Entities affiliated with GV[(2)]	38,812,407	14.61 %	
Entities affiliated with ARCH Venture Partners[(3)]	35,616,279	13.41 %	
F-Prime Capital Partners Life Sciences Fund VI LP[(4)]	35,616,279	13.41 %	
Newpath Partners, L.P.[(5)]	15,250,780	5.74 %	
Directors, Named Executive Officers and Other Executive Officers			
Keith Gottesdiener[(6)]	9,640,693	3.63 %	
Jeremy Duffield[(7)]	3,010,417	1.13 %	
Ann Lee	—	*	
John Evans[(8)]	5,000,000	1.88 %	
Stephen Knight[(9)]	—	*	
Robert Nelsen[(3)]	35,616,279	13.41 %	
Thomas Cahill	—	*	
David Schenkein	—	*	
Michael Kelly	—	*	
Wendy Chung	—	*	
Kaye Foster	—	*	
All executive officers and directors as a group (15 persons)	53,267,389	20.05 %	

* Less than one percent.

(1) Consists of: (a) 64,772,720 shares of common stock, (b) 1,000,001 shares of common stock issuable upon conversion of Series A convertible preferred stock and (c) 96,907 shares of common stock underlying options exercisable within 60 days of June 30, 2022.

(2) Consists of: (a) 33,333,331 shares of common stock issuable upon conversion of Series A convertible preferred stock held by GV 2019, L.P., or GV 2019, and (b) 5,479,076 shares of common stock issuable upon conversion of Series B convertible preferred stock held by GV 2021, L.P., or GV 2021.

GV 2019 GP, L.P., the general partner of GV 2019, GV 2019 GP, L.L.C., the general partner of GV 2019 GP, L.P., Alphabet Holdings LLC, the sole member of GV 2019 GP, L.L.C., XXVI Holdings Inc., the sole member of Alphabet Holdings LLC, and Alphabet Inc., the controlling stockholder of XXVI Holdings Inc., may each be deemed to have sole power to vote or dispose of the shares held directly by GV 2019.

GV 2021 GP, L.P., the general partner of GV 2021, GV 2021 GP, L.L.C., the general partner of GV 2021 GP, L.P., Alphabet Holdings LLC, the sole member of GV 2021 GP, L.L.C., XXVI Holdings Inc., the sole member of Alphabet Holdings LLC, and Alphabet Inc., the controlling stockholder of XXVI Holdings Inc., may each be deemed to have sole power to vote or dispose of the shares held directly by GV 2021.

The principal business address for all entities referenced in this footnote is 1600 Amphitheatre Parkway, Mountain View, CA 94043.

(3) Consists of: (a) 16,666,667 shares of common stock issuable upon conversion of Series A convertible preferred stock held by ARCH Venture Fund X, L.P., or ARCH X, (b) 1,141,474 shares of common stock issuable upon conversion of Series B convertible preferred stock held by ARCH X, (c) 16,666,664 shares of common stock issuable upon conversion of Series A convertible preferred stock held by ARCH Venture Fund X Overage, L.P., or ARCH X Overage, and (d) 1,141,474 shares of common stock issuable upon conversion of Series B convertible preferred stock held by ARCH X Overage.

ARCH Venture Partners X, L.P., or AVP X LP, is the sole general partner of ARCH X. ARCH Venture Partners X Overage, L.P., or AVP X Overage LP, is the sole general partner of ARCH X Overage. ARCH Venture Partners X, LLC, or AVP X LLC, is the sole general partner of each of AVP X LP and AVP X Overage LP. Keith Crandell, Kristina Burow, Steven Gillis, and Robert Nelsen comprise the investment committee of AVP X LLC, or the AVP X Committee Members. AVP X LP and AVP X Overage LP may be deemed to beneficially own the shares held by ARCH X and ARCH X Overage, respectively, AVP X LLC may be deemed to beneficially own the shares held by ARCH X and ARCH X Overage, and each of the AVP X Committee Members may be deemed to share the power to direct the disposition and vote of the shares held by ARCH X and ARCH X Overage. AVP X LP, AVP X Overage LP, AVP X LLC, and the AVP

X Committee Members each disclaim beneficial ownership except to any pecuniary interest therein. The address of the ARCH Venture Partners is 8755 W. Higgins Road, Suite 1025, Chicago, IL 60631.

(4) Consists of: (a) 33,333,331 shares of common stock issuable upon conversion of Series A convertible preferred stock and (b) 2,282,948 shares of common stock issuable upon conversion of Series B convertible preferred stock. As of September 22, 2022, entities affiliated with F-Prime Capital Partners beneficially own 26,309,621 shares, which represents an aggregate beneficial ownership of 9.91%, consisting of (x) 12,821,860 shares of common stock issuable upon conversion of shares of Series A convertible preferred stock held by F-Prime Capital Partners Life Sciences Fund VI LP, (y) 307,672 shares of common stock issuable upon conversion of shares of Series A convertible preferred stock and 34,244 shares of common stock issuable upon conversion of shares of Series B convertible preferred stock held by F-Prime Capital Partners Life Sciences Advisors Fund VI LP, and (z) 11,829,238 shares of common stock issuable upon conversion of shares of Series A convertible preferred stock and 1,316,607 shares of common stock issuable upon conversion of shares of Series B convertible preferred stock held by an entity managed by Impresa Management LLC.

F-Prime Capital Partners Life Sciences Advisors Fund VI LP, or F-Prime Advisors, is the general partner of F-Prime Capital Partners Life Sciences Fund VI LP. F-Prime Advisors is solely managed by Impresa Management LLC, the managing member of its general partner and its investment manager. Impresa Management LLC is owned, directly or indirectly, by various shareholders and employees of FMR LLC. Each of the entities listed above expressly disclaims beneficial ownership of the securities listed above except to the extent of any pecuniary interest therein, if any. The address of the above entities is 245 Summer Street, Boston, Massachusetts 02210.

(5) Consists of: (a) 9,999,999 shares of common stock issuable upon conversion of Series A convertible preferred stock and (b) 5,250,781 shares of common stock issuable upon conversion of Series B convertible preferred stock.

Newpath Partners GP, L.P. is the general partner of Newpath Partners L.P. Newpath Partners GP, LLC is the general partner of Newpath Partners GP, L.P. Each of the entities listed above expressly disclaims beneficial ownership of the securities listed above except to the extent of any pecuniary interest therein, if any. The address of Newpath Partners, L.P. is 800 Boylston Street, Suite 2222, Boston, Massachusetts 02199.

(6) Consists of: (a) 9,484,443 shares of common stock held by Dr. Gottesdiener and (b) 156,250 shares of common stock underlying options exercisable within 60 days of June 30, 2022.

(7) Consists of: (a) 3,000,000 shares of common stock and (b) 10,417 shares of common stock underlying options exercisable within 60 days of June 30, 2022.

(8) Consists of 5,000,000 shares of common stock held by Beam Therapeutics Inc., or Beam. Mr. Evans is a director of Beam and shares voting and dispositive power with respect to the shares held by Beam. The principal business address of Beam is 26 Landsdowne Street, Cambridge, MA 02139. Mr. Evans disclaims beneficial ownership of these shares except to the extent of any pecuniary interest therein. Mr. Evans resigned from our board of directors effective September 13, 2022.

(9) Mr. Knight resigned from our board of directors effective September 22, 2022 and is now a board observer.

DESCRIPTION OF CAPITAL STOCK

The following descriptions are summaries of the material terms of our third amended and restated certificate of incorporation, which will be effective immediately prior to the closing of this offering, and our amended and restated bylaws, which will be effective upon the effectiveness of the registration statement of which this prospectus is a part. The descriptions of the common stock and preferred stock give effect to changes to our capital structure that will occur immediately upon the closing of this offering. We refer in this section to our third amended and restated certificate of incorporation as our certificate of incorporation, and we refer to our amended and restated bylaws as our bylaws.

General

Upon completion of this offering, our authorized capital stock will consist of 775,000,000 shares of common stock, par value $0.00001 per share, and 10,000,000 shares of preferred stock, par value $0.00001 per share, all of which shares of preferred stock will be undesignated.

As of June 30, 2022, 104,182,989 shares of our common stock (which includes 37,293,160 shares of unvested restricted common stock) were outstanding and held of record by 21 stockholders, and 115,761,842 shares of Series A convertible preferred stock and 45,658,957 shares of Series B convertible preferred stock were outstanding and held of record by 40 stockholders. This amount does not take into account the conversion of all outstanding shares of our preferred stock into common stock upon the closing of this offering.

Common Stock

The holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of the common stockholders. The holders of our common stock do not have any cumulative voting rights. Holders of our common stock are entitled to receive ratably any dividends declared by our board of directors out of funds legally available for that purpose, subject to any preferential dividend rights of any outstanding preferred stock. Our common stock has no preemptive rights, conversion rights or other subscription rights or redemption or sinking fund provisions.

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in all assets remaining after payment of all debts and other liabilities and any liquidation preference of any outstanding preferred stock. The shares to be issued by us in this offering will be, when issued and paid for, validly issued, fully paid and non-assessable.

Preferred Stock

Upon the completion of this offering, all outstanding shares of our preferred stock will be converted into shares of our common stock. Upon the closing of this offering, our board of directors will have the authority, without further action by our stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting, or the designation of, such series, any or all of which may be greater than the rights of common stock. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change in control of our company or other corporate action. Immediately after consummation of this offering, no shares of preferred stock will be outstanding, and we have no present plan to issue any shares of preferred stock.

Options

As of June 30, 2022, options to purchase 11,171,720 shares of common stock at a weighted-average exercise price of $1.55 per share were outstanding under our 2019 Stock Option and Grant Plan, as amended, or the 2019 Plan.

Registration Rights

Upon the completion of this offering, the holders of shares of our common stock, including those issuable upon the conversion of preferred stock upon closing of this offering, will be entitled to rights with respect to the registration of these securities under the Securities Act. These rights are provided under the terms of an amended and restated investors' rights agreement between us, certain holders of our common stock and holders of our preferred stock. The amended and restated investors' rights agreement includes demand registration rights, short-form registration rights and piggyback registration rights. All fees, costs and expenses of underwritten registrations under this agreement will be borne by us and all selling expenses, including underwriting discounts and selling commissions, will be borne by the holders of the shares being registered.

Demand Registration Rights

Beginning 180 days after the effective date of this registration statement, the holders of shares of our common stock, including those issuable upon the conversion of shares of our preferred stock upon closing of this offering, are entitled to demand registration rights. Under the terms of the amended and restated investors' rights agreement, we will be required, upon the written request of holders of at least a majority of the securities eligible for registration then outstanding to file a registration statement with respect to at least a majority of the securities eligible for registration then outstanding, we will be required to file a registration statement within 60 days of such request covering all securities eligible for registration that our stockholders request to be included in such registration. We are required to effect only one registration pursuant to this provision of the amended and restated investors' rights agreement in any twelve-month period.

Short-Form Registration Rights

Pursuant to the amended and restated investors' rights agreement, if we are eligible to file a registration statement on Form S-3, upon the written request of stockholders holding at least twenty percent of the securities eligible for registration then outstanding we will be required to file a Form S-3 registration restatement with respect to outstanding securities of such stockholders having an anticipated aggregate offering, net of related fees and expenses, of at least $3.0 million. We are required to effect only two registrations in any twelve month period pursuant to this provision of the amended and restated investors' rights agreement. The right to have such shares registered on Form S-3 is further subject to other specified conditions and limitations.

Piggyback Registration Rights

Pursuant to the amended and restated investors' rights agreement, if we register any of our securities either for our own account or for the account of other security holders, the holders of our common stock, including those issuable upon the conversion of our preferred stock, are entitled to include their shares in the registration. Subject to certain exceptions contained in the amended and restated investors' rights agreement, we and the underwriters may limit the number of shares included in the underwritten offering to the number of shares which we and the underwriters determine in our sole discretion will not jeopardize the success of the offering.

Indemnification

Our amended and restated investors' rights agreement contains customary cross-indemnification provisions, under which we are obligated to indemnify holders of registrable securities in the event of material misstatements or omissions in the registration statement attributable to us, and they are obligated to indemnify us for material misstatements or omissions attributable to them.

Expiration of Registration Rights

The demand registration rights and short form registration rights granted under the amended and restated investors' rights agreement will terminate on the earliest to occur of (a) the closing of certain liquidation events, (b) the fifth anniversary of the completion of this offering or (c) at such time after this offering when the holders' shares may be sold without restriction pursuant to Rule 144 under the Securities Act within a three month period.

Expenses

Ordinarily, other than underwriting discounts and commissions, we are generally required to pay all expenses incurred by us related to any registration effected pursuant to the exercise of these registration rights. These expenses may include all registration and filing fees, printing expenses, fees and disbursements of our counsel, reasonable fees and disbursements of a counsel for the selling security holders and blue-sky fees and expenses.

Anti-Takeover Effects of Delaware Law and Certain Provisions of Our Certificate of Incorporation and Bylaws

Some provisions of Delaware law, our certificate of incorporation and bylaws include a number of provisions that may have the effect of delaying, deferring or preventing another party from acquiring control of us and encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts. These provisions include the items described below.

Board Composition and Filling Vacancies

Our certificate of incorporation provides for the division of our board of directors into three classes serving staggered three-year terms, with one class being elected each year. Our certificate of incorporation also provides that directors may be removed only for cause and then only by the affirmative vote of the holders of two-thirds or more of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum. The classification of directors, together with the limitations on removal of directors and treatment of vacancies, has the effect of making it more difficult for stockholders to change the composition of our board of directors.

No Written Consent of Stockholders

Our certificate of incorporation provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. This limit may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our bylaws or removal of directors by our stockholders without holding a meeting of stockholders.

Meetings of Stockholders

Our certificate of incorporation and bylaws provide that special meetings of stockholders may only be called by or at the direction of our board of directors and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our bylaws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

Advance Notice Requirements

Our bylaws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. Our bylaws specify the requirements as to form and content of all stockholders' notices. These requirements may preclude stockholders from bringing matters before the stockholders at an annual or special meeting.

Amendment to Certificate of Incorporation and Bylaws

Any amendment of our certificate of incorporation must first be approved by a majority of our board of directors, and if required by law or our certificate of incorporation, must thereafter be approved by a majority of the

outstanding shares entitled to vote on the amendment and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of the provisions relating to stockholder action, board composition, limitation of liability and the amendment of our bylaws and certificate of incorporation must be approved by not less than two-thirds of the outstanding shares entitled to vote on the amendment, and not less than two-thirds of the outstanding shares of each class entitled to vote thereon as a class. Our bylaws may be amended by the affirmative vote of a majority of the directors then in office, subject to any limitations set forth in the bylaws; and may also be amended at an annual meeting of stockholders by the affirmative vote of at least two-thirds of the outstanding shares entitled to vote on the amendment, or, if our board of directors recommends that the stockholders approve the amendment, by the affirmative vote of the majority of the outstanding shares entitled to vote on the amendment, in each case voting together as a single class.

Undesignated Preferred Stock

Our certificate of incorporation provides for 10,000,000 authorized shares of preferred stock. The existence of authorized but unissued shares of preferred stock may enable our board of directors to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of our stockholders, our board of directors could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our certificate of incorporation grants our board of directors broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

Delaware Anti-Takeover Statute

Upon completion of this offering, we will be subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became interested, our board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85 percent of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances, but not the outstanding voting stock owned by the interested stockholder; or
- at or after the time the stockholder became interested, the business combination was approved by our board of directors and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, lease, pledge, exchange, mortgage or other disposition involving the interested stockholder of 10 percent or more of the assets of the corporation;

- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15 percent or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Choice of Forum

Our bylaws will provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for any state law claims for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, and employees to us or our stockholders, (3) any action asserting a claim arising pursuant to the Delaware General Corporation Law, our certificate of incorporation or our bylaws (including the interpretation, validity or enforceability thereof) or as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware, or (4) any action asserting a claim that is governed by the internal affairs doctrine; provided, however, that the this provision shall not apply to any causes of action arising under the Securities Act, Exchange Act or to any claim for which the federal courts have exclusive jurisdiction. In addition, our bylaws will provide that, unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States shall be the sole and exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, the Exchange Act or the respective rules and regulations promulgated thereunder. To the fullest extent permitted by law, any person or entity purchasing or otherwise acquiring any interest in our securities shall be deemed to have notice of and consented to these forum provisions. These forum provisions may impose additional costs on stockholders, may limit our stockholders' ability to bring a claim in a forum they find favorable, and the designated courts may reach different judgments or results than other courts. In addition, there is uncertainty as to whether the federal forum provision for Securities Act claims will be enforced, which may impose additional costs on us and our stockholders.

Stock Exchange Listing

We have applied to list our common stock on The Nasdaq Global Market under the proposed trading symbol "PRME".

Transfer Agent and Registrar

The Transfer Agent and Registrar for our common stock will be Computershare Inc. and Computershare Trust Company, N.A.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our shares. Future sales of our common stock in the public market, or the availability of such shares for sale in the public market, could adversely affect market prices prevailing from time to time. As described below, only a limited number of shares will be available for sale shortly after this offering due to contractual and legal restrictions on resale. Nevertheless, sales of shares of our common stock in the public market after such restrictions lapse, or the perception that those sales may occur, could adversely affect the prevailing market price at such time and our ability to raise equity capital in the future.

Based on the number of shares outstanding as of December 31, 2021, upon the completion of this offering, shares of our common stock will be outstanding, assuming the issuance of shares offered by us in this offering, no exercise of the underwriters' option to purchase additional shares and no exercise of outstanding options. Of the outstanding shares, all of the shares sold in this offering will be freely tradable, except that any shares held by our affiliates, as that term is defined in Rule 144 under the Securities Act, may only be sold in compliance with the limitations described below, and restricted shares of common stock are subject to time-based vesting terms. All remaining shares of common stock held by existing stockholders immediately prior to the completion of this offering will be "restricted securities" as such term is defined in Rule 144 under the Securities Act. These restricted securities were issued and sold by us in private transactions and are eligible for public sale only if registered under the Securities Act or if they qualify for an exemption from registration under the Securities Act, including the exemptions provided by Rule 144 or Rule 701, summarized below.

Rule 144

In general, a person who has beneficially owned restricted stock for at least six months would be entitled to sell their securities provided that (i) such person is not deemed to have been one of our affiliates at the time of, or at any time during the 90 days preceding, a sale and (ii) we are subject to the periodic reporting requirements of the Exchange Act for at least 90 days before the sale. Persons who have beneficially owned restricted shares for at least six months but who are our affiliates at the time of, or any time during the 90 days preceding, a sale, would be subject to additional restrictions, by which such person would be entitled to sell within any three-month period only a number of securities that does not exceed the greater of either of the following:

- 1 percent of the number of shares then outstanding, which will equal approximately shares immediately after this offering, assuming no exercise of the underwriters' option to purchase additional shares, based on the number of shares outstanding as of December 31, 2021; or
- the average weekly trading volume of our common stock on The Nasdaq Global Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale;

provided, in each case, that we are subject to the periodic reporting requirements of the Exchange Act for at least 90 days before the sale. Such sales both by affiliates and by non-affiliates must also comply with the manner of sale, current public information and notice provisions of Rule 144.

Rule 701

Rule 701 under the Securities Act, as in effect on the date of this prospectus, permits resales of shares in reliance upon Rule 144 but without compliance with certain restrictions of Rule 144, including the holding period requirement. Most of our employees, executive officers or directors who purchased shares under a written compensatory plan or contract may be entitled to rely on the resale provisions of Rule 701, but all holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling their shares.

However, substantially all Rule 701 shares are subject to lock-up agreements as described below and under "Underwriting" included elsewhere in this prospectus and will become eligible for sale upon the expiration of the restrictions set forth in those agreements.

Lock-Up Agreements

We, all of our directors and officers and holders of substantially all of our outstanding shares of common and preferred stock have agreed not to sell or otherwise transfer or dispose of any of our securities for a period of 180 days from the date of this prospectus, subject to certain exceptions. The representatives of the underwriters in this offering may, in their sole discretion, permit early release of shares subject to the lock-up agreements. See the section entitled "Underwriting," included elsewhere in this prospectus for more information.

Registration Rights

Upon completion of this offering, certain holders of our securities will be entitled to various rights with respect to registration of their shares under the Securities Act. Registration of these shares under the Securities Act would result in these shares becoming fully tradable without restriction under the Securities Act immediately upon the effectiveness of the registration. See the section entitled "Description of Capital Stock—Registration Rights" included elsewhere in this prospectus for more information.

Equity Incentive Plans

We intend to file one or more registration statements on Form S-8 under the Securities Act to register our shares issued or reserved for issuance under our equity incentive plans. The first such registration statement is expected to be filed soon after the date of this prospectus and will automatically become effective upon filing with the SEC. Accordingly, shares registered under such registration statement will be available for sale in the open market, unless such shares are subject to vesting restrictions with us or the lock-up restrictions described above. As of the date of this prospectus, we estimate that such registration statement on Form S-8 will cover approximately shares.

MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

The following discussion is a summary of certain material U.S. federal income tax considerations applicable to non-U.S. holders (as defined below) with respect to their ownership and disposition of shares of our common stock issued pursuant to this offering. For purposes of this discussion, a non-U.S. holder means a beneficial owner of our common stock that is for U.S. federal income tax purposes:

- a non-resident alien individual;
- a foreign corporation or other foreign organization taxable as a corporation; or
- a foreign trust or estate the income of which is not subject to U.S. federal income tax on a net income basis.

This discussion does not address the tax treatment of partnerships or other entities that are pass-through entities for U.S. federal income tax purposes or persons that hold their common stock through partnerships or other pass-through entities. A partner in a partnership or other pass-through entity that will hold our common stock should consult his, her or its tax advisor regarding the tax consequences of acquiring, holding and disposing of our common stock through a partnership or other pass-through entity, as applicable.

This discussion is based on current provisions of the U.S. Internal Revenue Code of 1986, as amended, which we refer to as the Code, existing and proposed U.S. Treasury Regulations promulgated thereunder, current administrative rulings and judicial decisions, all as in effect as of the date of this prospectus and, all of which are subject to change or to differing interpretation, possibly with retroactive effect. Any such change or differing interpretation could alter the tax consequences to non-U.S. holders described in this prospectus. There can be no assurance that the Internal Revenue Service, which we refer to as the IRS, will not challenge one or more of the tax consequences described herein. We assume in this discussion that a non-U.S. holder holds shares of our common stock as a capital asset within the meaning of Section 1221 of the Code, generally property held for investment.

This discussion does not address all aspects of U.S. federal income taxation that may be relevant to a particular non-U.S. holder in light of that non-U.S. holder's individual circumstances nor does it address any aspects of U.S. state, local or non-U.S. taxes, the alternative minimum tax, the Medicare contribution tax on net investment income, the rules regarding qualified small business stock within the meaning of Section 1202 of the Code, or any other aspect of any U.S. federal tax other than income taxes. This discussion also does not consider any specific facts or circumstances that may apply to a non-U.S. holder and does not address the special tax rules applicable to particular non-U.S. holders, such as:

- insurance companies;
- tax-exempt or governmental organizations;
- financial institutions;
- brokers or dealers in securities;
- "regulated investment companies" and "real estate investment trusts";
- pension plans;
- "controlled foreign corporations," "passive foreign investment companies," and corporations that accumulate earnings to avoid U.S. federal income tax;
- "qualified foreign pension funds," or entities wholly owned by a "qualified foreign pension fund";
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and partners and investors therein);
- persons deemed to sell our common stock under the constructive sale provisions of the Code;

- persons that hold our common stock as part of a straddle, hedge, conversion transaction, synthetic security or other integrated investment; and
- U.S. expatriates.

This discussion is for general information only and is not tax advice. Accordingly, all prospective non-U.S. holders of our common stock should consult their tax advisors with respect to the U.S. federal, state, local and non-U.S. tax consequences of the purchase, ownership and disposition of our common stock.

Distributions on Our Common Stock

We have never declared or paid any cash distributions on our capital stock and we do not anticipate paying cash distributions on our common stock for the foreseeable future. Distributions, if any, on our common stock will generally constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the non-U.S. holder's investment, up to such holder's tax basis in the common stock. Any remaining excess will be treated as capital gain, subject to the tax treatment described below in "Gain on Sale or Other Taxable Disposition of Our Common Stock." Any such distributions will also be subject to the discussions below under the sections entitled "Backup Withholding and Information Reporting" and "Withholding and Information Reporting Requirements—FATCA."

Subject to the discussion in the following two paragraphs in this section, dividends paid to a non-U.S. holder generally will be subject to withholding of U.S. federal income tax at a 30 percent rate or a reduced rate specified by an applicable income tax treaty between the United States and such holder's country of residence.

Dividends that are treated as effectively connected with a trade or business conducted by a non-U.S. holder within the United States and, if an applicable income tax treaty so provides, that are attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder within the United States, are generally exempt from the 30 percent withholding tax if the non-U.S. holder satisfies applicable certification requirements. However, such U.S. effectively connected income, net of specified deductions and credits, is taxed at the same graduated U.S. federal income tax rates applicable to United States persons (as defined in the Code). Any U.S. effectively connected income received by a non-U.S. holder that is a corporation may also, under certain circumstances, be subject to an additional "branch profits tax" at a 30 percent rate or a reduced rate specified by an applicable income tax treaty between the United States and such holder's country of residence.

A non-U.S. holder of our common stock who claims the benefit of an applicable income tax treaty between the United States and such holder's country of residence generally will be required to provide a properly executed IRS Form W-8BEN or W-8BEN-E (or other applicable or successor form) to the applicable withholding agent and satisfy applicable certification and other requirements. Any documentation provided to an applicable withholding agent may need to be updated in certain circumstances. Non-U.S. holders are urged to consult their tax advisors regarding their entitlement to benefits under a relevant income tax treaty. A non-U.S. holder that is eligible for a reduced rate of U.S. withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim with the IRS.

Gain on Sale or Other Taxable Disposition of Our Common Stock

Subject to the discussions below under "Backup Withholding and Information Reporting" and "Withholding and Information Reporting Requirements—FATCA," a non-U.S. holder generally will not be subject to any U.S. federal income or withholding tax on any gain realized upon such holder's sale or other taxable disposition of shares of our common stock unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a U.S. trade or business and, if an applicable income tax treaty so provides, is attributable to a permanent establishment or a fixed base maintained by such non-U.S. holder in the United States, in which case the non-U.S. holder generally will be taxed on a net income basis at the graduated U.S. federal income tax rates applicable to United States

persons (as defined in the Code) and, if the non-U.S. holder is a foreign corporation, the branch profits tax described above in "Distributions on Our Common Stock" also may apply;

- the non-U.S. holder is a nonresident alien individual who is present in the United States for a period or periods aggregating 183 days or more in the taxable year of the disposition and certain other conditions are met, in which case the non-U.S. holder will be subject to a 30 percent tax (or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence) on the net gain derived from the disposition, which may be offset by certain U.S. source capital losses of the non-U.S. holder, if any (even though the individual is not considered a resident of the United States), provided that the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses; or

- we are, or have been, at any time during the five-year period preceding such sale or other taxable disposition (or the non-U.S. holder's holding period, if shorter) a "U.S. real property holding corporation," as described below, unless our common stock is regularly traded on an established securities market and the non-U.S. holder holds no more than 5 percent of our outstanding common stock, directly or indirectly, actually or constructively, during the shorter of the 5-year period ending on the date of the disposition or the period that the non-U.S. holder held our common stock. Generally, a corporation is a U.S. real property holding corporation if the fair market value of its U.S. real property interests, as defined in the Code and applicable Treasury regulations, equals or exceeds 50 percent of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. Although there can be no assurance, we do not believe that we are, or have been, a U.S. real property holding corporation, or that we are likely to become one in the future. No assurance can be provided that our common stock will be regularly traded on an established securities market for purposes of the rules described above.

Backup Withholding and Information Reporting

We (or the applicable paying agent) must report annually to the IRS and to each non-U.S. holder the gross amount of the distributions on our common stock paid to such holder and the tax withheld, if any, with respect to such distributions. A non-U.S. holder may have to comply with specific certification procedures to establish that the holder is not a United States person (as defined in the Code) in order to avoid backup withholding at the applicable rate with respect to dividends on our common stock. Dividends paid to non-U.S. holders subject to withholding of U.S. federal income tax, as described above in "Distributions on Our Common Stock," generally will be exempt from U.S. backup withholding.

Information reporting and backup withholding will generally apply to the proceeds of a disposition of our common stock by a non-U.S. holder effected by or through the U.S. office of any broker, U.S. or foreign, unless the holder certifies its status as a non-U.S. holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a non-U.S. holder where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker.

Non-U.S. holders should consult their tax advisors regarding the application of the information reporting and backup withholding rules to them. Copies of information returns may be made available to the tax authorities of the country in which the non-U.S. holder resides or is incorporated under the provisions of a specific treaty or agreement. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder can be refunded or credited against the non-U.S. holder's U.S. federal income tax liability, if any, provided that an appropriate claim is filed with the IRS in a timely manner.

Withholding and Information Reporting Requirements—FATCA

Provisions of the Code commonly referred to as the Foreign Account Tax Compliance Act (FATCA) generally impose a U.S. federal withholding tax at a rate of 30 percent on payments of dividends on, or, subject to the

discussion of certain proposed U.S. Treasury regulations below, gross proceeds from the sale or other disposition of, our common stock paid to a foreign entity unless (i) if the foreign entity is a "foreign financial institution," such foreign entity undertakes certain due diligence, reporting, withholding, and certification obligations, (ii) if the foreign entity is not a "foreign financial institution," such foreign entity identifies certain of its U.S. investors, if any, or (iii) the foreign entity is otherwise exempt under FATCA. However, the U.S. Treasury released proposed regulations which, if finalized in their present form, would eliminate the federal withholding tax of 30 percent applicable to the gross proceeds of a sale or other disposition of our common stock. In the preamble to such proposed regulations, the U.S. Treasury stated that taxpayers (including withholding agents) may generally rely on the proposed regulations until final regulations are issued. Under certain circumstances, a non-U.S. holder may be eligible for refunds or credits of this withholding tax. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this paragraph. Non-U.S. holders should consult their tax advisors regarding the possible implications of this legislation on their investment in our common stock and the entities through which they hold our common stock, including, without limitation, the process and deadlines for meeting the applicable requirements to prevent the imposition of the 30 percent withholding tax under FATCA.

UNDERWRITING

We are offering the shares of common stock described in this prospectus through a number of underwriters. J.P. Morgan Securities LLC, Goldman Sachs & Co. LLC, Morgan Stanley & Co. LLC and Jefferies LLC are acting as joint book-running managers of the offering and as representatives of the underwriters. We have entered into an underwriting agreement with the underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus, the number of shares of common stock listed next to its name in the following table:

Name	Number of shares of common stock
J.P. Morgan Securities LLC	
Goldman Sachs & Co. LLC	
Morgan Stanley & Co. LLC	
Jefferies LLC	
Total	

The underwriters are committed to purchase all the shares of common stock offered by us if they purchase any shares of common stock. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the shares of common stock directly to the public at the initial public offering price set forth on the cover page of this prospectus and to certain dealers at that price less a concession not in excess of $ per share. After the initial offering of the shares of common stock to the public, if all of the shares of common stock are not sold at the initial public offering price, the underwriters may change the offering price and the other selling terms. Sales of any shares of common stock made outside of the United States may be made by affiliates of the underwriters.

The underwriters have an option to buy up to additional shares of common stock from us to cover sales of shares of common stock by the underwriters which exceed the number of shares of common stock specified in the table above. The underwriters have 30 days from the date of this prospectus to exercise this option to purchase additional shares of common stock. If any shares of common stock are purchased with this option to purchase additional shares of common stock, the underwriters will purchase shares of common stock in approximately the same proportion as shown in the table above. If any additional shares of common stock are purchased, the underwriters will offer the additional shares of common stock on the same terms as those on which the shares of common stock are being offered.

The underwriting fee is equal to the public offering price per common share less the amount paid by the underwriters to us per common share. The underwriting fee is $ per share. The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares of common stock.

	Without option to purchase additional shares of common stock exercise	With full option to purchase additional shares of common stock exercise
Per Common Share	$	$
Total	$	$

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will be

approximately $ million. We have agreed to reimburse the underwriters for expenses relating to clearance of this offering with the Financial Industry Regulatory Authority, Inc. of up to $.

A prospectus in electronic format may be made available on the web sites maintained by one or more underwriters, or selling group members, if any, participating in the offering. The underwriters may agree to allocate a number of shares of common stock to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

We have agreed that we will not (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, or submit to, or file with, the SEC a registration statement under the Securities Act relating to, any of our shares of common stock or securities convertible into or exercisable or exchangeable for any of our shares of common stock, or publicly disclose the intention to undertake any of the foregoing, or (ii) enter into any swap or other arrangement that transfers all or a portion of the economic consequences of ownership of any shares of common stock or any such other securities (regardless of whether any of these transactions are to be settled by the delivery of shares of common stock or such other securities, in cash or otherwise), in each case without the prior written consent of the representatives for a period of 180 days after the date of this prospectus, other than shares of our common stock to be sold in this offering.

The restrictions on our actions described in the immediately preceding paragraph do not apply to certain transactions, including (i) the issuance of shares of common stock or securities convertible into or exercisable for shares of common stock pursuant to the conversion or exchange of convertible or exchangeable securities or the exercise of warrants or options (including net exercise) or the settlement of restricted stock units (including net settlement), in each case outstanding on the date of this prospectus and described herein, (ii) grants of stock options, stock awards, restricted stock, restricted stock units, or other equity awards and the issuance of shares of common stock or securities convertible into or exercisable or exchangeable for shares of common stock (whether upon the exercise of stock options or otherwise) to our employees, officers, directors, advisors, or consultants pursuant to the terms of an equity compensation plan in effect as of the closing date of this offering and described herein, (iii) the issuance of up to 10% of outstanding shares of our common stock, or securities convertible into, exercisable for, or which are otherwise exchangeable for, shares of our common stock, immediately following the closing date of this offering, in acquisitions or other similar strategic transactions or pursuant to an employee benefit plan assumed by us in connection with such acquisitions or similar transactions or other securities issued in connection with a transaction with an unaffiliated third party that includes a debt financing or a bona fide commercial relationship (including joint ventures, marketing or distribution arrangements, collaboration agreements or intellectual property license agreements) or any acquisition of assets or acquisition of not less than a majority or controlling portion of the equity of another entity, provided that the recipients of any such shares of common stock and/or securities issued pursuant to this clause (iii) during the 180-day restricted period described above enter into a lock-up agreement with the underwriters for the remainder of the 180-day restricted period, or (iv) the filing of any registration statement on Form S-8 relating to securities granted or to be granted pursuant to any plan in effect on the date of this prospectus and described herein or any assumed benefit plan pursuant to an acquisition or similar strategic transaction contemplated by clause (iii).

Our directors and executive officers, and holders of substantially all of our outstanding shares of common and preferred stock (such persons, the “lock-up parties”) have entered into lock-up agreements with the underwriters prior to the commencement of this offering pursuant to which each lock-up party, with limited exceptions, for a period of 180 days after the date of this prospectus (such period, the “restricted period”), may not (and may not cause any of their direct or indirect affiliates to), without the prior written consent of the representatives, (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for common stock (including without limitation, common stock or such other securities which may be deemed to be beneficially owned by the lock-up party in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant) (collectively with the common stock, “lock-up securities”), (2) enter into any hedging, swap, or other agreement or transaction that transfers, in whole or in part, any of the economic

consequences of ownership of the lock-up securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of lock-up securities, in cash or otherwise, (3) make any demand for or exercise any right with respect to the registration of any lock-up securities, or (4) publicly disclose the intention to do any of the foregoing. Each lock-up party will further acknowledge that the foregoing precludes the lock-up party from engaging in any hedging or other transactions or arrangements (including, without limitation, any short sale or the purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) designed or intended, or which could reasonably be expected to lead to or result in, a sale or disposition or transfer (whether by the lock-up party or any other person) of any economic consequences of ownership, in whole or in part, directly or indirectly, of any lock-up securities, whether any such transaction or arrangement (or instrument provided for thereunder) would be settled by delivery of lock-up securities, in cash or otherwise. Each lock-up party will further confirm subject to limited exceptions and conditions that (1) neither the lock-up party, nor any of its affiliates, is party to as of the date of the lock-up agreement, any transaction which would have been restricted by the lock-up agreement if it had been entered into by the lock-up party during the restricted period or (2) that it will furnish the representatives with the details of any transaction the lock-up party, or any of its affiliates, is a party to as of the date hereof, which transaction would have been restricted by the lock-up agreement if it had been entered into by the lock-up party during the restricted period.

The restrictions described in the immediately preceding paragraph and contained in the lock-up agreements between the underwriters and the lock-up parties do not apply, subject in certain cases to various conditions, to certain transactions, including (a) transfers or dispositions of the lock-up party's lock-up securities: (i) as a bona fide gift or gifts, or for bona fide estate planning purposes, (ii) by will or intestacy or other testamentary document, (iii) to any trust for the direct or indirect benefit of the lock-up party or the immediate family of the lock-up party, or if the lock-up party is a trust, to a trustor or beneficiary of the trust or to the estate of a beneficiary of such trust, (iv) to a corporation, partnership, limited liability company, investment fund or other entity (A) of which the lock-up party and/or the immediate family of the lock-up party are, directly or indirectly, the legal and beneficial owner of all of the outstanding equity securities or similar interests, or (B) controlled by, or under common control with, the lock-up party or the immediate family of the lock-up party, (v) to a nominee or custodian of a person or entity to whom a disposition or transfer would be permissible under clauses (i) through (iv) above, (vi) if the lock-up party is a corporation, partnership, limited liability company, trust or other business entity, (A) to another corporation, partnership, limited liability company, trust, or other business entity that is an affiliate (as defined in Rule 405 promulgated under the Securities Act) of the lock-up party, or to any investment fund or other entity controlling, controlled by, managing or managed by or under common control or common investment management with the lock-up party or affiliates of the lock-up party (including, for the avoidance of doubt, where the lock-up party is a partnership, to its general partner or a successor partnership or fund, or any other funds managed by such partnership), or to the undersigned's or its affiliates' partners, managers, members, employees, officers, directors or trustees, or (B) as part of a distribution or other transfer to general or limited partners, direct or indirect members, subsidiaries, affiliates or shareholders of the lock-up party, (vii) by operation of law, such as pursuant to a qualified domestic order, divorce settlement, divorce decree or separation agreement, (viii) to us from an employee upon death, disability or termination of employment, in each case, of such employee, (ix) as part of a sale or other transaction involving of the lock-up party's or its direct or indirect affiliates' lock-up securities acquired in this offering, subject to certain exceptions, or in open market transactions after the pricing date for this offering; (x) to us in connection with the vesting, settlement, or exercise of restricted stock units, options, warrants or other rights to purchase shares of common stock (including, in each case, by way of "net" or "cashless" exercise), including for the payment of exercise price and tax and remittance payments due as a result of the vesting, settlement, or exercise of such restricted stock units, options, warrants or rights, provided that any such shares of common stock received upon such exercise, vesting or settlement shall be subject to the terms of the lock-up agreement, and provided further that any such restricted stock units, options, warrants or rights are held by the lock-up party pursuant to an agreement or equity awards granted under a stock incentive plan or other equity award plan, each such agreement or plan which is described in this prospectus, or (xi) pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction that is approved by our board of directors and made to all holders of our capital stock involving a "change of control" (as defined below) (for purposes hereof, "change of control" shall mean the transfer (whether by tender offer, merger, consolidation or other similar transaction), in one transaction or a series of related transactions, to a person or group of affiliated persons, of shares of capital stock if, after such transfer, such person or group of affiliated persons would hold at least a majority of our outstanding voting securities (or the surviving entity));

provided that in the event that such tender offer, merger, consolidation or other similar transaction is not completed, the lock-up party's lock-up securities shall remain subject to the provisions of the lock-up agreement; provided that (A) in the case of any transfer, disposition or distribution pursuant to clause (a)(i), (ii), (iii), (iv), (v) and (vii), such transfer shall not involve a disposition for value and in the case of any transfer, disposition or distribution pursuant to clause (a)(i), (ii), (iii), (iv), (v), (vi) and (vii), each donee, devisee, transferee or distributee shall execute and deliver to the representatives a lock-up letter in the form of the lock-up agreement , (B) in the case of any transfer, disposition or distribution pursuant to clause (a) (i), (ii), (iii), (iv), (v) and (vi) no filing by any party (donor, donee, devisee, transferor, transferee, distributer or distributee) under the Exchange Act or other public announcement shall be required or shall be made voluntarily in connection with such transfer or distribution (other than a filing on a Form 5 or a filing required pursuant to Section 13 of the Exchange Act and the rules and regulations promulgated thereunder subject to certain conditions) and (C) in the case of any transfer or distribution pursuant to clause (a)(vii), (viii) and (x) it shall be a condition to such transfer that no public filing, report or announcement shall be voluntarily made and if any filing under Section 16(a) of the Exchange Act, or other public filing, report or announcement reporting a reduction in beneficial ownership of shares of common stock in connection with such transfer or distribution shall be legally required during the restricted period, such filing, report or announcement shall clearly indicate in the footnotes thereto the nature and conditions of such transfer; (b) the exercise of outstanding options, settled restricted stock units or other equity awards or warrants pursuant to plans described in this prospectus; provided that any lock-up securities received upon such exercise, vesting or settlement shall be subject to the terms of the lock-up agreement; (c) the conversion of outstanding preferred stock, warrants to acquire preferred stock or convertible securities into shares of common stock or warrants to acquire shares of common stock; provided that any such shares of common stock or warrants received upon such conversion shall be subject to the terms of the lock-up agreement; and (d) the establishment of trading plans pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of lock-up securities; provided that (1) such plans do not provide for the transfer of lock-up securities during the restricted period and (2) no filing by any party under the Exchange Act or other public announcement shall be required or made voluntarily in connection with such trading plan.

The representatives, in their sole discretion, may release the securities subject to any of the lock-up agreements with the underwriters described above, in whole or in part at any time.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act.

We have applied to have our shares of common stock approved for listing on The Nasdaq Global Market under the symbol "PRME".

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the shares of common stock while this offering is in progress. These stabilizing transactions may include making short sales of shares of common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be "covered" shorts, which are short positions in an amount not greater than the underwriters' option to purchase additional shares of common stock referred to above, or may be "naked" shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position either by exercising their option to purchase additional shares of common stock, in whole or in part, or by purchasing shares of common stock in the open market. In making this determination, the underwriters will consider, among other things, the price of shares of common stock available for purchase in the open market compared to the price at which the underwriters may purchase shares of common stock through the option to purchase additional shares of common stock. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares of common stock in the open market that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares of common stock in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the shares of common stock, including the

imposition of penalty bids. This means that if the representatives of the underwriters purchase shares of common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares of common stock as part of this offering to repay the underwriting discount received by them.

These activities may have the effect of raising or maintaining the market price of the shares of common stock or preventing or retarding a decline in the market price of the shares of common stock, and, as a result, the price of the shares of common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on Nasdaq, in the over-the-counter market or otherwise.

Prior to this offering, there has been no public market for our shares of common stock. The initial public offering price will be determined by negotiations between us and the representatives of the underwriters. In determining the initial public offering price, we and the representatives of the underwriters expect to consider a number of factors including:

- the information set forth in this prospectus and otherwise available to the representatives;
- our prospects and the history and prospects for the industry in which we compete;
- an assessment of our management;
- our prospects for future earnings;
- the general condition of the securities markets at the time of this offering;
- the recent market prices of, and demand for, publicly traded common stock of generally comparable companies; and
- other factors deemed relevant by the underwriters and us.

Neither we nor the underwriters can assure investors that an active trading market will develop for our shares of common stock, or that the shares of common stock will trade in the public market at or above the initial public offering price.

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Certain of the underwriters and their affiliates have provided in the past to us and our affiliates and may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services for us and such affiliates in the ordinary course of their business, for which they have received and may continue to receive customary fees and commissions. In addition, from time to time, certain of the underwriters and their affiliates may effect transactions for their own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and may do so in the future.

Notice to Prospective Investors in the European Economic Area

In relation to each Member State of the European Economic Area (each a “Relevant State”), no shares of our common stock have been offered or will be offered pursuant to the offering to the public in that Relevant State prior

to the publication of a prospectus in relation to the shares of our common stock which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation), except that offers of Shares may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

(a) to any legal entity which is a qualified investor as defined under the Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the underwriters for any such offer; or

(c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of shares of common stock shall require the Issuer or any underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

Each person in a Relevant State who initially acquires any shares of common stock or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with us and the underwriters that it is a qualified investor within the meaning of the Prospectus Regulation.

In the case of any shares of common stock being offered to a financial intermediary as that term is used in Article 5(1) of the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares of common stock acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer to the public other than their offer or resale in a Relevant State to qualified investors, in circumstances in which the prior consent of the underwriters has been obtained to each such proposed offer or resale.

We, the underwriters and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares of common stock in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any Shares to be offered so as to enable an investor to decide to purchase or subscribe for any Shares, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129.

Notice to Prospective Investors in the United Kingdom

In relation to the United Kingdom, or the UK, no shares of our common stock have been offered or will be offered pursuant to the offering to the public in the UK prior to the publication of a prospectus in relation to the shares of common stock which has been approved by the Financial Conduct Authority in the UK in accordance with the UK Prospectus Regulation and the FSMA, except that offers of shares of common stock may be made to the public in the UK at any time under the following exemptions under the UK Prospectus Regulation and the FSMA:

(a) to any legal entity which is a qualified investor as defined under the UK Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined under the UK Prospectus Regulation), subject to obtaining the prior consent of the underwriters for any such offer; or

(c) at any time in other circumstances falling within section 86 of the FSMA,

provided that no such offer of shares of common stock shall require the Issuer or any underwriter to publish a prospectus pursuant to Section 85 of the FSMA or Article 3 of the UK Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation.

Each person in the UK who initially acquires any shares of common stock or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with us and the underwriters that it is a qualified investor within the meaning of the UK Prospectus Regulation.

In the case of any shares of common stock being offered to a financial intermediary as that term is used in Article 5(1) of the UK Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the Shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer to the public other than their offer or resale in the UK to qualified investors, in circumstances in which the prior consent of the underwriters has been obtained to each such proposed offer or resale.

We, the underwriters and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares of our common stock in the UK means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of our common stock to be offered so as to enable an investor to decide to purchase or subscribe for any shares of our common stock, the expression "UK Prospectus Regulation" means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018, and the expression "FSMA" means the Financial Services and Markets Act 2000.

This document is for distribution only to persons who (i) have professional experience in matters relating to investments and who qualify as investment professionals within the meaning of Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Financial Promotion Order"), (ii) are persons falling within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc.") of the Financial Promotion Order, (iii) are outside the United Kingdom, or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) in connection with the issue or sale of any securities may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as "relevant persons"). This document is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is available only to relevant persons and will be engaged in only with relevant persons.

Notice to Prospective Investors in Canada

The shares of common stock may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares of common stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Notice to Prospective Investors in Switzerland

The shares of common stock may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This document does not constitute a prospectus within the meaning of, and has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares of common stock or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, us, the shares of common stock have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares of common stock will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, or FINMA, and the offer of shares of common stock has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares of common stock.

Notice to Prospective Investors in Hong Kong

The shares of common stock have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong), or SFO, of Hong Kong and any rules made thereunder; or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong), or CO, or which do not constitute an offer to the public within the meaning of the CO. No advertisement, invitation or document relating to the shares of common stock has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares of common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made thereunder.

Notice to Prospective Investors in Singapore

Each joint book-running manager has acknowledged that this prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, each joint book-running manager has represented and agreed that it has not offered or sold any shares of common stock or caused the shares of common stock to be made the subject of an invitation for subscription or purchase and will not offer or sell any shares of common stock or cause the shares of common stock to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this prospectus or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares of common stock, whether directly or indirectly, to any person in Singapore other than:

(a) to an institutional investor (as defined in Section 4A of the Securities and Futures Act (Chapter 289) of Singapore, as modified or amended from time to time, or the SFA) pursuant to Section 274 of the SFA;

(b) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA; or

(c) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares of common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares of common stock pursuant to an offer made under Section 275 of the SFA except:

(i) to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(ii) where no consideration is or will be given for the transfer;

(iii) where the transfer is by operation of law;

(iv) as specified in Section 276(7) of the SFA; or

(v) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018.

Singapore SFA Product Classification—In connection with Section 309B of the SFA and the CMP Regulations 2018, unless otherwise specified before an offer of shares of common stock, we have determined, and hereby notify all relevant persons (as defined in Section 309A(1) of the SFA), that the shares of common stock are ''prescribed capital markets products'' (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Notice to Prospective Investors in Japan

The shares of common stock have not been and will not be registered pursuant to Article 4, Paragraph 1 of the Financial Instruments and Exchange Act. Accordingly, none of the shares of common stock nor any interest therein may be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any "resident" of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to or for the benefit of a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Act and any other applicable laws, regulations and ministerial guidelines of Japan in effect at the relevant time.

Notice to Prospective Investors in the United Arab Emirates

The shares of common stock have not been, and are not being, publicly offered, sold, promoted or advertised in the United Arab Emirates (including the Dubai International Financial Centre) other than in compliance with the laws of the United Arab Emirates (and the Dubai International Financial Centre) governing the issue, offering and sale of securities. Further, this prospectus does not constitute a public offer of securities in the United Arab Emirates (including the Dubai International Financial Centre) and is not intended to be a public offer. This prospectus has not been approved by or filed with the Central Bank of the United Arab Emirates, the Securities and Commodities Authority or the Dubai Financial Services Authority.

Notice to Prospective Investors in Israel

In the State of Israel this prospectus shall not be regarded as an offer to the public to purchase shares of common stock under the Israeli Securities Law, 5728—1968, which requires a prospectus to be published and authorized by the Israel Securities Authority, if it complies with certain provisions of Section 15 of the Israeli Securities Law, 5728–1968, including, inter alia, if: (i) the offer is made, distributed or directed to not more than 35 investors, subject to certain conditions, or the Addressed Investors; or (ii) the offer is made, distributed or directed to certain qualified investors defined in the First Addendum of the Israeli Securities Law, 5728—1968, subject to certain conditions, or the "Qualified Investors". The Qualified Investors shall not be taken into account in the count of the Addressed Investors and may be offered to purchase securities in addition to the 35 Addressed Investors. We have not and will not take any action that would require it to publish a prospectus in accordance with and subject to the Israeli Securities Law, 5728—1968. We have not and will not distribute this prospectus or make, distribute or direct an offer to subscribe for our shares of common stock to any person within the State of Israel, other than to Qualified Investors and up to 35 Addressed Investors.

Qualified Investors may have to submit written evidence that they meet the definitions set out in of the First Addendum to the Israeli Securities Law, 5728—1968. In particular, we may request, as a condition to be offered shares of common stock, that Qualified Investors will each represent, warrant and certify to us and/or to anyone acting on our behalf: (i) that it is an investor falling within one of the categories listed in the First Addendum to the Israeli Securities Law, 5728—1968; (ii) which of the categories listed in the First Addendum to the Israeli Securities Law, 5728—1968 regarding Qualified Investors is applicable to it; (iii) that it will abide by all provisions set forth in the Israeli Securities Law, 5728—1968 and the regulations promulgated thereunder in connection with the offer to be issued shares of common stock; (iv) that the shares of common stock that it will be issued are, subject to exemptions available under the Israeli Securities Law, 5728—1968: (a) for its own account; (b) for investment purposes only; and (c) not issued with a view to resale within the State of Israel, other than in accordance with the provisions of the Israeli Securities Law, 5728—1968; and (v) that it is willing to provide further evidence of its Qualified Investor status. Addressed Investors may have to submit written evidence in respect of their identity and may have to sign and submit a declaration containing, inter alia, the Addressed Investor's name, address and passport number or Israeli identification number.

Notice to Prospective Investors in Australia

This prospectus:

(a) does not constitute a disclosure document or a prospectus under Chapter 6D.2 of the Corporations Act 2001 (Cth), or the Corporations Act;

(b) has not been, and will not be, lodged with the Australian Securities and Investments Commission, or ASIC, as a disclosure document for the purposes of the Corporations Act and does not purport to include the information required of a disclosure document for the purposes of the Corporations Act; and

(c) may only be provided in Australia to select investors who are able to demonstrate that they fall within one or more of the categories of investors, available under section 708 of the Corporations Act, or Exempt Investors.

The shares of common stock may not be directly or indirectly offered for subscription or purchased or sold, and no invitations to subscribe for or buy the shares of common stock may be issued, and no draft or definitive offering memorandum, advertisement or other offering material relating to any shares of common stock may be distributed in Australia, except where disclosure to investors is not required under Chapter 6D of the Corporations Act or is otherwise in compliance with all applicable Australian laws and regulations. By submitting an application for the shares of common stock, you represent and warrant to us that you are an Exempt Investor.

As any offer of shares of common stock under this document will be made without disclosure in Australia under Chapter 6D.2 of the Corporations Act, the offer of those securities for resale in Australia within 12 months may, under section 707 of the Corporations Act, require disclosure to investors under Chapter 6D.2 if none of the exemptions in section 708 applies to that resale. By applying for the shares of common stock you undertake to us

that you will not, for a period of 12 months from the date of issue of the shares of common stock, offer, transfer, assign or otherwise alienate those shares of common stock to investors in Australia except in circumstances where disclosure to investors is not required under Chapter 6D.2 of the Corporations Act or where a compliant disclosure document is prepared and lodged with ASIC.

Notice to Prospective Investors in China

This prospectus will not be circulated or distributed in the PRC and the shares of common stock will not be offered or sold, and will not be offered or sold to any person for re-offering or resale directly or indirectly to any residents of the PRC except pursuant to any applicable laws and regulations of the PRC. Neither this prospectus nor any advertisement or other offering material may be distributed or published in the PRC, except under circumstances that will result in compliance with applicable laws and regulations.

Notice to Prospective Investors in Korea

The shares of common stock have not been and will not be registered under the Financial Investments Services and Capital Markets Act of Korea and the decrees and regulations thereunder, or the FSCMA, and the shares of common stock have been and will be offered in Korea as a private placement under the FSCMA. None of the shares of common stock may be offered, sold or delivered directly or indirectly, or offered or sold to any person for re-offering or resale, directly or indirectly, in Korea or to any resident of Korea except pursuant to the applicable laws and regulations of Korea, including the FSCMA and the Foreign Exchange Transaction Law of Korea and the decrees and regulations thereunder, or FETL. Furthermore, the purchaser of the shares of common stock shall comply with all applicable regulatory requirements (including but not limited to requirements under the FETL) in connection with the purchase of the shares of common stock. By the purchase of the shares of common stock, the relevant holder thereof will be deemed to represent and warrant that if it is in Korea or is a resident of Korea, it purchased the shares of common stock pursuant to the applicable laws and regulations of Korea.

Notice to Prospective Investors in Saudi Arabia

This document may not be distributed in the Kingdom of Saudi Arabia except to such persons as are permitted under the Offers of Securities Regulations as issued by the board of the Saudi Arabian Capital Market Authority, or CMA, pursuant to resolution number 2-11-2004 dated 4 October 2004 as amended by resolution number 1-28-2008, as amended, or the CMA Regulations. The CMA does not make any representation as to the accuracy or completeness of this document and expressly disclaims any liability whatsoever for any loss arising from, or incurred in reliance upon, any part of this document. Prospective purchasers of the securities offered hereby should conduct their own due diligence on the accuracy of the information relating to the securities. If you do not understand the contents of this document, you should consult an authorized financial adviser.

Notice to Prospective Investors in the Dubai International Financial Centre (DIFC)

This document relates to an Exempt Offer in accordance with the Markets Rules 2012 of the Dubai Financial Services Authority, or DFSA. This document is intended for distribution only to persons of a type specified in the Markets Rules 2012 of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus supplement nor taken steps to verify the information set forth herein and has no responsibility for this document. The securities to which this document relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the securities offered should conduct their own due diligence on the securities. If you do not understand the contents of this document, you should consult an authorized financial advisor.

In relation to its use in the DIFC, this document is strictly private and confidential and is being distributed to a limited number of investors and must not be provided to any person other than the original recipient, and may not be reproduced or used for any other purpose. The interests in the securities may not be offered or sold directly or indirectly to the public in the DIFC.

Notice to Prospective Investors in Bermuda

Shares of common stock may be offered or sold in Bermuda only in compliance with the provisions of the Investment Business Act of 2003 of Bermuda which regulates the sale of securities in Bermuda. Additionally, non-Bermudian persons (including companies) may not carry on or engage in any trade or business in Bermuda unless such persons are permitted to do so under applicable Bermuda legislation.

LEGAL MATTERS

The validity of the shares of common stock offered by this prospectus will be passed upon for us by Goodwin Procter LLP, Boston, Massachusetts. Certain legal matters relating to this offering will be passed upon for the underwriters by Davis Polk & Wardwell LLP, New York, New York.

EXPERTS

The financial statements as of December 31, 2021 and December 31, 2020 and for the years ended December 31, 2021 and 2020, and for the period from September 13, 2019 (inception) to December 31, 2019, included in this Prospectus have been so included in reliance on the report of PricewaterhouseCoopers LLP ("PwC"), an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

In connection with their engagement, PwC completed an independence assessment to evaluate the services and relationships with Prime Medicine, Inc. ("Prime" or the "Company") and its affiliates that may bear on PwC's independence under the SEC and the PCAOB (United States) independence rules. From September 13, 2019 (inception of the Company) through November 24, 2021, a business relationship existed between PwC and a beneficial owner that had significant influence ("BOSI") over Prime whereby PwC is a cloud services partner of the BOSI and advises clients on their cloud computer strategy and operations. The existence of this business relationship identified is inconsistent with SEC and PCAOB auditor independence rules provided in Rule 2-01 of Regulation S-X. The matter was resolved on November 24, 2021, when the Company determined the beneficial owner no longer demonstrated the ability to exercise significant influence over Prime.

PwC provided an overview of the facts and circumstances surrounding the business arrangement to our board of directors and management, including the entity involved and other relevant facts. The PwC audit engagement team members did not participate in PwC's activities and engagements with the BOSI or any entity that is part of PwC's business relationship with the BOSI, and the business relationship was not quantitatively or qualitatively material to PwC or the BOSI.

Considering the facts presented, our board of directors and PwC have concluded that the business relationship would not impair PwC's application of objective and impartial judgment on any matters encompassed within the audit engagement performed by PwC for our financial statements as of and for the fiscal years ended December 31, 2021 and 2020, and for the period from September 13, 2019 (inception) to December 31, 2019, and the review for the interim period for the six months ended June 30, 2021, and that a reasonable investor with knowledge of all relevant facts and circumstances would conclude that PwC is capable of remaining objective and impartial with respect to the audit of Prime's financial statements.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 (File Number 333-) under the Securities Act with respect to the common stock we are offering by this prospectus. This prospectus, which constitutes part of the registration statement, does not contain all of the information included in the registration statement. For further information pertaining to us and our common stock, you should refer to the registration statement and to its exhibits. Whenever we make reference in this prospectus to any of our contracts, agreements or other documents, the references are not necessarily complete, and you should refer to the exhibits attached to the registration statement for copies of the actual contract, agreement or other document.

Upon the completion of the offering, we will be subject to the informational requirements of the Exchange Act and will file annual, quarterly and current reports, proxy statements and other information with the SEC. You can read our SEC filings, including the registration statement, at the SEC's website at www.sec.gov. We also maintain a website at https://www.primemedicine.com and upon completion of the offering, you may access, free of charge, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports, as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not part of, and is not incorporated into, this prospectus.

PRIME MEDICINE, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Prime Medicine, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Prime Medicine, Inc., and its subsidiary (the "Company") as of December 31, 2021 and 2020, and the related consolidated statements of operations and comprehensive loss, of redeemable convertible and convertible preferred stock and stockholders' equity (deficit) and of cash flows for the years ended December 31, 2021 and 2020 and the period from September 13, 2019 (Inception) to December 31, 2019, including the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for the years ended December 31, 2021 and 2020 and the period from September 13, 2019 (Inception) to December 31, 2019 in conformity with accounting principles generally accepted in the United States of America.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2021.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
February 4, 2022

We have served as the Company's auditor since 2021.

PRIME MEDICINE, INC.

CONSOLIDATED BALANCE SHEETS

(In thousands, except share and per share amounts)

	December 31,		June 30,
	2020	2021	2022
			(unaudited)
Assets			
Current assets:			
Cash and cash equivalents	$ 36,975	$ 185,420	$ 92,239
Short-term investments	—	68,238	80,610
Related party short-term investment	16,353	15,962	7,754
Prepaid expenses and other current assets	74	959	1,002
Total current assets	53,402	270,579	181,605
Property and equipment, net	596	4,932	12,528
Operating lease right-of-use lease assets	—	10,746	35,097
Restricted cash	—	13,125	13,496
Other assets	785	2,474	4,871
Total assets	$ 54,783	$ 301,856	$ 247,597
Liabilities, Redeemable Convertible and Convertible Preferred Stock and Stockholders' Equity (Deficit)			
Current liabilities:			
Accounts payable	$ 250	$ 1,435	$ 5,885
Preferred stock tranche right liability	17,515	—	—
Anti-dilution obligation	855	—	—
Accrued expenses and other current liabilities[(1)]	822	37,192	5,985
Related party forward contract liability	—	12,020	—
Operating lease liability	—	7,336	11,963
Total current liabilities	19,442	57,983	23,833
Operating lease liability, net of current	—	3,070	22,758
Non current deferred tax liability	1,867	1,243	269
Total liabilities	21,309	62,296	46,860
Commitments and contingencies (Note 12)			
Series A redeemable convertible preferred stock, $0.00001 par value; 115,000,000, 115,761,842, and 115,761,842 shares authorized at December 31, 2020, December 31 2021 and June 30, 2022 (unaudited), respectively; 45,000,000, 115,761,842, and 115,761,842 shares issued and outstanding at December 31, 2020, December 31, 2021 and June 30, 2022 (unaudited), respectively; liquidation preference of $46,388, $125,000, and $129,592 at December 31, 2020, December 31 2021 and June 30, 2022 (unaudited), respectively	31,136	196,157	196,157
Series B convertible preferred stock, $0.00001 par value; No shares authorized, issued or outstanding at December 31, 2020; 45,658,957 shares authorized, issued and outstanding at December 31, 2021; liquidation preference of $210,814 at December 31, 2021; 45,658,957 shares authorized, issued and outstanding at June 30, 2022 (unaudited); liquidation preference of $218,738 at June 30, 2022 (unaudited)	—	199,643	199,643
Stockholders' equity (deficit):			
Common stock, $0.00001 par value; 220,000,000, 293,258,790, and 293,258,790 shares authorized at December 31, 2020, December 31, 2021, and June 30, 2022 (unaudited), respectively; 88,568,497, 100,768,255, and 104,182,989 shares issued and outstanding at December 31, 2020, December 31, 2021, and June 30, 2022 (unaudited), respectively	1	1	1
Additional paid-in capital	8,346	15,162	29,650
Accumulated other comprehensive loss	—	(27)	(150)
Accumulated deficit	(6,009)	(171,376)	(224,564)
Total stockholders' equity (deficit)	2,338	(156,240)	(195,063)
Total liabilities, redeemable convertible and convertible preferred stock and stockholders' equity (deficit)	$ 54,783	$ 301,856	$ 247,597

(1) Includes related party amount of $30,000 as of December 31, 2021 (see Note 14).

The accompanying notes are an integral part of these consolidated financial statements.

PRIME MEDICINE, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

(In thousands, except share and per share amounts)

	Period from September 13, 2019 (Inception) to December 31, 2019	Year Ended December 31,		Six Months Ended June 30,	
		2020	2021	2021	2022
				(unaudited)	
Related party collaboration revenue	$ —	$ 5,210	$ —	$ —	$ —
Operating expenses:					
Research and development[1]	920	2,980	70,550	10,261	32,617
General and administrative	1,252	3,162	13,924	3,710	13,586
Total operating expenses	2,172	6,142	84,474	13,971	46,203
Income (loss) from operations	(2,172)	(932)	(84,474)	(13,971)	(46,203)
Other income (expense):					
Change in fair value of preferred stock tranche right liability	(353)	(10,904)	(74,319)	(74,319)	—
Change in fair value of anti-dilution obligation	—	(700)	(6,681)	(6,681)	—
Change in fair value of related party short-term investment	—	10,867	(391)	9,429	(8,208)
Other income (expense), net[2]	—	126	12	1	249
Total other expense, net	(353)	(611)	(81,379)	(71,570)	(7,959)
Net loss before income taxes	(2,525)	(1,543)	(165,853)	(85,541)	(54,162)
Provision for (benefit from) income taxes	4	1,867	(486)	503	(974)
Net loss	(2,529)	(3,410)	(165,367)	(86,044)	(53,188)
Accretion of preferred stock to redemption value	(265)	(1,645)	(1,468)	(1,468)	—
Cumulative dividend on preferred stock	—	—	(17,284)	(4,559)	(12,517)
Net loss attributable to common stockholders	$ (2,794)	$ (5,055)	$ (184,119)	$ (92,071)	$ (65,705)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.60)	$ (0.62)	$ (4.57)	$ (2.91)	$ (1.06)
Weighted-average common shares outstanding, basic and diluted	4,622,576	8,206,374	40,332,091	31,662,400	61,777,538
Comprehensive Loss:					
Net loss	$ (2,529)	$ (3,410)	$ (165,367)	$ (86,044)	$ (53,188)
Change in unrealized gains (losses) on investments, net of tax	—	—	(27)	(34)	(123)
Total other comprehensive loss	—	—	(27)	(34)	(123)
Comprehensive Loss	$ (2,529)	$ (3,410)	$ (165,394)	$ (86,078)	$ (53,311)

(1) Includes related party amounts of $45, $150 and $42,170 for the period from September 13, 2019 (inception) to December 31, 2019 and for the years ended December 31, 2020 and 2021, respectively (see Note 14).

(2) Includes related party amount of $126 for the year ended December 31, 2020 (see Note 14).

The accompanying notes are an integral part of these consolidated financial statements.

PRIME MEDICINE, INC.

CONSOLIDATED STATEMENTS OF REDEEMABLE CONVERTIBLE AND CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)

(In thousands, except share amounts)

	Redeemable Convertible Preferred Stock		Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Losses	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount	Shares	Amount				
Balances at September 13, 2019 (Inception)	—	$ —	—	$ —	—	$ —	$ —	$ —	$ —	$ —
Issuance of Series A redeemable convertible preferred stock, net of preferred stock tranche right liability of $6,258 and issuance costs of $20	10,000,001	3,722	—	—	—	—	—	—	—	—
Accretion of redeemable convertible preferred stock to redemption value	—	265	—	—	—	—	(195)	—	(70)	(265)
Issuance of common stock in exchange for Broad license	—	—	—	—	1,938,429	—	39	—	—	39
Stock-based compensation expense	—	—	—	—	—	—	156	—	—	156
Issuance of restricted common stock	—	—	—	—	64,772,720	1	—	—	—	1
Net loss	—	—	—	—	—	—	—	—	(2,529)	(2,529)
Balances at December 31, 2019	10,000,001	3,987	—	—	66,711,149	1	—	—	(2,599)	(2,598)
Issuance of Series A redeemable convertible preferred stock for the settlement of the second tranche right liability, net of issuance costs of $46	34,999,999	25,504	—	—	—	—	9,450	—	—	9,450
Accretion of redeemable convertible preferred stock to redemption value	—	1,645	—	—	—	—	(1,645)	—	—	(1,645)
Issuance of common stock as consideration for related party collaboration agreement	—	—	—	—	5,000,000	—	150	—	—	150
Issuance of restricted common stock	—	—	—	—	16,857,348	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	—	—	391	—	—	391
Net loss	—	—	—	—	—	—	—	—	(3,410)	(3,410)
Balances at December 31, 2020	45,000,000	31,136	—	—	88,568,497	1	8,346	—	(6,009)	2,338
Issuance of Series A redeemable convertible preferred stock, including the settlement of the third and fourth tranche right liability, net of issuance costs of $41	70,761,842	71,719	—	—	—	—	(998)	—	—	(998)
Reclassification of preferred stock tranche liability upon settlement	—	91,834	—	—	—	—	—	—	—	—
Accretion of redeemable convertible preferred stock to redemption value	—	1,468	—	—	—	—	(1,468)	—	—	(1,468)
Issuance of Series B convertible preferred stock, net of issuance costs of $356	—	—	45,658,957	199,643	—	—	—	—	—	—
Issuance of restricted common stock	—	—	—	—	4,488,000	—	—	—	—	—
Issuance of common stock and settlement of the anti-dilution obligation	—	—	—	—	7,768,425	—	—	—	—	—
Reclassification of the anti-dilution obligation upon settlement	—	—	—	—	—	—	7,536	—	—	7,536
Repurchase of unvested restricted common stock	—	—	—	—	(56,667)	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	—	—	1,746	—	—	1,746
Net loss	—	—	—	—	—	—	—	—	(165,367)	(165,367)
Change in unrealized gain on investments, net of tax	—	—	—	—	—	—	—	(27)	—	(27)
Balances at December 31, 2021	115,761,842	$ 196,157	45,658,957	$ 199,643	100,768,255	$ 1	$ 15,162	$ (27)	$ (171,376)	$ (156,240)

The accompanying notes are an integral part of these consolidated financial statements.

PRIME MEDICINE, INC.

CONSOLIDATED STATEMENTS OF REDEEMABLE CONVERTIBLE AND CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)

(In thousands, except share amounts)

	Redeemable Convertible Preferred Stock		Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Losses	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount	Shares	Amount				
Balances at December 31, 2020	45,000,000	$ 31,136	—	—	88,568,497	$ 1	$ 8,346	$ —	$ (6,009)	$ 2,338
Issuance of Series A redeemable convertible preferred stock, including the settlement of the third and fourth tranche right liability, net of issuance costs of $41	70,761,842	71,719	—	—	—	—	(998)	—	—	(998)
Reclassification of preferred stock tranche liability upon settlement	—	91,834	—	—	—	—	—	—	—	—
Accretion of redeemable convertible preferred stock to redemption value	—	1,468	—	—	—	—	(1,468)	—	—	(1,468)
Issuance of Series B convertible preferred stock, net of issuance costs of $80	—	—	45,658,957	199,643	—	—	—	—	—	—
Issuance of restricted common stock	—	—	—	—	4,488,000	—	—	—	—	—
Issuance of common stock and settlement of the anti-dilution obligation	—	—	—	—	7,768,425	—	7,536	—	—	7,536
Stock-based compensation expense	—	—	—	—	—	—	300	—	—	300
Net loss	—	—	—	—	—	—	—	—	(86,044)	(86,044)
Change in unrealized gain on investments, net of tax	—	—	—	—	—	—	—	(34)	—	(34)
Balances at June 30, 2021 (unaudited)	115,761,842	$ 196,157	45,658,957	$ 199,643	100,824,922	$ 1	$ 13,716	$ (34)	$ (92,053)	$ (78,370)

	Redeemable Convertible Preferred Stock		Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Losses	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount	Shares	Amount				
Balances at December 31, 2021	115,761,842	$ 196,157	45,658,957	$ 199,643	100,768,255	$ 1	$ 15,162	$ (27)	$ (171,376)	$ (156,240)
Reclassification of related party forward contract	—	—	—	—	3,424,422	—	12,020	—	—	12,020
Repurchase of unvested restricted common stock	—	—	—	—	(9,688)	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	—	—	2,468	—	—	2,468
Net loss	—	—	—	—	—	—		—	(53,188)	(53,188)
Change in unrealized gain on investments, net of tax	—	—	—	—	—	—	—	(123)	—	(123)
Balances at June 30, 2022 (unaudited)	115,761,842	$ 196,157	45,658,957	$ 199,643	104,182,989	$ 1	$ 29,650	$ (150)	$ (224,564)	$ (195,063)

The accompanying notes are an integral part of these consolidated financial statements.

PRIME MEDICINE, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

	Period from September 13, 2019 (date of (Inception) to December 31, 2019	Year Ended December 31,		Six Months Ended June 30,	
		2020	2021	2021	2022
				(unaudited)	
Cash flows from operating activities:					
Net loss	$ (2,529)	$ (3,410)	$ (165,367)	$ (86,044)	$ (53,188)
Adjustments to reconcile net loss to net cash used in operating activities					
Depreciation and amortization expense	—	43	568	172	723
Amortization of premiums and discount on short-term investments	—	—	715	107	249
Stock-based compensation expense	156	391	1,746	300	2,468
Non cash research and development expense for licenses	194	—	12,020	—	—
Non cash consideration received under related party collaboration arrangement	—	(5,360)	—	—	—
Non cash payment to Beam	—	150	—	—	—
Non cash lease expense	—	—	4,293	1,707	4,222
Deferred income taxes	—	1,867	(624)	503	(974)
Change in fair value of preferred stock tranche right liability	353	10,904	74,319	74,319	—
Change in fair value of anti-dilution obligation	—	700	6,681	6,681	—
Change in fair value of related party short-term investment	—	(10,867)	391	(9,429)	8,208
Non cash other income (expense)	—	(126)	—	—	—
Changes in operating assets and liabilities:					
Prepaid expenses and other current assets	(50)	(388)	(885)	(260)	(43)
Accounts payable	—	250	1,185	980	2,428
Accrued expenses and other current liabilities	542	302	35,206	1,365	(30,851)
Lease liabilities	—	—	(4,330)	(1,690)	(4,258)
Net cash used in operating activities	(1,334)	(5,544)	(34,082)	(11,289)	(71,016)
Cash flows from investing activities:					
Purchases of property and equipment	—	(639)	(4,150)	(1,944)	(6,490)
Purchase of short-term investments	—	—	(81,980)	(75,921)	(74,744)
Matured short-term investments	—	—	13,000	—	62,000
Payments of security deposits	—	(423)	(496)	(279)	(664)
Net cash (used in) provided by investing activities	—	(1,062)	(73,626)	(78,144)	(19,898)
Cash flows from financing activities:					
Proceeds from the issuance of convertible preferred stock series A, net of issuance costs paid	9,980	34,954	70,721	70,722	—
Proceeds from the issuance of convertible preferred stock series B, net of issuance costs paid	—	—	199,643	199,643	—
Cash received in advance from issuance of convertible preferred stock series A	—	—	—	—	—
Payments of deferred offering costs	—	(20)	(1,086)	—	(1,896)
Proceeds from the issuance of common stock	1	—	—	—	—
Net cash provided by (used in) financing activities	9,981	34,934	269,278	270,365	(1,896)
Net increase (decrease) in cash, cash equivalents and restricted cash	8,647	28,328	161,570	180,932	(92,810)
Cash and cash equivalents at beginning of period	—	8,647	36,975	36,975	198,545
Cash and cash equivalents at end of period	$ 8,647	$ 36,975	$ 198,545	$ 217,907	$ 105,735

PRIME MEDICINE, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

	Period from September 13, 2019 (date of (Inception) to December 31, 2019	Year Ended December 31,		Six Months Ended June 30,	
		2020	2021	2021	2022
Supplemental cash flow information:					
Right-of-use assets obtained in exchange for new operating lease liabilities	$ —	$ —	$ 12,264	$ 8,936	$ 28,573
Supplemental disclosure of non-cash investing and financing activities:					
Initial fair value of preferred stock tranche right liability	$ 6,258	$ —	$ —	$ —	$ —
Settlement of Series A preferred stock tranche obligation	$ —	$ —	$ 91,834	$ 91,834	$ —
Issuance of Series A preferred stock at a price below fair value	$ —	$ —	$ 998	$ 998	$ —
Issuance of common stock in exchange for licenses	$ 39	$ —	$ —	$ —	$ —
Initial fair value of anti-dilution obligation	$ 155	$ —	$ —	$ —	$ —
Settlement of anti-dilution obligation	$ —	$ —	$ 7,536	$ 7,536	$ —
Settlement of related party forward contract	$ —	$ —	$ —	$ —	$ 12,020
Deferred offering costs included in accounts payable and accrued expenses at period end	$ 20	$ —	$ 410	$ —	$ 244
Purchases of property and equipment included in accounts payable and accrued expenses at period end	$ —	$ —	$ 754	$ 529	$ 2,583
Accretion of preferred stock to redemption value	$ 265	$ 1,645	$ 1,468	$ 1,468	$ —
Short-term investment in connection with related party collaboration arrangement	$ —	$ 5,486	$ —	$ —	$ —
Unrealized loss on short-term investments	$ —	$ —	$ 27	$ 34	$ 123
Reconciliation of cash, cash equivalents and restricted cash:					
Cash and cash equivalents	$ 8,647	$ 36,975	$ 185,420	$ 217,907	$ 92,239
Restricted cash	—	—	13,125	—	13,496
Total cash, cash equivalents and restricted cash shown in the statement of cash flows	$ 8,647	$ 36,975	$ 198,545	$ 217,907	$ 105,735

The accompanying notes are an integral part of these consolidated financial statements.

1. Nature of the Business and Basis of Presentation

Prime Medicine, Inc., together with its consolidated subsidiary (the "Company") is a biotechnology company committed to deliver genetic therapies to address diseases by deploying gene editing technology, Prime Editing. The Company was incorporated in the State of Delaware in September 2019.

The Company is subject to risks and uncertainties common to early stage companies in the biotechnology industry, including, but not limited to, completing preclinical studies and clinical trials, obtaining regulatory approval for product candidates, market acceptance of products, development by competitors of new technological innovations, dependence on key personnel, the ability to attract and retain qualified employees, reliance on third-party organizations, protection of proprietary technology, compliance with government regulations, the impact of the COVID-19 pandemic, and the ability to raise additional capital to fund operations. The Company's product candidates currently under development will require significant additional research and development efforts, including extensive preclinical and clinical testing and regulatory approval prior to commercialization. These efforts require significant amounts of additional capital, adequate personnel and infrastructure, and extensive compliance-reporting capabilities. Even if the Company's development efforts are successful, it is uncertain when, if ever, the Company will realize significant revenue from product sales.

The accompanying consolidated financial statements have been prepared on the basis of continuity of operations, realization of assets, and the satisfaction of liabilities and commitments in the ordinary course of business. Through years ended December 31, 2020 and 2021, the Company has funded its operations primarily with proceeds from sales of its convertible preferred stock. The Company has incurred net losses of $2.5 million, $3.4 million, $165.4 million, $86.0 million and $53.2 million for the period from September 13, 2019 (inception) to December 31, 2019, for the years ended December 31, 2020 and 2021, respectively, and for the six months ended June 30, 2021 and 2022 (unaudited), respectively. As of December 31, 2020 and 2021, and June 30, 2022 (unaudited) the Company had an accumulated deficit of $6.0 million, $171.4 million, and $224.6 million, respectively. As of February 4, 2022, the issuance date of the annual consolidated financial statements for the year ended December 31, 2021, the Company expected that its cash and cash equivalents and short-term investments would be sufficient to fund its operating expenses and capital expenditure requirements for the next twelve months. As of August 5, 2022, the issuance date of the interim consolidated financial statements for the six months ended June 30, 2022 (unaudited), the Company expects that its cash and cash equivalents and short-term investments will be sufficient to fund its operating expenses and capital expenditure requirements for the next twelve months. The future viability of the Company beyond that point is dependent on its ability to raise additional capital to finance its operations.

The Company is seeking to complete an initial public offering ("IPO") of its common stock. Upon the completion of a qualifying public offering on specified terms, the Company's outstanding convertible preferred stock will automatically convert into shares of common stock (see Note 6).

In the event the Company does not complete an IPO, the Company expects to seek additional funding through private and public equity financings, debt financings, additional collaborations, strategic alliances and marketing, distribution or licensing arrangements. The Company may not be able to obtain financing on acceptable terms, or at all, and the Company may not be able to enter into additional collaborations or other arrangements. The terms of any financing may adversely affect the holdings or the rights of the Company's stockholders.

If the Company is unable to obtain sufficient funding, the Company will be forced to delay, scale back or discontinue some or all of its research and development programs, product portfolio expansion efforts or commercialization efforts, which could adversely affect its business prospects. Although management continues to pursue these plans, there is no assurance that the Company will be successful in obtaining sufficient funding on terms acceptable to the Company to fund continuing operations, if at all.

Impact of the COVID-19 Pandemic

The Company is subject to a number of risks associated with the COVID-19 global pandemic, including potential delays associated with the Company's ongoing preclinical studies and anticipated clinical trials. COVID-19 may have an adverse impact on the Company's operations, supply chains and distribution systems or those of its

third-party vendors and collaborators, and increase expenses, including as a result of impacts associated with preventive and precautionary measures that are being taken, such as restrictions on travel and border crossings, quarantine policies and social distancing. For example, the Company's laboratory-based personnel have been unable to maximize use of its existing laboratory space due to restrictions on density of people and other aspects of its work have been limited by the need for its staff to isolate. The Company and its third-party vendors and collaborators may experience disruptions in supply of items that are essential for its research and development activities. The Company cannot predict the scope and severity of any economic recovery after the COVID-19 pandemic abates, including following any additional "waves" or other intensifying of the pandemic will have on its financial condition, operations, and business plans.

Basis of Presentation

The accompanying consolidated financial statements reflect the operations of the Company and its wholly-owned subsidiary. Intercompany balances and transactions have been eliminated in consolidation. The accompanying consolidated financial statements have been prepared in conformity with generally accepted accounting principles in the United States of America ("GAAP"). Any reference in these notes to applicable guidance is meant to refer to the authoritative GAAP as found in the Accounting Standards Codification ("ASC") and Accounting Standards Updates ("ASU") of the Financial Accounting Standards Board ("FASB").

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of the Company's consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting periods. Significant estimates and assumptions reflected within these consolidated financial statements include, but are not limited to, revenue recognition, the valuation of the Company's common stock and stock-based awards, the valuation of preferred stock tranche right liability, the valuation of the anti-dilution obligation and the valuation of the related party forward contract liability. The Company bases its estimates on historical experience, known trends and other market-specific or other relevant factors that it believes to be reasonable under the circumstances. On an ongoing basis, management evaluates its estimates, as there are changes in circumstances, facts and experience. Actual results may differ materially from those estimates or assumptions.

Unaudited Interim Financial Information

The accompanying consolidated balance sheet as of June 30, 2022 and the consolidated statements of operations and comprehensive loss, cash flows and redeemable convertible and convertible preferred stock and stockholders' equity (deficit) for the six months ended June 30, 2021 and 2022 are unaudited. The unaudited interim consolidated financial statements have been prepared on the same basis as the audited annual consolidated financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary for the fair statement of the Company's financial position as of June 30, 2022 and the results of its operations and its cash flows for the six months ended June 30, 2021 and 2022. The financial data and other information disclosed in these notes related to the six months ended June 30, 2021 and 2022 are also unaudited. The results for the six months ended June 30, 2022 are not necessarily indicative of results to be expected for the year ending December 31, 2022, any other interim periods, or any future year or period.

Concentrations of Credit Risk

Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash and cash equivalents and short-term investments. The Company invests in treasury bills and maintains its cash and cash equivalents at high-quality and accredited financial institutions in amounts that could exceed federally insured limits. Cash equivalents are invested in money market funds. However, the Company does not believe that it is subject to unusual credit risk beyond the normal credit risk associated with commercial banking relationships.

Cash and Cash Equivalents

The Company considers all highly liquid investments with an original maturity of three months or less at the time of initial purchase to be cash equivalents. As of December 31, 2020 and 2021, and June 30, 2022 (unaudited) the amount of cash equivalents included in cash and cash equivalents totaled $34.0 million, $49.5 million, and $38.2 million, respectively.

Restricted Cash

Restricted cash consisted of letters of credit totaling $13.1 million and $13.5 million as of December 31, 2021 and June 30, 2022 (unaudited), respectively, that are required to be maintained in connection with the Company's lease arrangements. Both letters of credit are in the name of the Company's landlords and are required to fulfill lease requirements in the event the Company should default on its lease obligations. As of both December 31, 2021 and June 30, 2022 (unaudited), the Company classified its restricted cash as non-current on the consolidated balance sheets based on the release dates of the restrictions.

Short-term Investments and Related Party Short-Term Investment

The Company's short-term investments consist of investments in debt, including U.S. Treasury securities with remaining maturities beyond three months at the date of purchase and one year or less from the balance sheet date. As of both December 31, 2021 and June 30, 2022 (unaudited), all of the Company's debt securities were classified as available-for-sale and were carried at fair market value (see Note 3). The unrealized losses on the Company's available-for-sale debt securities are recorded in other comprehensive income in the consolidated statements of operations and comprehensive loss.

Short-term debt securities are considered impaired when a decline in fair value is judged to be other-than-temporary. The Company consults with its investment managers and considers available quantitative and qualitative evidence in evaluating potential impairment of its short-term investments on a quarterly basis. If the cost of an individual investment exceeds its fair value, the Company evaluates, among other factors, general market conditions, the duration and extent to which the fair value is less than cost and its intent and ability to hold the investment. Once a decline in fair value is determined to be other-than-temporary, an impairment charge will be recorded to other income (expense), net, in the consolidated statements of operations and comprehensive loss.

The Company's related party short-term equity investment was obtained from the collaboration agreement with Beam Therapeutics Inc. ("Beam"), which is a public company trading on the NASDAQ Exchange. At each reporting date, the Company will mark-to-market the Beam common stock to the fair value of the related party short-term investment.

The Company's equity securities with readily determinable fair values are recorded at fair value based upon the market prices of the securities at each reporting date. Unrealized and realized gains and losses on the Company's equity investment is included as a component of other income (expense) in the consolidated statements of operations and comprehensive loss. The costs of debt and equity securities for purposes of computing realized and unrealized gains and losses is based on the specific identification method.

Deferred Offering Costs

The Company capitalizes certain legal, professional accounting and other third-party fees that are directly associated with in-process equity financings as deferred offering costs until such financings are consummated. After consummation of an equity financing, these costs are recorded as a reduction of the proceeds from the offering, either as a reduction of the carrying value of the preferred stock or in stockholders' equity (deficit) as a reduction of additional paid-in capital generated as a result of the offering. Should the in-process equity financing be abandoned, the deferred offering costs would be expensed immediately as a charge to operating expenses in the statements of operations and comprehensive loss. As of December 31, 2020, there were no deferred offering costs capitalized. As of December 31, 2021, there were $1.5 million of deferred offering costs capitalized. As of June 30, 2022 (unaudited), there were $3.2 million of deferred offering costs capitalized.

Fair Value Measurements

Certain assets and liabilities are carried at fair value under GAAP. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

Level 1 — Quoted prices in active markets for identical assets or liabilities.

Level 2 — Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.

Level 3 — Unobservable inputs that are supported by little or no market activity that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

The Company's cash equivalents, short-term investments, preferred stock tranche right liability, anti-dilution obligation and related party forward contract liability are carried at fair value, determined according to the fair value hierarchy described above (see Note 3). The carrying values of the Company's accounts payable and accrued expenses approximate their fair values due to the short-term nature of these liabilities.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation and amortization. Depreciation and amortization expense is recognized using the straight-line method over the estimated useful life of each asset as follows:

	Estimated Useful Life
Laboratory equipment	5 years
Furniture and fixtures	5 years
Leasehold improvements	Shorter of remaining lease term or useful life

Costs for capital assets not yet placed into service are capitalized and are depreciated once placed into service. Upon retirement or sale, the cost of assets disposed of and the related accumulated depreciation and amortization are removed from the accounts and any resulting gain or loss is included in loss from operations. Expenditures for repairs and maintenance that do not improve or extend the life of the respective assets are charged to expense as incurred.

Impairment of Long-Lived Assets

Long-lived assets consist primarily of property and equipment, and operating lease right-of-use assets. Long-lived assets to be held and used are tested for recoverability whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. Factors that the Company considers in deciding when to perform an impairment review include significant underperformance of the business in relation to expectations, significant negative industry or economic trends and significant changes or planned changes in the use of the assets. If an impairment review is performed to evaluate a long-lived asset group for recoverability, the Company compares forecasts of undiscounted cash flows expected to result from the use and eventual disposition of the long-lived asset group to its carrying value. An impairment loss would be recognized in loss from operations when estimated undiscounted future cash flows expected to result from the use of an asset group are less than its carrying amount. If such asset group is considered to be impaired, the impairment loss to be recognized is measured based on the excess of the carrying value of the impaired asset group over its fair value.

For the period from September 13, 2019 (inception) to December 31, 2019 and the years ended December 31, 2020 and 2021, and the six months ended June 30, 2021 and 2022 (unaudited), the Company did not recognize any impairment losses on long-lived assets.

Leases

Prior to January 1, 2021, the Company accounted for leases in accordance with Accounting Standards Codification ("ASC") ASC 840, *Leases*. At lease inception, the Company determined if an arrangement was an operating or capital lease. For operating leases, the Company recognized rent expense, inclusive of rent escalation, on a straight-line basis over the lease term.

Effective on January 1, 2021, the Company accounts for leases in accordance with ASC 842, Leases. In accordance with ASC 842, Leases, the Company determines if an arrangement is or contains a lease at inception. A contract is or contains a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Company classifies leases at the lease commencement date as operating or finance leases and records a right-of-use asset and a lease liability on the consolidated balance sheet for all leases with an initial lease term of greater than 12 months. Leases with an initial term of 12 months or less are not recorded in the balance sheet, but payments are recognized as expense on a straight-line basis over the lease term. The Company has elected not to recognize leases with terms of 12 months or less.

A lease qualifies as a finance lease if any of the following criteria are met at the inception of the lease: (i) there is a transfer of ownership of the leased asset to the Company by the end of the lease term, (ii) the Company holds an option to purchase the leased asset that it is reasonably certain to exercise, (iii) the lease term is for a major part of the remaining economic life of the leased asset, (iv) the present value of the sum of lease payments equals or exceeds substantially all of the fair value of the leased asset, or (v) the nature of the leased asset is specialized to the point that it is expected to provide the lessor no alternative use at the end of the lease term. All other leases are recorded as operating leases.

The Company enters into contracts that contain both lease and non-lease components. Non-lease components may include maintenance, utilities, and other operating costs. The Company combines the lease and non-lease components of fixed costs in its lease arrangements as a single lease component. Variable costs, such as utilities or maintenance costs, are not included in the measurement of right-of-use assets and lease liabilities, but rather are expensed when the event determining the amount of variable consideration to be paid occurs.

Finance and operating lease assets and liabilities are recognized at the lease commencement date based on the present value of the lease payments over the lease term using the discount rate implicit in the lease. If the rate implicit is not readily determinable, the Company utilizes an estimate of its incremental borrowing rate based upon the available information at the lease commencement date. Operating lease assets are further adjusted for prepaid or accrued lease payments. Operating lease payments are expensed using the straight-line method as an operating expense over the lease term. The Company's lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Finance lease assets are amortized to depreciation expense using the straight-line method over the shorter of the useful life of the related asset or the lease term. Finance lease payments are bifurcated into (i) a portion that is recorded as imputed interest expense and (ii) a portion that reduces the finance liability associated with the lease.

Certain of the Company's leases include options to extend or terminate the lease. The amounts determined for the Company's right-of-use assets and lease liabilities generally do not assume that renewal options or early-termination provisions, if any, are exercised, unless it is reasonably certain that the Company will exercise such options.

In addition, the Company examines other contracts with suppliers, vendors and outside parties to identify whether such contracts contain an embedded lease and, as applicable, records such embedded leases in accordance with ASC 842.

Segment Information

The Company operates and manages its business as a single segment for the purposes of assessing performance and making operating decisions. The Company's chief executive officer, who is the chief operating decision maker, reviews the Company's financial information on a consolidated basis for purposes of evaluating financial performance and allocating resources. All of the Company's long-lived assets are located in the United States and all of the Company's revenue was derived in the United States.

Classification and Accretion of Redeemable Convertible Preferred Stock

The Company has classified the convertible preferred stock outside of stockholders' equity (deficit) on the Company's consolidated balance sheets because the holders of such stock have redemption features and certain liquidation rights in the event of a deemed liquidation that, in certain situations, are not solely within the control of the Company and would require the redemption of the then-outstanding convertible preferred stock.

The Company's Series A redeemable convertible preferred stock ("Series A Preferred Stock") were redeemable in an amount equal to the original issue price per share plus all declared but unpaid dividends thereon. The Company recorded periodic accretion to the values of its outstanding Series A Preferred Stock such that the carrying value of the Series A Preferred Stock would be equal to the redemption value at the earliest redemption date. Adjustments to the carrying value of the Series A Preferred Stock at each reporting date resulted in an increase to net loss attributable to common stockholders. In April 2021, the redemption rights for Series A Preferred Stock were removed and such shares of preferred stock were no longer redeemable. After the removal of the redemption rights, the Company did not record any further accretion to the carrying value of Series A Preferred Stock (see Note 6).

The Company's Series B convertible preferred stock is not redeemable, except in the event of a deemed liquidation (see Note 6). Because the occurrence of a deemed liquidation event is not currently probable, the carrying values of the Series B convertible preferred stock are not being accreted to their redemption values. Subsequent adjustments to the carrying values of the convertible preferred stock would be made only when a deemed liquidation event becomes probable.

Revenue Recognition

The Company recognizes revenue in accordance with ASU 2014-09, *Revenue from Contracts with Customers* (*Topic 606*) and its related amendments, or, collectively, ASC 606.

Under ASC 606, revenue is recognized when a customer obtains control of promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. In order to achieve this core principle, the Company applies the following five steps when recording revenue: (1) identify the contract, or contracts, with the customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract and (5) recognize revenue when, or as, performance obligations are satisfied.

At contract inception, the Company assesses the goods or services promised within each contract, whether each promised good or service is distinct, and determines those that are performance obligations. In assessing whether promised goods or services are distinct, the Company considers factors such as the stage of development of the underlying intellectual property, the capabilities of the customer to develop the intellectual property on their own and whether the required expertise is readily available. In addition, the Company considers whether the collaboration partner can benefit from a promise for its intended purpose without the receipt of the remaining promises, whether the value of the promise is dependent on the unsatisfied promises, whether there are other vendors that could provide the remaining promises, and whether it is separately identifiable from the remaining promises. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when or as the performance obligation is satisfied.

In determining the appropriate amount of revenue to be recognized as it fulfills its obligations under its arrangements, the Company performs the following steps: (i) identification of the promised goods or services in the contract; (ii) determination of whether the promised goods or services are performance obligations, including

whether they are distinct in the context of the contract; (iii) measurement of the transaction price, including the assessment of the constraint on variable consideration; (iv) allocation of the transaction price to the performance obligations, and (v) recognition of revenue when, or as, the Company satisfies each performance obligation. As part of the accounting for arrangements under ASC 606, the Company must use significant judgment to determine: a) the performance obligations based on the determination under step (ii) above; b) the transaction price under step (iii) above; and c) the standalone selling price for each performance obligation identified in the contract for the allocation of transaction price in step (iv) above. The Company also uses judgment to determine whether milestones or other variable consideration, except for royalties and sales-based milestones where such payments principally relate to a license of intellectual property, should be included in the transaction price as described below. At the end of each subsequent reporting period, the Company re-evaluates the estimated variable consideration included in the transaction price and any related constraint, and if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis in the period of adjustment. The transaction price is allocated to each performance obligation based on the relative standalone selling price of each performance obligation in the contract, and the Company recognizes revenue based on those amounts when, or as, the performance obligations under the contract are satisfied. The Company utilizes key assumptions to determine the standalone selling price, which may include other comparable transactions, pricing considered in negotiating the transaction, probabilities of technical and regulatory success and the estimated costs. Certain variable consideration is allocated specifically to one or more performance obligations in a contract when the terms of the variable consideration relate to the satisfaction of the performance obligation and the resulting amounts allocated to each performance obligation are consistent with the amounts the Company would expect to receive for each performance obligation.

Research and Development Expenses

Research and development expenses are expensed as incurred. Research and development expenses may consist of costs incurred in connection with acquired in-process research and development and performing research and development activities, including amounts incurred under agreements with external vendors and consultants engaged to perform preclinical studies and to manufacture research and development materials for use in such studies, salaries and related personnel costs, stock-based compensation, consultant fees, and third-party license fees.

Upfront payments under license agreements are expensed upon receipt of the license, and annual maintenance fees under license agreements are expensed over the maintenance period. Milestone payments under license agreements are accrued, with a corresponding expense being recognized, in the period in which the milestone is determined to be probable of achievement and the related amount is reasonably estimable.

Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are recorded as prepaid expenses. The prepaid amounts are expensed as the related goods are delivered or the services are performed.

Acquired In-Process Research and Development

The Company measures and recognizes asset acquisitions or licenses to intellectual property that are not deemed to be business combinations based on the cost to acquire or license the asset or group of assets, which includes transaction costs. Goodwill is not recognized in asset acquisitions or transaction to license intellectual property. In an asset acquisition or license to intellectual property, the cost allocated to acquire in-process research and development ("IPR&D") with no alternative future use is recognized as research and development expense on the acquisition date.

Upfront and milestone payments made are accrued for and expensed when the achievement of the milestone is probable up to the point of regulatory approval. Milestone payments made upon regulatory approval are capitalized and amortized over the remaining useful life of the related product.

Acquired IPR&D for the period from September 13, 2019 (inception) to December 31, 2019 consisted of (i) $0.2 million initial recognition of an anti-dilution obligation that obligates the Company to issue shares of common stock equal to 5.0 percent of the Company's capital stock until the Company has raised $100.0 million in net cash proceeds from equity financings, (ii) issuance of 1.9 million shares of common stock valued at $39,000 and (iii) the

upfront cash consideration for a license arrangement of $0.5 million (see Note 11). There were no acquired IPR&D recognized for the year ended December 31, 2020. Acquired IPR&D for the year ended December 31, 2021, consisted of (i) the related party forward contract liability for the issuance of 3.4 million shares of common stock initially valued at $12.0 million and (ii) upfront cash consideration for a license arrangement of $30.0 million (see Note 11). In January 2022, the Company made the upfront payment of $30.0 million and issued 3,424,422 shares of its common stock, with a fair value of $12.0 million, to Myeloid pursuant to the terms of the Myeloid Collaboration Agreement (see Note 11 and 14).

Patent Costs

The Company expenses as incurred all patent-related costs incurred in connection with filing and prosecuting patent applications due to the uncertainty about the recovery of the expenditure. Amounts incurred are classified as general and administrative expenses in the statements of operations and comprehensive loss.

Contingencies

The Company is subject to contingent liabilities, such as legal proceedings and claims, that arise in the ordinary course of business activities. The Company accrues for loss contingencies when losses become probable and are reasonably estimable. If the reasonable estimate of the loss is a range and no amount within the range is a better estimate, the minimum amount of the range is recorded as a liability on the consolidated balance sheets. The Company does not accrue for contingent losses that, in its judgment, are considered to be reasonably possible, but not probable; however, it discloses the range of reasonably possible losses. As of December 31, 2020 and 2021 and June 30, 2022 (unaudited), no liabilities were recorded for loss contingencies (see Note 12).

Stock-Based Compensation

The Company measures all stock-based awards granted to employees, directors and non-employees based on the fair value of the awards on the date of grant using the Black-Scholes option-pricing model. The Company measures restricted common stock awards using the difference, if any, between the purchase price per share of the award and the fair value of the Company's common stock at the date of grant.

The Company grants stock options and restricted stock awards that are subject to either service or performance-based vesting conditions. Compensation expense for awards to employees and directors with service-based vesting conditions is recognized using the straight-line method over the requisite service period, which is generally the vesting period of the respective award. Compensation expense for awards to non-employees with service-based vesting conditions is recognized in the same manner as if the Company had paid cash in exchange for the goods or services, which is generally over the vesting period of the award. Forfeitures are accounted for as they occur. Compensation expense for awards to employees and non-employees with performance-based vesting conditions is recognized based on the grant-date fair value over the requisite service period using the accelerated attribution method to the extent achievement of the performance condition is probable. As of each reporting date, the Company estimates the probability that specified performance criteria will be met and does not recognize compensation expense until it is probable that the performance-based vesting condition will be achieved.

The Company classifies stock-based compensation expense in its consolidated statements of operations and comprehensive loss in the same manner in which the award recipient's payroll costs are classified or in which the award recipient's service payments are classified.

Preferred Stock Tranche Right Liability

The subscription agreements for the Company's Series A Preferred Stock (see Note 6) obligated investors, to participate in subsequent offerings of Series A Preferred Stock upon satisfaction of certain conditions (the "Series A preferred stock tranche right liability").

The Company classified this preferred stock tranche right as a liability on its consolidated balance sheets as each preferred stock tranche right is a freestanding financial instrument that may require the Company to transfer assets upon satisfaction of certain conditions. Each preferred stock tranche right liability was initially recorded at fair

value upon the date of issuance of each preferred stock tranche right and is subsequently remeasured to fair value at each reporting date. Changes in the fair value of the preferred stock tranche right liability are recognized as a component of other income (expense), net in the consolidated statement of operations and comprehensive loss. Changes in the fair value of the preferred stock tranche right liability were recognized until the preferred stock tranche right was settled in full upon the satisfaction of certain conditions in April 2021.

Comprehensive Loss

Comprehensive loss includes net loss as well as other changes in stockholders' equity (deficit) that result from transactions and economic events other than those with stockholders. For the period from September 13, 2019 (inception) to December 31, 2019, year ended December 31, 2020, and for the six months ended June 30, 2021 (unaudited) there was no difference between net loss and comprehensive loss. For the year ended December 31, 2021 and for the six months ended June 30, 2022 (unaudited), comprehensive loss includes net loss and unrealized gains (losses) on investments.

Net Loss per Share Attributable to Common Stockholders

The Company applies the two-class method when computing net income (loss) per share attributable to common stockholders as the Company has issued shares that meet the definition of participating securities. The two-class method determines net income (loss) per share for each class of common and participating securities according to dividends declared or accumulated and participation rights in undistributed earnings. The two-class method requires income (loss) available to common stockholders for the period to be allocated between common and participating securities based upon their respective rights to share in the undistributed earnings as if all income (loss) for the period had been distributed. The Company considers its convertible preferred stock to be participating securities as, in the event a dividend is paid on common stock, the holders of convertible preferred stock would be entitled to receive dividends on a basis consistent with the common stockholders. There is no allocation required under the two-class method during periods of loss since the participating securities do not have a contractual obligation to share in the losses of the Company.

Basic net income (loss) per share attributable to common stockholders is computed by dividing the net income (loss) attributable to common stockholders by the weighted-average number of common shares outstanding for the period, excluding potentially dilutive common shares and of unvested restricted common stock. Diluted net income (loss) per share attributable to common stockholders is computed by adjusting net loss attributable to common stockholders to reallocate undistributed earnings based on the potential impact of dilutive securities. Diluted net income (loss) per share attributable to common stockholders is computed by dividing the diluted net income (loss) attributable to common stockholders by the weighted-average number of common shares outstanding for the period, including potential dilutive common shares. For purposes of this calculation, the Company's outstanding stock options and convertible preferred stock are considered potential dilutive common shares.

The Company reported net loss and net loss attributable to common stockholders for the period from September 13, 2019 (inception) through December 31, 2019, for the years ended December 31, 2020 and 2021, and for the six months ended June 30, 2021 and 2022 (unaudited).

Income Taxes

The Company accounts for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the consolidated financial statements or in the Company's tax returns. Deferred tax assets and liabilities are determined based on the differences between the financial statement basis and tax basis of assets and liabilities using enacted tax rates in effect for the years in which the differences are expected to reverse. Changes in deferred tax assets and liabilities are recorded in the provision for income taxes. The Company assesses the likelihood that its deferred tax assets will be recovered from future taxable income and, to the extent it believes, based upon the weight of available evidence, that it is more likely than not that all or a portion of the deferred tax assets will not be realized, a valuation allowance is established through a charge to income tax expense. Potential for recovery of deferred tax assets is evaluated by estimating the future taxable profits expected and considering prudent and feasible tax planning strategies.

The Company accounts for uncertainty in income taxes recognized in the consolidated financial statements by applying a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained upon external examination by the taxing authorities. If the tax position is deemed more likely than not to be sustained, the tax position is then assessed to determine the amount of benefit to recognize in the consolidated financial statements. The amount of the benefit that may be recognized is the largest amount that has a greater than 50 percent likelihood of being realized upon ultimate settlement. The provision for income taxes includes the effects of any resulting tax reserves, or unrecognized tax benefits, that are considered appropriate as well as the related net interest and penalties. The Company had accrued no amounts for interest or penalties related to uncertain tax positions as of December 31, 2020 and 2021 and June 30, 2022 (unaudited).

Recently Adopted Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842) ("ASU 2016-02"), as subsequently amended, which sets out the principles for the recognition, measurement, presentation, and disclosure of leases for both parties to a contract (i.e., lessees and lessors), and replaces the existing guidance in ASC 840, Leases.

The new standard requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification will determine the recognition pattern of lease expense over the term of the lease. In addition, a lessee is required to record (i) a right-of-use asset and a lease liability on its balance sheet for all leases with accounting lease terms of more than 12 months regardless of whether it is an operating or financing lease and (ii) lease expense in its consolidated statement of operations and comprehensive loss for operating leases and amortization and interest expense in its consolidated statement of operations and comprehensive loss for financing leases. Leases with a term of 12 months or less may be accounted for similar to existing guidance for operating leases under ASC 840. In July 2018, the FASB issued ASU No. 2018-11, *Leases* (Topic 842), which added an optional transition method that allows companies to adopt the standard as of the beginning of the year of adoption as opposed to the earliest comparative period presented. This guidance is effective for the Company for annual periods beginning after December 15, 2021, including interim periods within that fiscal year. Early adoption is permitted.

The Company adopted the new leasing standard effective January 1, 2021, using the modified retrospective transition approach which uses the effective date, or January 1, 2021, as the date of initial application. As a result, prior periods are presented in accordance with the previous guidance in ASC 840. The Company has elected to apply the package of practical expedients requiring no reassessment of whether any expired or existing contracts are or contain leases, the lease classification of any expired or existing leases, or the capitalization of initial direct costs for any existing leases.

Upon its adoption of ASC 842, the Company recorded lease liabilities and their corresponding right-of-use assets based on the present value of lease payments over the remaining lease term. The adoption of ASC 842 resulted in the recognition of operating lease liabilities of $2.7 million and right-of-use assets of $2.8 million and the derecognition of prepaid rent balances recorded in other assets of $0.1 million on the Company's balance sheet as of January 1, 2021. The adoption impact relates to the Company's existing operating lease for office and laboratory space. The adoption of ASU 2016-02 did not have a material impact on the Company's statements of operations and comprehensive loss or statements of cash flows.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments—Credit Losses* (Topic 326): Measurement of Credit Losses on Financial Instruments, or ASU 2016-13, which requires the measurement and recognition of expected credit losses for financial assets held at amortized cost. ASU 2016-13 replaces the existing incurred loss impairment model with an expected loss model. It also eliminates the concept of other-than-temporary impairment and requires credit losses related to available-for-sale debt securities to be recorded through an allowance for credit losses rather than as a reduction in the amortized cost basis of the securities. These changes may result in earlier recognition of credit losses. For public entities that are Securities and Exchange Commission filers, excluding entities eligible to be smaller reporting companies, ASU 2016-13 is effective for annual periods beginning after December 15, 2019, including interim periods within those fiscal years. For all other entities, ASU 2016-13 is effective for annual periods beginning after December 15, 2022, including interim periods within those fiscal years.

Early adoption is permitted. The Company adopted ASU 2016-13 on January 1, 2021. The adoption of ASU 2016-13 did not have a material impact on the Company's consolidated financial statements.

In July 2017, the FASB issued ASU No. 2017-11, *Earnings Per Share (Topic 260), Distinguishing Liabilities from Equity (Topic 480) and Derivatives and Hedging (Topic 815): I. Accounting for Certain Financial Instruments with Down Round Features and II. Replacement of the Indefinite Deferral for Mandatorily Redeemable Financial Instruments of Certain Nonpublic Entities and Certain Mandatorily Redeemable Noncontrolling Interests with a Scope Exception* ("ASU 2017-11"). Part I of this update addresses the complexity of accounting for certain financial instruments with down round features. Down round features are features of certain equity-linked instruments (or embedded features) that result in the strike price being reduced on the basis of the pricing of future equity offerings. Current accounting guidance creates cost and complexity for entities that issue financial instruments (such as warrants and convertible instruments) with down round features that require fair value measurement of the entire instrument or conversion option. Pursuant to the amendments in Part I of this update, when determining whether certain financial instruments should be classified as liabilities or equity instruments, a down round feature no longer precludes equity classification when assessing whether the instrument is indexed to an entity's own stock. Part II of this update replaces the indefinite deferral for certain mandatorily redeemable noncontrolling interests and mandatorily redeemable financial instruments of nonpublic entities contained within ASC No. 480 with a scope exception. The amendments in Part II of this update do not have an accounting effect. For public entities, ASU 2017-11 was required to be adopted for annual periods beginning after December 15, 2018, including interim periods within those fiscal years. For nonpublic entities, ASU 2017-11 is effective for annual periods beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020. Early adoption was permitted. The Company adopted ASU 2017-11 on January 1, 2020. The adoption of ASU 2017-11 did not have a material impact on the Company's consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07, *Compensation-Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting* ("ASU 2018-07"). The standard largely aligns the accounting for share-based payments to nonemployees by aligning it with the accounting for share-based payments to employees and directors, with certain exceptions. Under ASU 2018-07, an entity should apply the requirements of Topic 718 to nonemployee awards except for specific guidance on inputs to an option pricing model and the attribution of cost. The amendments specify that Topic 718 applies to all share-based payment transactions in which a grantor acquires goods or services to be used or consumed in a grantor's own operations by issuing share-based payment awards. The amendments also clarify that Topic 718 does not apply to share-based payments used to effectively provide (1) financing to the issuer or (2) awards granted in conjunction with selling goods or services to customers as part of a contract accounted for under ASC Topic 606, *Revenue from Contracts with Customers* ("ASC 606"). For public entities, ASU 2018-07 was required to be adopted for annual periods beginning after December 15, 2018, including interim periods within those fiscal years. For nonpublic entities, ASU 2018-07 is effective for annual periods beginning after December 15, 2019, including interim periods within fiscal years beginning after December 15, 2020. Early adoption is permitted for all entities but no earlier than the Company's adoption of ASC 606. The Company early adopted ASU 2018-07 as of January 1, 2020 and the adoption did not have a material impact on its consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Requirements for Fair Value Measurement* ("ASU 2018-13"), which modifies the existing disclosure requirements for fair value measurements in Topic 820. The new disclosure requirements include disclosure related to changes in unrealized gains or losses included in other comprehensive loss for recurring Level 3 fair value measurements held at the end of each reporting period and the explicit requirement to disclose the range and weighted-average of significant unobservable inputs used for Level 3 fair value measurements. The other provisions of ASU 2018-13 include eliminated and modified disclosure requirements. For all entities, this guidance is required to be adopted for annual periods beginning after December 15, 2019, including interim periods within those fiscal years. The Company adopted ASU 2018-13 as of January 1, 2020 and the adoption did not have a material impact on its consolidated financial statements.

In November 2018, the FASB issued ASU No. 2018-18, *Collaborative Arrangements (Topic 808): Clarifying the Interaction between Topic 808 and Topic 606* ("ASU 2018-18"). ASU 2018-18 makes targeted improvements to GAAP for collaborative arrangements, including (i) clarification that certain transactions between collaborative

arrangement participants should be accounted for as revenue under ASC Topic 606 when the collaborative arrangement participant is a customer in the context of a unit of account, (ii) adding unit-of-account guidance in ASC Topic 808, *Collaborative Arrangements*, to align with the guidance in ASC 606 and (iii) a requirement that in a transaction with a collaborative arrangement participant that is not directly related to sales to third parties, presenting the transaction together with revenue recognized under ASC 606 is precluded if the collaborative arrangement participant is not a customer. For public entities, this guidance was effective for annual periods beginning after December 15, 2019, including interim periods within those fiscal years. For nonpublic entities, this guidance is effective for annual periods beginning after December 15, 2020, including interim periods within fiscal years beginning after December 15, 2021. Early adoption is permitted. The Company early adopted ASU 2018-18 as of January 1, 2020 and the adoption did not have a material impact on its consolidated financial statements.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* ("ASU 2019-12"). ASU 2019-12 eliminates certain exceptions related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. The update also clarifies and simplifies other aspects of the accounting for income taxes. For public entities, ASU 2019-12 is required to be adopted for annual periods beginning after December 15, 2020, including interim periods within those fiscal years. For nonpublic entities, ASU 2019-12 is effective for annual periods beginning after December 15, 2021, including interim periods within fiscal years beginning after December 15, 2022. Early adoption is permitted, including adoption in any interim period for which financial statements have not yet been issued or made available for issuance. An entity that elects to early adopt the update in an interim period should reflect any adjustments as of the beginning of the annual period that includes that interim period. Additionally, an entity that elects early adoption must adopt all the amendments in the update in the same period. The Company early adopted ASU 2019-12 as of January 1, 2020 and the adoption did not have a material impact on its consolidated financial statements.

Recently Issued Accounting Pronouncements Not Yet Adopted

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies and adopted by the Company as of the specified effective date. The Company qualifies as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012 and has elected not to "opt out" of the extended transition related to complying with new or revised accounting standards, which means that when a standard is issued or revised and it has different application dates for public and nonpublic companies, the Company will adopt the new or revised standard at the time nonpublic companies adopt the new or revised standard and will do so until such time that the Company either (i) irrevocably elects to "opt out" of such extended transition period or (ii) no longer qualifies as an emerging growth company. As a result of this election, the Company's financial statements may not be comparable to those public companies that comply with new or revised accounting pronouncements as of public company effective dates. The Company may choose to early adopt any new or revised accounting standards whenever such early adoption is permitted for nonpublic companies.

In August 2020, the FASB issued ASU 2020-06, *Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity* (Subtopic 815-40). This standard eliminates the beneficial conversion and cash conversion accounting models for convertible instruments. It also amends the accounting for certain contracts in an entity's own equity that are currently accounted for as derivatives because of specific settlement provisions. In addition, the new guidance modifies how particular convertible instruments and certain contracts that may be settled in cash or shares impact the diluted earnings per share ("EPS") computation. Additionally, the amended guidance requires the application of the if-converted method for calculating diluted EPS and the treasury stock method will no longer be available. For public business entities, it is effective for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years using the fully retrospective or modified retrospective method. For all other entities, the amendments are effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. Early adoption is permitted but no earlier than fiscal years beginning after December 15, 2020, including interim periods within those fiscal years. The Company is currently evaluating the potential impact that ASU 2020-06 will have on its consolidated financial statements and related disclosures but does not currently expect that the adoption of ASU 2020-06 will have a material impact.

3. Fair Value Measurements

The following tables present the Company's fair value hierarchy for its assets and liabilities that are measured at fair value on a recurring basis and indicate the level within the fair value hierarchy of the valuation techniques the Company utilized to determine such fair value (in thousands):

	Fair Value Measurements at December 31, 2020:			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents:				
Money market funds	$ —	$ 34,000	$ —	$ 34,000
Related party short-term investment:				
Beam equity securities	16,353	—	—	16,353
	$ 16,353	$ 34,000	$ —	$ 50,353
Liabilities:				
Preferred stock tranche right liability	$ —	$ —	$ 17,515	$ 17,515
Anti-dilution obligation	—	—	855	855
	$ —	$ —	$ 18,370	$ 18,370

	Fair Value Measurements at December 31, 2021:			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents:				
Money market funds	$ —	$ 49,450	$ —	$ 49,450
Short-term investment:				
U.S. Treasury bills and government securities	—	68,238	—	68,238
Related party short-term investment:				
Beam equity securities	15,962	—	—	15,962
	$ 15,962	$ 117,688	$ —	$ 133,650
Liabilities:				
Related party forward contract liability	—	—	12,020	12,020
	$ —	$ —	$ 12,020	$ 12,020

	Fair Value Measurements at June 30, 2022 (unaudited):			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents:				
Money market funds	$ —	$ 38,151	$ —	$ 38,151
Short-term investment:				
U.S. Treasury bills and government securities	—	80,610	—	80,610
Related party short-term investment:				
Beam equity securities	7,754	—	—	7,754
	$ 7,754	$ 118,761	$ —	$ 126,515

Money market funds were valued by the Company based on observable inputs, which represent a Level 2 measurement within the fair value hierarchy. For the years ended December 31, 2020 and 2021 and the six months ended June 30, 2022 (unaudited), there were no transfers between Level 1, Level 2 and Level 3.

The Company classifies its U.S. Treasury as short-term based on each instrument's underlying contractual maturity date. The fair value of the Company's U.S. Treasury securities and money market funds are classified as Level 2 because they are valued using observable inputs to quoted market prices, benchmark yields, reported trades, broker/dealer quotes or alternative pricing sources with reasonable levels of price transparency and U.S. Treasury securities.

The underlying securities held in the money market funds held by the Company are all government backed securities.

Short-term investments consisted of the following (in thousands):

	December 31, 2020			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Related party short-term investment:				
Beam equity securities	$ 5,486	$ 10,867	$ —	$ 16,353
	$ 5,486	$ 10,867	$ —	$ 16,353

	December 31, 2021			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Short-term investments:				
U.S. Treasury bills and government securities	$ 68,265	$ —	$ (27)	$ 68,238
Related party short-term investment:				
Beam equity securities	5,486	10,476	—	15,962
	$ 73,751	$ 10,476	$ (27)	$ 84,200

	June 30, 2022 (unaudited)			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Short-term investments:				
U.S. Treasury bills and government securities	$ 80,760	$ —	$ (150)	$ 80,610
Related party short-term investment:				
Beam equity securities	5,486	2,268	—	7,754
	$ 86,246	$ 2,268	$ (150)	$ 88,364

The contractual maturities of the Company's short-term investments in available-for-sale debt securities held were as follows:

	December 31, 2021	June 30, 2022
		(unaudited)
Due within one year	$ 68,238	$ 80,610
	$ 68,238	$ 80,610

Valuation of Preferred Stock Tranche Right Liability

The preferred stock tranche right liability in the table above is composed of the fair value of rights to purchase Series A Preferred Stock (see Note 6). The fair value of the preferred stock tranche right liability was determined based on significant inputs not observable in the market, which represented a Level 3 measurement within the fair value hierarchy. The fair value of the preferred stock tranche right liability was determined using a Black-Scholes option pricing model, which considered as inputs the estimated fair value of the preferred stocks as of each valuation date, the risk-free interest rate, volatility and estimated time to each tranche closing.

The most significant assumption in the Black-Scholes option pricing model impacting the fair value of the preferred stock tranche right liability is the fair value of the Company's convertible preferred stock as of each measurement date. The Company determines the fair value per share of the underlying convertible preferred stock by taking into consideration the most recent sales of its convertible preferred stock, results obtained from third-party valuations and additional factors the Company deems relevant. In November 2020, the second tranche of the Series A Preferred Stock closed. The fair value of each Series A Preferred Stock was $0.73 per share upon the closing of the second tranche. As of December 31, 2020, the fair value of Series A Preferred Stock was $0.76 per share. In April 2021, the third and fourth tranches of the Series A Preferred Stock closed. Upon satisfaction of certain conditions and the closing date of the third and fourth tranches, the associated Series A preferred stock tranche right liability was settled. The fair value of Series A Preferred Stock was $2.31 per share upon the closing of the third and fourth tranches. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve for time periods approximately equal to the remaining estimated time to each tranche closing. The volatility is based on the historical volatility of publicly traded peer companies. Changes in the estimated fair value of the Company's convertible preferred stock can have a significant impact on the fair value of the preferred stock tranche right liability.

The preferred stock tranche right liability was initially recorded at fair value upon the date of issuance of the preferred stock tranche right and is subsequently remeasured to fair value at each reporting date, and immediately prior to the closing dates of Series A preferred stock tranches. Changes in the fair value of the preferred stock tranche right liability are recognized as a component of other income (expense), net in the consolidated statement of operations and comprehensive loss. Changes in the fair value of the preferred stock tranche right liability were recognized until the preferred stock tranche right liability was settled in full upon the satisfaction of certain conditions in April 2021.

The following table provides a roll-forward of the aggregate fair value of the Company's preferred stock tranche right liability, for which fair value is determined using Level 3 inputs (in thousands):

	Preferred Stock Tranche Right
Balances at September 13, 2019 (Inception)	$ —
Initial fair value of Series A preferred stock tranche right liability	6,258
Change in fair value of Series A preferred stock tranche right liability	353
Balance as of December 31, 2019	6,611
Change in fair value of Series A preferred stock trance right liability	10,904
Balance as of December 31, 2020	17,515
Change in fair value of Series A preferred stock tranche right liability	74,319
Reclassification of Series A preferred stock tranche right liability upon settlement	(91,834)
Balance as of December 31, 2021	$ —

Valuation of Anti-dilution Obligation

The fair value of the anti-dilution obligation recognized in connection with the anti-dilution provisions set forth in the Company's license agreement with Broad Institute (see Note 11) was determined based on significant inputs not observable in the market, which represented a Level 3 measurement within the fair value hierarchy.

The fair value of the anti-dilution obligation was estimated using a probability-weighted scenario which considered as inputs the probability of occurrence of events that would trigger the issuance of shares, including (i) the closing of Series A Preferred Stock, (ii) the Company's initial public offering, and (iii) no future sale of equity securities. The weighted-average fair value of all scenarios was calculated utilizing the fair value per share of the underlying common stock. Changes in the estimated fair value of common stock and the probability of achieving different financing scenarios can have a significant impact on the fair value of the anti-dilution obligation. The most significant assumption impacting the fair value of the anti-dilution obligation was the fair value of the Company's common stock as of each measurement date. The Company determined the fair value per share of the underlying common stock by taking into consideration the most recent sales of its convertible preferred stock, results obtained

from third-party valuations and additional factors the Company deems relevant. The per share fair value of the Company's common stock was $0.11 as of December 31, 2020. Immediately prior to the settlement of the anti-dilution obligation, the fair value of the Company's common stock was $0.97 per share.

The anti-dilution obligation was initially recorded at fair value upon entering into the license agreement with Broad Institute and was subsequently remeasured to fair value at each reporting date. Changes in fair value of the anti-dilution obligation were recognized as a component of other income (expense), net in the consolidated statements of operations and comprehensive loss. Changes in the fair value of the anti-dilution obligation were recognized until achievement of $100.0 million in cumulative equity financing is raised by the Company, which was achieved in connection with the fourth Series A Preferred Stock closing, resulting in the issuance of 7,768,425 shares of common stock to Broad Institute with a fair value of $7.5 million.

The following table provides a roll-forward of the aggregate fair value of the Company's anti-dilution obligation, for which fair value was determined using Level 3 inputs (in thousands):

	Anti-dilution Obligation
Balances at September 13, 2019 (Inception)	$ —
Initial fair value of anti-dilution obligation	155
Balance as of December 31, 2019	155
Change in fair value of anti-dilution obligation	700
Balance as of December 31, 2020	855
Change in fair value of anti-dilution obligation	6,681
Reclassification of anti-dilution obligation upon settlement	(7,536)
Balance as of December 31, 2021	$ —

Valuation of the Related Party Forward Contract Liability

The Company measured its related party forward contract liability, which was established in connection with its obligation to issue shares of its common stock to Myeloid Therapeutics, Inc. ("Myeloid") under a stock subscription agreement (see Note 11), at fair value based on significant inputs not observable in the market, which represented a Level 3 measurement within the fair value hierarchy. The initial fair value of the related party forward contract liability was determined based on the number of shares to be issued by the Company and the then per share fair value of the Company's common stock, which was determined based, in part, on a third-party valuation that utilized methodologies and assumptions consistent with the Company's most recent common stock valuations, including on a minority, nonmarketable interest basis.

Changes in the fair value of the related party forward contract liability will be recognized as other income (expense), net in the consolidated statements of operations through the settlement date. There was no change in the fair value of the Company's common stock from the initial date of the related party forward contract liability and December 31, 2021 and the settlement which occurred in January 2022. Upon settlement, the fair value of the related party forward contract liability was reclassified to equity upon issuance of the common stock to Myeloid.

A reconciliation of the related party forward contract liability measured and recorded at fair value on a recurring basis is as follows (in thousands):

	Forward Contract
Balance at December 31, 2020	$ —
Initial fair value of related party forward contract liability	12,020
Balance as of December 31, 2021	12,020
Reclassification of related party forward contract liability upon settlement	(12,020)
Balance as of June 30, 2022 (unaudited)	$ —

4. Property and Equipment, Net

Property and equipment, net consisted of the following (in thousands):

	December 31,		June 30,
	2020	2021	2022
			(unaudited)
Laboratory equipment	$ 639	$ 5,274	$ 12,953
Leasehold improvement	—	125	720
Furniture and Fixture	—	144	189
	639	5,543	13,862
Less: Accumulated depreciation and amortization	(43)	(611)	(1,334)
	$ 596	$ 4,932	$ 12,528

Depreciation and amortization expense of property and equipment for the years ended December 31, 2020 and 2021 was $43,000 and $0.6 million, respectively. Depreciation and amortization expense of property and equipment for the six months ended June 30, 2021 and 2022 (unaudited) was $0.2 million and $0.7 million, respectively.

5. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following (in thousands):

	December 31,		June 30,
	2020	2021	2022
			(unaudited)
Accrued Myeloid license fee–related party	$ —	$ 30,000	$ —
Accrued employee compensation and benefits	627	2,364	2,531
Accrued professional fees	116	3,830	2,260
Deferred rent	46	—	—
Lab-related supplies and services	—	719	968
Other	33	279	226
	$ 822	$ 37,192	$ 5,985

6. Convertible Preferred Stock

The Company has issued Series A Preferred Stock and Series B convertible preferred stock (the "Series B Preferred Stock" and, together with the Series A Preferred Stock, the "Preferred Stock").

In September 2019, the Company completed its first closing of its Series A Preferred Stock and issued and sold 10,000,001 shares of Series A Preferred Stock at a price of $1.00 per share for gross proceeds of $10.0 million (the "2019 Preferred Stock Financing"). The Company incurred issuance costs of $20,000 in connection with this transaction.

The purchase agreement for the Series A Preferred Stock obligates the investors of the 2019 Preferred Stock Financing to purchase an additional 104,999,997 Series A Preferred Stock at a price of $1.00 per share in the subsequent closings upon certain conditions ("Series A Subsequent Closings"). The investors' obligation to purchase shares in the subsequent closing will terminate upon occurrence of a Deemed Liquidation Event (as defined below), the Company's initial public offering, or bankruptcy by the Company. If an investor does not participate in the subsequent closing when obligated to do so, then any existing Series A Preferred Stock held by that investor will be converted into common shares of the Company on a ten-for-one basis.

The Company concluded that these obligations of investors to participate in the subsequent closing of Series A Preferred Stock met the definition of a freestanding financial instrument that was required to be recorded as a

liability at fair value as (i) the instruments are legally detachable and separately exercisable from the Series A Preferred Stock and (ii) the rights will require the Company to transfer assets upon future closings of the Series A Preferred Stock. Upon the first closing of the Series A Preferred Stock in September 2019, the Company recorded a preferred stock tranche right liability of $6.3 million and a corresponding reduction to the carrying value of the Series A Preferred Stock (see Note 3).

In November 2020, the Company completed the second closing of its Series A Preferred Stock, in which the Company issued and sold 34,999,999 shares of Series A Preferred Stock, at a price of $1.00 per share, for gross proceeds of $35.0 million and incurred $46,000 of issuance costs. As the fair value of the Series A Preferred Stock was $0.73 at the time of the second closing, the Company recorded a capital contribution of $9.5 million for the difference between the fair value per share and the $1.00 per share paid by the holders of the Series A Preferred Stock participating in the second closing, which included members of the Company's board of directors.

In April 2021, the Company completed the third and fourth closings of its Series A Preferred Stock, in which the Company issued and sold an aggregate of 70,761,842 shares of Series A Preferred Stock, at a price of $1.00 per share, for gross proceeds of $70.8 million and incurred $41,000 of issuance costs. As a result of this issuance, the Series A preferred stock tranche right liability with a then fair value of $91.8 million, based on a fair value of $2.31 per share of Series A Preferred Stock immediately prior to the closings, was settled in full and reclassified as an increase to the carrying value of Series A Preferred Stock.

In April 2021, the Company issued and sold 45,658,957 shares of Series B Preferred Stock, at a price of $4.3803 per share, for gross proceeds of $200.0 million and incurred $0.4 million of issuance costs.

Upon issuance of each series of Preferred Stock, the Company assessed the embedded conversion and liquidation features of the securities and determined that such features did not require the Company to separately account for these features. The Company also concluded that no beneficial conversion feature existed on the issuance date of each series of Preferred Stock.

As of each balance sheet date, the Preferred Stock consisted of the following (in thousands, except share amounts):

	December 31, 2020					
	Preferred Stock Authorized	Preferred Stock Issued and Outstanding	Carrying Value	Liquidation Preference	Conversion price per share	Common Stock Issuable Upon Conversion
Series A Preferred Stock	115,000,000	45,000,000	31,136	$ 46,388	$ 1.00	45,000,000
	115,000,000	45,000,000	31,136	$ 46,388		45,000,000

	December 31, 2021					
	Preferred Stock Authorized	Preferred Stock Issued and Outstanding	Carrying Value	Liquidation Preference	Conversion price per share	Common Stock Issuable Upon Conversion
Series A Preferred Stock	115,761,842	115,761,842	$ 196,157	$ 125,000	$ 1.00	115,761,842
Series B Preferred Stock	45,658,957	45,658,957	199,643	210,814	$ 4.3803	45,658,957
	161,420,799	161,420,799	$ 395,800	$ 335,814		161,420,799

	June 30, 2022 (unaudited)					
	Preferred Stock Authorized	Preferred Stock Issued and Outstanding	Carrying Value	Liquidation Preference	Conversion price per share	Common Stock Issuable Upon Conversion
Series A Preferred Stock	115,761,842	115,761,842	$ 196,157	$ 129,592	$ 1.00	115,761,842
Series B Preferred Stock	45,658,957	45,658,957	199,643	218,738	$ 4.3803	45,658,957
	161,420,799	161,420,799	$ 395,800	$ 348,330		161,420,799

The holders of the Preferred Stock have the following rights and preferences:

Voting

The holders of the Preferred Stock are entitled to vote, together with the holders of common stock, as a single class, on all matters submitted to the shareholders for a vote and are entitled to the number of votes equal to the number of common stock into which the Preferred Stock could convert on the record date for determination of shareholders entitled to vote. A majority vote of the holders of Preferred Stock is required to, among others, liquidate or dissolve the Company, amend the certificate of incorporation or bylaws, reclassify common stock or establish another class of capital stock, create shares that would rank senior to or authorize additional shares of Preferred Stock, declare a dividend or make a distribution, or change the authorized number of directors constituting the board of directors.

In addition, the holders of shares of Series A Preferred Stock, voting exclusively and as a separate class, are entitled to elect three directors of the Company. The holders of shares of common stock and any other class or series of voting stock (including the Series B Preferred Stock), exclusively and voting together as a single class, are entitled to elect the balance of the total number of directors of the Company.

Conversion

Each Preferred Stock is convertible into voting common stock, at any time, at the option of the holder, and without the payment of additional consideration, at the applicable conversion ratio then in effect. In addition, each share of Preferred Stock will be automatically converted into shares of common stock at the then-effective applicable conversion ratio upon either (i) the closing of a firm-commitment underwritten public offering of its common stock resulting in at least $50.0 million of gross proceeds, net of underwriting discount and commissions, to the Company, or (ii) the date specified by vote or written consent of the holders of a majority in voting power of the outstanding shares of Preferred Stock, voting as a single class.

The conversion ratio of each class of Preferred Stock is determined by dividing the Original Issue Price of each class of Preferred Stock by the Conversion Price of each class. As of December 31, 2020, and 2021, and June 30, 2022 (unaudited), the Conversion Price was $1.00 per share for Series A Preferred Stock and $4.3803 per share for Series B Preferred Stock, each subject to appropriate adjustment in the event of any share dividend, share split, combination or other similar recapitalization with respect to the Preferred Stock.

There shall be no adjustment in the conversion price of the Series A Preferred Stock as the result of the issuance or deemed issuance of additional shares of Company's common stock if the Company receives written notice from the holders of at least 65 percent of the then outstanding shares of Series A Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of additional shares of the Company's common stock. There shall be no adjustment in the conversion price of the Series B Preferred Stock as the result of the issuance or deemed issuance of additional shares of the Company's common stock if the Company receives written notice from the holders of at least a majority of the then outstanding shares of Series B Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such additional shares of the Company's common stock.

In the event that any holder of shares of Series A Preferred Stock is required to participate in a Series A Subsequent Closing pursuant to the purchase agreement does not purchase the aggregate number of subsequent closing shares, then each share of Series A Preferred Stock held by such holder shall automatically be converted into shares of common stock at a ratio of one share of common stock for every ten shares of Series A Preferred Stock held immediately prior to the consummation of such Series A Subsequent Closing.

Dividends

The holders of the Series A Preferred Stock are entitled to receive cumulative dividends at a rate of $0.08 per share per annum of the Original Issue Price when, as and if declared by the board of directors (the "Series A Preferred Dividend"). The holders of the series B Preferred Stock are entitled to receive cumulative dividends at a

rate of $0.35 per share per annum of the Original Issue Price when, as and if declared by the board of directors (the “Series B Preferred Dividend”, and together with Series A Preferred Dividend, the “Preferred Dividend”).

The Company may not declare, pay or set aside any dividends on common shares of the Company unless the holders of Preferred Stock then outstanding first receive, or simultaneously receive, the Preferred Dividend on each outstanding Preferred Stock and a dividend on each outstanding Preferred Stock in an amount at least equal to the greater of (i) the amount of the aggregate Preferred Dividend then accrued on such share of Preferred Stock and not previously paid and (ii) (a) in the case of a dividend on common stock or any class or series that is convertible into common stock, that dividend per share of Preferred Stock as would equal to the product of (1) the dividend payable on each share of such class or series determined, as if all shares of such class or series had been converted into common stock and (2) the number of shares of common stock issuable upon conversion of a share of such series of Preferred Stock, in each case calculated on the record date for determination of the holders entitle to receive such dividend or the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into common shares or (b) in the case of a dividend on any class or series that is not convertible into common stock, at a rate per share of Preferred Stock determined by (1) dividing the amount of dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock and (2) multiplying such faction by an amount equal to the Original Issue Price for such series of Preferred Stock. If the Company declares, pays, or sets aside, on the same date, a dividend on shares of more than one class or series of shares in the capital of the Company (other than the Preferred Stock), the dividend payable to the holders of Preferred Stock shall be calculated based upon the dividend on the class or series of shares in the capital of the Company that would result in the highest dividend on the Preferred Stock. Through December 31, 2020, December 31, 2021 and June 30, 2022 (unaudited) no cash dividends have been declared or paid.

Liquidation

In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company, or upon the occurrence of a Deemed Liquidation Event (as defined below), the holders of shares of Preferred Stock then outstanding are entitled, on a *pari passu* basis, to be paid out of the assets or funds of the Company available for distribution to stockholders before any payment is made to the holders of common stock. The holders of Preferred Stock are entitled to an amount per share equal to (i) in the case of Series A Preferred Stock, the Original Issue Price plus any accruing dividends accrued but unpaid thereon, whether or not declared, together with any other dividends declared but unpaid thereon, and (ii) in the case of Series B Preferred Stock, the greater of (a) the applicable Original Issue Price plus any accruing dividends accrued but unpaid thereon, whether or not declared, together with any other dividends declared, or not declared, but unpaid thereon (the "Series B Preference Amount") or (b) the amount that would have been payable had all shares of each series of Preferred Stock been converted into common stock immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (as defined below). After the payment in full of the Series A Preferred Stock preference amount and if applicable, the Series B Preference Amount, the remaining assets of the Company available for distribution to stockholders shall be distributed among the holders of Series A Preferred Stock and common stock on a pro rata basis provided that such distribution includes holders of Series B Preferred Stock if such distribution is greater than the Series B Preference Amount.

Unless at least the holders of a majority in voting power of the outstanding shares of Preferred Stock, elect otherwise, a Deemed Liquidation Event shall include a merger, consolidation, or share exchange (other than one in which stockholders of the Company own a majority by voting power of the outstanding shares of the surviving or acquiring corporation) or a sale, lease, transfer, exclusive license or other disposition of all or substantially all of the assets of the Company.

Redemption

As of December 31, 2020, at the written election of at least 65 percent of the holders of the outstanding shares of Series A Preferred Stock, voting together as a single class and on an as-converted to common stock basis, the shares of Series A Preferred Stock outstanding were redeemable, at any time on or after the fifth anniversary of issuance, in three equal annual installments commencing 60 days after receipt of the required vote. Shares of Series

A Preferred Stock were redeemable in an amount equal to the Original Issue Price per share plus any accruing dividends accrued but unpaid thereon, whether or not declared.

In April 2021, in connection with the Series B Preferred Stock closing, the Company adopted an amended and restated certificate of incorporation, which removed the redemptions rights of the holders of Series A Preferred Stock. As a result of this amendment, Series A Preferred Stock was no longer redeemable at the option of the holders. The Company determined that the changes to the rights underlying the Series A Preferred Stock was not substantive and did not materially modify the rights and preferences of the holders of Series A Preferred Stock.

Prior to the amendment, the Company recognized changes in the redemption values of its Series A Preferred Stock over the period from the date of issuance to the earliest redemption date and adjusted the carrying value of the instrument to equal the redemption value at the redemption date. During the period from September 19, 2019 (inception) to December 31, 2019, the years ended December 31, 2020 and 2021, the Company recorded adjustments to increase the carrying values of the Series A Preferred Stock by an aggregate of $0.3 million, $1.6 million, and $1.5 million, respectively, which resulted in an increase in redeemable convertible preferred stock by those amounts, offset by charges against additional paid-in-capital, if any, and then in the absence of additional paid-in capital the accretion is charged to the accumulated deficit.

The Company's articles of the corporation, as amended and restated, does not provide redemption rights to the holders of Series B Preferred Stock.

7. Common Stock

The voting, dividend and liquidation rights of the holders of the Company's common stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth above. Each share of common stock entitles the holder to one vote, together with the holders of the Preferred Stock, on all matters submitted to the stockholders for a vote. The holders of common stock are entitled to receive dividends, if any, as declared by the Company's board of directors, subject to the preferential dividend rights of Preferred Stock.

As of December 31, 2020, and 2021, and June 30, 2022 (unaudited) the Company had reserved 127,257,387, 181,659,533, and 181,669,221 shares, respectively, of common stock for the potential conversion of shares of Preferred Stock into common stock (including committed but unissued shares under future tranche obligations for the Series A Preferred Stock), common stock for the settlement of the Company's anti-dilution obligation and related party forward contract liability, the exercise of outstanding stock options for common stock, and the issuance of common stock options and restricted stock awards remaining available for grant under the 2019 Equity Incentive Plan.

8. Stock-Based Compensation

2019 Equity Incentive Plan

The Company's 2019 Stock Option and Grant Plan (the "2019 Plan") provides for the Company to grant incentive stock options ("ISO"), non-qualified stock options, unrestricted stock awards, restricted stock awards ("RSA") and other stock-based awards (collectively, the "Awards") to the officers, employees, consultants and other key persons of the Company. The 2019 Plan is administered by the board of directors, or at the discretion of the board of directors, by a committee of the board of directors. The exercise prices, vesting and other restrictions are determined at the discretion of the board of directors, or its committee if so delegated.

The total number of shares of common stock issuable under the 2019 Plan was 19,186,379. In April 2021, the Company's board of directors further increased the number of shares of common stock reserved for issuance under the plan from 19,186,379 shares to 35,943,372 shares. As of December 31, 2019, 2020, and 2021, and June 30, 2022 (unaudited) there were 19,186,379 shares, 4,488,652 shares, 7,479,092 shares, and 5,652,280 shares respectively, remaining available for future grants under the 2019 Plan. Shares of unused common stock underlying any Awards that are forfeited, canceled or reacquired by the Company prior to vesting will again be available for the grant of awards under the 2019 Plan.

The exercise price for stock options granted may not be less than the fair market value of the Company's common stock on the date of grant, as determined by the board of directors, or at least 110 percent of the fair market value of the Company's common stock on the date of grant in the case of an ISO granted to an employee who owns stock representing more than 10 percent of the voting power of all classes of stock ("10% Owner") as determined by the board of directors as of the date of grant. The Company's board of directors determines the fair market value of the Company's common stock, taking into consideration its most recently available valuation of common stock performed by third parties as well as additional factors which may have changed since the date of the most recent contemporaneous valuation through the date of grant. Unless otherwise provided, at the time of grant, the options granted pursuant to the 2019 Plan expire ten years from the date of grant, or five years from the date of grant in the case of an ISO that is granted to a 10% Owner. Awards typically vest over four years, with the first 25 percent vesting on the first anniversary of the vesting commencement date and the remainder vesting in 36 equal monthly installments thereafter, contingent on the recipient's continued employment, service or relationship with the Company.

Stock Option Valuation

The fair value of each stock option grant is estimated on the grant date using the Black-Scholes option-pricing model. The Company historically has been a private company and lacks company-specific historical and implied volatility information. Therefore, it estimates its expected stock volatility based on the historical volatility of a publicly traded set of peer companies and expects to continue to do so until such time as it has adequate historical data regarding the volatility of its own traded stock price. For options with service-based vesting conditions, the expected term of the Company's options has been determined utilizing the "simplified" method for awards that qualify as "plain-vanilla" options. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. The expected dividend yield is based on the fact that the Company has never paid cash dividends on common stock and does not expect to pay any cash dividends in the foreseeable future.

The following table presents, on a weighted-average basis, the assumptions used in the Black-Scholes option-pricing model to determine the fair value of stock options granted:

	December 31, 2021	June 30, 2022 (unaudited)
Fair value per share of underlying common stock	$ 2.43	$ 2.83
Risk-free interest rate	1.2 %	2.6 %
Expected term (in years)	6.0	6.1
Expected volatility	75.27 %	74.42 %
Expected dividend yield	— %	— %

Stock Options

The following table summarizes the Company's stock option activity since December 31, 2020:

	Number of Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Balance at December 31, 2020	—	—	—	—
Granted	9,335,220	$ 1.27	—	—
Exercised	—	—	—	—
Forfeited	—	—	—	—
Balance at December 31, 2021	9,335,220	1.27	9.73	$ 19,763
Granted	2,001,500	$ 2.81	—	—
Exercised	—	—	—	—
Forfeited	(165,000)	1.18	—	—
Balance at June 30, 2022 (unaudited)	11,171,720	$ 1.55	9.3	$ 11,282
Options vested and exercisable at December 31, 2021	57,618	$ 1.18	9.83	$ 127
Options vested and expected to vest at December 31, 2021	9,335,220	$ 1.27	9.73	$ 19,763
Options vested and exercisable at June 30, 2022 (unaudited)	1,082,703	$ 1.19	9.2	$ 1,482
Options vested and expected to vest at June 30, 2022 (unaudited)	11,171,720	$ 1.55	9.3	$ 11,282

The weighted-average grant-date fair value of stock options granted for the year ended December 31, 2021 and six months ended June 30, 2022 (unaudited) was $1.89 and $1.88 per share, respectively. As of December 31, 2021 and June 30, 2022 (unaudited), there was $14.2 million and $15.4 million of total unrecognized compensation cost related to time-based unvested stock options the Company expects to recognize such amount over a remaining weighted-average period of 3.3 years and 3.4 years, respectively.

The aggregate intrinsic value of stock options is calculated as the difference between the exercise price of the options and the fair value of the Company's common stock for those stock options that had an exercise price lower than the fair value of the Company's common stock.

Performance-Based Stock Options

During the year ended December 31, 2021, the Company granted performance-based stock options to purchase 750,000 shares of common stock. The performance-based options commence vesting upon the achievement of (i) IND acceptance, (ii) consummation of the Company's IPO and (iii) a research milestone to be mutually agreed upon and vest over three equal installments. On February 9, 2022, the Company's board of directors established and approved the third performance-based vesting milestone, which requires the building of a chemistry facility, initiation of pegRNA piloting operations, and production of a GLP toxicology lot suitable for *in vivo* non-human primate studies, for stock options to purchase 250,000 shares of common stock granted on October 27, 2021 to the Company's CTO. The first two performance-based vesting conditions for stock options to purchase 500,000 shares of common stock granted were established by the board of directors on October 27, 2021. The grant date of these awards for accounting purposes is the date on which the performance conditions of the award were established by the board of directors and all terms of the award were known by the recipient. As a result, the grant-date fair value of each such award for accounting purposes was determined on October 27, 2021 and such awards are reflected in the Company's total stock options outstanding as of December 31, 2021. The performance-based vesting condition for stock options to purchase 250,000 shares of common stock granted on October 27, 2021 which was not established by the Company's board of directors until February 9, 2022 and therefore a grant date for accounting purposes had

not been established for those stock options as of December 31, 2021 although such stock options are included in the Company's total stock options outstanding as of December 31, 2021. The accounting grant date was established on February 9, 2022 and as such are outstanding stock options for accounting purposes as of June 30, 2022 (unaudited).

During the six months ended June 30, 2022 (unaudited), the Company granted three performance-based stock options to purchase a total of 100,000 shares of common stock. The performance-based options commence vesting upon the achievement of (i) IND acceptance, (ii) consummation of the Company's IPO and (iii) first regulatory designation granted to Prime Medicine and vest over three equal installments. The grant date of these awards for accounting purposes is the date on which the performance conditions of the award are established by the board of directors and all terms of the award are known by the recipient. As a result, the grant-date fair value for accounting purposes for the first performance-based stock options to purchase 33,334 shares of common stock was determined on June 3, 2022, when the performance-based vesting conditions were established by the board of directors and the terms of the awards were communicated to the recipients. The second and third performance-based vesting conditions for stock options to purchase the remaining 66,666 shares of common stock was not established by the Company's board of directors until August 4, 2022 and therefore a grant date for accounting purposes had not been established for those stock options as of June 30, 2022 although such stock options are included in the Company's total stock options outstanding for legal purposes as of June 30, 2022.

Through June 30, 2022 (unaudited), the Company concluded that the achievement of all of the performance conditions for such awards was not probable.

As of December 31, 2021 and June 30, 2022 (unaudited), there was $1.4 million and $2.2 million respectively, of total unrecognized compensation cost related to performance-based stock options.

Restricted Common Stock Awards

The Company awards restricted common stock to employees and non-employees under its 2019 Plan. The fair value of each share of restricted common stock is based on the market price of the Company's common stock on the date of grant.

For a period of up to six months from a grantee's termination, the Company has the right and option to repurchase unvested restricted common stock at the lower of (i) the original purchase price per share ($0.00001) or (ii) the fair market value per share as of the date of the Company elects to exercise its repurchase right. In August 2021, the Company repurchased 56,667 unvested shares of the restricted common stock at a price of $0.00001 per share, the original sale price, and the repurchased common shares were restored to the amount of unissued, authorized shares of common stock as of December 31, 2021. In May 2022, the Company repurchased 9,688 unvested shares of the restricted common stock at a price of $0.00001 per share, the original sale price, and the repurchased common shares were restored to the amount of unissued, authorized shares of common stock as of June 30, 2022 (unaudited).

During the period from September 13, 2019 (inception) to December 31, 2019, the years ended December 31, 2020 and 2021, and six months ended June 30, 2021 (unaudited), the Company issued time-based restricted common stock and performance-based restricted common stock with vesting subject to certain performance conditions. Shares of restricted common stock granted to employees and directors are not deemed, for accounting purposes, to be outstanding until those shares have vested.

Each award type is discussed below.

Time-Based Restricted Common Stocks

The majority of the restricted common stock have time-based vesting conditions and vest over a four-year period, subject to the employee's continued employment with, or service to, the Company on such vesting date. Compensation expense is recognized on a straight-line basis over the vesting period.

Time-Based Restricted Common Stock

In September 2019, a co-founder of the Company was granted a total of 64,772,720 shares of restricted common stock, of which 10,795,453 shares are performance-based restricted common stock as described below. The remaining 53,977,267 shares are subject to service conditions. In February 2020, another co-founder of the Company was granted 2,159,621 shares of restricted common stock that are subject to service conditions. These awards vest over a four-year period and provide for accelerated vesting of a portion of the unvested awards, as determined in the award agreement, upon the initial or subsequent closings of the Series A Preferred Stock. Upon the grant date, the Company determined the initial and subsequent closings of the Series A Preferred Stock were probable to occur and recognized the compensation expense over the expected service period.

The following table summarizes the Company's time-based restricted common stock activity since December 31, 2020:

	Number of Shares	Weighted-Average Grant-Date Fair Value
Unvested restricted common stock at December 31, 2020	59,287,638	$ 0.02
Issued	3,288,000	0.11
Vested	(28,939,657)	0.02
Repurchased	(56,667)	0.03
Unvested restricted common stock at December 31, 2021	33,579,314	0.03
Issued	—	—
Vested	(9,311,666)	0.03
Repurchased	(9,688)	0.11
Unvested restricted common stock at June 30, 2022 (unaudited)	24,257,960	$ 0.02

The aggregate fair value of restricted common stock that vested during the period from September 13, 2019 (inception) to December 31, 2019, the years ended December 31, 2020 and 2021, and the six months ended June 30, 2021 and 2022 (unaudited) was $0.1 million, $0.1 million, $0.6 million, $0.4 million and $0.3 million, respectively.

As of December 31, 2021 and June 30, 2022 (unaudited), there was $0.8 million and $0.6 million of total unrecognized compensation cost related to unvested time-based restricted common stock which the Company expects to recognize over a weighted-average period of 2.0 and 1.5 years, respectively.

Performance-Based Restricted Common Stock

The Company has also granted performance-based restricted common stock to certain executive officers and key persons of the Company with terms that allow the grantees to vest in a specific number of shares based upon the achievement of performance-based milestones. The Company granted 10,795,453 shares of performance-based restricted common stock to a co-founder of the Company in 2019, which will vest upon on the dosing of first patient in a Phase II or later-stage clinical trial or FDA approval of compound. The Company granted 2,159,621 and 1,200,000 shares of performance-based restricted common stock to certain executive officers in the years ended December 31, 2020 and 2021, respectively. These awards vest in three equal installments upon the achievements of (i) proof of concept in lead indication (which was achieved in May 2022), (ii) IND acceptance and (iii) consummation of the Company's IPO.

Share-based compensation expense associated with the performance-based restricted common stock is recognized if the performance condition is considered probable of achievement using the Company's best estimates of the time to vesting for the achievement of the performance-based milestones. Each reporting period, the Company updates its assessment of the probability that the performance-based milestones will be achieved. As of December 31, 2020 and 2021, the Company has concluded it was not probable that these performance conditions related to performance-based restricted common stock would be achieved, and as a result no compensation expense related to the performance-based restricted common stock has been recorded. As of June 30, 2022 (unaudited), the Company

has concluded that the proof of concept in a lead indication was achieved in May 2022, but it was not probable that the remaining performance conditions related to performance-based restricted common stock would be achieved. As a result, compensation expense of $0.1 million was recorded for the milestone achieved, and no compensation expense related to the remaining performance-based restricted common stock has been recorded. The fair value of the restricted common stock was based on the fair market value of the Company's common stock on the date of grant.

The following table summarizes the Company's performance-based restricted common stock activity since December 31, 2020:

	Number of Shares	Weighted-Average Grant-Date Fair Value
Unvested restricted common stock at December 31, 2020	12,955,074	$ 0.02
Issued	1,200,000	0.11
Vested	—	—
Repurchased	—	—
Unvested restricted common stock at December 31, 2021	14,155,074	0.03
Issued	—	—
Vested	(1,119,874)	0.06
Repurchased	—	—
Unvested restricted common stock at June 30, 2022 (unaudited)	13,035,200	$ 0.03

As of both December 31, 2021 and June 30, 2022 (unaudited) , there was $0.3 million of total unrecognized compensation cost related to unvested performance-based restricted common stock.

Stock-Based Compensation

The following table below summarizes the classification of the Company's stock-based compensation expense related to stock options and restricted common stock awards in the consolidated statements of operations and comprehensive loss (in thousands):

	Period from September 13, (Inception) to December 31,	Year Ended December 31,		Six Months Ended June 30,	
	2019	2020	2021	2021	2022
				(unaudited)	
General and administrative	$ —	$ 40	$ 459	$ 42	$ 821
Research and development	156	351	1,287	258	1,647
	$ 156	$ 391	$ 1,746	$ 300	$ 2,468

9. Income Taxes

For the period from September 13, 2019 (inception) to December 31, 2019, and the years ended December 31, 2020 and 2021, the Company recorded a tax provision (benefit) of $4,000, $1.9 million, and $(0.5) million, respectively. The deferred provision for the year ended December 31, 2021 was attributable to the Company recording a valuation allowance on its deferred tax assets and liabilities due to the Company being in a net deferred tax asset position. For the six months ended June 30, 2021 (unaudited), the Company recorded a tax provision of $0.5 million and for the six months ended June 30, 2022 (unaudited), the Company recorded a tax benefit of $1.0 million. The deferred benefit for the six months ended June 30, 2022 (unaudited) was attributable to the change in deferred tax liability associated with the unrealized gains on investments.

The components of income tax provision are as follows (in thousands):

	Period from September 13, 2019 (Inception) to December 31,	Year Ended December 31,	
	2019	2020	2021
Components of income tax provision			
Current provision:			
Federal	$ —	$ —	$ —
State	4	—	138
Total current provision	4	—	138
Deferred income tax provision (benefit):			
Federal	—	1,332	(928)
State	—	535	304
Total deferred income tax provision (benefit)	—	1,867	(624)
Total provision for (benefit from) income taxes	$ 4	$ 1,867	$ (486)

A reconciliation of the U.S. federal statutory income tax rate to the Company's effective income tax rate is as follows:

	Period from September 13, 2019 (Inception) to December 31,	Year Ended December 31,	
	2019	2020	2021
Rate Reconciliation			
Federal income tax expense at statutory rate	21.0 %	21.0 %	21.0 %
State income taxes, net of federal benefit	5.3 %	(38.5)%	3.5 %
Permanent differences	(2.9)%	(148.5)% [1]	(9.6)% [1]
Tax credits	— %	9.5 %	0.7 %
Other	(1.7)%	(0.3)%	(0.1)%
Change in valuation allowance	(21.8)%	35.8 %	(15.2)%
Effective income tax rate	(0.1)%	(121.0)%	0.3 %

(1) Permanent differences for the years ended December 31, 2020 and 2021 related to the change in fair value of Series A Preferred Stock tranche rights

Net deferred tax assets (liabilities) consisted of the following (in thousands):

	As of December 31,	
	2020	2021
Deferred Tax Summary		
Deferred tax assets:		
U.S. and state net operating loss carryforwards	$ 431	$ 11,365
Tax credits	144	1,547
Depreciation and amortization	486	13,584
Accrual	138	639
Deferred Rent	13	—
Lease Liability	—	2,843
Total deferred tax assets	1,212	29,978
Deferred tax liabilities:		
Stock compensation	(76)	(136)
Mark to market adjustments	(34)	(34)
Unrealized gain/loss	(2,969)	(2,862)
Right of Use Asset	—	(2,936)
Total deferred tax liabilities	(3,079)	(5,968)
Valuation allowance	—	(25,253)
Net deferred tax assets (liabilities)	$ (1,867)	$ (1,243)

As of December 31, 2021, the Company had U.S. federal net operating loss carryforwards of $41.8 million, which may be available to reduce future taxable income, which do not expire. In addition, as of December 31, 2021, the Company had state net operating loss carryforwards of $40.9 million, which may be available to reduce future taxable income and expire at various times beginning in 2039. As of December 31, 2021, the Company also had federal and state research and development tax credit carryforwards of $1.3 million and $0.4 million, respectively, which may be available to reduce future tax liabilities and begin to expire in 2040 and 2035, respectively.

Utilization of the U.S. federal and state net operating loss carryforwards and research and development tax credit carryforwards may be subject to a substantial annual limitation under Sections 382 and 383 of the Internal Revenue Code of 1986, and corresponding provisions of state law, due to certain ownership changes that have occurred previously or that could occur in the future. These ownership changes may limit the amount of carryforwards that can be utilized annually to offset future taxable income and tax liabilities. In general, an ownership change, as defined by Section 382, results from transactions increasing the ownership of certain stockholders or public groups in the stock of a corporation by more than 50 percent over a three-year period. The Company has not conducted a study to assess whether a change of control has occurred or whether there have been multiple changes of control since inception due to the significant complexity and cost associated with such a study. If the Company has experienced a change of control, as defined by Section 382, at any time since inception, utilization of the net operating loss carryforwards or research and development tax credit carryforwards would be subject to an annual limitation, which is determined by first multiplying the value of the Company's stock at the time of the ownership change by the applicable long-term tax-exempt rate, and then could be subject to additional adjustments. Any limitation may result in expiration of a portion of the net operating loss carryforwards or research and development tax credit carryforwards before their utilization. Further, until a study is completed by the Company and any limitation is known, no amounts are being presented as an uncertain tax position.

The Company has evaluated the positive and negative evidence bearing upon its ability to realize the deferred tax assets. Management has considered the Company's history of cumulative net losses incurred since inception, expectation of future losses and lack of other positive evidence. For the year ended December 31, 2019, the Company has concluded that it is more likely than not it will not realize the benefits of the net deferred tax assets. Accordingly, a full valuation allowance has been established against the net deferred tax assets. As of December 31,

2020, the Company was in a deferred tax liability position due to the unrealized gain and therefore had released the valuation allowance and recorded an ending deferred tax liability balance. For the year ended December 31, 2021, the Company was in a net deferred tax asset position and therefore recorded a valuation allowance against the portion of its deferred tax assets that cannot be fully supported by the future reversal of existing deferred tax liabilities. The Company has determined that the indefinite nature of the deferred tax liability related to its unrealized gain on its related party short-term investment can only support 80 percent of the federal deferred tax assets and none of the state deferred tax assets, resulting in a net deferred tax liability position at December 31, 2021 of $1.2 million. As of June 30, 2022 (unaudited), the Company was in a net deferred tax asset position and it is more likely than not that the Company will not realize the benefits. Therefore, the Company has recorded a full valuation allowance as of June 30, 2022 (unaudited) and in doing so, will recognize a tax benefit on the consolidated statement of operations and comprehensive loss in an amount equal to $1.0 million which is the change in the deferred tax liability recorded on the consolidated balance sheet as of December 31, 2021 to June 30, 2022 (unaudited). The Company reevaluates the positive and negative evidence at each reporting period.

For the year ended December 31, 2021, the valuation allowance increased primarily due to the increases in net operating loss carryforwards and research and development tax credit carryforwards. The changes in the valuation allowance were as follows (in thousands):

	Period from September 13, 2019 (Inception) to December 31,	Year Ended December 31,	
	2019	2020	2021
Valuation allowance at beginning of year	$ —	$ 552	$ —
Increases (decreases) recorded to income tax provision	552	(552)	25,253
Valuation allowance at end of year	$ 552	$ —	$ 25,253

The Company assesses the uncertainty in its income tax positions to determine whether a tax position of the Company is more likely than not to be sustained upon examination, including resolution of any related appeals of litigation processes, based on the technical merits of the position. For tax positions meeting the more-likely-than-not threshold, the tax amount recognized in the financial statements is reduced by the largest benefit that has a greater than 50 percent likelihood of being realized upon the ultimate settlement with the relevant taxing authority. As of December 31, 2021, the Company had not recorded any reserves for uncertain tax positions or related interest and penalties.

The Company files income tax returns as prescribed by the tax laws of the jurisdictions in which it operates. In the normal course of business, the Company is subject to examination by federal and state jurisdictions, where applicable. Since the Company is in a loss carryforward position, the Company is generally subject to examination by the U.S. federal, state and local income tax authorities for all years in which a loss carryforward is available. As of December 31, 2021, there were no pending tax examinations. The Company is open to future tax examination under statute from 2019 to the present.

10. Leases

21 Erie Street, Cambridge, Massachusetts Lease

In March 2020, the Company entered into an operating lease to sublease office and laboratory space located at 21 Erie Street, Cambridge, Massachusetts. The lease commenced in March 2020 and was set to expire in March 2022. The lease agreement provides for escalating monthly rental payments with fixed costs for expenses and property taxes included in each payment. Upon the execution of the lease agreement the Company paid $0.1 million for the rental fee for the last month of the term and $0.1 million as a security deposit on the space, which is classified as other assets on the consolidated balance sheet as of December 31, 2020. Effective August 2020, the Company amended the sublease for additional office and laboratory space (the "1st Amendment") with the lease commencement date in February 2021, and to extend the maturity of the sublease through June 2023. Upon the execution of the 1st Amendment, the Company paid a rental fee of $0.3 million to lease additional office space in

addition to the last month's rent of the lease and $0.3 million security deposit, which is classified as other assets on the consolidated balance sheet as of December 31, 2020. The lease was subsequently amended in October 2020 (the "2nd Amendment") to shorten the maturity of the sublease through March 2023.

In May 2021, the Company amended (the "3rd Amendment") the sublease for additional office and laboratory space ("Expanded Premises"). The lease commenced in December 2021 and expires in March 2023. Upon the execution of the 3rd Amendment the Company paid $0.2 million for the rental fee for the last month of the term and $0.2 million as a security deposit on the space, which is classified as other assets on the consolidated balance sheet as of December 31, 2021. In July 2021, the Company amended (the "4th Amendment") the sublease for additional laboratory space ("Lab Space") with a term of less than one year. The Lab Space lease is classified as a short-term lease and the Company will recognize lease payments as an expense on a straight-line basis over the term. In April 2022, the Company executed an extension (the "6th Amendment") which extends the expiration date of the lease for a period of two years, from March 2023 to March 2025.

38 Sidney Street, Cambridge, Massachusetts Lease

In July 2021, the Company entered into a non-cancelable operating lease to sublease office space in Cambridge, Massachusetts. The lease commenced in August 2021 and expires in December 2024. The Company has a right to extend the lease for one additional six-month period at a market rate as determined by the sublandlord and agreed to by the Company. The option to extend the lease term is not included in the right-of-use asset and lease liability as it is not reasonably certain of being exercised. The lease requires the Company to share in prorated expenses and property taxes based on actual amounts incurred; those amounts are not fixed for future periods and, therefore, are not included in the measurement of the lease.

64 Sidney Street, Cambridge, Massachusetts Lease

In July 2021, the Company entered into a non-cancelable operating lease to sublease office space located at 64 Sidney Street, Cambridge, Massachusetts. The lease commenced on April 15, 2022 and will expire on April 15, 2025. The Company has a right to extend the lease for one additional six-month period at a market rate as determined by the sublandlord and agreed to by the Company. The lease requires the Company to share in prorated expenses and property taxes based on actual amounts incurred; those amounts are not fixed for future periods and, therefore, these amounts will not be included in the measurement of the lease.

60 First Street, Cambridge, Massachusetts Lease

In November 2021, the Company entered into a lease for office and laboratory space in Cambridge, Massachusetts. The Landlord is required to perform certain base building work prior to turning over the space to the Company to perform certain additional improvements, which is not currently expected until the second half of 2022. The lease will then commence when the Company obtains control over the space with rental payments commencing 11 months later. The initial non-cancelable term of the lease is ten years, and the Company has an option to extend the lease for an additional period of ten years with the rent during the option period being the then fair market rent. The Company secured the lease with a $13.1 million security deposit, which was recorded as restricted cash on the consolidated balance sheets as of December 31, 2021 and June 30, 2022 (unaudited).

480 Arsenal Street, Watertown, Massachusetts Lease

In May 2022, the Company entered into a non-cancelable operating lease to sublease office space located at 480 Arsenal Street, Watertown, Massachusetts. The lease commenced on May 13, 2022 and will expire on April 30, 2027. The lease requires the Company to share in prorated expenses and property taxes based on actual amounts incurred; those amounts are not fixed for future periods and, therefore, these amounts will not be included in the measurement of the lease. The Company secured the lease with a $0.4 million security deposit, which was recorded as restricted cash on the consolidated balance sheet as of June 30, 2022 (unaudited).

In conjunction with the lease, the Company entered into a sublease agreement to sublet a portion of the office space at 480 Arsenal Street Watertown, Massachusetts (the "Arsenal Street Sublease"). The Arsenal Street Sublease commenced in May, 2022 and will expire on April 30, 2025.

Summary of lease costs recognized under ASC 842

The following tables contains a summary of the lease costs recognized under ASC 842 and other information pertaining to the Company's operating leases for the year ended December 31, 2021 and the six months ended June 30, 2021 and 2022 (unaudited).

The components of lease cost under ASC 842 were as follows (in thousands):

	Year Ended December 31, 2021	Six Months Ended June 30,	
		2021	2022
		(unaudited)	
Operating lease cost	$ 4,457	$ 1,775	$ 4,665
Variable lease cost	222	36	573
Short-term lease cost	432	110	607
Total lease cost	$ 5,111	$ 1,921	$ 5,845

In connection with the Arsenal Street Sublease, the Company recorded operating sublease income of $0.1 million for the six months ended June 30, 2022 in other income (expense), net in the consolidated statements of operations. The Company was not relieved of its primary obligation under the operating lease as a result of the sublease.

The weighted-average remaining lease term and discount rate were as follows:

	Year Ended December 31, 2021	Six Months Ended June 30,	
		2021	2022
		(unaudited)	
Weighted average remaining lease term (in years)	1.8 years	1.7 years	3.1 years
Weighted average discount rate	2.10 %	2.00 %	4.89 %

Future annual lease payments under non-cancelable operating leases as of December 31, 2021 were as follows (in thousands):

2022	7,404
2023	1,936
2024	1,262
Total future minimum lease payments	$ 10,602
Less: imputed interest	(196)
	$ 10,406

The lease for office space at 64 Sidney Street, Cambridge, Massachusetts commenced on April 15, 2022 and the Company expects to pay $10.1 million in total lease payments over the lease term. As the lease had not commenced as of December 31, 2021 the table above excludes any amounts related to this lease.

The extension on the lease for office space at 21 Erie Street, Cambridge, Massachusetts extends the expiration date of the lease from March 2023 to March 2025 and the Company expects to pay additional lease payments of $18.2 million over the lease term. As the extension had not commenced as of December 31, 2021 the table above excludes any amounts related to this lease.

The lease for office space at 60 First Street, Cambridge, Massachusetts has not yet commenced and the expected date for which the Company obtains control of the space is currently uncertain but not expected to occur until the second half of 2022. The Company currently expects rent to commence 11 months after taking possession of the space, with full occupancy expected in 2024, for which the Company will pay approximately $208.7 million over

the ten-year lease term. As the lease has not commenced as of June 30, 2022, the operating lease liabilities on the consolidated balance sheet through June 30, 2022 and the table above excludes any amounts related to this lease.

Disclosures under ASC 840

The Company did not enter into any lease agreements for the period from September 13, 2019 (inception) to December 31, 2019.

The Company recognizes rent expense on a straight-line basis over the respective lease period. During the year ended December 31, 2020, rent expense was $1.0 million.

Future minimum rental commitments to be paid by the Company at December 31, 2020 is as follows (in thousands):

Year Ended December 31:		
2021	$	2,669
2022		111
Total future minimum lease payments	$	2,780

11. License and Collaboration Agreements

License Agreement with Broad Institute

In September 2019, the Company entered into a license agreement with Broad Institute, Inc. (“Broad Institute”), and in May 2020 and February 2021, the Company entered into amendments to the license agreement, for certain patents related to delivery or targeting of DNA (the “Broad License Agreement”). Under the Broad License Agreement, Broad Institute granted the Company (i) an exclusive, worldwide license under the licensed patent rights solely to offer for sale, sell, have sold and import products covered by such licensed patent rights, or licensed products, solely for use within the Prime Broad Field (subject to certain specified limitations and exclusions with respect to certain applications), (ii) a non-exclusive, worldwide license under the licensed patent rights solely to make, have made, offer for sale, sell, have sold, and import licensed products solely for use in the Prime Broad Field, (iii) a non-exclusive, worldwide license under the licensed patent rights solely to make, have made, offer for sale, sell, have sold and import other products that are enabled by (a) the licensed patent rights or (b) the use of certain materials transferred to the Company by Broad Institute, solely for the prevention or treatment of human diseases and (iv) a non-exclusive, worldwide license solely for internal research. Further, with respect to DNA delivery or targeting applications covered by the licensed patent rights, the exclusive license granted to the Company by Broad Institute is limited only to “prime editor” products and specifically excludes applications relating to the production or processing of small or large molecules, including for the prevention or treatment of human disease. Under the Broad License Agreement, the Company also has the right to grant sublicenses to its affiliates and third parties, subject to certain requirements. The Company is obligated to use commercially reasonable efforts to develop, seek marketing approval for, and commercialize licensed products in the field. As partial consideration for the license, the Company made a upfront payment of $0.5 million to Broad Institute.

Concurrently with the Broad License Agreement, the Company entered into a subscription agreement with Broad Institute (the “Broad Subscription Agreement”). Under the Broad Subscription Agreement, as additional consideration for the license, the Company issued 1,938,429 shares of common stock, with a fair value of $39,000, to Broad Institute, representing 5.0 percent of its then outstanding capital stock on a fully-diluted basis. The Broad Subscription Agreement also obligated the Company to issue additional shares of common stock to Broad Institute without additional consideration to maintain Broad Institute’s ownership of the Company at 5.0 percent on a fully-diluted basis, if at any time prior to the achievement of an equity financing up to $100.0 million, the Company issues additional securities that would cause Broad Institute shares of common stock to be less than 5.0 percent of the Company's outstanding capital stock on a fully-diluted basis (the “Anti-Dilution Obligation”). In connection with the fourth Series A Preferred Stock closing, the Anti-Dilution Obligation was settled in full (see Note 3).

The Company also granted certain preemptive rights to Broad Institute, under which if after the Company has reached the financing threshold of $100.0 million, the Company proposes to offer or sell any new securities, then Broad Institute shall have the right to purchase from the Company the portion of such new securities that would allow Broad Institute to maintain its 5.0 percent ownership in the Company. The Company determined that the Anti-Dilution Obligation was required to be recorded as a liability because it was a freestanding instrument that would require the Company to transfer assets to settle the obligation and it is indexed to an obligation to contingently redeem the Company's equity shares. Accordingly, the Company recorded a liability of $0.2 million equal to the Anti-Dilution Obligation fair value upon entering into the Broad Subscription Agreement. In April 2021, the Company exceeded the financing threshold with the fourth issuance of the Series A Preferred Stock (Note 6). In connection with the fourth closing of Series A Preferred Stock, Broad Institute purchased an additional 761,844 shares of Series A preferred stock, at a price of $1.00 per share for gross proceeds of $0.8 million, to maintain its 5.0 percent ownership in the Company. At the time of purchase, the Company's Series A Preferred Stock had a fair value of $2.31 per share. Therefore, the Company recorded the difference between the purchase price and the fair value per share as additional paid-in capital as it represented a transaction with a stockholder due to Broad Institute's existing ownership of the Company's common stock.

Under the Broad License Agreement, the Company is also required to use commercially reasonable efforts to develop licensed products in the Prime Broad Field in accordance with a development plan that the Company prepared and submitted to Broad Institute. The Company is also obligated to pay Broad Institute an annual license maintenance fee ranging from the low to mid five-figures dollar amount through the end of 2020 to a low six-figures dollar amount beginning in 2021. In addition, the Company is obligated to reimburse Broad Institute for its documented, out-of-pocket costs incurred while prosecuting and maintaining its licensed patent rights.

Broad Institute is also entitled to receive clinical and regulatory milestone payments up to a total of $20.0 million per licensed product, depending on the patient population to be treated by the licensed product achieving the applicable milestone. If the Company undergoes a change of control at any time during the term of the Broad License Agreement, certain of the clinical and regulatory milestone payments will increase by a specified percentage. Broad Institute is also entitled to sales-based milestone payments up to a total of $54.0 million per licensed product, depending on the patient population to be treated by the licensed product achieving the applicable milestone. Broad Institute is entitled to lower payments to the extent the clinical and regulatory milestones or sales-based milestones are achieved by enabled products, rather than licensed products.

Broad Institute is entitled to receive mid-single digit percentage royalties on net sales of licensed products, and low single-digit percentage royalties of enabled products. Royalties payable to Broad Institute are subject to customary offsets and reductions with respect to a product in a given country, to a floor. Royalties are due on a country-by-country and product-by-product basis beginning upon the first commercial sale of each product and ending on the latest of (i) the expiration of the last valid claim of a patent covering such product in such country, (ii) the period of regulatory exclusivity associated with such product in such country or (iii) 10 years after the first commercial sale of such product in such.

Unless earlier terminated, the Broad License Agreement will remain in effect until the later of (i) the last to expire valid claim of an issued patent or pending patent application within the licensed patent rights covering the Company's licensed products or (ii) the expiration of the last royalty term for a licensed product in a country. The Company can terminate the Broad License Agreement for convenience after a certain period of time following prior written notice to Broad Institute. Each party may terminate the Broad License Agreement for the other party's uncured material breach within a specified time period following notice of such breach. Broad Institute may also immediately terminate the Broad License Agreement (i) to the extent the Company (or its affiliates or sublicensees) challenges a licensed patent right, (ii) upon the Company's bankruptcy or insolvency or (iii) if the Company fails to procure and maintain insurance.

The Company determined that the Broad License Agreement represented an asset acquisition of IPR&D assets with no alternative future use and recognized the aggregate acquisition cost as acquired IPR&D within research and development expense in the consolidated statement of operations and comprehensive loss. The acquisition did not qualify as a business combination as the acquisition did not include both an input and substantive processes, including an assembled workforce, that together contribute to the ability to create outputs. For the period from

September 13, 2019 (inception) to December 31, 2019, the Company recorded $0.7 million of research and development expense related to the acquired IPR&D from Broad Institute, which consisted of the initial upfront payment of $0.5 million, the $39,000 fair value of common stock issued to Broad Institute and the initial fair value of the Anti-Dilution Obligation of $0.2 million. For the period from September 13, 2019 (inception) to December 31, 2019, for the years ended December 31, 2020 and 2021, and for the six months ended June 30, 2021 and 2022 (unaudited), the Company recognized $0.5 million, $0.1 million, $0.3 million, $0.1 million and $0.1 million, respectively, of research and development expense (in addition to the IPR&D above) related to annual license maintenance fees. For the period from September 13, 2019 (inception) to December 31, 2019, for the years ended December 31, 2020 and 2021, and for the six months ended June 30, 2021 and 2022 (unaudited), the Company recognized $0.4 million, $0.6 million, $1.3 million, $0.3 million, and $0.6 million, respectively, of general and administrative expenses related to its payment obligation with respect to out-of-pocket patent costs incurred by Broad Institute under the Broad License Agreement. As of December 31, 2019, 2020 and 2021, and June 30, 2022 (unaudited), no milestone payments or royalties under the agreement had been paid or were due, and no specified milestones were deemed to be probable of achievement.

In May 2020 and February 2021, the Company amended the Broad License Agreement, in each case, to update or include additional licensed patent rights. Under the February 2021 amendment, as partial consideration for the addition of licensed patent rights relating to prime editing improvements, the Company paid Broad Institute an amendment fee of $0.1 million.

Option Agreement with Broad Institute

In May 2021, the Company entered into an exclusive option agreement with Broad Institute (the "Broad Option Agreement), pursuant to which, Broad Institute granted to the Company an exclusive option to negotiate an amendment to the Broad License Agreement to include certain additional patent rights relating to prime editing improvements to the Company's license thereunder (subject to certain specific limitations and exclusions with respect to certain applications) (the "Exclusive Option"). In connection with the Broad Option Agreement, Broad Institute also granted the Company, during the option period, a limited, non-exclusive license under the new patent rights solely for research purposes to evaluate whether to exercise its option (subject to certain specified exceptions). The Company paid a upfront fee of $0.1 million to Broad Institute under the agreement upon execution of the agreement.

The Company may terminate the Broad Option Agreement for convenience by giving advance written notice of termination to Broad Institute. Broad Institute has the right to terminate the agreement if the Company (i) fails to pay its obligations, (ii) materially breaches the agreement and fails to cure such nonpayment or breach within specified cure periods or (iii) becomes insolvent.

The Company's option expires in November 2022, unless it mutually agrees in writing with Broad Institute to extend such expiration date. As of December 31, 2021 and June 30, 2022 (unaudited), the Company has not exercised its Exclusive Option.

Other than the expense for the upfront payment made in September 2021 of $0.1 million, the Company did not recognize any research and development expense for the period from September 13, 2019 (inception) to December 31, 2019, for the years ended December 31, 2020 and 2021, and for the six months ended June 30, 2021 and 2022 (unaudited) in connection with its payment obligations under the Broad Option Agreement.

Broad Pledge

In February 2021, the Company committed to donate $5.0 million to Broad Institute and Harvard University annually for 14 years, commencing in 2021 (the "Pledge"). The Pledge is intended to be used for research and development related to new genome editing technologies, for example Prime Editing, improve on existing genome-editing technologies, identify delivery mechanisms for these technologies and apply these technologies to the understanding and treatment of rare genetic diseases. The Company can terminate the Pledge at its discretion, subject to providing one year of funding from the date of termination. In August 2022, the Company amended and restated the Pledge to clarify that the funds may be used by the laboratory of David Liu, who is a member of the Broad Institute and a faculty member at Harvard.

The Company accounts for this Pledge as research and development expenses as it has access to certain data generated as a result of the Pledge. For the year ended December 31, 2021, the Company recognized $5.0 million of research and development expense in connection with the Pledge. For both the six months ended June 30, 2021 and 2022 (unaudited), the Company recognized $2.5 million of research and development expense in connection with the Pledge.

Related Party Beam Collaboration Agreement

In September 2019, the Company entered into a collaboration agreement with Beam (the "Beam Collaboration Agreement") to collaborate on the research, development, manufacture and commercialization of certain prime editing products within a specified field and provide each other with access and licenses to certain proprietary technology to advance the other's progress. Under the Beam Collaboration Agreement, each party agreed to provide each other with access to, and licenses under, certain technology, know-how and patent rights controlled by each party for a limited number of years after the effective date, known as the initial term, and certain improvements thereto. Under the Beam Collaboration Agreement, the Company granted Beam an exclusive (even as to the Company and its affiliates), worldwide license under (i) certain prime editing technology, know-how and patent rights that the Company controls during the initial term, and improvements thereto that the Company controls for a specified number of years following the initial term, and (ii) the Company's interest in certain jointly-owned collaboration technology, in each case, solely to develop, make, have made, use, offer for sale, sell, import and commercialize licensed products only in the Beam field. Beam also granted to the Company certain non-exclusive, worldwide licenses under certain technology, know-how and patent rights, including under certain CRISPR or delivery-related technology, know-how and patent rights, that it controls during the initial term, and improvements thereto that Beam controls for a specified number of years following the initial term, solely to develop, make, have made, use, offer for sale, sell, import and commercialize products only in the Company's field. As partial consideration for the Beam Collaboration Agreement, Beam agreed to pay the Company, upon its election to continue its collaboration with the Company on the first anniversary of the Beam Collaboration Agreement, $5.0 million worth of its own shares of common stock.

Before and within a short period of time after the filing of an IND for a development candidate being developed under the Beam Collaboration Agreement, Beam has the option to designate up to a mid-single digit number of licensed products for which the Company is not permitted to exercise the profit share right (described below) (the "Beam Option"). Under the Beam Collaboration Agreement, a licensed product for which the Company has not exercised its profit share option or for which Beam has exercised the Beam Option is collectively referred to as "protected product." Beam must exercise its option within 30 days following the filing of an IND for such product. Unless the Company exercises its profit sharing option for a licensed product, Beam is solely responsible for the development and commercialization of licensed products in the Beam field under the Beam Collaboration Agreement. If Beam exercises its option for a protected product, Beam will owe Prime a payment of $5.0 million if the product is developed for non-sickle cell disease or $10.0 million if the product is developed for sickle cell disease.

On a licensed product-by-licensed product basis, the Company has the right to elect to share equally with Beam in the profits and losses in the United States for Beam's licensed products. The Company may exercise such right for each licensed product within a specified period of time. Any such licensed product for which the Company exercises its right is referred to as a collaboration product. If the Company exercises such right, the Company agrees to share equally in the costs, profits and losses of each such collaboration product in the United States, rather than receiving milestones and royalties based on development and sales thereof by Beam in the United States. For clarity, the Company is still entitled to receive milestones and royalties on the development and sale of each such collaboration product outside the United States. The Company also has the right to elect, within a specified time period, at least one year prior to the expected filing of an NDA, to co-promote with Beam each collaboration product in the United States, in addition to sharing in the profits and losses. To the extent the Company exercises its co-promote option with respect to a given collaboration product, the Company and Beam must use commercially reasonable efforts to commercialize such collaboration product, in each case, in the Beam field in the major markets in which marketing authorization has been obtained. After the Company has exercised its right to profit share on a collaboration product, the Company is able to, at any time during the term of the Beam Collaboration Agreement, on a collaboration

product-by-collaboration product basis, opt-out of the profit and loss share and co-promotion activities with respect to any collaboration product with prior written notice to Beam within a certain time period.

The Company is entitled to receive development milestone payments from Beam on Beam's development of protected products (which, for clarity, includes any licensed product for which the Company has not exercised its profit share option) and collaboration products. For protected products, the Company is entitled to receive up to a total of $35.5 million on a protected product-by-protected product basis based on Beam's development of such protected product and, for collaboration products, up to a total of $17.8 million on a collaboration product-by-collaboration product basis based on Beam's development of such collaboration product outside of the United States, in each case, with such amounts lowered if such licensed product achieves a given milestone for use in treating an orphan disease. The Company is also entitled to receive sales-based milestone payments from Beam based on net sales of licensed products. For protected products, the Company is entitled to receive up to a total of $84.5 million on a protected product-by-protected product basis based on net sales of such protected product worldwide, and, for collaboration products, up to a total of $42.3 million on a collaboration product-by-collaboration product basis based on net sales of collaboration products outside of the United States.

The sickle cell disease product partnered with Beam is a licensed product under the Beam Collaboration Agreement. Beam has not designated this product as a protected product and the Company has not received any development or sales-based milestones with respect to Beam's exploitation thereof.

Beam is obligated to pay the Company tiered royalties ranging from a high-single digit percentage to a low double-digit percentage, but less than teens on net sales of protected products worldwide on a protected product-by-protected product basis and net sales of collaboration products outside of the United States on a collaboration product-by-collaboration product basis. The Company's royalties are subject to customary offsets and reductions, to a floor that takes into account any royalties the Company is obligated to pay to its third-party licensors, including Broad Institute. In addition, certain of the rights licensed under the Beam Collaboration Agreement are sublicensed from third parties, and Beam agrees to reimburse the Company for certain payments the Company is required to make to its third-party licensors attributable to Beam's exercise of any sublicense the Company grants to Beam, including payments it makes to Broad Institute under the Broad License Agreement.

If the Company develops a product that is covered by the technology, know-how or patent rights that Beam licenses to the Company under the Beam Collaboration Agreement, which it refers to as a Prime product, the Company is obligated to pay to Beam a low single digit royalty on its worldwide net sales of such any product on a Prime product-by-Prime product and country-by-country basis, subject to certain customary reductions, to a floor.

Unless earlier terminated in accordance with its terms, the Beam Collaboration Agreement will expire on the later of (a) expiration of the last royalty term for a product on which a party is obligated to pay royalties to the other party or (b) with respect to any collaboration product, the date on which neither party is developing or commercializing any such collaboration product in the United States.

After expiration of the initial term, Beam can terminate the Beam Collaboration Agreement for convenience in its entirety, or on a licensed product-by-licensed product or subfield-by-subfield basis, with prior written notice to the Company. Each party may terminate the Beam Collaboration Agreement for (a) the other party's uncured material breach, (b) upon the insolvency or bankruptcy of the other party or (c) immediately to the extent the other party (or its affiliates or sublicensees) challenges a patent right licensed to such party.

In connection with the Beam Collaboration Agreement, concurrently in September 2019, Beam and the Company also entered into a mutual subscription agreement ("Beam Mutual Subscription Agreement"). Under the Beam Mutual Subscription Agreement, if Beam elected to continue its collaboration with the Company, on the first anniversary of the agreement the Company was obligated to grant Beam 5,000,000 shares of the Company's common stock which represented 5.0 percent of the 100 million shares of Series A Preferred Stock that the Company had issued or committed to issue as of the effective date of the Beam Mutual Subscription Agreement. In September 2020, Beam elected to continue its collaboration with the Company and, in October 2020, as required by the terms under the Beam Mutual Subscription Agreement, the Company issued 5,000,000 shares of the Company's common stock to Beam with a fair value of $0.2 million. For the year ended December 31, 2020, the Company

recognized $5.2 million of collaboration revenue, which represents the net of the fair value of Beam's common stock of $5.4 million as of the first anniversary of the Beam Collaboration Agreement, which was when the Company was entitled to the Beam shares, offset by the fair value of $0.2 million related to the 5,000,000 shares of the Company's common stock required to be issued to Beam, which reflect a payment to the Company's customer.

The Company concluded that the Beam Collaboration Agreement and the Beam Mutual Subscription Agreement should be combined and treated as a single arrangement for accounting purposes as the agreements were entered into contemporaneously and in contemplation of one another. The Company determined that the combined agreements are accounted for under Topic 606, *Revenue recognition.* The Company identified the following performance obligations: (i) exclusive, worldwide license to certain Prime patents, (ii) non-exclusive, worldwide licenses to CRISPR technology and (iii) joint research committee participation. The Company also evaluated whether the Beam Option and the Company's right to elect collaboration products in the Beam Collaboration Agreement represented material rights that would give rise to a performance obligation and concluded that neither the Beam Option nor the Company's right to elect collaboration products convey a material right to Beam and therefore are not considered separate performance obligations within the Beam Collaboration Agreement. There have been no protected product or collaboration products to date. Under the Beam Collaboration Agreement, the Company is eligible to receive certain milestones and royalties regardless of whether any options are exercised, which are considered variable consideration. At each reporting period, the Company evaluates whether milestones are considered probable of being reached and, to the extent that a significant reversal would not occur in future periods, estimates the amount to be included in the transaction price. During the years ended December 31, 2020 and 2021, the Company did not receive any milestone payments and all variable consideration related to the Beam Collaboration Agreement remained fully constrained.

The Company assessed the above promises and determined that the exclusive license for certain Prime products and non-exclusive licenses to CRISPR technology represent performance obligations within the scope of Topic 606. The exclusive license for certain Prime products and non-exclusive licenses to CRISPR technology are considered functional intellectual property and distinct from other promises under the contract. The exclusive license for certain Prime products and non-exclusive licenses to CRISPR technology are considered functional licenses that are distinct in the context of the Beam Collaboration Agreement as Beam can benefit from the licenses on its own or together with other readily available resources. As the exclusive license for certain Prime products and non-exclusive licenses to CRISPR technology are delivered at the same time, they are considered one performance obligation at contract inception. The joint research committee performance promise is immaterial in the context of the contract.

The Company determined the transaction price under Topic 606 at the inception of the Beam Collaboration Agreement to be $5.2 million, consisting of the value of the Beam equity investment under the Beam Mutual Subscription Agreement, when measured at fair value, less the value of the Prime shares issued to Beam of $0.2 million. The shares Prime issued to Beam represents a payment to a customer and is therefore a reduction of the transaction price.

The Company recognizes revenue for the license performance obligations at a point in time, that is upon the first anniversary of the effective date when Beam elected to continue its collaboration with the Company. As control of these licenses was transferred on this date, Beam could begin to use and benefit from the licenses, the Company recognized $5.2 million of license revenue during the year ended December 31, 2020 under the Beam Collaboration Agreement. There was no revenue recognized during the year ended December 31, 2021 or the six months ended June 30, 2021 and 2022 (unaudited).

In September 2020, on the first anniversary of the Beam Collaboration Agreement, the Company was entitled to receive 200,307 shares of Beam common stock, which had a fair value of $5.4 million and which was recorded as related party collaboration revenue in the consolidated statements of operations and comprehensive loss at that time. In October 2020, Beam issued the shares of common stock to the Company at which time the common shares had a fair value of $5.5 million and which the Company recorded as related party short-term investments on the consolidated balance sheet. For the year ended December 31, 2020, the Company recognized a net gain of $0.1 million for the change in fair value of the Beam shares the Company was entitled to receive, which was recorded to other income (expense), net in the consolidated statements of operations and comprehensive loss. There was no change in fair value of $0.2 million related to the 5,000,000 shares of common stock issued by the Company to

Beam, between the first anniversary date of the Beam Collaboration Agreement, in September 2020 and the issuance date of the shares of common stock in October 2020.

For the years ended December 31, 2020 and 2021, the Company recognized an unrealized gain (loss) of $10.9 million and $(0.4) million, respectively, for the change in fair value of the related party short-term investment consisting of Beam shares, which was recorded to other income (expense), net in the consolidated statements of operations and comprehensive loss. For the six months ended June 30, 2021 and 2022 (unaudited), the Company recognized an unrealized gain of $9.4 million and an unrealized loss of $8.2 million, respectively.

Additionally, in September 2019, in connection with the Beam Collaboration Agreement, the Company executed a letter agreement, as amended, to receive certain interim management and startup services from Beam through March 2021. The Company is obligated to reimburse Beam for out-of-pocket costs incurred in connection with performing the services. The Company concluded this does not represent a payment to a customer because it is a distinct service at standalone selling price. For the years ended December 31, 2020 and 2021, the Company paid $0.1 million and $0.1 million, respectively, for such services. As of December 31, 2020, there was $30,000 included within accounts payable and no amounts as of December 31, 2021. The agreement ended on March 31, 2021 and for the six months ended June 30, 2021 (unaudited) the Company paid $0.1 million for such services.

Beam Sub-license Agreement

On January 25, 2021, the Company entered into a sub-license agreement with Beam (the “Beam Sub-license Agreement”), under which Beam granted to the Company a non-exclusive, non-transferable, fully paid-up and royalty-free license to certain intellectual property that Beam has licensed from the Ohio State Innovation Foundation (the "OSIF") for internal research purposes only. The patent rights and other proprietary rights in or related to the patent rights are and will remain the exclusive property of the OSIF. There was no accounting impact of this amendment.

Research Collaboration, Option and License Agreement with Myeloid

In December 2021, the Company entered into a research collaboration and exclusive option agreement with Myeloid (the “Myeloid Agreement”). Under the Myeloid Agreement, the Company collaborates with Myeloid, a related party, on the research and development of LINE-1 retrotransposon technology. In connection with the Myeloid Agreement, the Company also entered into a subscription agreement with Myeloid under which the Company was obligated to issue an aggregate of 3,424,422 shares of its common stock as additional consideration for the license.

Myeloid grants to the Company an exclusive option, exercisable during the research term and for 60 days thereafter, to obtain ownership of certain patent rights and know-how owned by Myeloid that relate to LINE-1 retrotransposon technology. If the Company exercises its option, in addition to assigning the Company ownership of the applicable patent rights and know-how, Myeloid also agrees to grant the Company certain exclusive and non-exclusive licenses, including to certain improvements and other enabling technology.

Following the exercise of the Company’s option, the Company agrees to grant Myeloid, in addition to certain other licenses, an exclusive, worldwide license under the assigned patent rights and know-how to develop and commercialize products in the field of myeloid cells and myeloid cell engineering, or the Myeloid Field. As of December 31, 2021 and June 30, 2022 (unaudited), the Company has not exercised its option.

Upon entering into the Myeloid Agreement, Myeloid was entitled to receive an upfront payment of $30.0 million in cash and an aggregate of 3,424,422 shares of the Company’s common stock, with a then fair value of $12.0 million, both of which Myeloid received in January 2022. If the research agreement meets its goals, then (i) during the research term, Myeloid is entitled to cash payments of up to $35.0 million in the aggregate upon the achievement of certain milestones reflecting the technology’s development; and (ii) if the Company exercises its option, the Company agrees to pay to Myeloid an option exercise fee of $80.0 million in cash, and shares of the Company’s common stock with a then fair value of $30.0 million. Additionally, if the research collaboration meets its goal and the Company exercises its option, and the Company is able to proceed with the development and commercialization of a product that is covered by (a) the patent rights or know-how subject to the Company’s option

or (b) the patent rights or know-how developed by one or both of the parties during the research term related to LINE-1 retrotransposon technology, or, collectively, a Prime Product, Myeloid would be eligible to receive, for the first five Prime Products, development and regulatory milestone payments of up to $120.0 million on a Prime Product-by-Prime Product basis and sales-based milestone payments of up to $210.0 million on a Prime Product-by-Prime Product basis.

Myeloid is also eligible to receive tiered low to mid single-digit percentage royalties on the Company's annual aggregate global net sales of Prime Products on a Prime Product-by-Prime Product and country-by-country basis, subject to customary offsets and reductions to a floor. On a country-by-country and Prime Product-by-Prime Product basis, the period during which royalties will be paid will continue until the latest of (i) the expiration date of the last to expire valid claim of an issued patent or pending patent application within the patent rights subject to the Company's option or the patent rights developed by one or both of the parties during the research term related to LINE-1 retrotransposon technology, in each case, covering the applicable Prime Product, (ii) loss of regulatory exclusivity for such Prime Product in such country, or (iii) ten (10) years after the first commercial sale of such Prime Product in such country.

Following the exercise of the Company's option and for a period of two years thereafter, Myeloid will have the right to select up to three targets, subject to certain exclusions, for the development and commercialization of products directed at such targets in all fields and the Company will be eligible to receive the development, regulatory and sales-based milestone payments and royalty payments as set forth above from Myeloid with respect to such products.

Unless earlier terminated based on customary termination rights, the Myeloid Agreement will continue on a Prime Product-by-Prime Product and country-by-country basis until the expiration of the royalty term for such Prime Product in such country. If the Company exercises its option, neither party will have the right to terminate the Myeloid Agreement for any reason.

The Company determined that the Myeloid Collaboration Agreement represented an asset acquisition of IPR&D assets with no alternative future use and recognized the aggregate acquisition cost as acquired IPR&D within research and development expense in the consolidated statement of operations and comprehensive loss. The acquisition did not qualify as a business combination as the acquisition did not include both an input and substantive processes, including an assembled workforce, that together contribute to the ability to create outputs. For the year ended December 31, 2021, the Company recorded $42.0 million of research and development expense related to the acquired IPR&D from Myeloid, which consisted of the initial upfront payment of $30.0 million and the $12.0 million fair value of common stock to be issued to Myeloid.

In connection with the Company's obligation to issue Myeloid shares of its common stock, the Company determined the fair value of the common stock to be issued based, in part, on the results obtained from a third-party valuation of the Company's equity securities prepared as of December 24, 2021. As the Company had not issued the shares to Myeloid as of December 31, 2021, the Company recorded a $12.0 million related party forward contract liability based on the common stock fair value as of the date of the Myeloid Subscription Agreement. Further, there was no change in fair value of the shares from the date of the Myeloid Subscription Agreement to December 31, 2021. As such, the Company will recognize any future changes in fair value of the shares as other income (expense) through the date such shares are issued to Myeloid. In addition, as the upfront payment was not made as of December 31, 2021, the Company recorded the $30.0 million payment obligation within accrued expenses and other current liabilities on its consolidated balance sheet as of December 31, 2021. In January 2022, the Company made the $30.0 million payment and also issued the shares of its common stock to Myeloid. As of December 31, 2021 and June 30, 2022 (unaudited), no milestone payments under the agreement had been paid or were due, and no specified milestones were deemed to be probable of achievement.

12. Commitments and Contingencies

Leases

The Company's commitments under its operating leases are described in Note 10. Additionally, as part of the lease agreement the Company entered into in May 2022 for 480 Arsenal Street, the Company signed a participation

rights agreement for up to $2.0 million, which allows the landlord or an affiliate or designee of the landlord to participate in any future issuance of equity at the same terms and pricing as other investors. Since the right to participate is on the same terms and pricing afforded to other investors, the participation right is deemed to be at fair value with no separate accounting required.

License and Collaboration Agreements

The Company entered into various license and collaboration agreements under which it is obligated to make fixed and contingent payments (see Note 11).

401(k) Plan

The Company maintains a defined-contribution plan under Section 401(k) of the Internal Revenue Code of 1986 (the "401(k) Plan"). The 401(k) Plan covers all employees who meet defined minimum age and service requirements and allows participants to defer a portion of their annual compensation on a pre-tax basis. Matching contributions to the 401(k) Plan may be made at the discretion of management. The Company is not required to make, and to date has not made, any matching contributions to the 401(k) Plan through December 31, 2020 or 2021 and the six months ended June 30, 2021 or 2022 (unaudited).

Indemnification Agreements

In the ordinary course of business, the Company may provide indemnification of varying scope and terms to vendors, lessors, business partners and other parties with respect to certain matters including, but not limited to, losses arising out of breach of such agreements or from intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with all board of directors that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date, the Company has not incurred any material costs as a result of such indemnifications. The Company is not aware of any indemnification arrangements that could have a material effect on its financial position, results of operations or cash flows, and it has not accrued any liabilities related to such obligations in its consolidated financial statements as of December 31, 2020 and 2021 and June 30, 2022 (unaudited).

Legal Proceedings

From time to time, the Company may become involved in legal proceedings or other litigation relating to claims arising in the ordinary course of business. The Company accrues a liability for such matters when it is probable that future expenditures will be made and that such expenditures can be reasonably estimated. Significant judgment is required to determine both probability and estimated exposure amount. Legal fees and other costs associated with such proceedings are expensed as incurred. As of December 31, 2020 and 2021 and June 30, 2022 (unaudited), the Company was not a party to any material legal proceedings or claims.

13. Net Loss per Share

The Company calculated basic and diluted net loss per share attributable to common stockholders using the two-class method required for companies with participating securities. The Company considers Series A Preferred Stock and Series B Preferred Stock to be participating securities as the holders are entitled to receive cumulative dividends as well as residuals in liquidation.

Under the two-class method, basic net loss per share available to common shareholders was calculated by dividing the net loss available to common shareholders by the weighted-average number of shares of common stock outstanding during the period. The net loss available to common shareholders was not allocated to the Series A Preferred Stock and Series B Preferred Stock as the holders of preferred stock did not have a contractual obligation to share in losses. Diluted net loss per share available to common shareholders was computed by giving effect to all potentially dilutive common stock equivalents outstanding for the period. For purposes of this calculation, preferred stock, unvested restricted stock and stock options to purchase common stock were considered common stock

equivalents but had been excluded from the calculation of diluted net loss per share available to common shareholders as their effect was anti-dilutive. In periods in which the Company reports a net loss available to common shareholders, diluted net loss per share available to common shareholders is the same as basic net loss per share available to common shareholders, since dilutive common shares are not assumed to have been issued if their effect is anti-dilutive.

Net Loss Per Share

	Period from September 13, 2019 (Inception) to December 31,	Year Ended December 31,		Six Months Ended June 30,	
	2019	2020	2021	2021	2022
				(unaudited)	
Numerator:					
Net loss	$ (2,529)	$ (3,410)	$ (165,367)	$ (86,044)	$ (53,188)
Accretion of preferred stock to redemption value	(265)	(1,645)	(1,468)	(1,468)	—
Cumulative dividend on preferred stock	—	—	(17,284)	(4,559)	(12,517)
Net loss attributable to common stockholders	$ (2,794)	$ (5,055)	$ (184,119)	$ (92,071)	$ (65,705)
Denominator:					
Weighted-average common shares outstanding, basic and diluted	4,622,576	8,206,374	40,332,091	31,662,400	61,777,538
Net loss per share attributable to common stockholders, basic and diluted	$ (0.60)	$ (0.62)	$ (4.57)	$ (2.91)	$ (1.06)

For accounting purposes, the computation of basic net loss per share attributable to common stockholders, the amount of weighted-average common shares outstanding as of December 31, 2021, includes the impact of the 3,424,422 shares the Company was obligated to issue to Myeloid as of December 24, 2021 (see Note 11) and excludes all shares of unvested restricted common stock as such shares are not considered outstanding (see Note 8).

	Period from September 13, 2019 (Inception) to December 31,	Year Ended December 31,		Six Months Ended June 30,	
	2019	2020	2021	2021	2022
				(unaudited)	
Convertible preferred stock (as converted to common stock) [1]	10,000,001	45,000,000	161,420,799	45,000,000	161,420,799
Stock Options to purchase common stock	—	—	9,335,220	—	11,171,720
Unvested restricted common stock	61,702,273	72,242,712	47,734,388	51,894,096	37,293,160
	71,702,274	117,242,712	218,490,407	96,894,096	209,885,679

(1) Under the "If converted" method, the results of basic and diluted EPS are presented as the same calculation. Due to the Company being in a net loss position for all periods, preferred stock and all other securities will have anti-dilutive effect under the “if converted” method and thus all potentially dilutive securities are excluded from the diluted EPS calculation.

14. Related Party Transactions

Founder Consulting Services

For the period from September 13, 2019 (inception) to December 31, 2019 and the years ended December 31, 2020 and 2021, the Company made payments of $45,000, $0.2 million and $0.2 million, respectively, to one of the Co-founder shareholders for scientific consulting and other expenses. As of December 31, 2020 and 2021, there were no amounts included within accounts payable.

Beam Therapeutics

The Company and Beam are parties to the Beam Collaboration Agreement and the Beam Mutual Subscription Agreement and have a common founder and one common board member (see Note 11). For the year ended December 31, 2020, the Company recognized a net gain of $0.1 million, related to change in the fair value of the Beam shares the Company was entitled to receive for the period from the first anniversary date of the Beam Collaboration agreement through the date on which the Beam shares were received in October 2020. Such unrealized gain (loss) was recorded as other income (expense), net within the consolidated statements of operations and comprehensive loss.

For the years ended December 31, 2020 and 2021, the Company made payments of $0.1 million and $0.1 million, respectively, to Beam for general and administrative services pursuant to an agreement to receive certain interim management and startup services (see Note 11). The agreement ended on March 31, 2021 and for the six months ended June 30, 2021 (unaudited), the Company made payments of $0.1 million for such services. As of December 31, 2020, the Company recorded $30,000 due to Beam within accounts payable and no amount was due to Beam as of December 31, 2021.

Newpath Partners

In connection with the Series A and B Preferred Stock closings (see Note 6), the Company issued and sold 9,999,999 and 5,250,781 shares of Series A and B Preferred Stock, respectively, to Newpath Partners L.P. (“Newpath”), which is an affiliate to one of the Company’s board members, for an aggregate purchase price of $10.0 million and $23.0 million, respectively.

Myeloid Therapeutics

In December 2021, the Company and Myeloid entered into the Myeloid Collaboration Agreement and Myeloid Subscription Agreement (see Note 11 and 15). The Company and Myeloid have one common board member, who is also an affiliate of Newpath, one of the Company’s holders of Series A and B Preferred Stock.

15. Subsequent Events

For its consolidated financial statements as of December 31, 2021 and for the year then ended, the Company has evaluated subsequent events through February 4, 2022, the date on which these consolidated financial statements were issued.

In January 2022, the Company made the upfront payment of $30.0 million and issued 3,424,422 shares of its common stock, with a fair value of $12.0 million, to Myeloid pursuant to the terms of the Myeloid Collaboration Agreement (see Note 11 and 14). As there was no material change in the fair value of the Company’s common stock from the date of the Myeloid Subscription Agreement to the date on which the shares were issued, there was no other income (expense) recorded in connection with the issuance of the shares.

In January 2022, the Company granted options for the purchase of an aggregate of 475,500 shares of common stock, at an exercise price of $3.51 per share. The aggregate grant-date fair value of the options granted is $1.1 million, which is expected to be recognized as stock-based compensation expense over a period of 3.0 to 4.0 years.

16. Subsequent Events (unaudited)

For its interim consolidated financial statements as of June 30, 2022 and for the six months then ended, the Company evaluated subsequent events through August 5, 2022, the date on which those financial statements were issued.

In July 2022, the Company announced a new company match for the 401(k) retirement plan beginning on July 1, 2022. Substantially all of the Company's full-time employees are eligible to participate. Participants may contribute a percentage of their annual compensation to this plan, subject to statutory limitations. The Company will make matching contributions equal to 50% of the employee's contributions, subject to a maximum of 6% of eligible compensation. The Company will also make a one-time catch- up contribution to match employees' contributions from January 1, 2022 through June 30, 2022 in the third quarter of 2022.

In August 2022, the Company granted options for the purchase of an aggregate 1,325,000 shares of common stock, at an exercise price of $2.56 per share. The aggregate grant-date fair value of the options granted is $2.3 million, which is expected to be recognized as stock-based compensation expense over a period of 3.9 years. Additionally, in August 2022, the Company granted 280,000 shares of performance-based options, at an exercise price of $2.56 per share. This includes two grants, and 180,000 of the performance-based options vest in three equal installments upon the achievement of (i) IND acceptance, (ii) consummation of the Company's IPO and (iii) business development deals which generate $100.0 million or more in upfront and near-term unrestricted cash. The remaining 100,000 of the performance-based options vest in three equal installments upon the achievement of (i) IND acceptance, (ii) consummation of the Company's IPO and (iii) maximize the senior leadership team effectiveness by accomplishment of four criteria through year end 2023. The grant date of these awards for accounting purposes is the date on which the performance conditions of the award are established by the board of directors and all terms of the award are known by the recipient. As a result, the grant-date fair value for accounting purposes was determined on August 4, 2022, when the performance-based vesting conditions were established by the board of directors and the terms of the awards were communicated to the recipients. The aggregate grant-date fair value is $0.5 million.

On February 9, 2022, the Company's board of directors approved the third amended and restated certificate of incorporation, which will be filed upon the closing of the IPO and which, among other things, increases the number of shares of common stock authorized for issuance from 293,258,790 to 775,000,000 shares of common stock.

shares

Common Stock

Prospectus

J.P. Morgan **Goldman Sachs & Co. LLC** **Morgan Stanley** **Jefferies**

, 2022

Through and including , 2022 (the 25th day after the date of this prospectus), all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

Part II

Information Not Required in Prospectus

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the costs and expenses, other than underwriting discounts and commissions, to be paid by us in connection with the sale of the shares of common stock being registered hereby. All amounts shown are estimates except for the SEC registration fee, the FINRA filing fee and the Nasdaq Global Market initial listing fee.

SEC registration fee	$	9,270
FINRA filing fee		15,500
Nasdaq listing fee		*
Printing and engraving expenses		*
Legal fees and expenses		*
Accounting fees and expenses		*
Transfer agent and registrar fees and expenses		*
Miscellaneous		*
Total	$	*

* To be provided by amendment.

Item 14. Indemnification of Directors and Officers

Section 145 of the Delaware General Corporation Law (the DGCL) authorizes a corporation to indemnify its directors and officers against liabilities arising out of actions, suits and proceedings to which they are made or threatened to be made a party by reason of the fact that they have served or are currently serving as a director or officer to a corporation. The indemnity may cover expenses (including attorneys' fees) judgments, fines and amounts paid in settlement actually and reasonably incurred by the director or officer in connection with any such action, suit or proceeding. Section 145 permits corporations to pay expenses (including attorneys' fees) incurred by directors and officers in advance of the final disposition of such action, suit or proceeding. In addition, Section 145 provides that a corporation has the power to purchase and maintain insurance on behalf of its directors and officers against any liability asserted against them and incurred by them in their capacity as a director or officer, or arising out of their status as such, whether or not the corporation would have the power to indemnify the director or officer against such liability under Section 145.

We have adopted provisions in our certificate of incorporation and bylaws to be in effect upon the effectiveness of this registration statement that limit or eliminate the personal liability of our directors to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended. Consequently, a director will not be personally liable to us or our stockholders for monetary damages or breach of fiduciary duty as a director, except for liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- any unlawful payments related to dividends or unlawful stock purchases, redemptions or other distributions; or
- any transaction from which the director derived an improper personal benefit.

These limitations of liability do not alter director liability under the federal securities laws and do not affect the availability of equitable remedies such as an injunction or rescission.

In addition, our bylaws to be in effect upon the effectiveness of this registration statement provide that:

- we will indemnify our directors, officers and, in the discretion of our board of directors, certain employees to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended; and
- we will advance reasonable expenses, including attorneys' fees, to our directors and, in the discretion of our board of directors, to our officers and certain employees, in connection with legal proceedings relating to their service for or on behalf of us, subject to limited exceptions.

We intend to enter into indemnification agreements with each of our directors and executive officers. These agreements provide that we will indemnify each of our directors, certain of our executive officers and, at times, their affiliates to the fullest extent permitted by Delaware law. We will advance expenses, including attorneys' fees (but excluding judgments, fines and settlement amounts), to each indemnified director or executive officer in connection with any proceeding in which indemnification is available and we will indemnify our directors and officers for any action or proceeding arising out of that person's services as a director or officer brought on behalf of us or in furtherance of our rights. Additionally, certain of our directors or officers may have certain rights to indemnification, advancement of expenses or insurance provided by their affiliates or other third parties, which indemnification relates to and might apply to the same proceedings arising out of such director's or officer's services as a director referenced herein. Nonetheless, we have agreed in the indemnification agreements that our obligations to those same directors or officers are primary and any obligation of such affiliates or other third parties to advance expenses or to provide indemnification for the expenses or liabilities incurred by those directors are secondary.

We also maintain general liability insurance which covers certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers, including liabilities under the Securities Act.

The underwriting agreement filed as Exhibit 1.1 to this registration statement provides for indemnification of us and our directors and officers by the underwriters against certain liabilities under the Securities Act and the Exchange Act.

Item 15. Recent Sales of Unregistered Securities

Since our inception in September 2019, we have issued the following securities that were not registered under the Securities Act:

(a) Issuances of Capital Stock

In September 2019, in connection with, and as partial consideration for the entry by The Broad Institute, Inc., or the Broad Institute, into, a License and Subscription Agreement, or the Broad License Agreement, we issued 1,938,429 shares of our common stock to the Broad Institute.

In September 2020, in connection with, and as partial consideration for the entry by Beam Therapeutics Inc. into, a License and Subscription Agreement, or the Beam License Agreement, we issued an aggregate of 5,000,000 shares of our common stock.

In March 2021, we issued an additional 7,768,425 shares of our common stock pursuant to the Broad Institute's anti-dilution rights under the Broad License Agreement.

In September 2019, November 2020 and April 2021, accredited investors and the Broad Institute purchased an aggregate of 115,761,842 shares of our Series A redeemable convertible preferred stock at a price per share of $1.00, for an aggregate purchase price of approximately $115,761,842.

In April 2021, accredited investors purchased an aggregate of 45,658,957 shares of our Series B convertible preferred stock at a price per share of $4.3803, for an aggregate purchase price of approximately $199,999,929.

In January 2022, in connection with, and as partial consideration for the entry by Myeloid Therapeutics, Inc. into, a Research, Collaboration, Option and License Agreement and a Subscription Agreement, we issued 3,424,422 shares of our common stock.

No underwriters were involved in the foregoing sales of securities. The sales of securities described above were deemed to be exempt from registration pursuant to Section 4(a)(2) of the Securities Act, including Regulation D and Rule 506 promulgated thereunder, as transactions by an issuer not involving a public offering. All of the purchasers in these transactions represented to us in connection with their purchase that they were acquiring the securities for investment and not distribution, that they could bear the risks of the investment and could hold the securities for an indefinite period of time. Such purchasers received written disclosures that the securities had not been registered under the Securities Act and that any resale must be made pursuant to a registration or an available exemption from such registration. All of the foregoing securities are deemed restricted securities for the purposes of the Securities Act.

(c) Grants and Exercises of Stock Options and Restricted Stock

As of the date hereof, we have granted stock options to purchase an aggregate of 12,941,720 shares of our common stock, with exercise prices ranging from $1.18 to $3.51 per share, to employees, directors and consultants pursuant to 2019 Plan. Of these, 53,125 shares of common stock have been issued upon the exercise of stock options pursuant to the 2019 Plan for aggregate consideration of $62,688.

As of the date hereof, we have granted an aggregate of 19,185,727 shares of restricted stock to employees and consultants under the 2019 Plan and an additional 66,932,341 shares to our co-founders outside of the 2019 Plan. In August 2021, we repurchased 56,667 shares of restricted stock previously granted under the 2019 plan. In May 2022, we repurchased 9,688 shares of restricted stock previously granted under the 2019 plan.

The issuances of the securities under the 2019 Plan described above were deemed to be exempt from registration pursuant to Section 4(a)(2) of the Securities Act or Rule 701 promulgated under the Securities Act as transactions pursuant to compensatory benefit plans. The shares of common stock issued upon the exercise of options are deemed to be restricted securities for purposes of the Securities Act.

The issuance of securities described above to employees and consultants outside of the 2019 Plan were deemed exempt from registration pursuant to Section 4(a)(2) of the Securities Act as transactions by an issuer not involving a public offering.

Item 16. Exhibits and Financial Statement Schedules

(a) Exhibits.

Exhibit number	Exhibit table
1.1	Form of Underwriting Agreement
3.1	Second Amended and Restated Certificate of Incorporation of the Registrant, as currently in effect
3.2	Form of Third Amended and Restated Certificate of Incorporation of the Registrant (to be effective immediately prior to the closing of this offering)
3.3	By-laws of the Registrant, as currently in effect
3.4	Form of Amended and Restated By-laws (to be effective upon the effectiveness of this registration statement)
4.1+	Amended and Restated Investors' Rights Agreement among the Registrant and certain of its stockholders, dated April 20, 2021
4.2	Form of Common Stock Certificate
5.1*	Opinion of Goodwin Procter LLP
10.1#	2019 Stock Option and Grant Plan, as amended, and forms of award agreements thereunder

10.2*#	2022 Stock Option and Incentive Plan and forms of award agreements thereunder
10.3*#	2022 Employee Stock Purchase Plan
10.4#	Senior Executive Cash Incentive Bonus Plan
10.5#	Non-Employee Director Compensation Policy
10.6#	Form of Officer Indemnification Agreement
10.7#	Form of Director Indemnification Agreement
10.8#	Amended and Restated Employment Agreement, dated July 7, 2022, between the Registrant and Keith Gottesdiener
10.9#	Amended and Restated Employment Agreement, dated July 20, 2022, between the Registrant and Jeremy Duffield
10.10#	Amended and Restated Employment Agreement, dated July 11, 2022, between the Registrant and Ann Lee
10.11#	Amended and Restated Employment Agreement, dated July 7, 2022, between the Registrant and Carman Alenson
10.12#	Amended and Restated Employment Agreement, dated July 7, 2022, between the Registrant and Meredith Goldwasser
10.13†	Collaboration and License Agreement, dated September 26, 2019, between Beam Therapeutics Inc. and the Registrant
10.14†	License Agreement, dated September 26, 2019, between The Broad Institute, Inc. and the Registrant, as amended
10.15†	Amendment No. 1 to License Agreement, dated May 5, 2020, between The Broad Institute, Inc. and the Registrant
10.16†	Amendment No. 2 to License Agreement, dated February 18, 2021, between The Broad Institute, Inc. and the Registrant
10.17	Pledge from Prime Medicine, amended and restated August 2022, between The Broad Institute, Inc. and the Registrant
10.18+	License Agreement, dated March 16, 2020, between MIL 21E, LLC and the Registrant, as amended
10.19+	Consulting Agreement between the Registrant and David Liu, dated September 13, 2019
10.20	Amendment No. 1 to the Consulting Agreement between the Registrant and David Liu, dated October 22, 2021
10.21+	Andrew Anzalone Offer Letter, dated December 20, 2019
10.22	Andrew Anzalone Confidentiality, Assignment and Nonsolicitation Agreement, dated October 16, 2020
21.1	Subsidiaries of the Registrant
23.1	Consent of PricewaterhouseCoopers, LLP, Independent Registered Public Accounting Firm
23.2*	Consent of Goodwin Procter LLP (included in Exhibit 5.1)
24.1	Power of Attorney (included on signature page to this registration statement)
107	Calculation of Filing Fee Table

* To be filed by amendment.
\# Indicates a management contract or any compensatory plan, contract or arrangement.
† Portions of this exhibit (indicated by asterisks) have been omitted pursuant to Item 601(b)(10) of Regulation S-K.
\+ Certain exhibits and schedules to these agreements have been omitted pursuant to Item 601(a)(5) and (6) of Regulation S-K. The registrant will furnish copies of any of the exhibits and schedules to the Securities and Exchange Commission upon request.

(b) Financial Statement Schedules.

None.

Item 17. Undertakings

The undersigned Registrant hereby undertakes to provide to the underwriters at the closing specified in the Underwriting Agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

(i) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(ii) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Signatures

Pursuant to the requirements of the Securities Act, Prime Medicine, Inc. has duly caused this registration statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, Commonwealth of Massachusetts, on the 23rd day of September, 2022.

Prime Medicine, Inc.

By: /s/ Keith Gottesdiener
Keith Gottesdiener
President and Chief Executive Officer

Signatures and Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Keith Gottesdiener and Carman Alenson, and each of them, either of whom may act without the joinder of the other, as his true and lawful attorneys-in-fact and agents with full power of substitution and re-substitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to sign any registration statement for the same offering covered by the registration statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act, and all post-effective amendments thereto, and to file the same, with all exhibits thereto and all documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or his or her or their substitute or substitutes, may lawfully do or cause to be done or by virtue hereof.

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities indicated on the 23rd day of September, 2022.

Signature	Title
/s/ Keith Gottesdiener Keith Gottesdiener	President, Chief Executive Officer and Director (Principal Executive Officer)
/s/ Carman Alenson Carman Alenson	Interim Chief Financial Officer and Chief Accounting Officer (Principal Financial Officer and Principal Accounting Officer)
/s/ Robert Nelsen Robert Nelsen	Director
/s/ David Schenkein David Schenkein	Director
/s/ Thomas Cahill Thomas Cahill	Director
/s/ Michael Kelly Michael Kelly	Director
/s/ Wendy Chung Wendy Chung	Director
/s/ Kaye Foster Kaye Foster	Director

Calculation of Filing Fee Tables
Form S-1
(Form Type)

Prime Medicine, Inc.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Proposed Maximum Aggregate Offering Price[(1)]	Fee Rate	Amount of Registration Fee
Newly Registered Securities								
Fees to be Paid	Equity	Common Stock, $0.00001 par value per share	Rule 457(o)			$100,000,000	$0.0000927	$9,270
Fees Previously Paid								
Carry Forward Securities								
Carry Forward Securities								
	Total Offering Amounts							$9,270
	Total Fees Previously Paid							-
	Total Fees Offsets							-
	Net Fee Due							$9,270

(1) Estimated solely for the purpose of computing the registration fee in accordance with Rule 457(o) under the Securities Act of 1933, as amended.

Prime Medicine, Inc.

[—] Shares of Common Stock

Underwriting Agreement

[—], 2022

J.P. Morgan Securities LLC
Goldman Sachs & Co. LLC
Morgan Stanley & Co. LLC
Jefferies LLC

As Representatives of
the several Underwriters listed in
Schedule 1 hereto

c/o J.P. Morgan Securities LLC
383 Madison Avenue
New York, New York 10179

c/o Goldman Sachs & Co. LLC
200 West Street
New York, NY 10282-2198

c/o Morgan Stanley & Co. LLC
1585 Broadway
New York, New York 10036

c/o Jefferies LLC
520 Madison Avenue
New York, New York 10022

Ladies and Gentlemen:

Prime Medicine, Inc., a Delaware corporation (the "Company"), proposes to issue and sell to the several underwriters listed in Schedule 1 hereto (the "Underwriters"), for whom you are acting as representatives (the "Representatives"), an aggregate of [l] shares of common stock, par value $0.00001 per share, of the Company (the "Underwritten Shares") and, at the option of the Underwriters, up to an additional [l] shares of common stock of the Company (the "Option Shares"). The Underwritten Shares and the Option Shares are herein referred to as the "Shares". The shares of common stock of the Company to be outstanding after giving effect to the sale of the Shares are referred to herein as the "Stock".

The Company hereby confirms its agreement with the several Underwriters concerning the purchase and sale of the Shares, as follows:

1. Registration Statement. The Company has prepared and filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended, and the rules and regulations of the Commission thereunder (collectively, the "Securities Act"), a registration statement (File No. 333-[l]), including a prospectus, relating to the Shares. Such registration statement, as amended at the time it became effective, including the information, if any, deemed pursuant to Rule 430A, 430B or 430C under the Securities Act to be part of the registration statement at the time of its effectiveness ("Rule 430 Information"), is referred to herein as the "Registration Statement"; and as used herein, the term "Preliminary Prospectus" means each prospectus included in such registration statement (and any amendments thereto) before effectiveness, any prospectus filed with the Commission pursuant to Rule 424(a) under the Securities Act and the prospectus included in the Registration Statement at the time of its effectiveness that omits Rule 430 Information, and the term "Prospectus" means the prospectus in the form first used (or made available upon request of purchasers pursuant to Rule 173 under the Securities Act) in connection with confirmation of sales of the Shares. If the Company has filed an abbreviated registration statement pursuant to Rule 462(b) under the Securities Act (the "Rule 462 Registration Statement"), then any reference herein to the term "Registration Statement" shall be deemed to include such Rule 462 Registration Statement. Capitalized terms used but not defined herein shall have the meanings given to such terms in the Registration Statement and the Prospectus.

At or prior to the Applicable Time (as defined below), the Company had prepared the following information (collectively with the pricing information set forth on Annex A, the "Pricing Disclosure Package"): a Preliminary Prospectus dated [l], 2022 and each "free-writing prospectus" (as defined pursuant to Rule 405 under the Securities Act) listed on Annex A hereto.

"Applicable Time" means [l] [A/P].M., New York City time, on [l], 2022.

2. Purchase of the Shares.

(a) The Company agrees to issue and sell the Underwritten Shares to the several Underwriters as provided in this underwriting agreement (this "Agreement"), and each Underwriter, on the basis of the representations, warranties and agreements set forth herein and subject to the conditions set forth herein, agrees, severally and not jointly, to purchase at a price per share of $[l] (the "Purchase Price") from the Company the respective number of Underwritten Shares set forth opposite such Underwriter's name in Schedule 1 hereto.

In addition, the Company agrees to issue and sell the Option Shares to the several Underwriters as provided in this Agreement, and the Underwriters, on the basis of the representations, warranties and agreements set forth herein and subject to the conditions set forth herein, shall have the option to purchase, severally and not jointly, from the Company the Option Shares at the Purchase Price less an amount per share equal to any dividends or distributions declared by the Company and payable on the Underwritten Shares but not payable on the Option Shares.

If any Option Shares are to be purchased, the number of Option Shares to be purchased by each Underwriter shall be the number of Option Shares which bears the same ratio to the aggregate number of Option Shares being purchased as the number of Underwritten Shares set forth opposite the name of such Underwriter in Schedule 1 hereto (or such number increased as set forth in Section 10 hereof) bears to the aggregate number of Underwritten Shares being purchased from the Company by the several Underwriters, subject, however, to such adjustments to eliminate any fractional Shares as the Representatives in their sole discretion shall make.

The Underwriters may exercise the option to purchase Option Shares at any time in whole, or from time to time in part, on or before the thirtieth day following the date of the Prospectus, by written notice from the Representatives to the Company. Such notice shall set forth the aggregate number of Option Shares as to which the option is being exercised and the date and time when the Option Shares are to be delivered and paid for, which may be the same date and time as the Closing Date (as hereinafter defined) but shall not be earlier than the Closing Date nor later than the tenth full business day (as hereinafter defined) after the date of such notice (unless such time and date are postponed in accordance with the provisions of Section 10 hereof). Any such notice shall be given at least two business days prior to the date and time of delivery specified therein.

(b) The Company understands that the Underwriters intend to make a public offering of the Shares, and initially to offer the Shares on the terms set forth in the Pricing Disclosure Package. The Company acknowledges and agrees that the Underwriters may offer and sell Shares to or through any affiliate of an Underwriter.

(c) Payment for the Shares shall be made by wire transfer in immediately available funds to the account specified by the Company to the Representatives in the case of the Underwritten Shares, at the offices of Davis Polk & Wardwell LLP, 450 Lexington Avenue, New York, New York 10017 at 10:00 A.M. New York City time on [l], 2022, or at such other time or place on the same or such other date, not later than the fifth business day thereafter, as the Representatives and the Company may agree upon in writing or, in the case of the Option Shares, on the date and at the time and place specified by the Representatives in the written notice of the Underwriters' election to purchase such Option Shares. The time and date of such payment for the Underwritten Shares is referred to herein as the "Closing Date", and the time and date for such payment for the Option Shares, if other than the Closing Date, is herein referred to as the "Additional Closing Date".

Payment for the Shares to be purchased on the Closing Date or the Additional Closing Date, as the case may be, shall be made against delivery to the Representatives for the respective accounts of the several Underwriters of the Shares to be purchased on such date or the Additional Closing Date, as the case may be, with any transfer taxes payable in connection with the sale of such Shares duly paid by the Company. Delivery of the Shares shall be made through the facilities of The Depository Trust Company ("DTC") unless the Representatives shall otherwise instruct.

(d) The Company acknowledges and agrees that the Representatives and the other Underwriters are acting solely in the capacity of an arm's length contractual counterparty to the

Company with respect to the offering of Shares contemplated hereby (including in connection with determining the terms of the offering) and not as a financial advisor or a fiduciary to, or an agent of, the Company or any other person. Additionally, neither the Representatives nor any other Underwriter is advising the Company or any other person as to any legal, tax, investment, accounting or regulatory matters in any jurisdiction. The Company shall consult with its own advisors concerning such matters and shall be responsible for making its own independent investigation and appraisal of the transactions contemplated hereby, and neither the Representatives nor the other Underwriters shall have any responsibility or liability to the Company with respect thereto. Any review by the Representatives and the other Underwriters of the Company, the transactions contemplated hereby or other matters relating to such transactions will be performed solely for the benefit of the Underwriters and shall not be on behalf of the Company.

3. Representations and Warranties of the Company. The Company represents and warrants to each Underwriter that:

(a) *Preliminary Prospectus.* No order preventing or suspending the use of any Preliminary Prospectus has been issued by the Commission, and each Preliminary Prospectus included in the Pricing Disclosure Package, at the time of filing thereof, complied in all material respects with the Securities Act, and no Preliminary Prospectus, at the time of filing thereof, contained any untrue statement of a material fact or omitted to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that the Company makes no representation or warranty with respect to any statements or omissions made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in any Preliminary Prospectus, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 7(b) hereof.

(b) *Pricing Disclosure Package*. The Pricing Disclosure Package as of the Applicable Time did not, and as of the Closing Date and as of the Additional Closing Date, as the case may be, will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that the Company makes no representation or warranty with respect to any statements or omissions made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in such Pricing Disclosure Package, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 7(b) hereof. No statement of material fact included in the Prospectus has been omitted from the Pricing Disclosure Package and no statement of material fact included in the Pricing Disclosure Package that is required to be included in the Prospectus has been omitted therefrom.

(c) *Issuer Free Writing Prospectus.* Other than the Registration Statement, the Preliminary Prospectus and the Prospectus, the Company (including its agents and representatives, other than the Underwriters in their capacity as such) has not prepared, made, used, authorized, approved or referred to and will not prepare, make, use, authorize, approve or refer to any "written communication" (as defined in Rule 405 under the Securities Act) that constitutes an offer to sell or solicitation of an offer to buy the Shares (each such communication by the Company or its agents and representatives (other than a communication referred to in clause (i) below) an "Issuer Free Writing Prospectus") other than (i) any document not constituting a prospectus pursuant to Section 2(a)(10)(a) of the Securities Act or Rule 134 under the Securities Act or (ii) the documents listed on Annex A hereto, each electronic road show and any other written communications approved in writing in advance by the Representatives. Each such Issuer Free Writing Prospectus complies in all material respects with the Securities Act, has been or will be (within the time period specified in Rule 433) filed in accordance with the Securities Act (to the extent required thereby) and does not conflict with the information contained in the Registration Statement or the Pricing Disclosure Package, and, when taken together with the Preliminary Prospectus accompanying, or delivered prior to delivery of, such Issuer Free Writing Prospectus, did not, and as of the Closing Date and as of the Additional Closing Date, as the case may be, will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that the Company makes no representation or warranty with respect to any statements or omissions made in each such Issuer Free Writing Prospectus or Preliminary Prospectus in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in such Issuer Free Writing Prospectus or Preliminary Prospectus, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 7(b) hereof.

(d) *Emerging Growth Company*. From the time of initial confidential submission of the Registration Statement to the Commission (or, if earlier, the first date on which the Company engaged directly or through any person authorized to act on its behalf in any Testing-the-Waters Communication undertaken in reliance on Section 5(d) of the Securities Act) through the date hereof, the Company has been and is an "emerging growth company," as defined in Section 2(a) of the Securities Act (an "Emerging Growth Company"). "Testing-the-Waters Communication" means any oral or written communication with potential investors undertaken in reliance on either Section 5(d) of, or Rule 163B under, the Securities Act.

(e) *Testing-the-Waters Materials.* The Company (i) has not alone engaged in any Testing-the-Waters Communications other than Testing-the-Waters Communications with the consent of the Representatives (x) with entities that are qualified institutional buyers ("QIBs") within the meaning of Rule 144A under the Securities Act or institutions that are accredited investors within the meaning of Rule 501(a)(1), (a)(2), (a)(3), (a)(7) or (a)(8) under the Securities Act ("IAIs") and otherwise in compliance with the

requirements of Section 5(d) of the Securities Act or (y) with entities that the Company reasonably believed to be QIBs or IAIs and otherwise in compliance with the requirements of Rule 163B under the Securities Act and (ii) has not authorized anyone other than the Representatives to engage in Testing-the-Waters Communications. The Company reconfirms that the Representatives have been authorized to act on its behalf in undertaking Testing-the-Waters Communications by virtue of a writing substantially in the form of Exhibit A hereto. The Company has not distributed or approved for distribution any Written Testing-the-Waters Communications other than those listed on Annex B hereto. "Written Testing-the-Waters Communication" means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Securities Act. Any individual Written Testing-the-Waters Communication does not conflict with the information contained in the Registration Statement or the Pricing Disclosure Package, complied in all material respects with the Securities Act, and when taken together with the Pricing Disclosure Package as of the Applicable Time, did not, and as of the Closing Date and as of the Additional Closing Date, as the case may be, will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(f) *Registration Statement and Prospectus.* The Registration Statement has been declared effective by the Commission. No order suspending the effectiveness of the Registration Statement has been issued by the Commission, and no proceeding for that purpose or pursuant to Section 8A of the Securities Act against the Company or related to the offering of the Shares has been initiated or, to the knowledge of the Company, threatened by the Commission; as of the applicable effective date of the Registration Statement and any post-effective amendment thereto, the Registration Statement and any such post-effective amendment complied and will comply in all material respects with the Securities Act, and did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein not misleading; and as of the date of the Prospectus and any amendment or supplement thereto and as of the Closing Date and as of the Additional Closing Date, as the case may be, the Prospectus will comply in all material respects with the Securities Act and will not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that the Company makes no representation or warranty with respect to any statements or omissions made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in the Registration Statement and the Prospectus and any amendment or supplement thereto, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 7(b) hereof.

(g) *Financial Statements.* The financial statements (including the related notes thereto) of the Company and its consolidated subsidiaries included in the Registration Statement, the Pricing Disclosure Package and the Prospectus comply in all material

respects with the applicable requirements of the Securities Act and present fairly in all material respects the financial position of the Company and its consolidated subsidiaries as of the dates indicated and the results of their operations and the changes in their cash flows for the periods specified; such financial statements have been prepared in conformity with generally accepted accounting principles ("GAAP") in the United States applied on a consistent basis throughout the periods covered thereby, except in the case of any unaudited financial statements, which are subject to normal year end adjustments and do not contain certain footnotes as permitted by the applicable rules of the Commission, and any supporting schedules included in the Registration Statement present fairly in all material respects the information required to be stated therein; the other financial information included in the Registration Statement, the Pricing Disclosure Package and the Prospectus has been derived from the accounting records of the Company and its consolidated subsidiaries and presents fairly in all material respects the information shown thereby; and the *pro forma* financial information and the related notes thereto included in the Registration Statement, the Pricing Disclosure Package and the Prospectus have been prepared in accordance with the applicable requirements of the Securities Act and the assumptions underlying such pro forma financial information are reasonable and are set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

(h) *No Material Adverse Change.* Since the date of the most recent financial statements of the Company included in the Registration Statement, the Pricing Disclosure Package and the Prospectus, (i) there has not been any change in the capital stock (other than the issuance of shares of common stock upon exercise of stock options and warrants described as outstanding in, and the grant of options and awards under existing equity incentive plans described in, the Registration Statement, the Pricing Disclosure Package and the Prospectus), short-term debt or long-term debt of the Company or any of its subsidiaries, or any dividend or distribution of any kind declared, set aside for payment, paid or made by the Company on any class of capital stock, or any material adverse change, or any development involving a prospective material adverse change, in or affecting the business, properties, management, financial position, stockholders' equity, results of operations or prospects of the Company and its subsidiaries taken as a whole; (ii) neither the Company nor any of its subsidiaries has entered into any transaction or agreement (whether or not in the ordinary course of business) that is material to the Company and its subsidiaries taken as a whole or incurred any liability or obligation, direct or contingent, that is material to the Company and its subsidiaries taken as a whole; and (iii) neither the Company nor any of its subsidiaries has sustained any loss or interference with its business that is material to the Company and its subsidiaries taken as a whole and that is either from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor disturbance or dispute or any action, order or decree of any court or arbitrator or governmental or regulatory authority, except in each case as otherwise disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

(i) *Organization and Good Standing.* The Company and each of its subsidiaries have been duly organized and are validly existing and in good standing under the laws of their respective jurisdictions of organization, are duly qualified to do business and are in good standing in each jurisdiction in which their respective ownership or lease of property or the conduct of their respective businesses requires such qualification, and have all power and authority necessary to own or hold their respective properties and to conduct the businesses in which they are engaged, except where the failure to be so qualified or in good standing or have such power or authority would not, individually or in the aggregate, have a material adverse effect on the business, properties, management, financial position, stockholders' equity, results of operations or prospects of the Company and its subsidiaries taken as a whole or on the performance by the Company of its obligations under this Agreement (a "Material Adverse Effect"). The Company does not own or control, directly or indirectly, any corporation, association or other entity other than the subsidiaries listed in Exhibit 21 to the Registration Statement.

(j) *Capitalization.* The Company has an authorized capitalization as set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus under the heading "Capitalization"; all the outstanding shares of capital stock of the Company have been duly and validly authorized and issued and are fully paid and non-assessable and are not subject to any pre-emptive or similar rights that have not been duly waived or satisfied; except as described in or expressly contemplated by the Registration Statement, the Pricing Disclosure Package and the Prospectus, there are no outstanding rights (including, without limitation, pre-emptive rights), warrants or options to acquire, or instruments convertible into or exchangeable for, any shares of capital stock or other equity interest in the Company or any of its subsidiaries, or any contract, commitment, agreement, understanding or arrangement of any kind relating to the issuance of any capital stock of the Company or any such subsidiary, any such convertible or exchangeable securities or any such rights, warrants or options; the capital stock of the Company conforms in all material respects to the description thereof contained in the Registration Statement, the Pricing Disclosure Package and the Prospectus; and all the outstanding shares of capital stock or other equity interests of each subsidiary owned, directly or indirectly, by the Company have been duly and validly authorized and issued, are fully paid and non-assessable and are owned directly or indirectly by the Company, free and clear of any lien, charge, encumbrance, security interest, restriction on voting or transfer or any other claim of any third party.

(k) *Stock Options.* With respect to the stock options (the "Stock Options") granted pursuant to the stock-based compensation plans of the Company and its subsidiaries (the "Company Stock Plans"), (i) each Stock Option intended to qualify as an "incentive stock option" under Section 422 of the Internal Revenue Code of 1986, as amended (the "Code")) so qualifies, (ii) each grant of a Stock Option was duly authorized no later than the date on which the grant of such Stock Option was by its terms to be effective by all necessary corporate action, including, as applicable, approval by the board of directors of the Company (or a duly constituted and authorized committee thereof) and any required stockholder approval by the necessary number of votes or

written consents, and the award agreement governing such grant (if any) was duly executed and delivered by each party thereto, (iii) each such grant was made in accordance with the terms of the Company Stock Plans, the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Commission thereunder (collectively, the "Exchange Act") and all other applicable laws and regulatory rules or requirements, including the rules of the Nasdaq Global [Select] Market ("Nasdaq") and any other exchange on which Company securities are traded, and (iv) each such grant was properly accounted for in accordance with GAAP in the financial statements (including the related notes) of the Company. The Company has not knowingly granted, and there is no and has been no policy or practice of the Company of granting, Stock Options prior to, or otherwise coordinating the grant of Stock Options with, the release or other public announcement of material information regarding the Company or its subsidiaries or their results of operations or prospects.

(l) *Due Authorization.* The Company has full right, power and authority to execute and deliver this Agreement and to perform its obligations hereunder; and all action required to be taken for the due and proper authorization, execution and delivery by it of this Agreement and the consummation by it of the transactions contemplated hereby has been duly and validly taken.

(m) *Underwriting Agreement.* This Agreement has been duly authorized, executed and delivered by the Company.

(n) *The Shares.* The Shares to be issued and sold by the Company hereunder have been duly authorized by the Company and, when issued and delivered and paid for as provided herein, will be duly and validly issued, will be fully paid and nonassessable and will conform to the descriptions thereof in the Registration Statement, the Pricing Disclosure Package and the Prospectus; and the issuance of the Shares is not subject to any preemptive or similar rights that have not been duly waived or satisfied.

(o) *Description of the Underwriting Agreement.* This Agreement conforms in all material respects to the description thereof contained in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

(p) *No Violation or Default.* Neither the Company nor any of its subsidiaries is (i) in violation of its charter or by-laws or similar organizational documents; (ii) in default, and no event has occurred that, with notice or lapse of time or both, would constitute such a default, in the due performance or observance of any term, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any property or asset of the Company or any of its subsidiaries is subject; or (iii) in violation of any law or statute or any judgment, order, rule or regulation of any court or arbitrator or governmental or regulatory authority, except, in the case of clauses (ii) and (iii) above, for any such default or violation that would not, individually or in the aggregate, have a Material Adverse Effect.

(q) *No Conflicts.* The execution, delivery and performance by the Company of this Agreement, the issuance and sale of the Shares and the consummation of the transactions contemplated by this Agreement or the Pricing Disclosure Package and the Prospectus will not (i) conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, result in the termination, modification or acceleration of, or result in the creation or imposition of any lien, charge or encumbrance upon any property, right or asset of the Company or any of its subsidiaries pursuant to, any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any property, right or asset of the Company or any of its subsidiaries is subject, (ii) result in any violation of the provisions of the charter or by-laws or similar organizational documents of the Company or any of its subsidiaries or (iii) result in the violation of any law or statute or any judgment, order, rule or regulation of any court or arbitrator or governmental or regulatory authority, except, in the case of clauses (i) and (iii) above, for any such conflict, breach, violation, default, lien, charge or encumbrance that would not, individually or in the aggregate, have a Material Adverse Effect.

(r) *No Consents Required.* No consent, approval, authorization, order, registration or qualification of or with any court or arbitrator or governmental or regulatory authority is required for the execution, delivery and performance by the Company of this Agreement, the issuance and sale of the Shares and the consummation of the transactions contemplated by this Agreement, except for the registration of the Shares under the Securities Act and such consents, approvals, authorizations, orders and registrations or qualifications as may be required by the Financial Industry Regulatory Authority, Inc. ("FINRA") and under applicable state securities laws in connection with the purchase and distribution of the Shares by the Underwriters.

(s) *Legal Proceedings.* Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there are no legal, governmental or regulatory investigations, actions, demands, claims, suits, arbitrations, inquiries or proceedings ("Actions") pending to which the Company or any of its subsidiaries is or may be a party or to which any property of the Company or any of its subsidiaries is or may be the subject that, individually or in the aggregate, if determined adversely to the Company or any of its subsidiaries, could reasonably be expected to have a Material Adverse Effect; to the knowledge of the Company, no such Actions are threatened or contemplated by any governmental or regulatory authority or threatened by others; and (i) there are no current or pending Actions that are required under the Securities Act to be described in the Registration Statement, the Pricing Disclosure Package or the Prospectus that are not so described in the Registration Statement, the Pricing Disclosure Package and the Prospectus and (ii) there are no statutes, regulations or contracts or other documents that are required under the Securities Act to be filed as exhibits to the Registration Statement or described in the Registration Statement, the Pricing Disclosure Package or the Prospectus that are not so filed as exhibits to the Registration Statement or

described in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

(t) *Independent Accountants*. PricewaterhouseCoopers LLP, who have certified certain financial statements of the Company and its subsidiaries, is an independent registered public accounting firm with respect to the Company and its subsidiaries within the applicable rules and regulations adopted by the Commission and the Public Company Accounting Oversight Board (United States) and as required by the Securities Act.

(u) *Title to Real and Personal Property*. The Company and its subsidiaries have good and marketable title in fee simple to, or have valid rights to lease or otherwise use, all items of real and personal property that are material to the respective businesses of the Company and its subsidiaries, in each case free and clear of all liens, encumbrances, claims and defects and imperfections of title except those that (i) do not materially interfere with the use made and proposed to be made of such property by the Company and its subsidiaries or (ii) could not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect.

(v) *Intellectual Property.* (i) Except as disclosed in the Registration Statement, the Pricing Disclosure Package or the Prospectus, the Company and its subsidiaries own or have a valid and enforceable right to use any and all patents, inventions, trademarks, service marks, trade names, domain names and other source indicators, software, social media identifiers and accounts, copyrights and copyrightable works, know-how (including trade secrets, systems, procedures, and other unpatented and/or unpatentable proprietary or confidential information) and all other similar worldwide intellectual property and proprietary rights (including all registrations and applications for registration of, and all goodwill associated with, any of the foregoing) (collectively, "Intellectual Property") which are owned by or licensed to (or purported to be owned by or licensed to) the Company or its subsidiaries and are used in, held for use in or necessary for the conduct of their respective businesses as presently conducted and as proposed to be conducted in the Registration Statement, the Pricing Disclosure Package or the Prospectus; (ii) except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company and its subsidiaries and the conduct of their respective businesses has not infringed, misappropriated or otherwise violated any Intellectual Property of any third party; (iii) there is no claim, action, suit, investigation or proceeding pending, or to the knowledge of the Company, threatened against the Company or any of its subsidiaries (A) challenging or seeking to deny or restrict any rights of the Company or any of its subsidiaries in any Intellectual Property owned by or licensed to the Company or any of its subsidiaries, (B) challenging the ownership, validity, enforceability or scope of any Intellectual Property owned or controlled by the Company or any of its subsidiaries, or (C) alleging that the Company or any of its subsidiaries has infringed, misappropriated or otherwise violated any Intellectual Property of any third party; (iv) except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, none of the product

candidates of the Company or any of its subsidiaries, if commercially sold or offered for commercial sale, would infringe, misappropriate or otherwise violate any Intellectual Property of any third party; (v) to the knowledge of the Company, no Intellectual Property owned by or exclusively licensed to the Company or any of its subsidiaries has been infringed, misappropriated or otherwise violated by any person; (vi) to the knowledge of the Company, all Intellectual Property owned by or exclusively licensed to the Company and its subsidiaries is valid, subsisting and enforceable and none of the Intellectual Property owned or controlled by the Company or any of its subsidiaries has been adjudged invalid or unenforceable in whole or in part; and (vii) the Company and its subsidiaries have taken reasonable steps in accordance with normal industry practice to maintain the confidentiality of all Intellectual Property for which the value to the Company or any of its subsidiaries is contingent upon maintaining the confidentiality thereof, and no such Intellectual Property has been disclosed other than to employees, representatives and agents of the Company or any of its subsidiaries, all of whom are bound by written confidentiality agreements.

(w) *No Undisclosed Relationships*. No relationship, direct or indirect, exists between or among the Company or any of its subsidiaries, on the one hand, and the directors, officers, stockholders, customers, suppliers or other affiliates of the Company or any of its subsidiaries, on the other, that is required by the Securities Act to be described in each of the Registration Statement and the Prospectus and that is not so described in such documents and in the Pricing Disclosure Package.

(x) *Investment Company Act*. The Company is not and, after giving effect to the offering and sale of the Shares and the application of the proceeds thereof as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, will not be required to register as an "investment company" or an entity "controlled" by an "investment company" within the meaning of the Investment Company Act of 1940, as amended, and the rules and regulations of the Commission thereunder (collectively, the "Investment Company Act").

(y) *Taxes.* The Company and its subsidiaries have paid all material federal, state, local and foreign taxes and filed all material tax returns required to be paid, or filed through the date hereof (taking into account any extensions permitted by law); and except as otherwise disclosed in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus, there is no material tax deficiency that has been, or could reasonably be expected to be, asserted against the Company or any of its subsidiaries or any of their respective properties or assets.

(z) *Licenses and Permits.* The Company and its subsidiaries possess all licenses, sub-licenses, certificates, permits and other authorizations issued by, and have made all declarations and filings with, the appropriate federal, state, local or foreign governmental or regulatory authorities that are necessary for the ownership or lease of their respective properties or the conduct of their respective businesses as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus,

except where the failure to possess or make the same would not, individually or in the aggregate, have a Material Adverse Effect; and except as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus, neither the Company nor any of its subsidiaries has received notice of any revocation or modification of any such license, sub-license, certificate, permit or authorization or has any reason to believe that any such license, sub-license, certificate, permit or authorization will not be renewed in the ordinary course, except where such revocation, modification or nonrenewal would not reasonably be expected to, individually or in the aggregate, have a Material Adverse Effect.

(aa) *No Labor Disputes*. No labor disturbance by or dispute with employees of the Company or any of its subsidiaries exists or, to the knowledge of the Company, is contemplated or threatened, and the Company is not aware of any existing or imminent labor disturbance by, or dispute with, the employees of any of its or its subsidiaries' principal suppliers, contractors or customers, except as would not have a Material Adverse Effect. Neither the Company nor any of its subsidiaries has received any notice of cancellation or termination with respect to any collective bargaining agreement to which it is a party.

(bb) *Certain Environmental Matters*. (i) The Company and its subsidiaries (x) are in compliance with all, and have not violated any, applicable federal, state, local and foreign laws (including common law), rules, regulations, requirements, decisions, judgments, decrees, orders and other legally enforceable requirements relating to pollution or the protection of human health or safety, the environment, natural resources, hazardous or toxic substances or wastes, pollutants or contaminants (collectively, "Environmental Laws"); (y) have received and are in compliance with all, and have not violated any, permits, licenses, certificates or other authorizations or approvals required of them under any Environmental Laws to conduct their respective businesses; and (z) have not received notice of any actual or potential liability or obligation under or relating to, or any actual or potential violation of, any Environmental Laws, including for the investigation or remediation of any disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants, and have no knowledge of any event or condition that would reasonably be expected to result in any such notice; (ii) there are no costs or liabilities associated with Environmental Laws of or relating to the Company or its subsidiaries, except in the case of each of (i) and (ii) above, for any such matter as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and (iii) except as described in each of the Pricing Disclosure Package and the Prospectus, (x) there is no proceeding that is pending, or that is known to be contemplated, against the Company or any of its subsidiaries under any Environmental Laws in which a governmental entity is also a party, other than such proceeding regarding which it is reasonably believed no monetary sanctions of $100,000 or more will be imposed, (y) the Company and its subsidiaries are not aware of any facts or issues regarding compliance with Environmental Laws, or liabilities or other obligations under Environmental Laws or concerning hazardous or toxic substances or wastes, pollutants or contaminants, that could reasonably be expected to have a material effect on the capital

expenditures, earnings or competitive position of the Company and its subsidiaries, and (z) none of the Company or its subsidiaries anticipates material capital expenditures relating to any Environmental Laws.

(cc) *Compliance with ERISA*. (i) Each employee benefit plan, within the meaning of Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), for which the Company or any member of its "Controlled Group" (defined as any entity, whether or not incorporated, that is under common control with the Company within the meaning of Section 4001(a)(14) of ERISA or any entity that would be regarded as a single employer with the Company under Section 414(b),(c),(m) or (o) of the Code would have any liability (each, a "Plan") has been maintained in compliance with its terms and the requirements of any applicable statutes, orders, rules and regulations, including but not limited to ERISA and the Code; (ii) no prohibited transaction, within the meaning of Section 406 of ERISA or Section 4975 of the Code, has occurred with respect to any Plan, excluding transactions effected pursuant to a statutory or administrative exemption; (iii) for each Plan that is subject to the funding rules of Section 412 of the Code or Section 302 of ERISA, no Plan has failed (whether or not waived), or is reasonably expected to fail, to satisfy the minimum funding standards (within the meaning of Section 302 of ERISA or Section 412 of the Code) applicable to such Plan; (iv) no Plan is, or is reasonably expected to be, in "at risk status" (within the meaning of Section 303(i) of ERISA) and no Plan that is a "multiemployer plan" within the meaning of Section 4001(a)(3) of ERISA is in "endangered status" or "critical status" (within the meaning of Sections 304 and 305 of ERISA) (v) the fair market value of the assets of each Plan exceeds the present value of all benefits accrued under such Plan (determined based on those assumptions used to fund such Plan); (vi) no "reportable event" (within the meaning of Section 4043(c) of ERISA and the regulations promulgated thereunder) has occurred or is reasonably expected to occur; (vii) each Plan that is intended to be qualified under Section 401(a) of the Code is so qualified, and nothing has occurred, to the knowledge of the Company, whether by action or by failure to act, which would cause the loss of such qualification; (viii) neither the Company nor any member of the Controlled Group has incurred, nor reasonably expects to incur, any liability under Title IV of ERISA (other than contributions to the Plan or premiums to the Pension Benefit Guarantee Corporation, in the ordinary course and without default) in respect of a Plan (including a "multiemployer plan" within the meaning of Section 4001(a)(3) of ERISA); and (ix) none of the following events has occurred or is reasonably likely to occur: (A) a material increase in the aggregate amount of contributions required to be made to all Plans by the Company or its Controlled Group affiliates in the current fiscal year of the Company and its Controlled Group affiliates compared to the amount of such contributions made in the Company's and its Controlled Group affiliates' most recently completed fiscal year; or (B) a material increase in the Company and its subsidiaries' "accumulated post-retirement benefit obligations" (within the meaning of Accounting Standards Codification Topic 715-60) compared to the amount of such obligations in the Company and its subsidiaries' most recently completed fiscal year, except in each case with respect to the events or conditions set forth in (i) through (ix) hereof, as would not, individually or in the aggregate, have a Material Adverse Effect.

(dd) *Disclosure Controls*. The Company and its subsidiaries maintain an effective system of "disclosure controls and procedures" (as defined in Rule 13a-15(e) of the Exchange Act) that complies with the requirements of the Exchange Act and that has been designed to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms, including controls and procedures designed to ensure that such information is accumulated and communicated to the Company's management as appropriate to allow timely decisions regarding required disclosure. To the extent applicable as of the date of this Agreement, the Company and its subsidiaries have carried out evaluations of the effectiveness of their disclosure controls and procedures as required by Rule 13a-15 of the Exchange Act.

(ee) *Accounting Controls.* The Company maintains systems of "internal control over financial reporting" (as defined in Rule 13a-15(f) of the Exchange Act) that have been designed to comply with the requirements of the Exchange Act and have been designed by, or under the supervision of, their respective principal executive and principal financial officers, or persons performing similar functions, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. The Company maintains internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there are no material weaknesses in the Company's internal controls. The Company's auditors and the Audit Committee of the Board of Directors of the Company have been advised of: (i) all significant deficiencies and material weaknesses in the design or operation of internal controls over financial reporting which have adversely affected or are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and (ii) any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal controls over financial reporting.

(ff) *Insurance.* The Company and its subsidiaries have insurance covering their respective properties, operations, personnel and businesses, including business interruption insurance, which insurance is in amounts and insures against such losses and risks as are generally maintained by similarly situated companies and which the Company reasonably believes are adequate to protect the Company and its subsidiaries and their respective businesses; and neither the Company nor any of its subsidiaries has (i) received notice from any insurer or agent of such insurer that capital improvements or other expenditures are required or necessary to be made in order to continue such

insurance or (ii) any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage at reasonable cost from similar insurers as may be necessary to continue its business.

(gg) *Cybersecurity.* The Company and its subsidiaries' respective information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (including the data of their respective employees, suppliers, vendors and any third-party data maintained by or on behalf of the Company or any of its subsidiaries) (collectively, "IT Systems") are adequate for, and operate and perform in all material respects as required in connection with the operation of the business of the Company and its subsidiaries as currently conducted and as proposed to be conducted, free and clear of all bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants (collectively, "Bugs"), except where such Bugs would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. The Company and its subsidiaries implement and maintain, and have implemented and maintained, commercially reasonable controls, policies, procedures, and safeguards as are generally maintained by similarly situated companies (and which are consistent with industry standard practices) and which the Company and its subsidiaries believe are reasonably adequate to protect their material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and data (including all personally identifiable, household, sensitive or confidential data and all information subject to regulation under applicable Data Security Obligations (as such term is defined below) ("Personal Information") collected, used or otherwise processed in connection with their businesses. Without limiting the foregoing, the Company and its subsidiaries have used commercially reasonable efforts to establish and maintain, and have established, maintained, implemented and complied with, reasonable information technology, information security, cyber security and data protection controls, policies and procedures, including oversight, access controls, encryption, technological and physical safeguards and business continuity/disaster recovery and security plans as are generally maintained by similarly situated companies (and which are consistent with industry standard practices) that are designed to protect against and prevent breach, destruction, loss, unauthorized distribution, use, access, disablement, misappropriation or modification, or other compromise or misuse of or relating to any IT System or Personal Information used in connection with the operation of the Company's and its subsidiaries' respective businesses ("Breach"). To the knowledge of the Company, there has been no such Breach. The Company and its subsidiaries have not been notified of, and have no knowledge of any event or condition that would reasonably be expected to result in, any such Breach.

(hh) *Privacy*. The Company and its subsidiaries have complied and are presently in compliance, in all material respects, with all published privacy policies and written notices, contractual obligations, industry standards that are contractually binding upon the company and its subsidiaries, applicable laws, statutes, judgments, orders, rules and regulations of any court or arbitrator or other governmental or regulatory authority and any other legal obligations in each case, regarding the collection, use, transfer,

import, export, storage, protection, disposal, disclosure and other processing by or on behalf of the Company and its subsidiaries of personally identifiable, household, sensitive, confidential or regulated data ("Data Security Obligations"), except where the violation of such Data Security Obligations would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. Neither the Company nor any of its subsidiaries has received any notification of or complaint regarding, or are otherwise aware of any other facts that, individually or in the aggregate, would reasonably indicate, non-compliance with any Data Security Obligation or has any knowledge of any event or conditions that would reasonably be expected to result in any such non-compliance, and there is no action, suit, investigation or proceeding by or before any court or governmental agency, authority or body pending or, to the knowledge of the Company, threatened alleging non-compliance by the Company or any of its subsidiaries with any Data Security Obligation. The Company and its subsidiaries have at all times taken steps reasonably necessary in accordance with industry standard practices (including, without limitation, implementing and monitoring compliance with adequate measures with respect to technical and physical security) to protect its IT Systems and Personal Information against a Breach, except in each case to the extent that the failure to do so would not reasonably be expected to, individually or in the aggregate, have a Material Adverse Effect.

(ii) *No Unlawful Payments.* Neither the Company nor any of its subsidiaries nor any director or officer of the Company or any of its subsidiaries nor, to the knowledge of the Company, any employee of the Company or any of its subsidiaries or any agent, affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries (i) has used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity; (ii) has made or taken or will make or take any action in furtherance of an offer, payment, promise, authorization or approval of any direct or indirect unlawful payment, benefit or gift to any foreign or domestic government official or employee, including of any government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office; (iii) has violated or is in violation of any provision of the Foreign Corrupt Practices Act of 1977, as amended, or any applicable law or regulation implementing the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, or committed an offence under the Bribery Act 2010 of the United Kingdom or any other applicable anti-bribery or anti-corruption law; (iv) has made, offered, agreed, requested or taken an act in furtherance of any unlawful bribe or other unlawful benefit, including, without limitation, any rebate, payoff, influence payment, kickback or other unlawful or improper payment or benefit; or (v) will use, directly or indirectly, the proceeds of the offering in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to any person in violation of any applicable anti-corruption laws. The Company and its subsidiaries have conducted their business in compliance with all applicable anti-bribery and anti-corruption laws and have instituted, maintain and

enforce, and will continue to maintain and enforce policies and procedures designed to promote and ensure compliance with all applicable anti-bribery and anti-corruption laws.

(jj) *Compliance with Anti-Money Laundering Laws*. The operations of the Company and its subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements, including those of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the Bank Secrecy Act, as amended by Title III of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (USA PATRIOT Act), the applicable money laundering statutes of all jurisdictions where the Company or any of its subsidiaries conducts business, the rules and regulations thereunder and any related or similar rules, regulations or guidelines issued, administered or enforced by any governmental agency (collectively, the "Anti-Money Laundering Laws") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Anti-Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(kk) *No Conflicts with Sanctions Laws.* Neither the Company nor any of its subsidiaries, directors or officers, nor, to the knowledge of the Company, any employees of the Company or any of its subsidiaries, any agent, affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries, is an individual or entity that is, or is controlled by one or more individuals or entities that are, currently the subject or the target of any sanctions administered or enforced by the U.S. government, (including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury ("OFAC") or the U.S. Department of State and including, without limitation, the designation as a "specially designated national" or "blocked person"), the United Nations Security Council ("UNSC"), the European Union, Her Majesty's Treasury ("HMT") or other relevant sanctions authority (collectively, "Sanctions"), nor is the Company or any of its subsidiaries, directors, officers, or employees, nor, to the knowledge of the Company, any agent, affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries, an individual or entity, or is controlled by one or more individuals or entities, located, organized or resident in a country or territory that is the subject or target of Sanctions, including, without limitation, the so-called Donetsk People's Republic, the so-called Luhansk People's Republic, the Crimea Region of Ukraine, Cuba, Iran, North Korea and Syria (each, a "Sanctioned Country"); and the Company will not directly or indirectly use the proceeds of the offering of the Shares hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund or facilitate any activities of or business with any person that, at the time of such funding or facilitation, is the subject or target of Sanctions, (ii) to fund or facilitate any activities of or business in any Sanctioned Country or (iii) in any other manner that will result in a violation by any person (including any person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions. For the past five years, the Company and its subsidiaries have not knowingly engaged in, are

not now knowingly engaged in and will not engage in any dealings or transactions with any person that at the time of the dealing or transaction is or was the subject or the target of Sanctions or with any Sanctioned Country.

(ll) *No Restrictions on Subsidiaries*. No subsidiary of the Company is currently prohibited, directly or indirectly, under any agreement or other instrument to which it is a party or is subject, from paying any dividends to the Company, from making any other distribution on such subsidiary's capital stock or similar ownership interest, from repaying to the Company any loans or advances to such subsidiary from the Company or from transferring any of such subsidiary's properties or assets to the Company or any other subsidiary of the Company.

(mm) *No Broker's Fees.* Neither the Company nor any of its subsidiaries is a party to any contract, agreement or understanding with any person (other than this Agreement) that would give rise to a valid claim against any of them or any Underwriter for a brokerage commission, finder's fee or like payment in connection with the offering and sale of the Shares.

(nn) *No Registration Rights*. Except as described in the Registration, Statement, the Pricing Disclosure Package and the Prospectus, no person has the right to require the Company or any of its subsidiaries to register any securities for sale under the Securities Act by reason of the filing of the Registration Statement with the Commission or the issuance and sale of the Shares.

(oo) *No Stabilization.* Neither the Company nor any of its subsidiaries or affiliates has taken, directly or indirectly, any action designed to or that could reasonably be expected to cause or result in any stabilization or manipulation of the price of the Shares.

(pp) *Margin Rules*. Neither the issuance, sale and delivery of the Shares nor the application of the proceeds thereof by the Company as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus will violate Regulation T, U or X of the Board of Governors of the Federal Reserve System or any other regulation of such Board of Governors.

(qq) *Forward-Looking Statements.* No forward-looking statement (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) included in any of the Registration Statement, the Pricing Disclosure Package or the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith.

(rr) *Statistical and Market Data.* Nothing has come to the attention of the Company that has caused the Company to believe that the statistical and market-related data included in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus is not based on or derived from sources that are reliable and accurate in all material respects.

(ss) *Sarbanes-Oxley Act*. There is and has been no failure on the part of the Company or any of the Company's directors or officers, in their capacities as such, to comply with any applicable provision of the Sarbanes-Oxley Act of 2002, as amended and the rules and regulations promulgated in connection therewith (the "Sarbanes-Oxley Act"), including Section 402 related to loans and Sections 302 and 906 related to certifications.

(tt) *Status under the Securities Act*. At the time of filing the Registration Statement and any post-effective amendment thereto, at the earliest time thereafter that the Company or any offering participant made a *bona fide* offer (within the meaning of Rule 164(h)(2) under the Securities Act) of the Shares and at the date hereof, the Company was not and is not an "ineligible issuer," as defined in Rule 405 under the Securities Act.

(uu) *Regulatory Matters; Products and Product Candidates*. The Company (collectively with its subsidiaries): (i) has operated and currently operates its business in compliance in all material respects with applicable provisions of the Health Care Laws (as defined below) of the Food and Drug Administration ("FDA"), the Department of Health and Human Services and any applicable comparable foreign or other regulatory authority (collectively, the "Applicable Regulatory Authorities") applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, storage, import, export or disposal of any of the Company's or its subsidiary's product candidates manufactured or distributed by the Company; (ii) has not received any FDA Form 483, written notice of adverse finding, warning letter, untitled letter or other written notice from any court or arbitrator or governmental or regulatory authority alleging or asserting non-compliance with (A) any Health Care Laws or (B) any licenses, certificates, approvals, clearances, exemptions, authorizations, permits and supplements or amendments thereto required by any such Health Care Laws ("Regulatory Authorizations"); (iii) possesses all material Regulatory Authorizations required to conduct its business as currently conducted, and such Regulatory Authorizations are valid and in full force and effect in all material respects and, to the knowledge of the Company, the Company is not in material violation of any term of any such Regulatory Authorizations; (iv) has not received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from the Applicable Regulatory Authorities or any other third party alleging that any product candidate of the Company is in violation of any Health Care Laws or Regulatory Authorizations and has no knowledge that the Applicable Regulatory Authorities or any other third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding; (v) has not received written notice that any of the Applicable Regulatory Authorities has taken, is taking or intends to take action to limit, suspend, modify or revoke any material Regulatory Authorizations and has no knowledge that any of the Applicable Regulatory Authorities is considering such action; (vi) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws or Regulatory Authorizations and that all such material reports, documents,

forms, notices, applications, records, claims, submissions and supplements or amendments were complete and correct in all material respects on the date filed (or were corrected or supplemented by a subsequent submission); (vii) is not a party to and does not have any ongoing reporting obligations pursuant to any corporate integrity agreements, deferred prosecution agreements, monitoring agreements, consent decrees, settlement orders, plans of correction or similar agreements with or imposed by any Applicable Regulatory Authority; and (viii) along with its employees, officers and directors, has not, to the knowledge of the Company, been excluded, suspended or debarred from participation in any government health care program or human clinical research and, to the knowledge of the Company, is not subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion.

The term "Health Care Laws" means Title XVIII of the Social Security Act, 42 U.S.C. §§ 1395-1395hhh (the Medicare statute); Title XIX of the Social Security Act, 42 U.S.C. §§ 1396-1396v (the Medicaid statute); the Federal Anti-Kickback Statute, 42 U.S.C. § 1320a-7b(b); the civil False Claims Act, 31 U.S.C. §§ 3729 et seq.; the criminal False Claims Act, 42 U.S.C. 1320a-7b(a); any criminal laws relating to health care fraud and abuse, including but not limited to 18 U.S.C. Sections 286 and 287 and the health care fraud criminal provisions under the Health Insurance Portability and Accountability Act of 1996, 42 U.S.C. §§ 1320d et seq., ("HIPAA"); the Civil Monetary Penalties Law, 42 U.S.C. §§ 1320a-7a and 1320a-7b; the Physician Payments Sunshine Act, 42 U.S.C. § 1320a-7h; the Exclusion Statute, 42 U.S.C. § 1320a-7; HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, 42 U.S.C. §§ 17921 et seq.; the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. §§ 301 et seq.; the Public Health Service Act, 42 U.S.C. §§ 201 et seq.; the regulations promulgated pursuant to such laws; and any similar federal, state and local laws and regulations.

(vv) *Preclinical Studies*. (i) The preclinical studies conducted by or, to the knowledge of the Company, on behalf of or sponsored by the Company or its subsidiaries that are described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, or the results of which are referred to in the Registration Statement, the Pricing Disclosure Package and the Prospectus, as applicable, were, and if still pending are, being conducted in all material respects in accordance with the protocols and procedures established for such studies and with all applicable statutes and all applicable rules and regulations of the Applicable Regulatory Authorities and current Good Laboratory Practices, as applicable; (ii) the descriptions in the Registration Statement, the Pricing Disclosure Package and the Prospectus of the results of such studies are accurate and complete descriptions in all material respects and fairly present the data derived therefrom; (iii) the Company has no knowledge of any other studies not described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the results of which are materially inconsistent with or call into question the results described or referred to in the Registration Statement, the Pricing Disclosure Package and the Prospectus; (iv) to the Company's knowledge, the Company and its subsidiaries have operated at all relevant times and are currently in compliance in all material respects with

all applicable statutes, rules and regulations of the Applicable Regulatory Authorities; (v) the Company has provided the Underwriters with all material written notices, correspondence and summaries of all other communications from the Applicable Regulatory Authorities; and (vi) neither the Company nor its subsidiaries have received any written notices, correspondence or other communications from the Applicable Regulatory Authorities or any other governmental agency requiring or threatening the termination, material modification or suspension of any preclinical studies that are described in the Registration Statement, the Pricing Disclosure Package and the Prospectus or the results of which are referred to in the Registration Statement, the Pricing Disclosure Package and the Prospectus, other than ordinary course communications with respect to modifications in connection with the design and implementation of such studies, and, to the Company's knowledge, there are no reasonable grounds for the same. No investigational new drug application or comparable submission has been filed by or on behalf of the Company or its subsidiary with the FDA or any other Applicable Regulatory Authority.

(ww) *No Ratings*. There are (and prior to the Closing Date, will be) no debt securities, convertible securities or preferred stock issued or guaranteed by the Company or any of its subsidiaries that are rated by a "nationally recognized statistical rating organization", as such term is defined in Section 3(a)(62) under the Exchange Act.

4. Further Agreements of the Company. The Company covenants and agrees with each Underwriter that:

(a) *Required Filings.* The Company will file the final Prospectus with the Commission within the time periods specified by Rule 424(b) and Rule 430A, 430B or 430C under the Securities Act, will file any Issuer Free Writing Prospectus to the extent required by Rule 433 under the Securities Act; and the Company will furnish copies of the Prospectus and each Issuer Free Writing Prospectus (to the extent not previously delivered) to the Underwriters in New York City prior to 10:00 A.M., New York City time, on the business day next succeeding the date of this Agreement in such quantities as the Representatives may reasonably request.

(b) *Delivery of Copies.* The Company will deliver, without charge, (i) to the Representatives, two signed copies of the Registration Statement as originally filed and each amendment thereto, in each case including all exhibits and consents filed therewith; and (ii) to each Underwriter (A) a conformed copy of the Registration Statement as originally filed and each amendment thereto (without exhibits) and (B) during the Prospectus Delivery Period (as defined below), as many copies of the Prospectus (including all amendments and supplements thereto and each Issuer Free Writing Prospectus) as the Representatives may reasonably request. As used herein, the term "Prospectus Delivery Period" means such period of time after the first date of the public offering of the Shares as in the opinion of counsel for the Underwriters a prospectus relating to the Shares is required by law to be delivered (or required to be delivered but

for Rule 172 under the Securities Act) in connection with sales of the Shares by any Underwriter or dealer.

(c) *Amendments or Supplements, Issuer Free Writing Prospectuses.* Before making, preparing, using, authorizing, approving, referring to or filing any Issuer Free Writing Prospectus, and before filing any amendment or supplement to the Registration Statement, the Pricing Disclosure Package or the Prospectus, the Company will furnish to the Representatives and counsel for the Underwriters a copy of the proposed Issuer Free Writing Prospectus, amendment or supplement for review and will not make, prepare, use, authorize, approve, refer to or file any such Issuer Free Writing Prospectus or file any such proposed amendment or supplement to which the Representatives reasonably object.

(d) *Notice to the Representatives.* The Company will advise the Representatives promptly, and confirm such advice in writing, (i) when the Registration Statement has become effective; (ii) when any amendment to the Registration Statement has been filed or becomes effective; (iii) when any supplement to the Pricing Disclosure Package, the Prospectus, any Issuer Free Writing Prospectus or any Written Testing-the-Waters Communication or any amendment to the Prospectus has been filed or distributed; (iv) of any request by the Commission for any amendment to the Registration Statement or any amendment or supplement to the Prospectus or the receipt of any comments from the Commission relating to the Registration Statement or any other request by the Commission for any additional information including, but not limited to, any request for information concerning any Testing-the-Waters Communication; (v) of the issuance by the Commission or any other governmental or regulatory authority of any order suspending the effectiveness of the Registration Statement or preventing or suspending the use of any Preliminary Prospectus, any of the Pricing Disclosure Package, the Prospectus or any Written Testing-the-Waters Communication or the initiation or, to the knowledge of the Company, threatening of any proceeding for that purpose or pursuant to Section 8A of the Securities Act; (vi) of the occurrence of any event or development within the Prospectus Delivery Period as a result of which the Prospectus, any of the Pricing Disclosure Package, any Issuer Free Writing Prospectus or any Written Testing-the-Waters Communication as then amended or supplemented would include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing when the Prospectus, the Pricing Disclosure Package, any such Issuer Free Writing Prospectus or any Written Testing-the-Waters Communication is delivered to a purchaser, not misleading; and (vii) of the receipt by the Company of any notice with respect to any suspension of the qualification of the Shares for offer and sale in any jurisdiction or the initiation or, to the knowledge of the Company, threatening of any proceeding for such purpose; and the Company will use its reasonable best efforts to prevent the issuance of any such order suspending the effectiveness of the Registration Statement, preventing or suspending the use of any Preliminary Prospectus, any of the Pricing Disclosure Package or the Prospectus or any Written Testing-the-Waters Communication or suspending any such

qualification of the Shares and, if any such order is issued, will obtain as soon as possible the withdrawal thereof.

(e) *Ongoing Compliance.* (1) If during the Prospectus Delivery Period (i) any event or development shall occur or condition shall exist as a result of which the Prospectus as then amended or supplemented would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances existing when the Prospectus is delivered to a purchaser, not misleading or (ii) it is necessary to amend or supplement the Prospectus to comply with law, the Company will, as soon as practicable, notify the Underwriters thereof and forthwith prepare and, subject to paragraph (c) above, file with the Commission and furnish to the Underwriters and to such dealers as the Representatives may designate such amendments or supplements to the Prospectus as may be necessary so that the statements in the Prospectus as so amended or supplemented will not, in the light of the circumstances existing when the Prospectus is delivered to a purchaser, be misleading or so that the Prospectus will comply with law and (2) if at any time prior to the Closing Date (i) any event or development shall occur or condition shall exist as a result of which the Pricing Disclosure Package as then amended or supplemented would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances existing when the Pricing Disclosure Package is delivered to a purchaser, not misleading or (ii) it is necessary to amend or supplement the Pricing Disclosure Package to comply with law, the Company will immediately notify the Underwriters thereof and forthwith prepare and, subject to paragraph (c) above, file with the Commission (to the extent required) and furnish to the Underwriters and to such dealers as the Representatives may designate such amendments or supplements to the Pricing Disclosure Package as may be necessary so that the statements in the Pricing Disclosure Package as so amended or supplemented will not, in the light of the circumstances existing when the Pricing Disclosure Package is delivered to a purchaser, be misleading or so that the Pricing Disclosure Package will comply with law.

(f) *Blue Sky Compliance.* If required by law, the Company will qualify the Shares for offer and sale under the securities or Blue Sky laws of such jurisdictions as the Representatives shall reasonably request and will continue such qualifications in effect so long as required for distribution of the Shares; provided that the Company shall not be required to (i) qualify as a foreign corporation or other entity or as a dealer in securities in any such jurisdiction where it would not otherwise be required to so qualify, (ii) file any general consent to service of process in any such jurisdiction or (iii) subject itself to taxation in any such jurisdiction if it is not otherwise so subject.

(g) *Earning Statement.* The Company will make generally available to its security holders and the Representatives as soon as practicable an earning statement that satisfies the provisions of Section 11(a) of the Securities Act and Rule 158 of the Commission promulgated thereunder covering a period of at least twelve months beginning with the first fiscal quarter of the Company occurring after the “effective

date" (as defined in Rule 158) of the Registration Statement, it being understood and agreed that such earning statement shall be deemed to have been made available by the Company if (i) the Company is in compliance with its reporting obligations pursuant to the Exchange Act, (ii) such compliance satisfies the conditions of Rule 158, and (iii) such earnings statement is made available on the Commission's Electronic Data Gathering, Analysis and Retrieval system ("EDGAR").

(h) *Clear Market.* For a period of 180 days after the date of the Prospectus, the Company will not (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, or submit to, or file with, the Commission a registration statement under the Securities Act relating to, any shares of Stock or any securities convertible into or exercisable or exchangeable for Stock, or publicly disclose the intention to undertake any of the foregoing, or (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Stock or any such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Stock or such other securities, in cash or otherwise, without the prior written consent of the Representatives, other than the Shares to be sold hereunder.

The restrictions described above do not apply to (i) the issuance of shares of Stock or securities convertible into or exercisable for shares of Stock pursuant to the conversion or exchange of convertible or exchangeable securities or the exercise of warrants or options (including net exercise) or the settlement of RSUs (including net settlement), in each case outstanding on the date of this Agreement and described in the Prospectus; (ii) grants of stock options, stock awards, restricted stock, RSUs, or other equity awards and the issuance of shares of Stock or securities convertible into or exercisable or exchangeable for shares of Stock (whether upon the exercise of stock options or otherwise) to the Company's employees, officers, directors, advisors, or consultants pursuant to the terms of an equity compensation plan in effect as of the Closing Date and described in the Prospectus; (iii) the issuance of up to 10% of the outstanding shares of Stock, or securities convertible into, exercisable for, or which are otherwise exchangeable for, Stock, immediately following the Closing Date, in acquisitions or other similar strategic transactions or pursuant to an employee benefit plan assumed by the Company in connection with such acquisitions or similar transactions or other securities issued in connection with a transaction with an unaffiliated third party that includes a debt financing or a bona fide commercial relationship (including joint ventures, marketing or distribution arrangements, collaboration agreements or intellectual property license agreements) or any acquisition of assets or acquisition of not less than a majority or controlling portion of the equity of another entity, provided that such recipients of any such shares of Stock and/or securities issued pursuant to this clause (iii) during the 180-day restricted period described above enter into a lock-up agreement with the Underwriters for the remainder of the 180-day restricted period; or (iv) the filing of any registration statement on Form S-8 relating to securities granted or to be granted pursuant to any plan in effect on the date of this Agreement and described in the Prospectus or any

assumed benefit plan pursuant to an acquisition or similar strategic transaction contemplated by clause (iii).

If the Representatives, in their sole discretion, agree to release or waive the restrictions set forth in a lock-up letter described in Section 6(l) hereof for an officer or director of the Company and provide the Company with notice of the impending release or waiver substantially in the form of Exhibit B hereto at least three business days before the effective date of the release or waiver, the Company agrees to announce the impending release or waiver by a press release substantially in the form of Exhibit C hereto through a major news service at least two business days before the effective date of the release or waiver.

(i) *Use of Proceeds.* The Company will apply the net proceeds from the sale of the Shares as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus under the heading "Use of proceeds".

(j) *No Stabilization.* Neither the Company nor its subsidiaries or affiliates will take, directly or indirectly, any action designed to or that could reasonably be expected to cause or result in any stabilization or manipulation of the price of the Stock.

(k) *Exchange Listing.* The Company will use its reasonable best efforts to list for quotation the Shares on the Nasdaq.

(l) *Reports.* For a period of three years from the date of this Agreement, the Company will furnish to the Representatives, as soon as they are available, copies of all reports or other communications (financial or other) furnished to holders of the Shares, and copies of any reports and financial statements furnished to or filed with the Commission or any national securities exchange or automatic quotation system; provided the Company will be deemed to have furnished such reports and financial statements to the Representatives to the extent they are filed on EDGAR.

(m) *Record Retention*. The Company will, pursuant to reasonable procedures developed in good faith, retain copies of each Issuer Free Writing Prospectus that is not filed with the Commission in accordance with Rule 433 under the Securities Act.

(n) *Filings.* The Company will file with the Commission such reports as may be required by Rule 463 under the Securities Act.

(o) *Emerging Growth Company*. The Company will promptly notify the Representatives if the Company ceases to be an Emerging Growth Company at any time prior to the later of (i) completion of the distribution of Shares within the meaning of the Securities Act and (ii) completion of the 180-day restricted period referred to in Section 4(h) hereof.

5. Certain Agreements of the Underwriters. Each Underwriter hereby represents and agrees that:

(a) It has not and will not use, authorize use of, refer to or participate in the planning for use of, any "free writing prospectus", as defined in Rule 405 under the Securities Act (which term includes use of any written information furnished to the Commission by the Company and not incorporated by reference into the Registration Statement and any press release issued by the Company) other than (i) a free writing prospectus that contains no "issuer information" (as defined in Rule 433(h)(2) under the Securities Act) that was not included (including through incorporation by reference) in the Preliminary Prospectus or a previously filed Issuer Free Writing Prospectus, (ii) any Issuer Free Writing Prospectus listed on Annex A or prepared pursuant to Section 3(c) or Section 4(c) above (including any electronic road show), or (iii) any free writing prospectus prepared by such underwriter and approved by the Company in advance in writing (each such free writing prospectus referred to in clauses (i) or (iii), an "Underwriter Free Writing Prospectus").

(b) It has not and will not, without the prior written consent of the Company, use any free writing prospectus that contains the final terms of the Shares unless such terms have previously been included in a free writing prospectus filed with the Commission.

(c) It is not subject to any pending proceeding under Section 8A of the Securities Act with respect to the offering (and will promptly notify the Company if any such proceeding against it is initiated during the Prospectus Delivery Period).

6. Conditions of Underwriters' Obligations. The obligation of each Underwriter to purchase the Underwritten Shares on the Closing Date or the Option Shares on the Additional Closing Date, as the case may be, as provided herein is subject to the performance by the Company of its covenants and other obligations hereunder and to the following additional conditions:

(a) *Registration Compliance; No Stop Order.* No order suspending the effectiveness of the Registration Statement shall be in effect, and no proceeding for such purpose or pursuant to Section 8A under the Securities Act shall be pending before or threatened by the Commission; the Prospectus and each Issuer Free Writing Prospectus shall have been timely filed with the Commission under the Securities Act (in the case of an Issuer Free Writing Prospectus, to the extent required by Rule 433 under the Securities Act) and in accordance with Section 4(a) hereof; and all requests by the Commission for additional information shall have been complied with to the reasonable satisfaction of the Representatives.

(b) *Representations and Warranties.* The representations and warranties of the Company contained herein shall be true and correct on the date hereof and on and as of the Closing Date or the Additional Closing Date, as the case may be; and the statements of the Company and its officers made in any certificates delivered pursuant to this

Agreement shall be true and correct on and as of the Closing Date or the Additional Closing Date, as the case may be.

(c) *No Material Adverse Change.* No event or condition of a type described in Section 3(h) hereof shall have occurred or shall exist, which event or condition is not described in the Pricing Disclosure Package (excluding any amendment or supplement thereto) and the Prospectus (excluding any amendment or supplement thereto) and the effect of which in the judgment of the Representatives makes it impracticable or inadvisable to proceed with the offering, sale or delivery of the Shares on the Closing Date or the Additional Closing Date, as the case may be, on the terms and in the manner contemplated by this Agreement, the Pricing Disclosure Package and the Prospectus.

(d) *Officer's Certificate.* The Representatives shall have received on and as of the Closing Date or the Additional Closing Date, as the case may be, a certificate of the chief financial officer or chief accounting officer of the Company and one additional senior executive officer of the Company who is satisfactory to the Representatives (i) confirming that such officers have carefully reviewed the Registration Statement, the Pricing Disclosure Package and the Prospectus and, to the knowledge of such officers, the representations set forth in Sections 3(b) and 3(d) hereof are true and correct, (ii) confirming that the other representations and warranties of the Company in this Agreement are true and correct and that the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied hereunder at or prior to the Closing Date or the Additional Closing Date, as the case may be, and (iii) to the effect set forth in paragraphs (a) and (c) above.

(e) *Comfort Letters.* On the date of this Agreement and on the Closing Date or the Additional Closing Date, as the case may be, PricewaterhouseCoopers LLP shall have furnished to the Representatives, at the request of the Company, letters, dated the respective dates of delivery thereof and addressed to the Underwriters, in form and substance reasonably satisfactory to the Representatives, containing statements and information of the type customarily included in accountants' "comfort letters" to underwriters with respect to the financial statements and certain financial information contained in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus; provided, that the letter delivered on the Closing Date or the Additional Closing Date, as the case may be, shall use a "cut-off" date no more than two business days prior to such Closing Date or such Additional Closing Date, as the case may be.

(f) *Opinion and 10b-5 Statement of Counsel for the Company.* Goodwin Procter LLP, counsel for the Company, shall have furnished to the Representatives, at the request of the Company, their written opinion and 10b-5 statement, dated the Closing Date or the Additional Closing Date, as the case may be, and addressed to the Underwriters, in form and substance reasonably satisfactory to the Representatives.

(g) *Opinion of Intellectual Property Counsel for the Company.* (i) Wilson Sonsini Goodrich & Rosati, PC, intellectual property counsel for the Company, (ii) Honigman LLP, intellectual property counsel for the Company, (iii) Foley Hoag LLP,

intellectual property counsel for the Company, and (iv) the Senior Vice President, Intellectual Property and Legal Affairs at the Company, shall each have furnished to the Representatives, at the request of the Company, their written opinion, dated the Closing Date or the Additional Closing Date, as the case may be, and addressed to the Underwriters, in form and substance reasonably satisfactory to the Representatives.

(h) *Opinion and 10b-5 Statement of Counsel for the Underwriters.* The Representatives shall have received on and as of the Closing Date or the Additional Closing Date, as the case may be, an opinion and 10b-5 statement, addressed to the Underwriters, of Davis Polk & Wardwell LLP, counsel for the Underwriters, with respect to such matters as the Representatives may reasonably request, and such counsel shall have received such documents and information as they may reasonably request to enable them to pass upon such matters.

(i) *No Legal Impediment to Issuance and Sale.* No action shall have been taken and no statute, rule, regulation or order shall have been enacted, adopted or issued by any federal, state or foreign governmental or regulatory authority that would, as of the Closing Date or the Additional Closing Date, as the case may be, prevent the issuance or sale of the Shares; and no injunction or order of any federal, state or foreign court shall have been issued that would, as of the Closing Date or the Additional Closing Date, as the case may be, prevent the issuance or sale of the Shares.

(j) *Good Standing*. The Representatives shall have received on and as of the Closing Date or the Additional Closing Date, as the case may be, satisfactory evidence of the good standing of the Company and its subsidiaries in their respective jurisdictions of organization and their good standing in such other jurisdictions as the Representatives may reasonably request, in each case in writing or any standard form of telecommunication from the appropriate governmental authorities of such jurisdictions.

(k) *Exchange Listing.* The Shares to be delivered on the Closing Date or the Additional Closing Date, as the case may be, shall have been approved for listing on Nasdaq, subject to official notice of issuance.

(l) *Lock-up Agreements*. The "lock-up" agreements, each substantially in the form of Exhibit D hereto, between you and certain shareholders, officers and directors of the Company relating to sales and certain other dispositions of shares of Stock or certain other securities, delivered to you on or before the date hereof, shall be in full force and effect on the Closing Date or the Additional Closing Date, as the case may be.

(m) *Additional Documents.* On or prior to the Closing Date or the Additional Closing Date, as the case may be, the Company shall have furnished to the Representatives such further certificates and documents as the Representatives may reasonably request.

All opinions, letters, certificates and evidence mentioned above or elsewhere in this Agreement shall be deemed to be in compliance with the provisions hereof only if they are in form and substance reasonably satisfactory to counsel for the Underwriters.

7. Indemnification and Contribution.

(a) *Indemnification of the Underwriters.* The Company agrees to indemnify and hold harmless each Underwriter, its affiliates, directors and officers and each person, if any, who controls such Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any and all losses, claims, damages and liabilities (including, without limitation, reasonable and documented legal fees and other expenses incurred in connection with any suit, action or proceeding or any claim asserted, as such fees and expenses are incurred), joint or several, that arise out of, or are based upon, (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or caused by any omission or alleged omission to state therein a material fact required to be stated therein or necessary in order to make the statements therein, not misleading, or (ii) any untrue statement or alleged untrue statement of a material fact contained in the Prospectus (or any amendment or supplement thereto), any Preliminary Prospectus, any Issuer Free Writing Prospectus, any "issuer information" filed or required to be filed pursuant to Rule 433(d) under the Securities Act, any Written Testing-the-Waters Communication, any road show as defined in Rule 433(h) under the Securities Act (a "road show") or any Pricing Disclosure Package (including any Pricing Disclosure Package that has subsequently been amended), or caused by any omission or alleged omission to state therein a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading, in each case except insofar as such losses, claims, damages or liabilities arise out of, or are based upon, any untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with any information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use therein, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in paragraph (b) below.

(b) *Indemnification of the Company.* Each Underwriter agrees, severally and not jointly, to indemnify and hold harmless the Company, its directors, its officers who signed the Registration Statement and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act to the same extent as the indemnity set forth in paragraph (a) above, but only with respect to any losses, claims, damages or liabilities that arise out of, or are based upon, any untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with any information relating to such Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in the Registration Statement, the Prospectus (or any amendment or supplement thereto), any Preliminary Prospectus, any Issuer Free Writing Prospectus, any Written Testing-the-Waters Communication, any road show or any Pricing Disclosure Package (including any Pricing Disclosure Package that has subsequently been amended), it being understood and agreed upon that the only such information furnished by any Underwriter consists of the following information in the Prospectus furnished on behalf of each

Underwriter: the concession and reallowance figures appearing in the [l] paragraph under the caption "Underwriting" and the information describing passive market making activities and stabilization contained in the [l] paragraph under the caption "Underwriting."

(c) *Notice and Procedures.* If any suit, action, proceeding (including any governmental or regulatory investigation), claim or demand shall be brought or asserted against any person in respect of which indemnification may be sought pursuant to the preceding paragraphs of this Section 7, such person (the "Indemnified Person") shall promptly notify the person against whom such indemnification may be sought (the "Indemnifying Person") in writing; provided that the failure to notify the Indemnifying Person shall not relieve it from any liability that it may have under the preceding paragraphs of this Section 7 except to the extent that it has been materially prejudiced (through the forfeiture of substantive rights or defenses) by such failure; and provided, further, that the failure to notify the Indemnifying Person shall not relieve it from any liability that it may have to an Indemnified Person otherwise than under the preceding paragraphs of this Section 7. If any such proceeding shall be brought or asserted against an Indemnified Person and it shall have notified the Indemnifying Person thereof, the Indemnifying Person shall retain counsel reasonably satisfactory to the Indemnified Person (who shall not, without the consent of the Indemnified Person, be counsel to the Indemnifying Person) to represent the Indemnified Person and any others entitled to indemnification pursuant to this Section that the Indemnifying Person may designate in such proceeding and shall pay the reasonable and documented fees and expenses in such proceeding including the reasonable and documented fees and expenses of such counsel related to such proceeding, as incurred. In any such proceeding, any Indemnified Person shall have the right to retain its own counsel, but the fees and expenses of such counsel shall be at the expense of such Indemnified Person unless (i) the Indemnifying Person and the Indemnified Person shall have mutually agreed to the contrary; (ii) the Indemnifying Person has failed within a reasonable time to retain counsel reasonably satisfactory to the Indemnified Person; (iii) the Indemnified Person shall have reasonably concluded that there may be legal defenses available to it that are different from or in addition to those available to the Indemnifying Person; or (iv) the named parties in any such proceeding (including any impleaded parties) include both the Indemnifying Person and the Indemnified Person and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them. It is understood and agreed that the Indemnifying Person shall not, in connection with any proceeding or related proceeding in the same jurisdiction, be liable for the fees and expenses of more than one separate firm (in addition to any local counsel) for all Indemnified Persons, and that all such fees and expenses shall be paid or reimbursed as they are incurred. Any such separate firm for any Underwriter, its affiliates, directors and officers and any control persons of such Underwriter shall be designated in writing by the Representatives and any such separate firm for the Company, its directors, its officers who signed the Registration Statement and any control persons of the Company shall be designated in writing by the Company. The Indemnifying Person shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent, the Indemnifying Person agrees to indemnify each Indemnified Person from and against any loss or liability by reason of such settlement. Notwithstanding the foregoing sentence, if at any time an Indemnified Person shall have requested that an Indemnifying Person reimburse the Indemnified Person for fees and expenses of counsel as contemplated by this paragraph, the

Indemnifying Person shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 30 days after receipt by the Indemnifying Person of such request and (ii) the Indemnifying Person shall not have reimbursed the Indemnified Person in accordance with such request prior to the date of such settlement. No Indemnifying Person shall, without the written consent of the Indemnified Person, effect any settlement of any pending or threatened proceeding in respect of which any Indemnified Person is or could have been a party and indemnification could have been sought hereunder by such Indemnified Person, unless such settlement (x) includes an unconditional release of such Indemnified Person, in form and substance reasonably satisfactory to such Indemnified Person, from all liability on claims that are the subject matter of such proceeding and (y) does not include any statement as to or any admission of fault, culpability or a failure to act by or on behalf of any Indemnified Person.

(d) *Contribution.* If the indemnification provided for in paragraphs (a) or (b) above is unavailable to an Indemnified Person or insufficient in respect of any losses, claims, damages or liabilities referred to therein, then each Indemnifying Person under such paragraph, in lieu of indemnifying such Indemnified Person thereunder, shall contribute to the amount paid or payable by such Indemnified Person as a result of such losses, claims, damages or liabilities (i) in such proportion as is appropriate to reflect the relative benefits received by the Company, on the one hand, and the Underwriters on the other, from the offering of the Shares or (ii) if the allocation provided by clause (i) is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) but also the relative fault of the Company, on the one hand, and the Underwriters on the other, in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the Company, on the one hand, and the Underwriters on the other, shall be deemed to be in the same respective proportions as the net proceeds (before deducting expenses) received by the Company from the sale of the Shares and the total underwriting discounts and commissions received by the Underwriters in connection therewith, in each case as set forth in the table on the cover of the Prospectus, bear to the aggregate offering price of the Shares. The relative fault of the Company, on the one hand, and the Underwriters on the other, shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or by the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

(e) *Limitation on Liability.* The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to paragraph (d) above were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation that does not take account of the equitable considerations referred to in paragraph (d) above. The amount paid or payable by an Indemnified Person as a result of the losses, claims, damages and liabilities referred to in paragraph (d) above shall be deemed to include, subject to the limitations set forth above, any legal or other expenses incurred by such Indemnified Person in connection with any such action or claim. Notwithstanding the provisions of paragraphs (d) and (e), in no event shall an Underwriter be required to contribute any amount

in excess of the amount by which the total underwriting discounts and commissions received by such Underwriter with respect to the offering of the Shares exceeds the amount of any damages that such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations to contribute pursuant to paragraphs (d) and (e) are several in proportion to their respective purchase obligations hereunder and not joint.

(f) *Non-Exclusive Remedies.* The remedies provided for in paragraphs (a) through (e) are not exclusive and shall not limit any rights or remedies which may otherwise be available to any Indemnified Person at law or in equity.

8. Effectiveness of Agreement. This Agreement shall become effective as of the date first written above.

9. Termination. This Agreement may be terminated in the absolute discretion of the Representatives, by notice to the Company, if after the execution and delivery of this Agreement and on or prior to the Closing Date or, in the case of the Option Shares, prior to the Additional Closing Date (i) trading generally shall have been suspended or materially limited on or by any of the New York Stock Exchange or The Nasdaq Stock Market; (ii) trading of any securities issued or guaranteed by the Company shall have been suspended on any exchange or in any over-the-counter market; (iii) a general moratorium on commercial banking activities shall have been declared by federal or New York State authorities; or (iv) there shall have occurred any outbreak or escalation of hostilities or any change in financial markets or any calamity or crisis, either within or outside the United States, that, in the judgment of the Representatives, is material and adverse and makes it impracticable or inadvisable to proceed with the offering, sale or delivery of the Shares on the Closing Date or the Additional Closing Date, as the case may be, on the terms and in the manner contemplated by this Agreement, the Pricing Disclosure Package and the Prospectus.

10. Defaulting Underwriter.

(a) If, on the Closing Date or the Additional Closing Date, as the case may be, any Underwriter defaults on its obligation to purchase the Shares that it has agreed to purchase hereunder on such date, the non-defaulting Underwriters may in their discretion arrange for the purchase of such Shares by other persons satisfactory to the Company on the terms contained in this Agreement. If, within 36 hours after any such default by any Underwriter, the non-defaulting Underwriters do not arrange for the purchase of such Shares, then the Company shall be entitled to a further period of 36 hours within which to procure other persons satisfactory to the non-defaulting Underwriters to purchase such Shares on such terms. If other persons become obligated or agree to purchase the Shares of a defaulting Underwriter, either the non-defaulting Underwriters or the Company may postpone the Closing Date or the Additional Closing Date, as the case may be, for up to five full business days in order to effect any changes that in the opinion of counsel for the Company or counsel for the Underwriters may be necessary in the Registration Statement and the Prospectus or in any other document or arrangement, and the

Company agrees to promptly prepare any amendment or supplement to the Registration Statement and the Prospectus that effects any such changes. As used in this Agreement, the term "Underwriter" includes, for all purposes of this Agreement unless the context otherwise requires, any person not listed in Schedule 1 hereto that, pursuant to this Section 10, purchases Shares that a defaulting Underwriter agreed but failed to purchase.

(b) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by the non-defaulting Underwriters and the Company as provided in paragraph (a) above, the aggregate number of Shares that remain unpurchased on the Closing Date or the Additional Closing Date, as the case may be, does not exceed one-eleventh of the aggregate number of Shares to be purchased on such date, then the Company shall have the right to require each non-defaulting Underwriter to purchase the number of Shares that such Underwriter agreed to purchase hereunder on such date plus such Underwriter's pro rata share (based on the number of Shares that such Underwriter agreed to purchase on such date) of the Shares of such defaulting Underwriter or Underwriters for which such arrangements have not been made.

(c) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by the non-defaulting Underwriters and the Company as provided in paragraph (a) above, the aggregate number of Shares that remain unpurchased on the Closing Date or the Additional Closing Date, as the case may be, exceeds one-eleventh of the aggregate amount of Shares to be purchased on such date, or if the Company shall not exercise the right described in paragraph (b) above, then this Agreement or, with respect to any Additional Closing Date, the obligation of the Underwriters to purchase Shares on the Additional Closing Date, as the case may be, shall terminate without liability on the part of the non-defaulting Underwriters. Any termination of this Agreement pursuant to this Section 10 shall be without liability on the part of the Company, except that the Company will continue to be liable for the payment of expenses as set forth in Section 11 hereof and except that the provisions of Section 7 hereof shall not terminate and shall remain in effect.

(d) Nothing contained herein shall relieve a defaulting Underwriter of any liability it may have to the Company or any non-defaulting Underwriter for damages caused by its default.

11. Payment of Expenses.

(a) Whether or not the transactions contemplated by this Agreement are consummated or this Agreement is terminated, the Company will pay or cause to be paid all costs and expenses incident to the performance of its obligations hereunder, including without limitation, (i) the costs incident to the authorization, issuance, sale, preparation and delivery of the Shares and any taxes payable in that connection; (ii) the costs incident to the preparation, printing and filing under the Securities Act of the Registration Statement, the Preliminary Prospectus, any Issuer Free Writing Prospectus, any Pricing Disclosure Package and the Prospectus (including all exhibits, amendments and supplements thereto) and the distribution thereof; (iii) the fees and expenses of the Company's counsel and independent accountants; (iv) the fees and expenses incurred in connection with the registration or qualification and determination of eligibility for investment of the Shares under the laws of such jurisdictions as

the Representatives may designate and the preparation, printing and distribution of a Blue Sky Memorandum (including the related fees and expenses of counsel for the Underwriters); (v) the cost of preparing stock certificates; (vi) the costs and charges of any transfer agent and any registrar; (vii) all expenses and application fees incurred in connection with any filing with, and clearance of the offering by, FINRA (in an amount not to exceed, when taken together with costs, fees and expenses incurred pursuant to clause (iv), $40,000 (exclusive of filing fees)) without the prior written consent of the Company; (viii) all reasonable and documented expenses incurred by the Company in connection with any "road show" presentation to potential investors, provided, however, that the Company and the Underwriters shall each pay 50% of the total costs of chartering any aircraft to be used in connection with any such "road shows"; and (ix) all expenses and application fees related to the listing of the Shares on Nasdaq.

(b) If (i) this Agreement is terminated pursuant to Section 9, (ii) the Company for any reason fails to tender the Shares for delivery to the Underwriters (other than by reason of a default by any Underwriter) or (iii) the Underwriters decline to purchase the Shares for any reason permitted under this Agreement, the Company agrees to reimburse the Underwriters for all out-of-pocket costs and expenses (including the reasonably incurred fees and expenses of their counsel) reasonable and documented by the Underwriters in connection with this Agreement and the offering contemplated hereby. For the avoidance of doubt, the Company will not be required to pay or reimburse any costs, fees or expenses incurred by any Underwriter that defaults on its obligations to purchase the Shares, as described in Section 10 hereof.

12. Persons Entitled to Benefit of Agreement. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and the officers and directors and any controlling persons referred to herein, and the affiliates of each Underwriter referred to in Section 7 hereof. Nothing in this Agreement is intended or shall be construed to give any other person any legal or equitable right, remedy or claim under or in respect of this Agreement or any provision contained herein. No purchaser of Shares from any Underwriter shall be deemed to be a successor merely by reason of such purchase.

13. Survival. The respective indemnities, rights of contribution, representations, warranties and agreements of the Company and the Underwriters contained in this Agreement or made by or on behalf of the Company or the Underwriters pursuant to this Agreement or any certificate delivered pursuant hereto shall survive the delivery of and payment for the Shares and shall remain in full force and effect, regardless of any termination of this Agreement or any investigation made by or on behalf of the Company or the Underwriters or the directors, officers, controlling persons or affiliates referred to in Section 7 hereof.

14. Certain Defined Terms. For purposes of this Agreement, (a) except where otherwise expressly provided, the term "affiliate" has the meaning set forth in Rule 405 under the Securities Act; (b) the term "business day" means any day other than a day on which banks are permitted or required to be closed in New York City; and (c) the term "subsidiary" has the meaning set forth in Rule 405 under the Securities Act.

15. Compliance with USA Patriot Act. In accordance with the requirements of the USA Patriot Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)), the

Underwriters are required to obtain, verify and record information that identifies their respective clients, including the Company, which information may include the name and address of their respective clients, as well as other information that will allow the Underwriters to properly identify their respective clients.

16. Miscellaneous.

(a) *Notices*. All notices and other communications hereunder shall be in writing and shall be deemed to have been duly given if mailed or transmitted and confirmed by any standard form of telecommunication. Notices to the Underwriters shall be given to the Representatives c/o J.P. Morgan Securities LLC, 383 Madison Avenue, New York, New York 10179 (fax: (212) 622-8358), Attention Equity Syndicate Desk; c/o Goldman Sachs & Co. LLC, 200 West Street, New York, New York 10282-2198, Attention: Registration Department; Morgan Stanley & Co. LLC, 1585 Broadway, New York, New York 10036 (fax: (212) 507-8999), Attention: Equity Syndicate Desk; and Jefferies LLC, 520 Madison Avenue, New York, New York 10022 (fax: (646) 619-4437), Attention: General Counsel. Notices to the Company shall be given to it at Prime Medicine, Inc., 21 Erie Street, Cambridge, Massachusetts 02139, Attention: Keith Gottesdiener, M.D., with copies to Goodwin Procter LLP, 100 Northern Avenue, Boston, Massachusetts 02210, Attention: Kingsley L. Taft.

(b) *Governing Law.* This Agreement and any claim, controversy or dispute arising under or related to this Agreement shall be governed by and construed in accordance with the laws of the State of New York.

(c) *Submission to Jurisdiction*. The Company hereby submits to the exclusive jurisdiction of the U.S. federal and New York state courts in the Borough of Manhattan in The City of New York in any suit or proceeding arising out of or relating to this Agreement or the transactions contemplated hereby. The Company waives any objection which it may now or hereafter have to the laying of venue of any such suit or proceeding in such courts. The Company agrees that final judgment in any such suit, action or proceeding brought in such court shall be conclusive and binding upon the Company and may be enforced in any court to the jurisdiction of which Company is subject by a suit upon such judgment.

(d) *Waiver of Jury Trial.* Each of the parties hereto hereby waives any right to trial by jury in any suit or proceeding arising out of or relating to this Agreement.

(e) *Recognition of the U.S. Special Resolution Regimes*.

(i) In the event that any Underwriter that is a Covered Entity becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from such Underwriter of this Agreement, and any interest and obligation in or under this Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

(ii) In the event that any Underwriter that is a Covered Entity or a BHC Act Affiliate of such Underwriter becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against such Underwriter are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States.

As used in this Section 16(e):

"BHC Act Affiliate" has the meaning assigned to the term "affiliate" in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k).

"Covered Entity" means any of the following:

(i) a "covered entity" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b);

(ii) a "covered bank" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or

(iii) a "covered FSI" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b).

"Default Right" has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable.

"U.S. Special Resolution Regime" means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

(f) *Counterparts.* This Agreement may be signed in counterparts (which may include counterparts delivered by any standard form of telecommunication), each of which shall be an original and all of which together shall constitute one and the same instrument. The words "execution," "signed," "signature," and words of like import in this Agreement or in any other certificate, agreement or document related to this Agreement, if any, shall include images of manually executed signatures transmitted by facsimile or other electronic format (including, without limitation, "pdf," "tif" or "jpg") and other electronic signatures (including, without limitation, DocuSign and AdobeSign). The use of electronic signatures and electronic records (including, without limitation, any contract or other record created, generated, sent, communicated, received, or stored by electronic means) shall be of the same legal effect, validity and enforceability as a manually executed signature or use of a paper-based record-keeping system to the fullest extent permitted by applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act and any other applicable law, including, without limitation, any state law based on the Uniform Electronic Transactions Act or the Uniform Commercial Code.

(g) *Amendments or Waivers.* No amendment or waiver of any provision of this Agreement, nor any consent or approval to any departure therefrom, shall in any event be effective unless the same shall be in *writing* and signed by the parties hereto.

(h) *Headings.* The headings herein are included for convenience of reference only and are not intended to be part of, or to affect the meaning or interpretation of, this Agreement.

If the foregoing is in accordance with your understanding, please indicate your acceptance of this Agreement by signing in the space provided below.

Very truly yours,

PRIME MEDICINE, INC.

By: _____

Name:

Title:

Accepted: As of the date first written above

J.P. MORGAN SECURITIES LLC
GOLDMAN SACHS & CO. LLC
MORGAN STANLEY & CO. LLC
JEFFERIES LLC

For themselves and on behalf of the
several Underwriters listed
in Schedule 1 hereto.

J.P. MORGAN SECURITIES LLC

By: _____
Name:
Title:

GOLDMAN SACHS & CO. LLC

By: _____
Name:
Title:

MORGAN STANLEY & CO. LLC

By: _____
Name:
Title:

JEFFERIES LLC

By: _____
Name:
Title:

Schedule 1

Underwriter	Number of Shares
J.P. Morgan Securities LLC	[l]
Goldman Sachs & Co. LLC	[l]
Morgan Stanley & Co. LLC	[l]
Jefferies LLC	[l]
Total	[l]

Annex A

a. **Pricing Disclosure Package**

[l]

b. **Pricing Information Provided Orally by Underwriters**

Underwritten Shares: [l] shares

Option Shares: [l] shares

Public Offering Price Per Share: $[l]

Annex B

Written Testing-the-Waters Communications

Investor Presentation dated December 2021

Investor Presentation dated August 2022

Exhibit A

TESTING-THE-WATERS AUTHORIZATION

(to be delivered by the Issuer to J.P. Morgan Securities LLC, Goldman Sachs & Co. LLC, Morgan Stanley & Co. LLC and Jefferies LLC in email or letter form)

In reliance on Section 5(d) of the Securities Act of 1933, as amended (the "Act"), Prime Medicine, Inc. (the "Issuer") hereby authorizes J.P. Morgan Securities LLC ("J.P. Morgan"), Goldman Sachs & Co. LLC ("Goldman Sachs"), Morgan Stanley & Co. LLC ("Morgan Stanley") and Jefferies LLC ("Jefferies"), and their affiliates and their respective employees, to engage on behalf of the Issuer in oral and written communications with potential investors that are "qualified institutional buyers", as defined in Rule 144A under the Act, or institutions that are "accredited investors", within the meaning of Rule 501(a)(1), (a)(2), (a)(3), (a)(7) or (a)(8) under the Act, to determine whether such investors might have an interest in the Issuer's contemplated initial public offering ("Testing-the-Waters Communications"). A "Written Testing-the Waters Communication" means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Act. Each of J.P. Morgan, Goldman Sachs, Morgan Stanley and Jefferies, individually and not jointly, agrees that it shall not distribute any Written Testing-the-Waters Communication that has not been approved by the Issuer.

The Issuer represents that (i) except as disclosed to J.P. Morgan, Goldman Sachs, Morgan Stanley and Jefferies, it has not alone engaged in any Testing-the-Waters Communication and (ii) it has not authorized anyone other than J.P. Morgan, Goldman Sachs, Morgan Stanley and Jefferies to engage in Testing-the-Waters Communications. The Issuer agrees that it shall not authorize any other third party to engage on its behalf in oral or written communications with potential investors without the written consent of J.P. Morgan, Goldman Sachs, Morgan Stanley and Jefferies while this authorization is in effect. The issuer also represents that it is an "emerging growth company" as defined in Section 2(a)(19) of the Act ("Emerging Growth Company") and agrees to promptly notify J.P. Morgan, Goldman Sachs, Morgan Stanley and Jefferies in writing if the Issuer hereafter ceases to be an Emerging Growth Company while this authorization is in effect. If at any time following the distribution of any Written Testing-the-Waters Communication there occurred or occurs an event or development as a result of which such Written Testing-the-Waters Communication included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Issuer will promptly notify J.P. Morgan, Goldman Sachs, Morgan Stanley and Jefferies and will promptly amend or supplement, at its own expense, such Written Testing-the-Waters Communication to eliminate or correct such untrue statement or omission.

Nothing in this authorization is intended to limit or otherwise affect the ability of J.P. Morgan, Goldman Sachs, Morgan Stanley and Jefferies, and their affiliates and their respective

employees, to engage in communications in which they could otherwise lawfully engage in the absence of this authorization, including, without limitation, any written communication containing only one or more of the statements specified under Rule 134(a) under the Act. This authorization shall remain in effect until the Issuer has provided to J.P. Morgan, Goldman Sachs, Morgan Stanley and Jefferies a written notice revoking this authorization. All notices as described herein shall be sent by email to J.P. Morgan to the attention of David Ke at david.ke@jpmorgan.com, to Goldman Sachs to the attention of Lyla Bibi at lyla.bibi@gs.com, to Morgan Stanley to the attention of Kathy Bergsteinsson at Kathy.bergsteinsson@morganstanley.com and to Jefferies to the attention of Jesse Mark at jmark@jefferies.com, in each case with copies to Richard D. Truesdell, Jr. at richard.truesdell@davispolk.com and Alain Kuyumjian at alain.kuyumjian@davispolk.com.

Exhibit B

Form of Waiver of Lock-up

J.P. MORGAN SECURITIES LLC
GOLDMAN SACHS & CO. LLC
MORGAN STANLEY & CO. LLC
JEFFERIES LLC

Prime Medicine, Inc.
Public Offering of Common Stock

[_____], 2022

[Name and Address of
Officer or Director
Requesting Waiver]

Dear Mr./Ms. [Name]:

This letter is being delivered to you in connection with the offering by Prime Medicine, Inc. (the "Company") of [l] shares of common stock, $[l] par value (the "Common Stock"), of the Company and the lock-up letter dated _____, 2021 (the "Lock-up Letter"), executed by you in connection with such offering, and your request for a [waiver] [release] dated_____, 2022, with respect to [l] shares of Common Stock (the "Shares").

J.P. Morgan Securities LLC, Goldman Sachs & Co. LLC, Morgan Stanley & Co. LLC and Jefferies LLC hereby agree to [waive] [release] the transfer restrictions set forth in the Lock-up Letter, but only with respect to the Shares, effective _____, 20___; provided, however, that such [waiver] [release] is conditioned on the Company announcing the impending [waiver] [release] by press release through a major news service at least two business days before effectiveness of such [waiver] [release]. This letter will serve as notice to the Company of the impending [waiver] [release].

Except as expressly [waived] [released] hereby, the Lock-up Letter shall remain in full force and effect.

Yours very truly,

[Signature of J.P. Morgan Securities LLC Representative]

[Name of J.P. Morgan Securities LLC Representative]

[Signature of Goldman Sachs & Co. LLC Representative]

[Name of Goldman Sachs & Co. LLC Representative]

[Signature of Morgan Stanley & Co. LLC Representative]

[Name of Morgan Stanley & Co. LLC Representative]

[Signature of Jefferies LLC Representative]

[Name of Jefferies LLC Representative]

cc: Company

Exhibit C

Form of Press Release

Prime Medicine, Inc.
[l]**, 2022**

Prime Medicine, Inc. ("Company") announced today that J.P. Morgan Securities LLC, Goldman Sachs & Co. LLC, Morgan Stanley & Co. LLC and Jefferies LLC, the representatives of the underwriters in the Company's recent public sale of [l] shares of common stock, are [waiving][releasing] a lock-up restriction with respect to [l] shares of the Company's common stock held by [certain officers or directors] [an officer or director] of the Company. The [waiver][release] will take effect on [_____], 2022, and the shares may be sold on or after such date.

This press release is not an offer for sale of the securities in the United States or in any other jurisdiction where such offer is prohibited, and such securities may not be offered or sold in the United States absent registration or an exemption from registration under the United States Securities Act of 1933, as amended.

Exhibit D

FORM OF LOCK-UP AGREEMENT

[l], 2022

J.P. Morgan Securities LLC
Goldman Sachs & Co. LLC
Morgan Stanley & Co. LLC
Jefferies LLC

As Representatives of
the several Underwriters listed in
Schedule 1 to the Underwriting
Agreement referred to below

c/o J.P. Morgan Securities LLC
383 Madison Avenue
New York, New York 10179

c/o Goldman Sachs & Co. LLC
200 West Street
New York, NY 10282-2198

c/o Morgan Stanley & Co. LLC
1585 Broadway
New York, New York 10036

c/o Jefferies LLC
520 Madison Avenue
New York, New York 10022

Re: Prime Medicine, Inc. – Public Offering

Ladies and Gentlemen:

The undersigned understands that you, as Representatives of the several Underwriters, propose to enter into an underwriting agreement (the "Underwriting Agreement") with Prime Medicine, Inc., a Delaware corporation (the "Company"), providing for the public offering (the "Public Offering") by the several Underwriters named in Schedule 1 to the Underwriting Agreement (the "Underwriters"), of common stock, par value $0.00001 per share, of the Company (the "Securities"). Capitalized terms used herein and not otherwise defined shall have the meanings set forth in the Underwriting Agreement.

In consideration of the Underwriters' agreement to purchase and make the Public Offering of the Securities, and for other good and valuable consideration receipt of which is

hereby acknowledged, the undersigned hereby agrees that, without the prior written consent of the Representatives on behalf of the Underwriters, the undersigned will not, and will not cause any direct or indirect affiliate to, during the period beginning on the date of this letter agreement (this "Letter Agreement") and ending at the close of business 180 days after the date of the final prospectus relating to the Public Offering (the "Prospectus") (such period, the "Restricted Period"), (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of common stock, $0.00001 per share par value, of the Company (the "Common Stock") or any securities convertible into or exercisable or exchangeable for Common Stock (including without limitation, Common Stock or such other securities which may be deemed to be beneficially owned by the undersigned in accordance with the rules and regulations of the Securities and Exchange Commission and securities which may be issued upon exercise of a stock option or warrant) (collectively with the Common Stock, "Lock-Up Securities"), (2) enter into any hedging, swap or other agreement or transaction that transfers, in whole or in part, any of the economic consequences of ownership of the Lock-Up Securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Lock-Up Securities, in cash or otherwise, (3) make any demand for or exercise any right with respect to the registration of any Lock-Up Securities, or (4) publicly disclose the intention to do any of the foregoing. The undersigned acknowledges and agrees that the foregoing precludes the undersigned from engaging in any hedging or other transactions or arrangements (including, without limitation, any short sale or the purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) designed or intended, or which could reasonably be expected to lead to or result in, a sale or disposition or transfer (whether by the undersigned or any other person) of any economic consequences of ownership, in whole or in part, directly or indirectly, of any Lock-Up Securities, whether any such transaction or arrangement (or instrument provided for thereunder) would be settled by delivery of Lock-Up Securities, in cash or otherwise. The undersigned further confirms that (1) neither the undersigned, nor any of its affiliates, is a party to as of the date hereof, any transaction which would have been restricted by this Letter Agreement if it had been entered into by the undersigned during the Restricted Period or (2) it has furnished the Representatives with the details of any transaction the undersigned, or any of its affiliates, is a party to as of the date hereof, which transaction would have been restricted by this Letter Agreement if it had been entered into by the undersigned during the Restricted Period.

Notwithstanding the foregoing, the undersigned may:

(a) transfer or dispose of the undersigned's Lock-Up Securities:

(i) as a bona fide gift or gifts, or for bona fide estate planning purposes,

(ii) by will or intestacy or other testamentary document,

(iii) to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned, or if the undersigned is a trust, to a trustor or beneficiary of the trust or to the estate of a beneficiary of such trust (for purposes of this Letter Agreement, "immediate

family" shall mean any relationship by blood, current or former marriage, domestic partnership or adoption, not more remote than first cousin),

(iv) to a corporation, partnership, limited liability company, investment fund or other entity (A) of which the undersigned and/or the immediate family of the undersigned are the legal and beneficial owner of all of the outstanding equity securities or similar interests, or (B) controlled by, or under common control with, the undersigned or the immediate family of the undersigned,

(v) to a nominee or custodian of a person or entity to whom a disposition or transfer would be permissible under clauses (i) through (iv) above,

(vi) if the undersigned is a corporation, partnership, limited liability company, trust or other business entity, (A) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate (as defined in Rule 405 promulgated under the Securities Act of 1933, as amended) of the undersigned, or to any investment fund or other entity controlling, controlled by, managing or managed by or under common control or common investment management with the undersigned or affiliates of the undersigned (including, for the avoidance of doubt, where the undersigned is a partnership, to its general partner or a successor partnership or fund, or any other funds managed by such partnership), or (B) as part of a distribution to limited partners, members or shareholders of the undersigned,

(vii) by operation of law, such as pursuant to a qualified domestic order, divorce settlement, divorce decree or separation agreement,

(viii) to the Company from an employee of the Company upon death, disability or termination of employment, in each case, of such employee,

(ix) as part of a sale of the undersigned's Lock-Up Securities acquired in the Public Offering (other than, if the undersigned is an officer or director of the Company or an affiliated purchaser (as defined under Regulation M), Company-directed Securities acquired in the Public Offering) or in open market transactions after the pricing date for the Public Offering,

(x) to the Company in connection with the vesting, settlement, or exercise of restricted stock units, options, warrants or other rights to purchase shares of Common Stock (including, in each case, by way of "net" or "cashless" exercise), including for the payment of exercise price and tax and remittance payments due as a result of the vesting, settlement, or exercise of such restricted stock units, options, warrants or rights, provided that any such shares of Common Stock received upon such exercise, vesting or settlement shall be subject to the terms of this Letter Agreement, and provided further that any such restricted stock units, options, warrants or rights are held by the undersigned pursuant to an agreement or equity awards granted under a stock incentive plan or other equity award plan, each such agreement or plan which is described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, or

(xi) pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction that is approved by the Board of Directors of the Company and made to all holders of

the Company's capital stock involving a Change of Control (as defined below) of the Company (for purposes hereof, "Change of Control" shall mean the transfer (whether by tender offer, merger, consolidation or other similar transaction), in one transaction or a series of related transactions, to a person or group of affiliated persons, of shares of capital stock if, after such transfer, such person or group of affiliated persons would hold at least a majority of the outstanding voting securities of the Company (or the surviving entity)); provided that in the event that such tender offer, merger, consolidation or other similar transaction is not completed, the undersigned's Lock-Up Securities shall remain subject to the provisions of this Letter Agreement; provided that (A) in the case of any transfer or distribution pursuant to clause (a)(i), (ii), (iii), (iv), (v), (vi) and (vii), such transfer shall not involve a disposition for value and each donee, devisee, transferee or distributee shall execute and deliver to the Representatives a lock-up letter in the form of this Letter Agreement, (B) in the case of any transfer or distribution pursuant to clause (a) (i), (ii), (iii), (iv), (v), (vi) and (ix), no filing by any party (donor, donee, devisee, transferor, transferee, distributer or distributee) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or other public announcement shall be required or shall be made voluntarily in connection with such transfer or distribution (other than a filing on a Form 5 or a filing required pursuant to Section 13 of the Exchange Act and the rules and regulations promulgated thereunder made after the expiration of the Restricted Period referred to above) and (C) in the case of any transfer or distribution pursuant to clause (a)(vii), (viii) and (x) it shall be a condition to such transfer that no public filing, report or announcement shall be voluntarily made and if any filing under Section 16(a) of the Exchange Act, or other public filing, report or announcement reporting a reduction in beneficial ownership of shares of Common Stock in connection with such transfer or distribution shall be legally required during the Restricted Period, such filing, report or announcement shall clearly indicate in the footnotes thereto the nature and conditions of such transfer;

(b) exercise outstanding options, settle restricted stock units or other equity awards or exercise warrants pursuant to plans described in the Registration Statement, the Pricing Disclosure Package and the Prospectus; provided that any Lock-up Securities received upon such exercise, vesting or settlement shall be subject to the terms of this Letter Agreement;

(c) convert outstanding preferred stock, warrants to acquire preferred stock or convertible securities into shares of Common Stock or warrants to acquire shares of Common Stock; provided that any such shares of Common Stock or warrants received upon such conversion shall be subject to the terms of this Letter Agreement; and

(d) establish trading plans pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of Lock-Up Securities; provided that (1) such plans do not provide for the transfer of Lock-Up Securities during the Restricted Period and (2) no filing by any party under the Exchange Act or other public announcement shall be required or made voluntarily in connection with such trading plan.

If the undersigned is not a natural person, the undersigned represents and warrants that no single natural person, entity or "group" (within the meaning of Section 13(d)(3) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) beneficially owns, directly or

indirectly, 50% or more of the common equity interests, or 50% or more of the voting power, in the undersigned.

If the undersigned is an officer or director of the Company, the undersigned further agrees that the foregoing provisions shall be equally applicable to any Company-directed Securities the undersigned may purchase in the Public Offering.

If the undersigned is an officer or director of the Company, (i) the Representatives on behalf of the Underwriters agree that, at least three business days before the effective date of any release or waiver of the foregoing restrictions in connection with a transfer of Lock-Up Securities, the Representatives on behalf of the Underwriters will notify the Company of the impending release or waiver, and (ii) the Company has agreed in the Underwriting Agreement to announce the impending release or waiver through a major news service at least two business days before the effective date of the release or waiver. Any release or waiver granted by the Representatives on behalf of the Underwriters hereunder to any such officer or director shall only be effective two business days after the publication date of such announcement. The provisions of this paragraph will not apply if (a) the release or waiver is effected solely to permit a transfer not for consideration or that is to an immediate family member as defined in FINRA Rule 5130(i)(5) and (b) the transferee has agreed in writing to be bound by the same terms described in this letter to the extent and for the duration that such terms remain in effect at the time of the transfer.

In furtherance of the foregoing, the Company, and any duly appointed transfer agent for the registration or transfer of the securities described herein, are hereby authorized to decline to make any transfer of securities if such transfer would constitute a violation or breach of this Letter Agreement.

The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this Letter Agreement. All authority herein conferred or agreed to be conferred and any obligations of the undersigned shall be binding upon the successors, assigns, heirs or personal representatives of the undersigned.

The undersigned acknowledges and agrees that the Underwriters have not provided any recommendation or investment advice nor have the Underwriters solicited any action from the undersigned with respect to the Public Offering of the Securities and the undersigned has consulted their own legal, accounting, financial, regulatory and tax advisors to the extent deemed appropriate. The undersigned further acknowledges and agrees that, although the Representatives may be required or choose to provide certain Regulation Best Interest and Form CRS disclosures to you in connection with the Public Offering, the Representatives and the other Underwriters are not making a recommendation to you to enter into this Letter Agreement, and nothing set forth in such disclosures is intended to suggest that any Representative or Underwriter is making such a recommendation.

The undersigned understands that, if the Underwriting Agreement does not become effective by December 31, 2022, or if the Underwriting Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated prior to payment for and

delivery of the Common Stock to be sold thereunder, the undersigned shall be released from all obligations under this Letter Agreement. The undersigned understands that the Underwriters are entering into the Underwriting Agreement and proceeding with the Public Offering in reliance upon this Letter Agreement.

This Letter Agreement and any claim, controversy or dispute arising under or related to this Letter Agreement shall be governed by and construed in accordance with the laws of the State of New York.

Very truly yours,

By: _____
Name:
Title:

SECOND AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
PRIME MEDICINE, INC.

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

Prime Medicine, Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the **"General Corporation Law"),**

DOES HEREBY CERTIFY:

1. That the name of this corporation is Prime Medicine, Inc., and that this corporation was originally incorporated pursuant to the General Corporation Law on September 13, 2019 under the name Prime Medicine, Inc.

2. That the Board of Directors of the Corporation (the **"Board of Directors")** duly adopted resolutions proposing to amend and restate the Amended and Restated Certificate of Incorporation of this corporation, declaring said amendment and restatement to be advisable and in the best interests of this corporation and its stockholders, and authorizing the appropriate officers of this corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed amendment and restatement is as follows:

RESOLVED, that the Amended and Restated Certificate of Incorporation of this corporation be further amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Prime Medicine, Inc. (the **"Corporation").**

SECOND: The address of the registered office of the Corporation in the State of Delaware is 1209 Orange Street, in the City of Wilmington, County of New Castle, Zip Code 19801. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 293,258,790 shares of Common Stock, $0.00001 par value per share **("Common Stock")** and (ii) 161,420,799 shares of Preferred Stock, $0.00001 par value per share **("Preferred Stock").**

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of the Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings); provided, however, that, except as otherwise required by law, holders of Common Stock, as such, shall not be entitled to vote on any amendment to this Second Amended and Restated Certificate of Incorporation that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together with the holders of one or more other such series, to vote thereon pursuant to this Second Amended and Restated Certificate of Incorporation or pursuant to the General Corporation Law. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of this Second Amended and Restated Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Corporation representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

B. PREFERRED STOCK

115,761,842 shares of the authorized and unissued Preferred Stock of the Corporation are hereby designated **"Series A Preferred Stock",** and 45,658,957 shares of the authorized and unissued Preferred Stock of the Corporation are hereby designed **"Series B Preferred Stock",** each with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations. Unless otherwise indicated, references to "sections" or "subsections" in this Part B of this Article Fourth refer to sections and subsections of Part B of this Article Fourth.

1. Dividends.

From and after the date of the issuance of any shares of Series A Preferred Stock, dividends at the rate per annum of $0.08 per share shall accrue on such shares of Series A Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock) (the **"Series A Accruing Dividends").** From and after the date of the issuance of any shares of Series B Preferred Stock, dividends at the rate per annum of $0.35 per share shall accrue on such shares of Series B Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock) (the **"Series B Accruing Dividends",** and together with the Series A Accruing Dividends, the **"Accruing Dividends").** Accruing Dividends shall accrue from day to day, whether or not declared, and shall be cumulative; provided, however, that except as set forth in the following sentence of this Section I or in Subsection 2.1, such Accruing Dividends shall be payable only when, as, and if declared by the Board of Directors and the Corporation shall be under no obligation to pay such Accruing Dividends. The Corporation shall not declare, pay or set aside any dividends on shares of any class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in this Second Amended and Restated Certificate of Incorporation) the holders of the Preferred Stock then outstanding shall first receive, or simultaneously receive, on a pari passu basis, a dividend on each outstanding share of Preferred Stock in an amount at least equal to the greater of (i) the amount of the aggregate Accruing Dividends then accrued on such share of Preferred Stock and not previously paid and (ii) (A) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that

dividend per share of Preferred Stock as would equal the product of (I) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (2) the number of shares of Common Stock issuable upon conversion of a share of such series of Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend or (B) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Preferred Stock determined by (1) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) and (2) multiplying such fraction by an amount equal to the Original Issue Price (as defined below) for such series of Preferred Stock; provided that if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of a series of Preferred Stock pursuant to this Section 1 shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest dividend for such series of Preferred Stock. The **"Series A Original Issue Price"** shall mean $1.0000 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock. The **"Series B Original Issue Price"** shall mean $4.3803 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock. The term **"Original Issue Price"** shall be used to refer to the Series A Original Issue Price and/or the Series B Original Issue Price, as the case may be.

2. Liquidation. Dissolution or Winding Up: Certain Mergers. Consolidations and Asset Sales.

2.1 Preferential Payments to Holders of Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, each holder of a share of Preferred Stock then outstanding shall be entitled, on a pari passu basis, to be paid its respective Preference Amount (as defined below), as applicable, out of the assets of the Corporation available for distribution to its stockholders, and in the event of a Deemed Liquidation Event (as defined below), each holder of a share of Preferred Stock then outstanding shall be entitled, on a pari passu basis, to be paid its respective Preference Amount, as applicable, out of the consideration payable to stockholders in such Deemed Liquidation Event or out of the Available Proceeds (as defined below), and in each case as applicable, before any payment shall be made to the holders of Common Stock by reason of their ownership thereof, which Preference Amount shall be an amount per share equal to (i) in the case of the Series A Preferred Stock, one times the Series A Original Issue Price, plus any Accruing Dividends accrued but unpaid thereon, whether or not declared, together with any other dividends declared but unpaid thereon (such amount, the **"Series A Preference Amount"** and the aggregate of the Series A Preference Amount and the amount which a holder of a share of Series A Preferred Stock is also entitled to receive under Subsection 2.2 below collectively is hereinafter referred to as the **"Series A Liquidation Amount"),** and (ii) in the case of the Series B Preferred Stock, an amount per share equal to the Series B Preference Amount (as defined in the next sentence) if, and only if, the amount set forth in clause (x) of the next sentence is greater than the amount set forth in clause (y) of the next sentence; provided that if clause (y) is the greater amount, the last sentence of Section 2.2 shall govern the distribution to the holders of the Series B Preferred Stock in lieu of this clause (ii). Without duplication of the foregoing or of the last sentence of Section 2.2, each holder of a share of Series B Preferred Stock is entitled to the greater of (x) an amount per share equal to one times the Series B Original Issue Price, plus any Accruing Dividends accrued but unpaid thereon, whether or not declared, together with any other dividends declared but unpaid thereon (if clause x is the greater amount, such amount the **"Series B Preference Amount")** or

(y) such amount per share as would have been payable had all shares of Preferred Stock been converted into Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event to share in any remaining proceeds in accordance with Section 2.2 after the payment of the Series A Preference Amount in this Section 2.1 (the amount payable to a holder of a share of Series B Preferred Stock is hereinafter referred to as the **"Series B Liquidation Amount").** The term **"Liquidation Amount"** shall be used to refer to the Series A Liquidation Amount and/or the Series B Liquidation Amount, as the case may be. The term **"Preference Amount"** shall be used to refer to the Series A Preference Amount, and if applicable, the Series B Preference Amount.

2.2 Payments to Holders of Common Stock, Series A Preferred Stock and Series B Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, after the payment in full of the Series A Preference Amount, and if applicable pursuant to Section 2.1, the Series B Preference Amount, the remaining assets of the Corporation available for distribution to its stockholders or, in the case of a Deemed Liquidation Event, the consideration not payable to the holders of shares of Series A Preferred Stock in respect of the Series A Preference Amount and the consideration not payable to the holders of shares of the Series B Preferred Stock in respect of the Series B Preference Amount if such Series B Preference Amount is applicable pursuant to Section 2.1, or the remaining Available Proceeds, as the case may be, shall be distributed among the holders of shares of the Series A Preferred Stock and Common Stock, pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to Common Stock pursuant to the terms of this Second Amended and Restated Certificate of Incorporation immediately prior to such Deemed Liquidation Event, liquidation, dissolution or winding up of the Corporation; provided that the foregoing described distribution shall include distribution to the holders of Series B Preferred Stock in accordance with the next sentence if clause (y) in Section 2.1 is the greater amount. Without limiting the effects of the foregoing sentence and without duplication, if clause (y) in Section 2.1 is the greater amount, then the amount payable to the holders of Series B Preferred Stock pursuant to clause (y) shall be distributed to the holders of shares of the Series B Preferred Stock along with distribution to the holders of shares of the Series A Preferred Stock and Common Stock, pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to Common Stock pursuant to the terms of this Second Amended and Restated Certificate of Incorporation immediately prior to such Deemed Liquidation Event, liquidation, dissolution or winding up of the Corporation.

2.3 Deemed Liquidation Events.

2.3.1 Definition. Each of the following events shall be considered a **"Deemed Liquidation Event"** unless the holders of at least majority of the outstanding shares of Preferred Stock (the **"Requisite Holders")** elect otherwise by written notice sent to the Corporation at least 10 days prior to the effective date of any such event:

(a) a merger or consolidation in which

(i) the Corporation is a constituent party or

(ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation,

except any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, at least a majority, by voting power, of the capital stock of (1) the surviving or resulting corporation; or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation; or

(b) (1) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets of the Corporation and its subsidiaries taken as a whole, or (2) the sale or disposition (whether by merger, consolidation or otherwise, and whether in a single transaction or a series of related transactions) of one or more subsidiaries of the Corporation if substantially all of the assets of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation.

2.3.2 Effecting a Deemed Liquidation Event.

(a) The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in Subsection 2.3.l(a)(i) unless the agreement or plan of merger or consolidation for such transaction (the **"Merger Agreement")** provides that the consideration payable to the stockholders of the Corporation in such Deemed Liquidation Event shall be paid to the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2.

(b) In the event of a Deemed Liquidation Event referred to in Subsection 2.3.l(a)(ii) or 2.3.l(b), if the Corporation does not effect a dissolution of the

Corporation under the General Corporation Law within ninety (90) days after such Deemed Liquidation Event, then (i) the Corporation shall send a written notice (a **"Liquidation Redemption Notice")** to each holder of Preferred Stock no later than the ninetieth (90^{th}) day after the Deemed Liquidation Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clause; (ii) to require the redemption of such shares of Preferred Stock, and (iii) if the Requisite Holders so request in a written instrument delivered to the Corporation not later than one hundred twenty (120) days after such Deemed Liquidation Event **("Redemption Request Deadline"),** the Corporation shall use the consideration received by the Corporation for such Deemed Liquidation Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board of Directors), together with any other assets of the Corporation available for distribution to its stockholders, all to the extent permitted by Delaware law governing distributions to stockholders (the **"Available Proceeds"),** on the one hundred fiftieth (150^{th}) day after such Deemed Liquidation Event (the **"Liquidation Redemption Date"),** to redeem all outstanding shares of Preferred Stock at a price per share equal to the Liquidation Amount applicable to the series of Preferred Stock being redeemed. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Available Proceeds are not sufficient to redeem all outstanding shares of Preferred Stock, the Corporation shall redeem on a pari passu basis a pro rata portion of each holder's shares of Preferred Stock to the fullest extent of such Available Proceeds, based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the Available Proceeds were sufficient to redeem all such shares, and shall redeem the remaining shares as soon as it may lawfully do so under

Delaware law governing distributions to stockholders. Prior to the distribution or redemption provided for in this Subsection 2.3.2(b), the Corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with such Deemed Liquidation Event or in the ordinary course of business.

(c) Each Liquidation Redemption Notice shall state:

(i) the number of shares of Preferred Stock that the Corporation may be obligated to redeem;

(ii) the Redemption Request Deadline and the Liquidation Redemption Date;

(iii) each applicable Liquidation Amount; and

(iv) the manner and place designated for the holder to surrender his, her or its certificate or certificates representing the shares of Preferred Stock.

2.3.3 Amount Deemed Paid or Distributed. The amount deemed paid or distributed to the holders of capital stock of the Corporation upon any such merger, consolidation, sale, transfer, exclusive license, other disposition or redemption shall be the cash or the value of the property, rights or securities to be paid or distributed to such holders pursuant to such Deemed Liquidation Event. The value of such property, rights or securities shall be determined in good faith by the Board of Directors, including the approval of at least a majority of the Series A Directors (as defined herein).

2.3.4 Allocation of Escrow and Contingent Consideration. In the event of a Deemed Liquidation Event pursuant to Subsection 2.3.l(a)(i), if any portion of the consideration payable to the stockholders of the Corporation is payable only upon satisfaction of contingencies (the **"Additional Consideration"),** the Merger Agreement shall provide that (a) the portion of such consideration that is not Additional Consideration (such portion, the **"Initial Consideration")** shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2 as if the Initial Consideration were the only consideration payable in connection with such Deemed Liquidation Event; and (b) any Additional Consideration which becomes payable to the stockholders of the Corporation upon satisfaction of such contingencies shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2 after taking into account the previous payment of the Initial Consideration as part of the same transaction. For the purposes of this Subsection 2.3.4, consideration placed into escrow or retained as a holdback to be available for satisfaction of indemnification or similar obligations in connection with such Deemed Liquidation Event shall be deemed to be Additional Consideration.

3. Voting.

3.1 General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as

provided by law or by the other provisions of this Second Amended and Restated Certificate of Incorporation, holders of Preferred Stock shall vote together with the holders of Common Stock as a single class and on an as-converted to Common Stock basis.

3.2 Election of Directors. The holders of record of the shares of Series A Preferred Stock, exclusively and as a separate class, shall be entitled to elect 3 directors of the Corporation (the **"Series A Directors").** Any director elected as provided in the preceding sentence may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. If the holders of shares of Series A Preferred Stock fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors, voting exclusively and as a separate class, pursuant to the first sentence of this Subsection 3.2, then any directorship not so filled shall remain vacant until such time as the holders of the Series A Preferred Stock elect a person to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship, voting exclusively and as a separate class. The holders of record of the shares of Common Stock and of any other class or series of voting stock (including the Preferred Stock), exclusively and voting together as a single class, shall be entitled to elect the balance of the total number of directors of the Corporation. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. Except as otherwise provided in this Subsection 3.2, a vacancy in any directorship filled by the holders of any class or series shall be filled only by vote or written consent in lieu of a meeting of the holders of such class or series or by any remaining director or directors elected by the holders of such class or series pursuant to this Subsection 3.2.

3.3 Preferred Stock Protective Provisions. At any time when shares of Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Second Amended and Restated Certificate of Incorporation) the written consent or affirmative vote of the Requisite Holders given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio,* and of no force or effect.

3.3.1 liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any merger or consolidation or any other Deemed Liquidation Event, or consent to any of the foregoing;

3.3.2 amend, alter or repeal any provision of this Second Amended and Restated Certificate of Incorporation or Bylaws of the Corporation; and further, that (i) any amendment, alteration, or repeal of this Second Amended and Restated Certificate that would adversely affect the rights of the Series A Preferred Stock in Sections 2.1 and 2.2 shall also require the vote of the Requisite Series A Holders (as defined below), provided that, for the avoidance of doubt, the authorization or issuance of any other series or class of capital stock ranking junior, pari passu or senior to the Series A Preferred Stock shall not in and of itself be deemed to adversely affect the payment rights of the Series A Preferred Stock that would require the vote of the Requisite Series A Holders and (ii) any amendment, alteration, or repeal

of this Second Amended and Restated Certificate that would adversely affect the payment rights of the Series B Preferred Stock in Sections 2.1 and 2.2 shall also require the vote of the Requisite Series B Holders (as defined below), provided that, for the avoidance of doubt, the authorization or issuance of any other series or class of capital stock ranking junior, pari passu or senior to the Series B Preferred Stock shall not in and of itself be deemed to adversely affect the payment rights of the Series B Preferred Stock that would require the vote of the Requisite Series B Holders.

3.3.3 create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class or series of capital stock unless the same ranks junior to the Series A Preferred Stock and the Series B Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption, or increase the authorized number of shares of Series A Preferred Stock or Series B Preferred Stock, or increase the authorized number of shares of any additional class or series of capital stock of the Corporation unless the same ranks junior to the Series A Preferred Stock and the Series B Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption;

3.3.4 (i) reclassify, alter or amend any existing security of the Corporation that is pari passu with the Series A Preferred Stock or the Series B Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to the Series A Preferred Stock or the Series B Preferred Stock in respect of any such right, preference, or privilege or (ii) reclassify, alter or amend any existing security of the Corporation that is junior to the Series A Preferred Stock or the Series B Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or pari passu with the Series A Preferred Stock or the Series B Preferred Stock in respect of any such right, preference or privilege;

3.3.5 cause or permit any of its subsidiaries to sell, issue, sponsor, create or distribute any digital tokens, cryptocurrency or other blockchain-based assets (collectively, "Tokens"), including through a pre-sale, initial coin offering, token distribution event or crowdfunding, or through the issuance of any instrument convertible into or exchangeable for Tokens;

3.3.6 purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Preferred Stock as expressly authorized herein, (ii) dividends or other distributions payable on the Common Stock solely in the form of additional shares of Common Stock and (iii) repurchases of Common Stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at the lower of the original purchase price or the then-current fair market value thereof pursuant to agreements approved by the Board of Directors, including the approval of at least a majority of the Series A Directors;

3.3.7 create, or authorize the creation of, or issue, or authorize the issuance of any debt security or create any lien or security interest (except for purchase money liens or statutory liens of landlords, mechanics, materialmen, workmen, warehousemen and other similar persons arising or incurred in the ordinary course of business) or incur other indebtedness for borrowed money, including but not limited to obligations and contingent obligations under guarantees, or permit any subsidiary to take any such action with respect to any debt security lien, security interest or other indebtedness for borrowed money, unless such debt security or indebtedness for borrowed money, as the case may be, has received the prior approval of the Board of Directors, including the approval of at least a majority of the Series A Directors; or

3.3.8 create, or hold capital stock in, any subsidiary that is not wholly owned (either directly or through one or more other subsidiaries) by the Corporation, or permit any subsidiary to create, or authorize the creation of, or issue or obligate itself to issue, any shares of any class or series of capital stock, or sell, transfer or otherwise dispose of any capital stock of any direct or indirect subsidiary of the Corporation, or permit any direct or indirect subsidiary to sell, lease, transfer, exclusively license or otherwise dispose (in a single transaction or series of related transactions) of all or substantially all of the assets of such subsidiary.

4. Optional Conversion.

The holders of the Preferred Stock shall have conversion rights as follows (the

"Conversion Rights").

4.1 Right to Convert.

4.1.1 Conversion Ratio. Unless otherwise specified herein, each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of Common Stock as is determined by dividing the Original Issue Price for such series of Preferred Stock by the Conversion Price (as defined below) for such series of Preferred Stock in effect at the time of conversion. The **"Series A Conversion Price"** shall initially be equal to $1.0000. Such initial Series A Conversion Price, and the rate at which shares of Series A Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below. The **"Series B Conversion Price"** shall initially be equal to $4.3803. Such initial Series B Conversion Price, and the rate at which shares of Series B Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below. The term **"Conversion Price"** shall be used to refer to the Series A Conversion Price and/or the Series B Conversion Price, as the case may be.

4.1.2 Termination of Conversion Rights. In the event of a notice of redemption of any shares of Preferred Stock, the Conversion Rights of the shares designated for redemption shall terminate at the close of business on the last full day preceding the date fixed for redemption, unless the redemption price is not fully paid on such redemption date, in which case the Conversion Rights for such shares shall continue until such price is paid in full. In the event of a liquidation, dissolution or winding up of the Corporation or a Deemed Liquidation Event, the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Preferred Stock.

4.2 Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors. Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of a series of Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3 Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of Preferred Stock to voluntarily convert shares of Preferred Stock into shares of Common Stock, such holder shall (a) provide written notice to the Corporation's transfer agent at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent) that such holder elects to convert all or any number of such holder's shares of Preferred Stock and, if applicable, any event on which such conversion is contingent and (b), if such holder's shares are certificated, surrender the certificate or certificates for such shares of Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent). Such notice shall state such holder's name or the names of the nominees in which such holder wishes the shares of Common Stock to be issued. If required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such notice and, if applicable, certificates (or lost certificate affidavit and agreement) shall be the time of conversion (the "Conversion Time"), and the shares of Common Stock issuable upon conversion of the specified shares shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time (i) issue and deliver to such holder of Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, (ii) pay in cash such amount as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and (iii) pay all declared but unpaid dividends on the shares of Preferred Stock converted.

4.3.2 Reservation of Shares. The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common

Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to this Second Amended and Restated Certificate of Incorporation. Before taking any action which would cause an adjustment reducing the applicable Conversion Price below the then par value of the shares of Common Stock issuable upon conversion of a series of Preferred Stock, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and non-assessable shares of Common Stock at such adjusted Conversion Price.

4.3.3 Effect of Conversion. All shares of Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of Common Stock in exchange therefor, to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Subsection 4.2 and to receive payment of any dividends declared but unpaid thereon. Any shares of a series of Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of such series of Preferred Stock and Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the applicable Conversion Price for a series of Preferred Stock shall be made for any declared but unpaid dividends on the Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 Adjustments to Conversion Price for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) **"Option"** shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) **"Original Issue Date"** shall mean the date on which the first share of Series B Preferred Stock was issued.

(c) **"Convertible Securities"** shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) **"Additional Shares of Common Stock"** shall mean all shares of Common Stock issued (or, pursuant to Subsection 4.4.3 below, deemed to be issued) by the Corporation after the Original Issue Date, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, **"Exempted Securities"):**

(i) shares of Common Stock, Options or Convertible Securities issued as a dividend or distribution on Preferred Stock;

(ii) shares of Common Stock, Options or Convertible Securities issued by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Subsection 4.5, 4.6, 4.7 or 4.8;

(iii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors, including the approval of at least a majority of the Series A Directors;

(iv) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided such issuance is pursuant to the terms of such Option or Convertible Security;

(v) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors, including the approval of at least a majority of the Series A Directors;

(vi) shares of Common Stock, Options or Convertible Securities issued to suppliers or third party service providers in connection with the provision of goods or services pursuant to transactions approved by the Board of Directors, including the approval of at least a majority of the Series A Directors;

(vii) shares of Common Stock, Options or Convertible Securities issued as acquisition consideration pursuant to the acquisition of another corporation by the Corporation by merger, purchase of substantially all of the assets or other reorganization or to a joint venture agreement, provided that such issuances are approved by the Board of Directors, including the approval of at least a majority of the Series A Directors; or

(viii) shares of Common Stock, Options or Convertible Securities issued in connection with sponsored research, collaboration, technology license, development, OEM, marketing or other similar agreements or strategic partnerships approved by the Board of Directors, including the approval of at least a majority of the Series A Directors.

4.4.2 No Adjustment of Conversion Price. No adjustment in the Series A Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least 65% of the outstanding share of Series A Preferred Stock (the **"Requisite Series A Holders")** agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment in the Series B Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least a majority of the outstanding share of Series B Preferred Stock (the **"Requisite Series B Holders")** agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Original Issue Date shall issue any Options or Convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to a Conversion Price pursuant to the terms of Subsection 4.4.4, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable

upon the exercise, conversion and/or exchange of any such Option or Convertible Security or(2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the applicable Conversion Price computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Conversion Price as would have obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this clause (b) shall have the effect of increasing the applicable Conversion Price to an amount which exceeds the lower of (i) the applicable Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the applicable Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities which are themselves Exempted Securities), the issuance of which did not result in an adjustment to the applicable Conversion Price pursuant to the terms of Subsection 4.4.4 (either because the consideration per share (determined pursuant to Subsection 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than the Conversion Price then in effect, or because such Option or Convertible Security was issued before the Original Issue Date), are revised after the Original Issue Date as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (2) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Subsection 4.4.3(a) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Conversion Price for a series of Preferred Stock pursuant to the terms of Subsection 4.4.4, the Conversion Price for such series of Preferred Stock shall be readjusted to such Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the applicable Conversion Price provided for in this Subsection 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Subsection 4.4.3). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration

payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the Conversion Price that would result under the terms of this Subsection 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to the Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4 Adjustment of Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4.3), without consideration or for a consideration per share less than the Conversion Price for a series of Preferred Stock in effect immediately prior to such issuance or deemed issuance, then the Conversion Price for such series of Preferred Stock shall be reduced, concurrently with such issuance or deemed issuance, to a price (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A+ B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) "CP_2" shall mean the applicable Conversion Price in effect immediately after such issuance or deemed issuance of Additional Shares of Common Stock

(b) "CP_1" shall mean the applicable Conversion Price in effect immediately prior to such issuance or deemed issuance of Additional Shares of Common Stock;

(c) "A" shall mean the number of shares of Common Stock outstanding immediately prior to such issuance or deemed issuance of Additional Shares of Common Stock (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options outstanding immediately prior to such issuance or deemed issuance or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue);

(d) "B" shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued or deemed issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

(e) "C" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5 Determination of Consideration. For purposes of this Subsection 4.4, the consideration received by the Corporation for the issuance or deemed issuance of any Additional Shares of Common Stock shall be computed as follows:

(a) Cash and Property: Such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors; and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors.

(b) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Subsection 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing:

(i) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for

Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the applicable Conversion Price pursuant to the terms of Subsection 4.4.4, and such issuance dates occur within a period of no more than ninety (90) days from the first such issuance to the final such issuance, then, upon the final such issuance, such Conversion Price shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the Original Issue Date effect a subdivision of the outstanding Common Stock, the applicable Conversion Price in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Original Issue Date combine the outstanding shares of Common Stock, the applicable Conversion Price in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this subsection shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6 Adjustment for Certain Dividends and Distributions. In the event the Corporation at any time or from time to time after the Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable on the Common Stock in additional shares of Common Stock, then and in each such event the applicable Conversion Price in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the applicable Conversion Price then in effect by a fraction:

(1) the numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(2) the denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the applicable Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter such Conversion Price shall be adjusted pursuant to this subsection as of the

time of actual payment of such dividends or distributions; and (b) that no such adjustment shall be made if the holders of the applicable series of Preferred Stock simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of such series of Preferred Stock had been converted into Common Stock on the date of such event.

4.7 Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time after the Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of Common Stock in respect of outstanding shares of Common Stock) or in other property and the provisions of Section I do not apply to such dividend or distribution, then and in each such event the holders of Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of Preferred Stock had been converted into Common Stock on the date of such event.

4.8 Adjustment for Merger or Reorganization. etc. Subject to the provisions of Subsection 2.3, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not a given series of Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Subsections 4.4, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of such applicable series of Preferred Stock shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property which a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of such series of Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of such series of Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the applicable Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of such series of Preferred Stock.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Conversion Price for a series of Preferred Stock pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than ten (10) days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of any series of Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which each series of Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of a series of Preferred Stock (but in any event not later than ten (I 0) days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (i) the Conversion Price for each series of Preferred Stock then in effect, and (ii) the number of shares of Common Stock

and the amount, if any, of other securities, cash or property which then would be received upon the conversion of each series of Preferred Stock.

4.10 Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Preferred Stock and the Common Stock. Such notice shall be sent at least ten (10) days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1 Trigger Events. Upon either (a) the closing of the sale of shares of Common Stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, resulting in at least $50,000,000 of gross proceeds, net of the underwriting discount and commissions, to the Corporation and in connection with such offering the Common Stock is listed for trading on the Nasdaq Stock Market's National Market, the New York Stock Exchange or another exchange or marketplace approved the Board of Directors, including the approval of at least a majority of the Series A Directors or (b) the date and time, or the occurrence of an event, specified by vote or written consent of the Requisite Holders (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the **"Mandatory Conversion Time"),** then (i) all outstanding shares of Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective conversion rate as calculated pursuant to Subsection 4.1.1. and (ii) such shares may not be reissued by the Corporation.

5.2 Procedural Requirements. All holders of record of shares of Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of Preferred Stock pursuant to this

Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of Preferred Stock in certificated form shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to Subsection 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender any certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of any certificate or certificates of such holders (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Subsection 5.2. As soon as practicable after the Mandatory Conversion Time and, if applicable, the surrender of any certificate or certificates (or lost certificate affidavit and agreement) for Preferred Stock, the Corporation shall (a) issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof and (b) pay cash as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

6. Redeemed or Otherwise Acquired Shares. Any shares of Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Preferred Stock following redemption.

7. Waiver. Any of the rights, powers, preferences and other terms of the Preferred Stock set forth herein may be waived on behalf of all holders of Preferred Stock by the affirmative written consent or vote of the Requisite Holders; provided that a waiver of any provision expressly requiring the affirmative written consent or vote of the Requisite Series A Holders or the Requisite Series B Holders, as the case may be, shall be waived by the affirmative written consent or vote of the Requisite Series A Holders or the Requisite Series B Holders, as the case maybe.

8. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

FIFTH: Subject to any additional vote required by this Second Amended and Restated Certificate of incorporation or Bylaws, in furtherance and not in limitation of the

powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

SIXTH: Subject to any additional vote required by this Second Amended and Restated Certificate of Incorporation, the number of directors of the Corporation shall be determined in the manner set forth in the Bylaws of the Corporation. Each director shall be entitled to one vote on each matter presented to the Board of Directors; provided, however, that, so long as the holders of Series A Preferred Stock are entitled to elect a Series A Director, the affirmative vote of at least a majority of the Series A Directors shall be required for the authorization by the Board of Directors of any of the matters set forth in Section 5.5 of the Investors' Rights Agreement (as defined in the Purchase Agreement).

SEVENTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

EIGHTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

NINTH: To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law or any other law of the State of Delaware is amended after approval by the stockholders of this Article Ninth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law as so amended.

Any repeal or modification of the foregoing provisions of this Article Ninth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

TENTH: To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Corporation (and any other persons to which General Corporation Law permits the Corporation to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the General Corporation Law.

Any amendment, repeal or modification of the foregoing provisions of this Article Tenth shall not (a) adversely affect any right or protection of any director, officer or other agent of the Corporation existing at the time of such amendment, repeal or modification or (b) increase the liability of any director of the Corporation with respect to any acts or omissions of such director, officer or agent occurring prior to, such amendment, repeal or modification.

ELEVENTH: The Corporation renounces, to the fullest extent permitted by law, any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Excluded Opportunity. An **"Excluded Opportunity"** is any matter, transaction or interest

that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of (i) any director of the Corporation who is not an employee of the Corporation or any of its subsidiaries, or (ii) any holder of Preferred Stock or any partner, member, director, stockholder, employee, affiliate or agent of any such holder, other than someone who is an employee of the Corporation or any of its subsidiaries (collectively, the persons referred to in clauses (i) and (ii) are **"Covered Persons"),** unless such matter, transaction or interest is presented to, or acquired, created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person's capacity as a director of the Corporation while such Covered Person is performing services in such capacity. Any repeal or modification of this Article Eleventh will only be prospective and will not affect the rights under this Article Eleventh in effect at the time of the occurrence of any actions or omissions to act giving rise to liability. Notwithstanding anything to the contrary contained elsewhere in this Second Amended and Restated Certificate of Incorporation, the Requisite Holders will be required to amend or repeal, or to adopt any provisions inconsistent with this Article Eleventh.

TWELFTH: Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery in the State of Delaware shall be the sole and exclusive forum for any stockholder (including a beneficial owner) to bring (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the

Corporation, its directors, officers or employees arising pursuant to any provision of the Delaware General Corporation Law or the Corporation's certificate of incorporation or bylaws or (iv) any action asserting a claim against the Corporation, its directors, officers or employees governed by the internal affairs doctrine, except for, as to each of (i) through (iv) above, any claim as to which the Court of Chancery determines that there is an indispensable party not subject to the jurisdiction of the Court of Chancery (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery within ten days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery, or for which the Court of Chancery does not have subject matter jurisdiction. If any provision or provisions of this Article Twelfth shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article Twelfth (including, without limitation, each portion of any sentence of this Article Twelfth containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) and the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby.

THIRTEENTH: For purposes of Section 500 of the California Corporations Code (to the extent applicable), in connection with any repurchase of shares of Common Stock permitted under this Second Amended and Restated Certificate of Incorporation from employees, officers, directors or consultants of the Corporation in connection with a termination of employment or services pursuant to agreements or arrangements approved by the Board of Directors (in addition to any other consent required under this Second Amended and Restated Certificate of Incorporation), such repurchase may be made without regard to any "preferential dividends arrears amount" or "preferential rights amount" (as those terms are defined in Section 500 of the California Corporations Code). Accordingly, for purposes of making any calculation under California Corporations Code Section 500 in connection with such repurchase, the amount of any "preferential dividends arrears amount" or "preferential rights amount" (as those terms are defined therein) shall be deemed to be zero (0).

* * *

3. That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation in accordance with Section 228 of the General Corporation Law.

4. That this Certificate of Incorporation, which restates and integrates and further amends the provisions of this Corporation's Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

IN WITNESS WHEREOF, this Second Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 19th day of April, 2021.

By: /s/ Keith Gottesdiener
President

THIRD AMENDED AND RESTATED CERTIFICATE OF INCORPORATION OF PRIME MEDICINE, INC.

Prime Medicine, Inc., a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), hereby certifies as follows:

1. The name of the Corporation is Prime Medicine, Inc. The date of the filing of its original Certificate of Incorporation with the Secretary of State of the State of Delaware was September 13, 2019 (the "Original Certificate").

2. This Third Amended and Restated Certificate of Incorporation (the "Certificate") amends, restates and integrates the provisions of the Second Amended and Restated Certificate of Incorporation that was filed with the Secretary of State of the State of Delaware on April 19, 2021 (the "Amended and Restated Certificate"), and was duly adopted in accordance with the provisions of Sections 228, 242 and 245 of the General Corporation Law of the State of Delaware (the "DGCL").

3. The text of the Amended and Restated Certificate is hereby amended and restated in its entirety to provide as herein set forth in full.

ARTICLE I

The name of the Corporation is Prime Medicine, Inc.

ARTICLE II

The address of the registered office of the Corporation in the State of Delaware is 1209 Orange Street, in the City of Wilmington, County of New Castle, 19801. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE III

The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the DGCL.

ARTICLE IV

CAPITAL STOCK

The total number of shares of capital stock which the Corporation shall have authority to issue is Seven Hundred and Eighty-Five Million (785,000,000), of which (i) Seven Hundred and Seventy-Five Million (775,000,000) shares shall be a class designated as common stock, par value $0.00001 per share (the "Common Stock"), and (ii) Ten Million (10,000,000) shares shall be a class designated as undesignated preferred stock, par value $0.00001 per share (the "Undesignated Preferred Stock").

Except as otherwise provided in any certificate of designations of any series of Undesignated Preferred Stock, the number of authorized shares of the class of Common Stock or Undesignated Preferred Stock may from time to time be increased or decreased (but not below the number of shares of such class outstanding) by the affirmative vote of the holders of a majority in voting power of the outstanding shares of capital stock of the Corporation irrespective of the provisions of Section 242(b)(2) of the DGCL.

The powers, preferences and rights of, and the qualifications, limitations and restrictions upon, each class or series of stock shall be determined in accordance with, or as set forth below in, this Article IV.

A. COMMON STOCK

Subject to all the rights, powers and preferences of the Undesignated Preferred Stock and except as provided by law or in this Certificate (or in any certificate of designations of any series of Undesignated Preferred Stock):

(a) the holders of the Common Stock shall have the exclusive right to vote for the election of directors of the Corporation (the "Directors") and on all other matters requiring stockholder action, each outstanding share entitling the holder thereof to one vote on each matter properly submitted to the stockholders of the Corporation for their vote; provided, however, that, except as otherwise required by law, holders of Common Stock, as such, shall not be entitled to vote on any amendment to this Certificate (or on any amendment to a certificate of designations of any series of Undesignated Preferred Stock) that alters or changes the powers, preferences, rights or other terms of one or more outstanding series of Undesignated Preferred Stock if the holders of such affected series of Undesignated Preferred Stock are entitled to vote, either separately or together with the holders of one or more other such series, on such amendment pursuant to this Certificate (or pursuant to a certificate of designations of any series of Undesignated Preferred Stock) or pursuant to the DGCL;

(b) dividends may be declared and paid or set apart for payment upon the Common Stock out of any assets or funds of the Corporation legally available for the payment of dividends, but only when and as declared by the Board of Directors or any authorized committee thereof; and

(c) upon the voluntary or involuntary liquidation, dissolution or winding up of the Corporation, the net assets of the Corporation shall be distributed pro rata to the holders of the Common Stock.

B. UNDESIGNATED PREFERRED STOCK

The Board of Directors or any authorized committee thereof is expressly authorized, to the fullest extent permitted by law, to provide by resolution or resolutions for, out of the unissued shares of Undesignated Preferred Stock, the issuance of the shares of Undesignated Preferred Stock in one or more series of such stock, and by filing a certificate of designations pursuant to applicable law of the State of Delaware, to establish or change from time to time the number of

shares of each such series, and to fix the designations, powers, including voting powers, full or limited, or no voting powers, preferences and the relative, participating, optional or other special rights of the shares of each series and any qualifications, limitations and restrictions thereof.

ARTICLE V

STOCKHOLDER ACTION

1. Action without Meeting. Any action required or permitted to be taken by the stockholders of the Corporation at any annual or special meeting of stockholders of the Corporation must be effected at a duly called annual or special meeting of stockholders and may not be taken or effected by a written consent of stockholders in lieu thereof. Notwithstanding anything herein to the contrary, the affirmative vote of not less than two-thirds (2/3) of the outstanding shares of capital stock entitled to vote thereon, and the affirmative vote of not less than two-thirds (2/3) of the outstanding shares of each class entitled to vote thereon as a class, shall be required to amend or repeal any provision of this Article V, Section 1.

2. Special Meetings. Except as otherwise required by statute and subject to the rights, if any, of the holders of any series of Undesignated Preferred Stock, special meetings of the stockholders of the Corporation may be called only by the Board of Directors acting pursuant to a resolution approved by the affirmative vote of a majority of the Directors then in office, and special meetings of stockholders may not be called by any other person or persons. Only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders of the Corporation.

ARTICLE VI

DIRECTORS

1. General. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors except as otherwise provided herein or required by law.

2. Election of Directors. Election of Directors need not be by written ballot unless the By-laws of the Corporation (the "By-laws") shall so provide.

3. Number of Directors; Term of Office. The number of Directors of the Corporation shall be fixed solely and exclusively by resolution duly adopted from time to time by the Board of Directors. The Directors, other than those who may be elected by the holders of any series of Undesignated Preferred Stock, shall be classified, with respect to the term for which they severally hold office, into three classes. The initial Class I Directors of the Corporation shall be Michael Kelly and David Schenkein; the initial Class II Directors of the Corporation shall be Kaye Foster, Wendy Chung and Keith Gottesdiener; and the initial Class III Directors of the Corporation shall be Thomas Cahill and Robert Nelsen. The mailing address of each person who is to serve initially as a director is c/o Prime Medicine, Inc., 21 Erie Street, Cambridge, MA 02139. The initial Class I Directors shall serve for a term expiring at the annual meeting of

stockholders to be held in 2023, the initial Class II Directors shall serve for a term expiring at the annual meeting of stockholders to be held in 2024, and the initial Class III Directors shall serve for a term expiring at the annual meeting of stockholders to be held in 2025. At each annual meeting of stockholders, Directors elected to succeed those Directors whose terms expire shall be elected for a term of office to expire at the third succeeding annual meeting of stockholders after their election. Notwithstanding the foregoing, the Directors elected to each class shall hold office until their successors are duly elected and qualified or until their earlier resignation, death or removal.

Notwithstanding the foregoing, whenever, pursuant to the provisions of Article IV of this Certificate, the holders of any one or more series of Undesignated Preferred Stock shall have the right, voting separately as a series or together with holders of other such series, to elect Directors at an annual or special meeting of stockholders, the election, term of office, filling of vacancies and other features of such directorships shall be governed by the terms of this Certificate and any certificate of designations applicable to such series.

Notwithstanding anything herein to the contrary, the affirmative vote of not less than two-thirds (2/3) of the outstanding shares of capital stock entitled to vote thereon, and the affirmative vote of not less than two-thirds (2/3) of the outstanding shares of each class entitled to vote thereon as a class, shall be required to amend or repeal any provision of this Article VI, Section 3.

4. Vacancies. Subject to the rights, if any, of the holders of any series of Undesignated Preferred Stock to elect Directors and to fill vacancies in the Board of Directors relating thereto, any and all vacancies in the Board of Directors, however occurring, including, without limitation, by reason of an increase in the size of the Board of Directors, or the death, resignation, disqualification or removal of a Director, shall be filled solely and exclusively by the affirmative vote of a majority of the remaining Directors then in office, even if less than a quorum of the Board of Directors, and not by the stockholders. Any Director appointed in accordance with the preceding sentence shall hold office for the remainder of the full term of the class of Directors in which the new directorship was created or the vacancy occurred and until such Director's successor shall have been duly elected and qualified or until his or her earlier resignation, death or removal. Subject to the rights, if any, of the holders of any series of Undesignated Preferred Stock to elect Directors, when the number of Directors is increased or decreased, the Board of Directors shall, subject to Article VI.3 hereof, determine the class or classes to which the increased or decreased number of Directors shall be apportioned; provided, however, that no decrease in the number of Directors shall shorten the term of any incumbent Director. In the event of a vacancy in the Board of Directors, the remaining Directors, except as otherwise provided by law, shall exercise the powers of the full Board of Directors until the vacancy is filled.

5. Removal. Subject to the rights, if any, of any series of Undesignated Preferred Stock to elect Directors and to remove any Director whom the holders of any such series have the right to elect, any Director (including persons elected by Directors to fill vacancies in the Board of Directors) may be removed from office (i) only with cause and (ii) only by the

affirmative vote of the holders of not less than two-thirds (2/3) of the outstanding shares of capital stock then entitled to vote at an election of Directors. At least forty-five (45) days prior to any annual or special meeting of stockholders at which it is proposed that any Director be removed from office, written notice of such proposed removal and the alleged grounds thereof shall be sent to the Director whose removal will be considered at the meeting.

ARTICLE VII

LIMITATION OF LIABILITY

A Director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a Director, except for liability (a) for any breach of the Director's duty of loyalty to the Corporation or its stockholders, (b) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (c) under Section 174 of the DGCL or (d) for any transaction from which the Director derived an improper personal benefit. If the DGCL is amended after the effective date of this Certificate to authorize corporate action further eliminating or limiting the personal liability of Directors, then the liability of a Director of the Corporation shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

Any amendment, repeal or modification of this Article VII by either of (i) the stockholders of the Corporation or (ii) an amendment to the DGCL, shall not adversely affect any right or protection existing at the time of such amendment, repeal or modification with respect to any acts or omissions occurring before such amendment, repeal or modification of a person serving as a Director at the time of such amendment, repeal or modification.

Notwithstanding anything herein to the contrary, the affirmative vote of not less than two-thirds (2/3) of the outstanding shares of capital stock entitled to vote thereon, and the affirmative vote of not less than two-thirds (2/3) of the outstanding shares of each class entitled to vote thereon as a class, shall be required to amend or repeal any provision of this Article VII.

ARTICLE VIII

AMENDMENT OF BY-LAWS

1. Amendment by Directors. Except as otherwise provided by law, the By-laws of the Corporation may be amended or repealed by the Board of Directors by the affirmative vote of a majority of the Directors then in office.

2. Amendment by Stockholders. Except as otherwise provided therein, the By-laws of the Corporation may be amended or repealed at any annual meeting of stockholders, or special meeting of stockholders called for such purpose, by the affirmative vote of not less than two-thirds (2/3) of the outstanding shares of capital stock entitled to vote on such amendment or repeal, voting together as a single class; provided, however, that if the Board of Directors recommends that stockholders approve such amendment or repeal at such meeting of stockholders, such amendment or repeal shall only require the affirmative vote of the majority of

the outstanding shares of capital stock entitled to vote on such amendment or repeal, voting together as a single class.

ARTICLE IX

AMENDMENT OF CERTIFICATE OF INCORPORATION

The Corporation reserves the right to amend or repeal this Certificate in the manner now or hereafter prescribed by statute and this Certificate, and all rights conferred upon stockholders herein are granted subject to this reservation. Whenever any vote of the holders of capital stock of the Corporation is required to amend or repeal any provision of this Certificate, and in addition to any other vote of holders of capital stock that is required by this Certificate or by law, such amendment or repeal shall require the affirmative vote of the majority of the outstanding shares of capital stock entitled to vote on such amendment or repeal, and the affirmative vote of the majority of the outstanding shares of each class entitled to vote thereon as a class, at a duly constituted meeting of stockholders called expressly for such purpose; provided, however, that the affirmative vote of not less than two-thirds (2/3) of the outstanding shares of capital stock entitled to vote on such amendment or repeal, and the affirmative vote of not less than two-thirds (2/3) of the outstanding shares of each class entitled to vote thereon as a class, shall be required to amend or repeal any provision of Article V, Article VI, Article VII, Article VIII or Article IX of this Certificate.

[*End of Text*]

THIS THIRD AMENDED AND RESTATED CERTIFICATE OF INCORPORATION is executed as of this _____ day of _____, 2022.

PRIME MEDICINE, INC.

By: _____
Name: Keith Gottesdiener
Title: President and Chief Executive Officer

BY-LAWS

of

Prime Medicine, Inc.

(the "Corporation")

1. Stockholders

(a) Annual Meeting. The annual meeting of stockholders shall be held for the election of directors each year at such place, date and time as shall be designated by the Board of Directors. Any other proper business may be transacted at the annual meeting. If no date for the annual meeting is established or said meeting is not held on the date established as provided above, a special meeting in lieu thereof may be held or there may be action by written consent of the stockholders on matters to be voted on at the annual meeting, and such special meeting or written consent shall have for the purposes of these By-laws or otherwise all the force and effect of an annual meeting.

(b) Special Meetings. Special meetings of stockholders may be called by the Chief Executive Officer, if one is elected, or, if there is no Chief Executive Officer, a President, or by the Board of Directors, but such special meetings may not be called by any other person or persons. The call for the meeting shall state the place, date, hour and purposes of the meeting. Only the purposes specified in the notice of special meeting shall be considered or dealt with at such special meeting.

(c) Notice of Meetings. Whenever stockholders are required or permitted to take any action at a meeting, a notice stating the place, if any, date and hour of the meeting, the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present and vote at such meeting, and, in the case of a special meeting, the purpose or purposes of the meeting, shall be given by the Secretary (or other person authorized by these By-laws or by law) not less than ten (10) nor more than sixty (60) days before the meeting to each stockholder entitled to vote thereat and to each stockholder who, under the Certificate of Incorporation or under these By-laws is entitled to such notice. If mailed, notice is given when deposited in the mail, postage prepaid, directed to such stockholder at such stockholder's address as it appears in the records of the Corporation. Without limiting the manner by which notice otherwise may be effectively given to stockholders, any notice to stockholders may be given by electronic transmission in the manner provided in Section 232 of the Delaware General Corporation Law (the "DGCL").

If a meeting is adjourned to another time or place, notice need not be given of the adjourned meeting if the time and place, if any, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken, except that if the adjournment is for more than thirty (30) days, or if after the adjournment a

new record date is fixed for the adjourned meeting, notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

(d) Quorum. The holders of a majority in interest of all stock issued, outstanding and entitled to vote at a meeting, present in person or represented by proxy, shall constitute a quorum. Any meeting may be adjourned from time to time by a majority of the votes properly cast upon the question, whether or not a quorum is present. The stockholders present at a duly constituted meeting may continue to transact business until adjournment notwithstanding the withdrawal of enough stockholders to reduce the voting shares below a quorum.

(e) Voting and Proxies. Except as otherwise provided by the Certificate of Incorporation or by law, each stockholder entitled to vote at any meeting of stockholders shall be entitled to one vote for each share of stock held by such stockholder which has voting power upon the matter in question. Each stockholder entitled to vote at a meeting of stockholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons to act for such stockholder by either written proxy or by a transmission permitted by Section 212(c) of the DGCL, but no proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period or is irrevocable and coupled with an interest. Proxies shall be filed with the Secretary of the meeting, or of any adjournment thereof. Except as otherwise limited therein, proxies shall entitle the persons authorized thereby to vote at any adjournment of such meeting.

(f) Action at Meeting. When a quorum is present, any matter before the meeting shall be decided by vote of the holders of a majority of the shares of stock voting on such matter except where a larger vote is required by law, by the Certificate of Incorporation or by these By-laws. Any election of directors by stockholders shall be determined by a plurality of the votes cast, except where a larger vote is required by law, by the Certificate of Incorporation or by these By-laws. The Corporation shall not directly or indirectly vote any share of its own stock; provided, however, that the Corporation may vote shares which it holds in a fiduciary capacity to the extent permitted by law.

(g) Presiding Officer. Meetings of stockholders shall be presided over by the Chairman of the Board, if one is elected, or in his or her absence, the Vice Chairman of the Board, if one is elected, or if neither is elected or in their absence, a President. The Board of Directors shall have the authority to appoint a temporary presiding officer to serve at any meeting of the stockholders if the Chairman of the Board, the Vice Chairman of the Board or a President is unable to do so for any reason.

(h) Conduct of Meetings. The Board of Directors may adopt by resolution such rules and regulations for the conduct of the meeting of stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board of Directors, the presiding officer of any meeting of stockholders shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or

prescribed by the presiding officer of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (ii) rules and procedures for maintaining order at the meeting and the safety of those present; (iii) limitations on attendance at or participation in the meeting to stockholders of record of the Corporation, their duly authorized and constituted proxies or such other persons as the chairman of the meeting shall determine; (iv) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (v) limitations on the time allotted to questions or comments by participants. Unless and to the extent determined by the Board of Directors or the presiding officer of the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

(i) Action without a Meeting. Unless otherwise provided in the Certificate of Incorporation, any action required or permitted by law to be taken at any annual or special meeting of stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the Corporation by delivery to its registered office, by hand or by certified mail, return receipt requested, or to the Corporation's principal place of business or to the officer of the Corporation having custody of the minute book. Every written consent shall bear the date of signature and no written consent shall be effective unless, within sixty (60) days of the earliest dated consent delivered pursuant to these By-laws, written consents signed by a sufficient number of stockholders entitled to take action are delivered to the Corporation in the manner set forth in these By-laws. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing.

(j) Stockholder Lists. The officer who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Nothing contained in this Section 1(j) shall require the Corporation to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, for a period of at least ten (10) days prior to the meeting in the manner provided by law. The list shall also be open to the examination of any stockholder during the whole time of the meeting as provided by law.

2. Directors

(a) Powers. The business of the Corporation shall be managed by or under the direction of a Board of Directors who may exercise all the powers of the Corporation except as otherwise provided by law, by the Certificate of Incorporation or by these By-laws. In the event of a vacancy in the Board of Directors, the remaining directors, except as

otherwise provided by law, may exercise the powers of the full Board until the vacancy is filled.

(b) Number and Qualification. Unless otherwise provided in the Certificate of Incorporation or in these By-laws, the number of directors which shall constitute the whole board shall be determined from time to time by resolution of the Board of Directors. Directors need not be stockholders.

(c) Vacancies; Reduction of Board. Unless otherwise provided in the Certificate of Incorporation, a majority of the directors then in office, although less than a quorum, or a sole remaining Director, may fill vacancies in the Board of Directors occurring for any reason and newly created directorships resulting from any increase in the authorized number of directors. In lieu of filling any vacancy, the Board of Directors may reduce the number of directors.

(d) Tenure. Except as otherwise provided by law, by the Certificate of Incorporation or by these By-laws, directors shall hold office until their successors are elected and qualified or until their earlier resignation or removal. Any director may resign at any time upon notice given in writing or by electronic transmission to the Corporation. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

(e) Removal. To the extent permitted by law, a director may be removed from office with or without cause by vote of the holders of a majority of the shares of stock entitled to vote in the election of directors.

(f) Meetings. Regular meetings of the Board of Directors may be held without notice at such time, date and place as the Board of Directors may from time to time determine. Special meetings of the Board of Directors may be called, orally or in writing, by the Chief Executive Officer, if one is elected, or, if there is no Chief Executive Officer, the President, or by two or more Directors, designating the time, date and place thereof. Directors may participate in meetings of the Board of Directors by means of conference telephone or other communications equipment by means of which all directors participating in the meeting can hear each other, and participation in a meeting in accordance herewith shall constitute presence in person at such meeting.

(g) Notice of Meetings. Notice of the time, date and place of all special meetings of the Board of Directors shall be given to each director by the Secretary, or Assistant Secretary, or in case of the death, absence, incapacity or refusal of such persons, by the officer or one of the directors calling the meeting. Notice shall be given to each director in person, by telephone, or by facsimile, electronic mail or other form of electronic communications, sent to such director's business or home address at least twenty-four (24) hours in advance of the meeting, or by written notice mailed to such director's business or home address at least forty-eight (48) hours in advance of the meeting.

(h) Quorum. At any meeting of the Board of Directors, the greater of (a) a majority of the directors then in office at the time quorum is to be determined and (b) one-third of the total number of directors fixed pursuant to Section 2(b) of these By-laws shall constitute a quorum for the transaction of business. Less than a quorum may adjourn any meeting from time to time and the meeting may be held as adjourned without further notice.

(i) Action at Meeting. At any meeting of the Board of Directors at which a quorum is present, unless otherwise provided in the following sentence, a majority of the directors present may take any action on behalf of the Board of Directors, unless a larger number is required by law, by the Certificate of Incorporation or by these By-laws. So long as there are two (2) or fewer Directors, any action to be taken by the Board of Directors shall require the approval of all Directors.

(j) Action by Consent. Any action required or permitted to be taken at any meeting of the Board of Directors may be taken without a meeting if all members of the Board of Directors consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the records of the meetings of the Board of Directors. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

(k) Committees. The Board of Directors may, by resolution passed by a majority of the whole Board of Directors, establish one or more committees, each committee to consist of one or more directors. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member.

Any such committee, to the extent permitted by law and to the extent provided in the resolution of the Board of Directors, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to the following: (i) approving or adopting, or recommending to the stockholders, any action or matter expressly required by the DGCL to be submitted to stockholders for approval or (ii) adopting, amending or repealing any provision of these By-laws.

Except as the Board of Directors may otherwise determine, any such committee may make rules for the conduct of its business, but in the absence of such rules its business shall be conducted so far as possible in the same manner as is provided in these By-laws for the Board of Directors. All members of such committees shall hold their committee offices at the pleasure of the Board of Directors, and the Board may abolish any committee at any time.

3. Officers

(a) Enumeration. The officers of the Corporation shall consist of one or more Presidents (who, if there is more than one, shall be referred to as Co-Presidents), a Treasurer, a Secretary, and such other officers, including, without limitation, a Chief Executive Officer and one or more Vice Presidents (including Executive Vice Presidents or Senior Vice Presidents), Assistant Vice Presidents, Assistant Treasurers and Assistant Secretaries, as the Board of Directors may determine. The Board of Directors may elect from among its members a Chairman of the Board and a Vice Chairman of the Board.

(b) Election. The Presidents, Treasurer and Secretary shall be elected annually by the Board of Directors at their first meeting following the annual meeting of stockholders. Other officers may be chosen by the Board of Directors at such meeting or at any other meeting.

(c) Qualification. No officer need be a stockholder or Director. Any two or more offices may be held by the same person. Any officer may be required by the Board of Directors to give bond for the faithful performance of such officer's duties in such amount and with such sureties as the Board of Directors may determine.

(d) Tenure. Except as otherwise provided by the Certificate of Incorporation or by these By-laws, each of the officers of the Corporation shall hold office until the first meeting of the Board of Directors following the next annual meeting of stockholders and until such officer's successor is elected and qualified or until such officer's earlier resignation or removal. Any officer may resign by delivering his or her written resignation to the Corporation, and such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

(e) Removal. The Board of Directors may remove any officer with or without cause by a vote of a majority of the directors then in office.

(f) Vacancies. Any vacancy in any office may be filled for the unexpired portion of the term by the Board of Directors.

(g) Chairman of the Board and Vice Chairman. Unless otherwise provided by the Board of Directors, the Chairman of the Board of Directors, if one is elected, shall preside, when present, at all meetings of the stockholders and the Board of Directors. The Chairman of the Board shall have such other powers and shall perform such duties as the Board of Directors may from time to time designate.

Unless otherwise provided by the Board of Directors, in the absence of the Chairman of the Board, the Vice Chairman of the Board, if one is elected, shall preside, when present, at all meetings of the stockholders and the Board of Directors. The Vice Chairman of the Board shall have such other powers and shall perform such duties as the Board of Directors may from time to time designate.

(h) Chief Executive Officer. The Chief Executive Officer, if one is elected, shall have such powers and shall perform such duties as the Board of Directors may from time to time designate.

(i) Presidents. The Presidents shall, subject to the direction of the Board of Directors, each have general supervision and control of the Corporation's business and any action that would typically be taken by a President may be taken by any Co-President. If there is no Chairman of the Board or Vice Chairman of the Board, a President shall preside, when present, at all meetings of stockholders and the Board of Directors. The Presidents shall have such other powers and shall perform such duties as the Board of Directors may from time to time designate.

(j) Vice Presidents and Assistant Vice Presidents. Any Vice President (including any Executive Vice President or Senior Vice President) and any Assistant Vice President shall have such powers and shall perform such duties as the Board of Directors may from time to time designate.

(k) Treasurer and Assistant Treasurers. The Treasurer shall, subject to the direction of the Board of Directors, have general charge of the financial affairs of the Corporation and shall cause to be kept accurate books of account. The Treasurer shall have custody of all funds, securities, and valuable documents of the Corporation, except as the Board of Directors may otherwise provide. The Treasurer shall have such other powers and shall perform such duties as the Board of Directors may from time to time designate.

Any Assistant Treasurer shall have such powers and perform such duties as the Board of Directors may from time to time designate.

(l) Secretary and Assistant Secretaries. The Secretary shall record the proceedings of all meetings of the stockholders and the Board of Directors (including committees of the Board) in books kept for that purpose. In the absence of the Secretary from any such meeting an Assistant Secretary, or if such person is absent, a temporary secretary chosen at the meeting, shall record the proceedings thereof. The Secretary shall have charge of the stock ledger (which may, however, be kept by any transfer or other agent of the Corporation) and shall have such other duties and powers as may be designated from time to time by the Board of Directors.

Any Assistant Secretary shall have such powers and perform such duties as the Board of Directors may from time to time designate.

(m) Other Powers and Duties. Subject to these By-laws, each officer of the Corporation shall have in addition to the duties and powers specifically set forth in these By-laws, such duties and powers as are customarily incident to such officer's office, and such duties and powers as may be designated from time to time by the Board of Directors.

4. Capital Stock

(a) Certificates of Stock. Each stockholder shall be entitled to a certificate of the capital stock of the Corporation in such form as may from time to time be prescribed by the Board of Directors. Such certificate shall be signed by, or in the name of, the Corporation by any two (2) authorized officers of the Corporation. Such signatures may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed on such certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if such person were such officer, transfer agent or registrar at the time of its issue. Every certificate for shares of stock which are subject to any restriction on transfer and every certificate issued when the Corporation is authorized to issue more than one class or series of stock shall contain such legend with respect thereto as is required by law. The Corporation shall be permitted to issue fractional shares.

(b) Transfers. Subject to any restrictions on transfer, shares of stock may be transferred on the books of the Corporation by the surrender to the Corporation or its transfer agent of the certificate therefor properly endorsed or accompanied by a written assignment or power of attorney properly executed, with transfer stamps (if necessary) affixed, and with such proof of the authenticity of signature as the Corporation or its transfer agent may reasonably require.

(c) Record Holders. Except as may otherwise be required by law, by the Certificate of Incorporation or by these By-laws, the Corporation shall be entitled to treat the record holder of stock as shown on its books as the owner of such stock for all purposes, including the payment of dividends and the right to vote with respect thereto, regardless of any transfer, pledge or other disposition of such stock, until the shares have been transferred on the books of the Corporation in accordance with the requirements of these By-laws.

It shall be the duty of each stockholder to notify the Corporation of such stockholder's post office address.

(d) Record Date. In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or to consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not precede the date on which it is established, and which shall not be more than sixty (60) nor less than ten (10) days before the date of such meeting, more than ten (10) days after the date on which the record date for stockholder consent without a meeting is established, nor more than sixty (60) days prior to any other action. In such case only stockholders of record on such record date shall be so entitled notwithstanding any transfer of stock on the books of the Corporation after the record date.

If no record date is fixed, (i) the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held, (ii) the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is necessary, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation by delivery to its registered office in this state, to its principal place of business, or to an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders are recorded, and (iii) the record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

(e) Lost Certificates. The Corporation may issue a new certificate of stock in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the Corporation may require the owner of the lost, stolen or destroyed certificate, or his legal representative, to give the Corporation a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate.

5. Indemnification

(a) Definitions. For purposes of this Section 5:

(i) "Corporate Status" describes the status of a person who is serving or has served (A) as a Director of the Corporation, (B) as an Officer of the Corporation, (C) as a Non-Officer Employee of the Corporation, or (D) as a director, partner, trustee, officer, employee or agent of any other corporation, partnership, limited liability company, joint venture, trust, employee benefit plan, foundation, association, organization or other legal entity for which such person is or was serving at the request of the Corporation. For purposes of this Section 5(a)(i), a Director, Officer or Non-Officer Employee of the Corporation who is serving or has served as a director, partner, trustee, officer, employee or agent of a Subsidiary shall be deemed to be serving at the request of the Corporation. Notwithstanding the foregoing, "Corporate Status" shall not include the status of a person who is serving or has served as a director, officer, employee or agent of a constituent corporation absorbed in a merger or consolidation transaction with the Corporation with respect to such person's activities prior to said transaction, unless specifically authorized by the Board of Directors or the stockholders of the Corporation;

(ii) "Director" means any person who serves or has served the Corporation as a director on the Board of Directors of the Corporation;

(iii) "Disinterested Director" means, with respect to each Proceeding in respect of which indemnification is sought hereunder, a Director of the Corporation who is not and was not a party to such Proceeding;

(iv) "Expenses" means all reasonable attorneys fees, retainers, court costs, transcript costs, fees of expert witnesses, private investigators and professional advisors (including, without limitation, accountants and investment bankers), travel expenses, duplicating costs, printing and binding costs, costs of preparation of demonstrative evidence and other courtroom presentation aids and devices, costs incurred in connection with document review, organization, imaging and computerization, telephone charges, postage, delivery service fees, and all other disbursements, costs or expenses of the type customarily incurred in connection with prosecuting, defending, preparing to prosecute or defend, investigating, being or preparing to be a witness in, settling or otherwise participating in, a Proceeding;

(v) "Liabilities" means judgments, damages, liabilities, losses, penalties, excise taxes, fines and amounts paid in settlement;

(vi) "Non-Officer Employee" means any person who serves or has served as an employee or agent of the Corporation, but who is not or was not a Director or Officer;

(vii) "Officer" means any person who serves or has served the Corporation as an officer of the Corporation appointed by the Board of Directors of the Corporation;

(viii) "Proceeding" means any threatened, pending or completed action, suit, arbitration, alternate dispute resolution mechanism, inquiry, investigation, administrative hearing or other proceeding, whether civil, criminal, administrative, arbitrative or investigative; and

(ix) "Subsidiary" shall mean any corporation, partnership, limited liability company, joint venture, trust or other entity of which the Corporation owns (either directly or through or together with another Subsidiary of the Corporation) either (i) a general partner, managing member or other similar interest or (ii) (A) 50% or more of the voting power of the voting capital equity interests of such corporation, partnership, limited liability company, joint venture or other entity, or (B) 50% or more of the outstanding voting capital stock or other voting equity interests of such corporation, partnership, limited liability company, joint venture or other entity.

(b) Indemnification of Directors and Officers. Subject to the operation of Section 5(d) of these By-laws, each Director and Officer shall be indemnified and held harmless by the Corporation to the fullest extent authorized by the DGCL, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than such law permitted the Corporation to provide prior to such amendment), and to the extent authorized in subsections (i) through (iv) of this Section 5(b).

(i) Actions, Suits and Proceedings Other than By or In the Right of the Corporation. Each Director and Officer shall be indemnified and held harmless by

the Corporation against any and all Expenses and Liabilities that are incurred or paid by such Director or Officer or on such Director's or Officer's behalf in connection with any Proceeding or any claim, issue or matter therein (other than an action by or in the right of the Corporation), which such Director or Officer is, or is threatened to be made, a party to or participant in by reason of such Director's or Officer's Corporate Status, if such Director or Officer acted in good faith and in a manner such Director or Officer reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful.

(ii) Actions, Suits and Proceedings By or In the Right of the Corporation. Each Director and Officer shall be indemnified and held harmless by the Corporation against any and all Expenses that are incurred by such Director or Officer or on such Director's or Officer's behalf in connection with any Proceeding or any claim, issue or matter therein by or in the right of the Corporation, which such Director or Officer is, or is threatened to be made, a party to or participant in by reason of such Director's or Officer's Corporate Status, if such Director or Officer acted in good faith and in a manner such Director or Officer reasonably believed to be in or not opposed to the best interests of the Corporation; provided, however, that no indemnification shall be made under this Section 5(b)(ii) in respect of any claim, issue or matter as to which such Director or Officer shall have been finally adjudged by a court of competent jurisdiction to be liable to the Corporation, unless, and only to the extent that, the Court of Chancery or another court in which such Proceeding was brought shall determine upon application that, despite adjudication of liability, but in view of all the circumstances of the case, such Director or Officer is fairly and reasonably entitled to indemnification for such Expenses that such court deems proper.

(iii) Survival of Rights. The rights of indemnification provided by this Section 5(b) shall continue as to a Director or Officer after he or she has ceased to be a Director or Officer and shall inure to the benefit of his or her heirs, executors, administrators and personal representatives.

(iv) Actions by Directors or Officers. Notwithstanding the foregoing, the Corporation shall indemnify any Director or Officer seeking indemnification in connection with a Proceeding initiated by such Director or Officer only if such Proceeding (including any parts of such Proceeding not initiated by such Director or Officer) was authorized in advance by the Board of Directors of the Corporation, unless such Proceeding was brought to enforce such Officer's or Director's rights to indemnification or, in the case of Directors, advancement of Expenses under these By- laws in accordance with the provisions set forth herein.

(c) Indemnification of Non-Officer Employees. Subject to the operation of Section 5(d) of these By-laws, each Non-Officer Employee may, in the discretion of the Board of Directors of the Corporation, be indemnified by the Corporation to the fullest extent

authorized by the DGCL, as the same exists or may hereafter be amended, against any or all Expenses and Liabilities that are incurred by such Non-Officer Employee or on such Non-Officer Employee's behalf in connection with any threatened, pending or completed Proceeding, or any claim, issue or matter therein, which such Non-Officer Employee is, or is threatened to be made, a party to or participant in by reason of such Non-Officer Employee's Corporate Status, if such Non-Officer Employee acted in good faith and in a manner such Non-Officer Employee reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful. The rights of indemnification provided by this Section 5(c) shall exist as to a Non-Officer Employee after he or she has ceased to be a Non-Officer Employee and shall inure to the benefit of his or her heirs, personal representatives, executors and administrators. Notwithstanding the foregoing, the Corporation may indemnify any Non-Officer Employee seeking indemnification in connection with a Proceeding initiated by such Non-Officer Employee only if such Proceeding was authorized in advance by the Board of Directors of the Corporation.

(d) Determination. Unless ordered by a court, no indemnification shall be provided pursuant to this Section 5 to a Director, to an Officer or to a Non-Officer Employee unless a determination shall have been made that such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal Proceeding, such person had no reasonable cause to believe his or her conduct was unlawful. Such determination shall be made by (i) a majority vote of the Disinterested Directors, even though less than a quorum of the Board of Directors, (ii) a committee comprised of Disinterested Directors, such committee having been designated by a majority vote of the Disinterested Directors (even though less than a quorum), (iii) if there are no such Disinterested Directors, or if a majority of Disinterested Directors so directs, by independent legal counsel in a written opinion, or (iv) by the stockholders of the Corporation.

(e) Advancement of Expenses to Directors Prior to Final Disposition.

(i) The Corporation shall advance all Expenses incurred by or on behalf of any Director in connection with any Proceeding in which such Director is involved by reason of such Director's Corporate Status within thirty (30) days after the receipt by the Corporation of a written statement from such Director requesting such advance or advances from time to time, whether prior to or after final disposition of such Proceeding. Such statement or statements shall reasonably evidence the Expenses incurred by such Director and shall be preceded or accompanied by an undertaking by or on behalf of such Director to repay any Expenses so advanced if it shall ultimately be determined that such Director is not entitled to be indemnified against such Expenses. Notwithstanding the foregoing, the Corporation shall advance all Expenses incurred by or on behalf of any Director seeking advancement of expenses hereunder in connection with a Proceeding initiated by such Director only if such Proceeding (including any parts of such Proceeding not initiated by such Director) was (A)

authorized by the Board of Directors of the Corporation, or (B) brought to enforce such Director's rights to indemnification or advancement of Expenses under these By-laws.

(ii) If a claim for advancement of Expenses hereunder by a Director is not paid in full by the Corporation within thirty (30) days after receipt by the Corporation of documentation of Expenses and the required undertaking, such Director may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim and if successful in whole or in part, such Director shall also be entitled to be paid the expenses of prosecuting such claim. The failure of the Corporation (including its Board of Directors or any committee thereof, independent legal counsel, or stockholders) to make a determination concerning the permissibility of such advancement of Expenses under this Section 5 shall not be a defense to an action brought by a Director for recovery of the unpaid amount of an advancement claim and shall not create a presumption that such advancement is not permissible. The burden of proving that a Director is not entitled to an advancement of expenses shall be on the Corporation.

(iii) In any suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Corporation shall be entitled to recover such expenses upon a final adjudication that the Director has not met any applicable standard for indemnification set forth in the DGCL.

(f) Advancement of Expenses to Officers and Non-Officer Employees Prior to Final Disposition.

(i) The Corporation may, at the discretion of the Board of Directors of the Corporation, advance any or all Expenses incurred by or on behalf of any Officer or any Non-Officer Employee in connection with any Proceeding in which such person is involved by reason of his or her Corporate Status as an Officer or Non-Officer Employee upon the receipt by the Corporation of a statement or statements from such Officer or Non-Officer Employee requesting such advance or advances from time to time, whether prior to or after final disposition of such Proceeding. Such statement or statements shall reasonably evidence the Expenses incurred by such Officer or Non-Officer Employee and shall be preceded or accompanied by an undertaking by or on behalf of such person to repay any Expenses so advanced if it shall ultimately be determined that such Officer or Non-Officer Employee is not entitled to be indemnified against such Expenses.

(ii) In any suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Corporation shall be entitled to recover such expenses upon a final adjudication that the Officer or Non-Officer Employee has not met any applicable standard for indemnification set forth in the DGCL.

(g) Contractual Nature of Rights.

(i) The provisions of this Section 5 shall be deemed to be a contract between the Corporation and each Director and Officer entitled to the benefits hereof at any time while this Section 5 is in effect, in consideration of such person's past or current and any future performance of services for the Corporation. Neither amendment, repeal or modification of any provision of this Section 5 nor the adoption of any provision of the Certificate of Incorporation inconsistent with this Section 5 shall eliminate or reduce any right conferred by this Section 5 in respect of any act or omission occurring, or any cause of action or claim that accrues or arises or any state of facts existing, at the time of or before such amendment, repeal, modification or adoption of an inconsistent provision (even in the case of a proceeding based on such a state of facts that is commenced after such time), and all rights to indemnification and advancement of Expenses granted herein or arising out of any act or omission shall vest at the time of the act or omission in question, regardless of when or if any proceeding with respect to such act or omission is commenced. The rights to indemnification and to advancement of expenses provided by, or granted pursuant to, this Section 5 shall continue notwithstanding that the person has ceased to be a director or officer of the Corporation and shall inure to the benefit of the estate, heirs, executors, administrators, legatees and distributees of such person.

(ii) If a claim for indemnification hereunder by a Director or Officer is not paid in full by the Corporation within sixty (60) days after receipt by the Corporation of a written claim for indemnification, such Director or Officer may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim, and if successful in whole or in part, such Director or Officer shall also be entitled to be paid the expenses of prosecuting such claim. The failure of the Corporation (including its Board of Directors or any committee thereof, independent legal counsel, or stockholders) to make a determination concerning the permissibility of such indemnification under this Section 5 shall not be a defense to an action brought by a Director or Officer for recovery of the unpaid amount of an indemnification claim and shall not create a presumption that such indemnification is not permissible. The burden of proving that a Director or Officer is not entitled to indemnification shall be on the Corporation.

(iii) In any suit brought by a Director or Officer to enforce a right to indemnification hereunder, it shall be a defense that such Director or Officer has not met any applicable standard for indemnification set forth in the DGCL.

(h) Non-Exclusivity of Rights. The rights to indemnification and advancement of Expenses set forth in this Section 5 shall not be exclusive of any other right which any Director, Officer, or Non-Officer Employee may have or hereafter acquire under any statute, provision of the Certificate or these By-laws, agreement, vote of stockholders or Disinterested Directors or otherwise.

(i) Insurance. The Corporation may maintain insurance, at its expense, to protect itself and any Director, Officer or Non-Officer Employee against any liability of any character asserted against or incurred by the Corporation or any such Director, Officer or Non- Officer Employee, or arising out of any such person's Corporate Status, whether or not the Corporation would have the power to indemnify such person against such liability under the DGCL or the provisions of this Section 5.

(j) Other Indemnification. The Corporation's obligation, if any, to indemnify or provide advancement of Expenses to any person under this Section 5 as a result of such person serving, at the request of the Corporation, as a director, partner, trustee, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall be reduced by any amount such person may collect as indemnification or advancement of Expenses from such other corporation, partnership, joint venture, trust, employee benefit plan or enterprise (the "Primary Indemnitor"). Any indemnification or advancement of Expenses under this Section 5 owed by the Corporation as a result of a person serving, at the request of the Corporation, as a director, partner, trustee, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall only be in excess of, and shall be secondary to, the indemnification or advancement of Expenses available from the applicable Primary Indemnitor(s) and any applicable insurance policies.

6. Miscellaneous Provisions

(a) Fiscal Year. Except as otherwise determined by the Board of Directors, the fiscal year of the Corporation shall end on December 31 of each year.

(b) Seal. The Board of Directors shall have power to adopt and alter the seal of the Corporation.

(c) Execution of Instruments. Subject to any limitations which may be set forth in a resolution of the Board of Directors, all deeds, leases, transfers, contracts, bonds, notes and other obligations to be entered into by the Corporation in the ordinary course of its business without director action may be executed on behalf of the Corporation by, a President, or by any other officer, employee or agent of the Corporation as the Board of Directors may authorize.

(d) Voting of Securities. Unless the Board of Directors otherwise provides, a President, any Vice President or the Treasurer may waive notice of and act on behalf of this Corporation, or appoint another person or persons to act as proxy or attorney in fact for this Corporation with or without discretionary power and/or power of substitution, at any meeting of stockholders or shareholders of any other corporation or organization, any of whose securities are held by this Corporation.

(e) Resident Agent. The Board of Directors may appoint a resident agent upon whom legal process may be served in any action or proceeding against the Corporation.

(f) Corporate Records. The original or attested copies of the Certificate of Incorporation, By-laws and records of all meetings of the incorporators, stockholders and the Board of Directors and the stock and transfer records, which shall contain the names of all stockholders, their record addresses and the amount of stock held by each, shall be kept at the principal office of the Corporation, at the office of its counsel, or at an office of its transfer agent.

(g) Certificate of Incorporation. All references in these By-laws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the Corporation, as amended and in effect from time to time.

(h) Amendments. These By-laws may be altered, amended or repealed, and new By-laws may be adopted, by the stockholders or by the Board of Directors; provided, that (a) the Board of Directors may not alter, amend or repeal any provision of these By-laws which by law, by the Certificate of Incorporation or by these By-laws requires action by the stockholders and (b) any alteration, amendment or repeal of these By-laws by the Board of Directors and any new By-law adopted by the Board of Directors may be altered, amended or repealed by the stockholders.

(i) Waiver of Notice. Whenever notice is required to be given under any provision of these By-laws, a written waiver, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time of the event for which notice is to be given, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting at the beginning of the meeting to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any meeting needs to be specified in any written waiver or any waiver by electronic transmission.

Adopted September 26, 2019

AMENDED AND RESTATED

BY-LAWS

OF

PRIME MEDICINE, INC.

(the "Corporation")

ARTICLE I

Stockholders

SECTION 1. Annual Meeting. The annual meeting of stockholders (any such meeting being referred to in these By-laws as an "Annual Meeting") shall be held at the hour, date and place within or without the United States which is fixed by the Board of Directors, which time, date and place may subsequently be changed at any time by vote of the Board of Directors. If no Annual Meeting has been held for a period of thirteen (13) months after the Corporation's last Annual Meeting, a special meeting in lieu thereof may be held, and such special meeting shall have, for the purposes of these By-laws or otherwise, all the force and effect of an Annual Meeting. Any and all references hereafter in these By-laws to an Annual Meeting or Annual Meetings also shall be deemed to refer to any special meeting(s) in lieu thereof.

SECTION 2. Notice of Stockholder Business and Nominations.

(a) Annual Meetings of Stockholders.

(1) Nominations of persons for election to the Board of Directors of the Corporation and the proposal of other business to be considered by the stockholders may be brought before an Annual Meeting (i) by or at the direction of the Board of Directors or (ii) by any stockholder of the Corporation who was a stockholder of record at the time of giving of notice provided for in this By-law, who is entitled to vote at the meeting, who is present (in person or by proxy) at the meeting and who complies with the notice procedures set forth in this By-law as to such nomination or business. For the avoidance of doubt, the foregoing clause (ii) shall be the exclusive means for a stockholder to bring nominations or business properly before an Annual Meeting (other than matters properly brought under Rule 14a-8 (or any successor rule) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")), and such stockholder must comply with the notice and other procedures set forth in Article I, Section 2(a)(2) and (3) of this By-law to bring such nominations or business properly before an Annual Meeting. In addition to the other requirements set forth in this By-law, for any proposal of business to be considered at an Annual Meeting, it must be a proper subject for action by stockholders of the Corporation under Delaware law.

(2) For nominations or other business to be properly brought before an Annual Meeting by a stockholder pursuant to clause (ii) of Article I, Section 2(a)(1) of this By-law, the stockholder must (i) have given Timely Notice (as defined below) thereof in writing to the Secretary of the Corporation, (ii) have provided any updates or supplements to such notice at the times and in the forms required by this By-law and (iii) together with the beneficial owner(s), if any, on whose behalf the nomination or business proposal is made, have acted in accordance with the representations set forth in the Solicitation Statement (as defined below) required by this By-law. To be timely, a

stockholder's written notice shall be received by the Secretary at the principal executive offices of the Corporation not later than the close of business on the ninetieth (90th) day nor earlier than the close of business on the one hundred twentieth (120th) day prior to the one-year anniversary of the preceding year's Annual Meeting; provided, however, that in the event the Annual Meeting is first convened more than thirty (30) days before or more than sixty (60) days after such anniversary date, or if no Annual Meeting were held in the preceding year, notice by the stockholder to be timely must be received by the Secretary of the Corporation not later than the close of business on the later of the ninetieth (90th) day prior to the scheduled date of such Annual Meeting or the tenth (10th) day following the day on which public announcement of the date of such meeting is first made (such notice within such time periods shall be referred to as "Timely Notice"). Notwithstanding anything to the contrary provided herein, for the first Annual Meeting following the initial public offering of common stock of the Corporation, a stockholder's notice shall be timely if received by the Secretary at the principal executive offices of the Corporation not later than the close of business on the later of the ninetieth (90th) day prior to the scheduled date of such Annual Meeting or the tenth (10th) day following the day on which public announcement of the date of such Annual Meeting is first made or sent by the Corporation. Such stockholder's Timely Notice shall set forth:

(A) as to each person whom the stockholder proposes to nominate for election or reelection as a director, (i) the name, age, business address and residence address of the nominee, (ii) the principal occupation or employment of the nominee, (iii) the class and number of shares of the corporation that are held of record or are beneficially owned by the nominee and any derivative positions held or beneficially held by the nominee, (iv) whether and the extent to which any hedging or other transaction or series of transactions has been entered into by or on behalf of the nominee with respect to any securities of the corporation, and a description of any other agreement, arrangement or understanding (including any short position or any borrowing or lending of shares), the effect or intent of which is to mitigate loss to, or to manage the risk or benefit of share price changes for, or to increase or decrease the voting power of the nominee, (v) a description of all arrangements or understandings between or among the stockholder and each nominee and any other person or persons (naming such person or persons) pursuant to which the nominations are to be made by the stockholder or concerning the nominee's potential service on the Board of Directors, (vi) a written statement executed by the nominee acknowledging that as a director of the corporation, the nominee will owe fiduciary duties under Delaware law with respect to the corporation and its stockholders, and (vii) all information relating to such person that is required to be disclosed in solicitations of proxies for election of directors in an election contest, or is otherwise required, in each case pursuant to Regulation 14A under the Exchange Act (including such person's written consent to being named in the proxy statement as a nominee and to serving as a director if elected);

(B) as to any other business that the stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting, the text, if any, of any resolutions or By-law amendment proposed for adoption, and any material interest in such business of each Proposing Person (as defined below);

(C) (i) the name and address of the stockholder giving the notice, as they appear on the Corporation's books, and the names and addresses of the other Proposing Persons (if any) and (ii) as to each Proposing Person, the following information: (a) the class or series and number of all shares of capital stock of the

Corporation which are, directly or indirectly, owned beneficially or of record by such Proposing Person or any of its affiliates or associates (as such terms are defined in Rule 12b-2 promulgated under the Exchange Act), including any shares of any class or series of capital stock of the Corporation as to which such Proposing Person or any of its affiliates or associates has a right to acquire beneficial ownership at any time in the future, (b) all Synthetic Equity Interests (as defined below) in which such Proposing Person or any of its affiliates or associates, directly or indirectly, holds an interest including a description of the material terms of each such Synthetic Equity Interest, including without limitation, identification of the counterparty to each such Synthetic Equity Interest and disclosure, for each such Synthetic Equity Interest, as to (x) whether or not such Synthetic Equity Interest conveys any voting rights, directly or indirectly, in such shares to such Proposing Person, (y) whether or not such Synthetic Equity Interest is required to be, or is capable of being, settled through delivery of such shares and (z) whether or not such Proposing Person and/or, to the extent known, the counterparty to such Synthetic Equity Interest has entered into other transactions that hedge or mitigate the economic effect of such Synthetic Equity Interest, (c) any proxy (other than a revocable proxy given in response to a public proxy solicitation made pursuant to, and in accordance with, the Exchange Act), agreement, arrangement, understanding or relationship pursuant to which such Proposing Person has or shares a right to, directly or indirectly, vote any shares of any class or series of capital stock of the Corporation, (d) any rights to dividends or other distributions on the shares of any class or series of capital stock of the Corporation, directly or indirectly, owned beneficially by such Proposing Person that are separated or separable from the underlying shares of the Corporation, and (e) any performance-related fees (other than an asset based fee) that such Proposing Person, directly or indirectly, is entitled to based on any increase or decrease in the value of shares of any class or series of capital stock of the Corporation or any Synthetic Equity Interests (f)(1) if such Proposing Person is not a natural person, the identity of the natural person or persons associated with such Proposing Person responsible for (i) the formulation of and decision to propose the director nomination or business to be brought before the meeting and (ii) making voting and investment decisions on behalf of the Proposing Person (irrespective of whether such person or persons have "beneficial ownership" for purposes of Rule 13d-3 of the Exchange Act of any securities owned of record or beneficially by the Proposing Person) (such person or persons, the "Responsible Person"), the manner in which such Responsible Person was selected, any fiduciary duties owed by such Responsible Person to the equity holders or other beneficiaries of such Proposing Person and, the qualifications and background of such Responsible Person or (2) if such Proposing Person is a natural person, the qualifications and background of such natural person, (g) any equity interests or any Synthetic Equity Interests in any principal competitor of the Corporation beneficially owned by such Proposing Person or any of their affiliates or associates, (h) any direct or indirect interest of such Proposing Person or any of their affiliates or associates in any contract with the Corporation, any affiliate of the Corporation or any principal competitor of the Corporation (including, without limitation, in any such case, any employment agreement, collective bargaining agreement or consulting agreement), (i) any pending or threatened litigation in which such Proposing Person or any of their affiliates or associates is a party or material participant involving the Corporation or any of its officers or directors, or any affiliate of the Corporation, (j) any material transaction occurring during the prior twelve months between such Proposing Person or any of their affiliates or associates, on the one hand, and the Corporation, any affiliate of the Corporation or any principal competitor of the Corporation, on the other hand,

and (k) any other information relating to such Proposing Person or any of their affiliates or associates that would be required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies or consents by such Proposing Person in support of the business proposed to be brought before the meeting pursuant to Section 14(a) of the Exchange Act (the disclosures to be made pursuant to the foregoing clauses (a) through (l) are referred to, collectively, as "Material Ownership Interests"); provided, however, that the Material Ownership Interests shall not include any such disclosures with respect to the ordinary course business activities of any broker, dealer, commercial bank, trust company or other nominee who is a Proposing Person solely as a result of being the stockholder of record directed to prepare and submit the notice required by these By-laws on behalf of a beneficial owner;

(D) (i) a description of all agreements, arrangements or understandings by and among any of the Proposing Persons, or by and among any Proposing Persons and any other person (including with any proposed nominee(s)), pertaining to the nomination(s), or other business proposed to be brought before the meeting of stockholders (which description shall identify the name of each other person who is party to such an agreement, arrangement or understanding), and (ii) identification of the names and addresses of other stockholders (including beneficial owners) known by any of the Proposing Persons to support such nominations or other business proposal(s), and to the extent known the class and number of all shares of the Corporation's capital stock owned beneficially or of record by such other stockholder(s) or other beneficial owner(s); and

(E) a statement (i) that the stockholder is a holder of record of capital stock of the Corporation entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to propose such business, (ii) whether or not the stockholder giving the notice and/or the other Proposing Person(s), if any, (a) will deliver a proxy statement and form of proxy to holders of, in the case of a business proposal, at least the percentage of voting power of all of the shares of capital stock of the Corporation required under applicable law to approve the proposal or, in the case of a nomination or nominations, at least 67 percent of the voting power of all of the shares of capital stock of the Corporation entitled to vote on the election of directors or (b) otherwise solicit proxies or votes from stockholders in support of such proposal or nomination, as applicable, (iii) providing a representation as to whether or not such Proposing Person intends to solicit proxies in support of director nominees other than the Corporation's director nominees in accordance with Rule 14a-19 promulgated under the Exchange Act, and (iv) that the stockholder will provide any other information relating to such item of business that would be required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies in support of the business proposed to be brought before the meeting pursuant to Section 14(a) of the Exchange Act (such statement, the "Solicitation Statement").

For purposes of this Article I of these By-laws, the term "Proposing Person" shall mean the following persons: (i) the stockholder of record providing the notice of nominations or business proposed to be brought before a stockholders' meeting, and (ii) the beneficial owner(s), if different, on whose behalf the nominations or business proposed to be brought before a stockholders' meeting is made. For purposes of this Section 2 of Article I of these By-laws, the term "Synthetic Equity Interest" shall mean any transaction, agreement or arrangement (or series of transactions, agreements or arrangements), including, without limitation, any derivative, swap, hedge, repurchase or

so-called "stock borrowing" agreement or arrangement, the purpose or effect of which is to, directly or indirectly: (a) give a person or entity economic benefit and/or risk similar to ownership of shares of any class or series of capital stock of the Corporation, in whole or in part, including due to the fact that such transaction, agreement or arrangement provides, directly or indirectly, the opportunity to profit or avoid a loss from any increase or decrease in the value of any shares of any class or series of capital stock of the Corporation, (b) mitigate loss to, reduce the economic risk of or manage the risk of share price changes for, any person or entity with respect to any shares of any class or series of capital stock of the Corporation, (c) otherwise provide in any manner the opportunity to profit or avoid a loss from any decrease in the value of any shares of any class or series of capital stock of the Corporation, or (d) increase or decrease the voting power of any person or entity with respect to any shares of any class or series of capital stock of the Corporation.

(3) A stockholder providing Timely Notice of nominations or business proposed to be brought before an Annual Meeting shall further update and supplement such notice, if necessary, so that the information (including, without limitation, the Material Ownership Interests information) provided or required to be provided in such notice pursuant to this By-law shall be true and correct as of the record date for the meeting and as of the date that is ten (10) business days prior to such Annual Meeting, and such update and supplement shall be received by the Secretary at the principal executive offices of the Corporation not later than the close of business on the fifth (5th) business day after the record date for the Annual Meeting (in the case of the update and supplement required to be made as of the record date), and not later than the close of business on the eighth (8th) business day prior to the date of the Annual Meeting (in the case of the update and supplement required to be made as of ten (10) business days prior to the meeting). For the avoidance of doubt, the foregoing clause (ii) shall be the exclusive means for a stockholder to bring nominations or business properly before an Annual Meeting (other than matters properly brought under Rule 14a-8 (or any successor rule) under Exchange Act)), and such stockholder must comply with the notice and other procedures set forth in Article I, Section 2(a)(2), (3) and (4) of this By-law to bring such nominations or business properly before an Annual Meeting. In addition to the other requirements set forth in this By-law, for any proposal of business to be considered at an Annual Meeting, it must be a proper subject for action by stockholders of the Corporation under Delaware law.

(4) Notwithstanding anything in the second sentence of Article I, Section 2(a)(2) of this By-law to the contrary, in the event that the number of directors to be elected to the Board of Directors of the Corporation is increased and there is no public announcement naming all of the nominees for director or specifying the size of the increased Board of Directors made by the Corporation at least ten (10) days before the last day a stockholder may deliver a notice of nomination in accordance with the second sentence of Article I, Section 2(a)(2), a stockholder's notice required by this By-law shall also be considered timely, but only with respect to nominees for any new positions created by such increase, if it shall be received by the Secretary of the Corporation not later than the close of business on the tenth (10th) day following the day on which such public announcement is first made by the Corporation.

(b) General.

(1) Only such persons who are nominated in accordance with the provisions of this By-law shall be eligible for election and to serve as directors and only such business shall be conducted at an Annual Meeting as shall have been brought before the meeting in accordance with the provisions of this By-law or in accordance with Rule

14a-8 under the Exchange Act. The Board of Directors or a designated committee thereof shall have the power to determine whether a nomination or any business proposed to be brought before the meeting was made in accordance with the provisions of this By-law. If neither the Board of Directors nor such designated committee makes a determination as to whether any stockholder proposal or nomination was made in accordance with the provisions of this By-law, the presiding officer of the Annual Meeting shall have the power and duty to determine whether the stockholder proposal or nomination was made in accordance with the provisions of this By-law. If the Board of Directors or a designated committee thereof or the presiding officer, as applicable, determines that any stockholder proposal or nomination was not made in accordance with the provisions of this By-law, such proposal or nomination shall be disregarded and shall not be presented for action at the Annual Meeting.

(2) Except as otherwise required by law, nothing in this Article I, Section 2 shall obligate the Corporation or the Board of Directors to include in any proxy statement or other stockholder communication distributed on behalf of the Corporation or the Board of Directors information with respect to any nominee for director or any other matter of business submitted by a stockholder.

(3) Notwithstanding the foregoing provisions of this Article I, Section 2, if the nominating or proposing stockholder (or a qualified representative of the stockholder) does not appear at the Annual Meeting to present a nomination or any business, such nomination or business shall be disregarded, notwithstanding that proxies in respect of such vote may have been received by the Corporation. For purposes of this Article I, Section 2, to be considered a qualified representative of the proposing stockholder, a person must be authorized by a written instrument executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as proxy at the meeting of stockholders and such person must produce such written instrument or electronic transmission, or a reliable reproduction of the written instrument or electronic transmission, to the presiding officer at the meeting of stockholders.

(4) For purposes of this By-law, "public announcement" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Exchange Act.

(5) Notwithstanding the foregoing provisions of this By-law, a stockholder shall also comply with all applicable requirements of the Exchange Act and the rules and regulations thereunder, including, but not limited to, Rule 14a-19 of the Exchange Act, with respect to the matters set forth in this By-law. If a stockholder fails to comply with any applicable requirements of the Exchange Act, including, but not limited to, Rule 14a-19 promulgated thereunder, such stockholder's proposed nomination or proposed business shall be deemed to have not been made in compliance with this By-law and shall be disregarded. Nothing in this By-law shall be deemed to affect any rights of (i) stockholders to have proposals included in the Corporation's proxy statement pursuant to Rule 14a-8 (or any successor rule), as applicable, under the Exchange Act and, to the extent required by such rule, have such proposals considered and voted on at an Annual Meeting or (ii) the holders of any series of Undesignated Preferred Stock (as defined in the Certificate (as defined below)) to elect directors under specified circumstances.

(6) Further notwithstanding the foregoing provisions of this By-law, unless otherwise required by law, if any Proposing Person (i) provides notice pursuant to Rule 14a-19(b) promulgated under the Exchange Act and (ii) subsequently fails to comply

with the requirements of Rule 14a-19(a)(2) or Rule 14a-19(a)(3) promulgated under the Exchange Act, then the Corporation shall disregard any proxies or votes solicited for any proposed nominee of such Proposing Person. Upon request by the Corporation, if any Proposing Person provides notice pursuant to Rule 14a-19(b) promulgated under the Exchange Act, such Proposing Person shall deliver to the Corporation, no later than five (5) business days prior to the applicable meeting, reasonable evidence that it has met the requirements of Rule 14a-19(a)(3) promulgated under the Exchange Act.

(7) The number of nominees a stockholder may nominate for election at the Annual Meeting (or in the case of a stockholder giving the notice on behalf of a beneficial owner, the number of nominees a stockholder may nominate for election at the Annual Meeting on behalf of such beneficial owner) shall not exceed the number of directors to be elected at such Annual Meeting.

SECTION 3. Special Meetings. Except as otherwise required by statute and subject to the rights, if any, of the holders of any series of Undesignated Preferred Stock, special meetings of the stockholders of the Corporation may be called only by or at the direction of the Board of Directors. The Board of Directors may postpone or reschedule any previously scheduled special meeting of stockholders. Only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders of the Corporation. Nominations of persons for election to the Board of Directors and stockholder proposals of other business shall not be brought before a special meeting of stockholders to be considered by the stockholders unless such special meeting is held in lieu of an annual meeting of stockholders in accordance with Article I, Section 1 of these By-laws, in which case such special meeting in lieu thereof shall be deemed an Annual Meeting for purposes of these By-laws and the provisions of Article I, Section 2 of these By-laws shall govern such special meeting.

SECTION 4. (a) Notice of Meetings; Adjournments.

(a) A notice of each Annual Meeting stating the hour, date and place, if any, of such Annual Meeting and the means of remote communication, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such meeting, shall be given not less than ten (10) days nor more than sixty (60) days before the Annual Meeting, to each stockholder entitled to vote thereat by delivering such notice to such stockholder or by mailing it, postage prepaid, addressed to such stockholder at the address of such stockholder as it appears on the Corporation's stock transfer books. Without limiting the manner by which notice may otherwise be given to stockholders, any notice to stockholders may be given by electronic transmission in the manner provided in Section 232 of the Delaware General Corporation Law ("DGCL").

(b) Unless otherwise required by the DGCL, notice of all special meetings of stockholders shall be given in the same manner as provided for Annual Meetings, except that the notice of all special meetings shall state the purpose or purposes for which the meeting has been called.

(c) Notice of an Annual Meeting or special meeting of stockholders need not be given to a stockholder if a waiver of notice is executed, or waiver of notice by electronic transmission is provided, before or after such meeting by such stockholder or if such stockholder attends such meeting, unless such attendance is for the express purpose of objecting at the beginning of the meeting to the transaction of any business because the meeting was not lawfully called or convened.

(d) The Board of Directors may postpone and reschedule any previously scheduled Annual Meeting or special meeting of stockholders and any record date with respect thereto,

regardless of whether any notice or public disclosure with respect to any such meeting has been sent or made pursuant to Section 2 of this Article I of these By-laws or otherwise. In no event shall the public announcement of an adjournment, postponement or rescheduling of any previously scheduled meeting of stockholders commence a new time period for the giving of a stockholder's notice under this Article I of these By-laws.

(e) When any meeting is convened, the presiding officer may adjourn the meeting if (i) no quorum is present for the transaction of business, (ii) the Board of Directors determines that adjournment is necessary or appropriate to enable the stockholders to consider fully information which the Board of Directors determines has not been made sufficiently or timely available to stockholders, or (iii) the Board of Directors determines that adjournment is otherwise in the best interests of the Corporation. When any Annual Meeting or special meeting of stockholders is adjourned to another hour, date or place (including an adjournment taken to address a technical failure to convene or continue a meeting using remote communication), notice need not be given of the adjourned meeting if the time, place, if any, thereof, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are (i) announced at the meeting at which the adjournment is taken, (ii) displayed, during the time scheduled for the meeting, on the same electronic network used to enable stockholders and proxy holders to participate in the meeting by means of remote communication or (iii) set forth in the notice of meeting given in accordance with this Section 4; provided, however, that if the adjournment is for more than thirty (30) days from the meeting date, or if after the adjournment a new record date is fixed for the adjourned meeting, notice of the adjourned meeting and the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such adjourned meeting shall be given to each stockholder of record entitled to vote thereat and each stockholder who, by law or under the Third Amended and Restated Certificate of Incorporation of the Corporation (as the same may hereafter be amended and/or restated, the "Certificate") or these By-laws, is entitled to such notice.

SECTION 5. Quorum. A majority of the outstanding shares entitled to vote, present in person or represented by proxy, shall constitute a quorum at any meeting of stockholders. If less than a quorum is present at a meeting, the holders of voting stock representing a majority of the voting power present at the meeting or the presiding officer may adjourn the meeting from time to time, and the meeting may be held as adjourned without further notice, except as provided in Section 4 of this Article I. At such adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted at the original meeting. The stockholders present at a duly constituted meeting may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum.

SECTION 6. Voting and Proxies. Stockholders shall have one vote for each share of stock entitled to vote owned by them of record according to the stock ledger of the Corporation as of the record date, unless otherwise provided by law or by the Certificate. Stockholders may vote either (i) in person, (ii) by written proxy or (iii) by a transmission permitted by Section 212(c) of the DGCL. Any copy, facsimile telecommunication or other reliable reproduction of the writing or transmission permitted by Section 212(c) of the DGCL may be substituted for or used in lieu of the original writing or transmission for any and all purposes for which the original writing or transmission could be used, provided that such copy, facsimile telecommunication or other reproduction shall be a complete reproduction of the entire original writing or transmission. Proxies shall be filed in accordance with the procedures established for the meeting of stockholders. Except as otherwise limited therein or as otherwise provided by law, proxies authorizing a person to vote at a specific meeting shall entitle the persons authorized thereby to vote at any adjournment of such meeting, but they shall not be valid after final adjournment of such meeting. A proxy with respect to stock held in the name of

two or more persons shall be valid if executed by or on behalf of any one of them unless at or prior to the exercise of the proxy the Corporation receives a specific written notice to the contrary from any one of them.

SECTION 7. Action at Meeting. When a quorum is present at any meeting of stockholders, any matter before any such meeting (other than an election of a director or directors) shall be decided by a majority of the votes properly cast for and against such matter, except where a larger vote is required by law, by the Certificate or by these By-laws. Any election of directors by stockholders shall be determined by a plurality of the votes properly cast on the election of directors.

SECTION 8. Stockholder Lists. The Corporation shall prepare, no later than the tenth day before each Annual Meeting or special meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder for any purpose germane to the meeting for a period of ten (10) days ending on the day before the meeting date in the manner provided by law.

SECTION 9. Presiding Officer. The Board of Directors shall designate a representative to preside over all Annual Meetings or special meetings of stockholders, provided that if the Board of Directors does not so designate such a presiding officer, then the Chairman of the Board, if one is elected, shall preside over such meetings. If the Board of Directors does not so designate such a presiding officer and there is no Chairman of the Board or the Chairman of the Board is unable to so preside or is absent, then the Chief Executive Officer, if one is elected, shall preside over such meetings, provided further that if there is no Chief Executive Officer or the Chief Executive Officer is unable to so preside or is absent, then the President shall preside over such meetings. The presiding officer at any Annual Meeting or special meeting of stockholders shall have the power, among other things, to adjourn such meeting at any time and from time to time, subject to Sections 4 and 5 of this Article I. The order of business and all other matters of procedure at any meeting of the stockholders shall be determined by the presiding officer.

SECTION 10. Inspectors of Elections. The Corporation shall, in advance of any meeting of stockholders, appoint one or more inspectors to act at the meeting and make a written report thereof. The Corporation may designate one or more persons as alternate inspectors to replace any inspector who fails to act. If no inspector or alternate is able to act at a meeting of stockholders, the presiding officer shall appoint one or more inspectors to act at the meeting. Any inspector may, but need not, be an officer, employee or agent of the Corporation. Each inspector, before entering upon the discharge of his or her duties, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of his or her ability. The inspectors shall perform such duties as are required by the DGCL, including the counting of all votes and ballots. The inspectors may appoint or retain other persons or entities to assist the inspectors in the performance of the duties of the inspectors. The presiding officer may review all determinations made by the inspectors, and in so doing the presiding officer shall be entitled to exercise his or her sole judgment and discretion and he or she shall not be bound by any determinations made by the inspectors. All determinations by the inspectors and, if applicable, the presiding officer, shall be subject to further review by any court of competent jurisdiction.

ARTICLE II

Directors

SECTION 1. Powers. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors except as otherwise provided by the Certificate or required by law.

SECTION 2. Number and Terms. The number of directors of the Corporation shall be fixed solely and exclusively by resolution duly adopted from time to time by the Board of Directors. The directors shall hold office in the manner provided in the Certificate.

SECTION 3. Qualification. No director need be a stockholder of the Corporation.

SECTION 4. Vacancies. Vacancies in the Board of Directors shall be filled in the manner provided in the Certificate.

SECTION 5. Removal. Directors may be removed from office only in the manner provided in the Certificate.

SECTION 6. Resignation. A director may resign at any time by electronic transmission or by giving written notice to the Chairman of the Board, if one is elected, the President or the Secretary. A resignation shall be effective upon receipt, unless the resignation otherwise provides.

SECTION 7. Regular Meetings. The regular annual meeting and other regular meetings of the Board of Directors may be held at such hour, date and place as the Board of Directors may by resolution from time to time determine and publicize by means of reasonable notice given to any director who is not present at the meeting at which such resolution is adopted.

SECTION 8. Special Meetings. Special meetings of the Board of Directors may be called, orally or in writing, by or at the request of a majority of the directors, the Chairman of the Board, if one is elected, or the President. The person calling any such special meeting of the Board of Directors may fix the hour, date and place thereof.

SECTION 9. Notice of Meetings. Notice of the hour, date and place of all special meetings of the Board of Directors shall be given to each director by the Secretary or an Assistant Secretary, or in case of the death, absence, incapacity or refusal of such persons, by the Chairman of the Board, if one is elected, or the President or such other officer designated by the Chairman of the Board, if one is elected, or the President. Notice of any special meeting of the Board of Directors shall be given to each director in person, by telephone, or by facsimile, electronic mail or other form of electronic communication, sent to his or her business or home address, at least twenty-four (24) hours in advance of the meeting, or by written notice mailed to his or her business or home address, at least forty-eight (48) hours in advance of the meeting. Such notice shall be deemed to be delivered when hand-delivered to such address, read to such director by telephone, deposited in the mail so addressed, with postage thereon prepaid if mailed, dispatched or transmitted if sent by facsimile transmission or by electronic mail or other form of electronic communications. A written waiver of notice signed or electronically transmitted before or after a meeting by a director and filed with the records of the meeting shall be deemed to be equivalent to notice of the meeting. The attendance of a director at a meeting shall constitute a waiver of notice of such meeting, except where a director attends a meeting for the express purpose of objecting at the beginning of the meeting to the transaction of any business

because such meeting is not lawfully called or convened. Except as otherwise required by law, by the Certificate or by these By-laws, neither the business to be transacted at, nor the purpose of, any meeting of the Board of Directors need be specified in the notice or waiver of notice of such meeting.

SECTION 10. Quorum. At any meeting of the Board of Directors, a majority of the total number of directors shall constitute a quorum for the transaction of business, but if less than a quorum is present at a meeting, a majority of the directors present may adjourn the meeting from time to time, and the meeting may be held as adjourned without further notice. Any business which might have been transacted at the meeting as originally noticed may be transacted at such adjourned meeting at which a quorum is present. For purposes of this section, the total number of directors includes any unfilled vacancies on the Board of Directors.

SECTION 11. Action at Meeting. At any meeting of the Board of Directors at which a quorum is present, the vote of a majority of the directors present shall constitute action by the Board of Directors, unless otherwise required by law, by the Certificate or by these By-laws.

SECTION 12. Action by Consent. Any action required or permitted to be taken at any meeting of the Board of Directors may be taken without a meeting if all members of the Board of Directors consent thereto in writing or by electronic transmission and the writing or writings or electronic transmission or transmissions are filed with the records of the meetings of the Board of Directors. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form. Such consent shall be treated as a resolution of the Board of Directors for all purposes.

SECTION 13. Manner of Participation. Directors may participate in meetings of the Board of Directors by means of conference telephone or other communications equipment by means of which all directors participating in the meeting can hear each other, and participation in a meeting in accordance herewith shall constitute presence in person at such meeting for purposes of these By-laws.

SECTION 14. Presiding Director. The Board of Directors shall designate a representative to preside over all meetings of the Board of Directors, provided that if the Board of Directors does not so designate such a presiding director or such designated presiding director is unable to so preside or is absent, then the Chairman of the Board, if one is elected, shall preside over all meetings of the Board of Directors. If both the designated presiding director, if one is so designated, and the Chairman of the Board, if one is elected, are unable to preside or are absent, the Board of Directors shall designate an alternate representative to preside over a meeting of the Board of Directors.

SECTION 15. Committees. The Board of Directors, by vote of a majority of the directors then in office, may elect one or more committees, including, without limitation, a Compensation Committee, a Nominating & Corporate Governance Committee and an Audit Committee, and may delegate thereto some or all of its powers except those which by law, by the Certificate or by these By-laws may not be delegated. Except as the Board of Directors may otherwise determine, any such committee may make rules for the conduct of its business, but unless otherwise provided by the Board of Directors or in such rules, its business shall be conducted so far as possible in the same manner as is provided by these By-laws for the Board of Directors. All members of such committees shall hold such offices at the pleasure of the Board of Directors. The Board of Directors may abolish any such committee at any time. Any committee to which the Board of Directors delegates any of its powers or duties shall keep records of its meetings and shall report its action to the Board of Directors.

SECTION 16. Compensation of Directors. Directors shall receive such compensation for their services as shall be determined by a majority of the Board of Directors, or a designated committee thereof, provided that directors who are serving the Corporation as employees and who receive compensation for their services as such, shall not receive any salary or other compensation for their services as directors of the Corporation.

ARTICLE III

Officers

SECTION 1. Enumeration. The officers of the Corporation shall consist of a President, a Treasurer, a Secretary and such other officers, including, without limitation, a Chairman of the Board of Directors, a Chief Executive Officer and one or more Vice Presidents (including Executive Vice Presidents or Senior Vice Presidents), Assistant Vice Presidents, Assistant Treasurers and Assistant Secretaries, as the Board of Directors may determine.

SECTION 2. Election. At the regular annual meeting of the Board of Directors following the Annual Meeting, the Board of Directors shall elect the President, the Treasurer and the Secretary. Other officers may be elected by the Board of Directors at such regular annual meeting of the Board of Directors or at any other regular or special meeting.

SECTION 3. Qualification. No officer need be a stockholder or a director. Any person may occupy more than one office of the Corporation at any time.

SECTION 4. Tenure. Except as otherwise provided by the Certificate or by these By-laws, each of the officers of the Corporation shall hold office until the regular annual meeting of the Board of Directors following the next Annual Meeting or until his or her successor is elected and qualified or until his or her earlier resignation or removal.

SECTION 5. Resignation. Any officer may resign by delivering his or her written or electronically transmitted resignation to the Corporation addressed to the President or the Secretary, and such resignation shall be effective upon receipt, unless the resignation otherwise provides.

SECTION 6. Removal. Except as otherwise provided by law or by resolution of the Board of Directors, the Board of Directors may remove any officer with or without cause by the affirmative vote of a majority of the directors then in office.

SECTION 7. Absence or Disability. In the event of the absence or disability of any officer, the Board of Directors may designate another officer to act temporarily in place of such absent or disabled officer.

SECTION 8. Vacancies. Any vacancy in any office may be filled for the unexpired portion of the term by the Board of Directors.

SECTION 9. President. The President shall, subject to the direction of the Board of Directors, have such powers and shall perform such duties as the Board of Directors may from time to time designate.

SECTION 10. Chairman of the Board. The Chairman of the Board, if one is elected, shall have such powers and shall perform such duties as the Board of Directors may from time to time designate.

SECTION 11. Chief Executive Officer. The Chief Executive Officer, if one is elected, shall have such powers and shall perform such duties as the Board of Directors may from time to time designate.

SECTION 12. Vice Presidents and Assistant Vice Presidents. Any Vice President (including any Executive Vice President or Senior Vice President) and any Assistant Vice President shall have such powers and shall perform such duties as the Board of Directors or the Chief Executive Officer may from time to time designate.

SECTION 13. Treasurer and Assistant Treasurers. The Treasurer shall, subject to the direction of the Board of Directors and except as the Board of Directors or the Chief Executive Officer may otherwise provide, have general charge of the financial affairs of the Corporation and shall cause to be kept accurate books of account. The Treasurer shall have custody of all funds, securities, and valuable documents of the Corporation. He or she shall have such other duties and powers as may be designated from time to time by the Board of Directors or the Chief Executive Officer. Any Assistant Treasurer shall have such powers and perform such duties as the Board of Directors or the Chief Executive Officer may from time to time designate.

SECTION 14. Secretary and Assistant Secretaries. The Secretary shall record all the proceedings of the meetings of the stockholders and the Board of Directors (including committees of the Board of Directors) in books kept for that purpose. In his or her absence from any such meeting, a temporary secretary chosen at the meeting shall record the proceedings thereof. The Secretary shall have charge of the stock ledger (which may, however, be kept by any transfer or other agent of the Corporation). The Secretary shall have custody of the seal of the Corporation, and the Secretary, or an Assistant Secretary shall have authority to affix it to any instrument requiring it, and, when so affixed, the seal may be attested by his or her signature or that of an Assistant Secretary. The Secretary shall have such other duties and powers as may be designated from time to time by the Board of Directors or the Chief Executive Officer. In the absence of the Secretary, any Assistant Secretary may perform his or her duties and responsibilities. Any Assistant Secretary shall have such powers and perform such duties as the Board of Directors or the Chief Executive Officer may from time to time designate.

SECTION 15. Other Powers and Duties. Subject to these By-laws and to such limitations as the Board of Directors may from time to time prescribe, the officers of the Corporation shall each have such powers and duties as generally pertain to their respective offices, as well as such powers and duties as from time to time may be conferred by the Board of Directors or the Chief Executive Officer.

SECTION 16. Representation of Shares of Other Corporations. The Chairperson of the Board, the President, any Vice President, the Treasurer, the Secretary or Assistant Secretary of this Corporation, or any other person authorized by the Board of Directors or the President or a Vice President, is authorized to vote, represent and exercise on behalf of this Corporation all rights incident to any and all securities of any other entity or entities standing in the name of this Corporation. The authority granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

SECTION 17. Bonded Officers. The Board of Directors may require any officer to give the Corporation a bond in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors upon such terms and conditions as the Board of Directors may specify, including without limitation a bond for the faithful performance of his or her duties and for the restoration to the Corporation of all property in his or her possession or under his or her control belonging to the Corporation.

ARTICLE IV

Capital Stock

SECTION 1. Certificates of Stock. Each stockholder shall be entitled to a certificate of the capital stock of the Corporation in such form as may from time to time be prescribed by the Board of Directors. Such certificate shall be signed by any two authorized officers of the Corporation. The Corporation seal and the signatures by the Corporation's officers, the transfer agent or the registrar may be facsimiles. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed on such certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if he or she were such officer, transfer agent or registrar at the time of its issue. Every certificate for shares of stock which are subject to any restriction on transfer and every certificate issued when the Corporation is authorized to issue more than one class or series of stock shall contain such legend with respect thereto as is required by law. Notwithstanding anything to the contrary provided in these By-laws, the Board of Directors of the Corporation may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares (except that the foregoing shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation), and by the approval and adoption of these By-laws the Board of Directors has determined that all classes or series of the Corporation's stock may be uncertificated, whether upon original issuance, re-issuance, or subsequent transfer.

SECTION 2. Transfers. Subject to any restrictions on transfer and unless otherwise provided by the Board of Directors, shares of stock that are represented by a certificate may be transferred on the books of the Corporation by the surrender to the Corporation or its transfer agent of the certificate theretofore properly endorsed or accompanied by a written assignment or power of attorney properly executed, with transfer stamps (if necessary) affixed, and with such proof of the authenticity of signature as the Corporation or its transfer agent may reasonably require. Shares of stock that are not represented by a certificate may be transferred on the books of the Corporation by submitting to the Corporation or its transfer agent such evidence of transfer and following such other procedures as the Corporation or its transfer agent may require.

SECTION 3. Stock Transfer Agreements. The Corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the Corporation to restrict the transfer of shares of stock of the corporation of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

SECTION 4. Record Holders. Except as may otherwise be required by law, by the Certificate or by these By-laws, the Corporation shall be entitled to treat the record holder of stock as shown on its books as the owner of such stock for all purposes, including the payment of dividends and the right to vote with respect thereto, regardless of any transfer, pledge or other disposition of such stock, until the shares have been transferred on the books of the Corporation in accordance with the requirements of these By-laws.

SECTION 5. Record Date. In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date: (a) in the case of determination of stockholders entitled to vote at any meeting of stockholders, shall, unless otherwise required by

law, not be more than sixty (60) nor less than ten (10) days before the date of such meeting and (b) in the case of any other action, shall not be more than sixty (60) days prior to such other action. If no record date is fixed: (i) the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held; and (ii) the record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

SECTION 6. Replacement of Certificates. In case of the alleged loss, destruction or mutilation of a certificate of stock of the Corporation, a duplicate certificate may be issued in place thereof, upon such terms as the Board of Directors may prescribe.

ARTICLE V

Indemnification

SECTION 1. Definitions. For purposes of this Article:

(a) "Corporate Status" describes the status of a person who is serving or has served (i) as a Director of the Corporation, (ii) as an Officer of the Corporation, (iii) as a Non-Officer Employee of the Corporation, or (iv) as a director, partner, trustee, officer, employee or agent of any other corporation, partnership, limited liability company, joint venture, trust, employee benefit plan, foundation, association, organization or other legal entity which such person is or was serving at the request of the Corporation. For purposes of this Section 1(a), a Director, Officer or Non-Officer Employee of the Corporation who is serving or has served as a director, partner, trustee, officer, employee or agent of a Subsidiary shall be deemed to be serving at the request of the Corporation. Notwithstanding the foregoing, "Corporate Status" shall not include the status of a person who is serving or has served as a director, officer, employee or agent of a constituent corporation absorbed in a merger or consolidation transaction with the Corporation with respect to such person's activities prior to said transaction, unless specifically authorized by the Board of Directors or the stockholders of the Corporation;

(b) "Director" means any person who serves or has served the Corporation as a director on the Board of Directors of the Corporation;

(c) "Disinterested Director" means, with respect to each Proceeding in respect of which indemnification is sought hereunder, a Director of the Corporation who is not and was not a party to such Proceeding;

(d) "Expenses" means all attorneys' fees, retainers, court costs, transcript costs, fees of expert witnesses, private investigators and professional advisors (including, without limitation, accountants and investment bankers), travel expenses, duplicating costs, printing and binding costs, costs of preparation of demonstrative evidence and other courtroom presentation aids and devices, costs incurred in connection with document review, organization, imaging and computerization, telephone charges, postage, delivery service fees, and all other disbursements, costs or expenses of the type customarily incurred in connection with prosecuting, defending, preparing to prosecute or defend, investigating, being or preparing to be a witness in, settling or otherwise participating in, a Proceeding;

(e) "Liabilities" means judgments, damages, liabilities, losses, penalties, excise taxes, fines and amounts paid in settlement;

(f) "Non-Officer Employee" means any person who serves or has served as an employee or agent of the Corporation, but who is not or was not a Director or Officer;

(g) "Officer" means any person who serves or has served the Corporation as an officer of the Corporation appointed by the Board of Directors of the Corporation;

(h) "Proceeding" means any threatened, pending or completed action, suit, arbitration, alternate dispute resolution mechanism, inquiry, investigation, administrative hearing or other proceeding, whether civil, criminal, administrative, arbitrative or investigative; and

(i) "Subsidiary" shall mean any corporation, partnership, limited liability company, joint venture, trust or other entity of which the Corporation owns (either directly or through or together with another Subsidiary of the Corporation) either (i) a general partner, managing member or other similar interest or (ii) (A) fifty percent (50%) or more of the voting power of the voting capital equity interests of such corporation, partnership, limited liability company, joint venture or other entity, or (B) fifty percent (50%) or more of the outstanding voting capital stock or other voting equity interests of such corporation, partnership, limited liability company, joint venture or other entity.

SECTION 2. Indemnification of Directors and Officers.

(a) Subject to the operation of Section 4 of this Article V of these By-laws, each Director and Officer shall be indemnified and held harmless by the Corporation to the fullest extent authorized by the DGCL, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than such law permitted the Corporation to provide prior to such amendment), and to the extent authorized in this Section 2.

(1) Actions, Suits and Proceedings Other than By or In the Right of the Corporation. Each Director and Officer shall be indemnified and held harmless by the Corporation against any and all Expenses and Liabilities that are incurred or paid by such Director or Officer or on such Director's or Officer's behalf in connection with any Proceeding or any claim, issue or matter therein (other than an action by or in the right of the Corporation), which such Director or Officer is, or is threatened to be made, a party to or participant in by reason of such Director's or Officer's Corporate Status, if such Director or Officer acted in good faith and in a manner such Director or Officer reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful.

(2) Actions, Suits and Proceedings By or In the Right of the Corporation. Each Director and Officer shall be indemnified and held harmless by the Corporation against any and all Expenses that are incurred by such Director or Officer or on such Director's or Officer's behalf in connection with any Proceeding or any claim, issue or matter therein by or in the right of the Corporation, which such Director or Officer is, or is threatened to be made, a party to or participant in by reason of such Director's or Officer's Corporate Status, if such Director or Officer acted in good faith and in a manner such Director or Officer reasonably believed to be in or not opposed to the best interests of the Corporation; provided, however, that no indemnification shall be made under this Section 2(a)(2) in respect of any claim, issue or matter as to which such Director or Officer shall have been finally adjudged by a court of competent jurisdiction to be liable to the Corporation, unless, and only to the extent that, the Court of Chancery or another court in which such Proceeding was brought shall determine upon application that, despite adjudication of liability, but in view of all the circumstances of the case, such

Director or Officer is fairly and reasonably entitled to indemnification for such Expenses that such court deems proper.

(3) Survival of Rights. The rights of indemnification provided by this Section 2 shall continue as to a Director or Officer after he or she has ceased to be a Director or Officer and shall inure to the benefit of his or her heirs, executors, administrators and personal representatives.

(4) Actions by Directors or Officers. Notwithstanding the foregoing, the Corporation shall indemnify any Director or Officer seeking indemnification in connection with a Proceeding initiated by such Director or Officer only if such Proceeding (including any parts of such Proceeding not initiated by such Director or Officer) was authorized in advance by the Board of Directors of the Corporation, unless such Proceeding was brought to enforce such Officer's or Director's rights to indemnification or, in the case of Directors, advancement of Expenses under these By-laws in accordance with the provisions set forth herein.

SECTION 3. Indemnification of Non-Officer Employees. Subject to the operation of Section 4 of this Article V of these By-laws, each Non-Officer Employee may, in the discretion of the Board of Directors of the Corporation, be indemnified by the Corporation to the fullest extent authorized by the DGCL, as the same exists or may hereafter be amended, against any or all Expenses and Liabilities that are incurred by such Non-Officer Employee or on such Non-Officer Employee's behalf in connection with any threatened, pending or completed Proceeding, or any claim, issue or matter therein, which such Non-Officer Employee is, or is threatened to be made, a party to or participant in by reason of such Non-Officer Employee's Corporate Status, if such Non-Officer Employee acted in good faith and in a manner such Non-Officer Employee reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful. The rights of indemnification provided by this Section 3 shall exist as to a Non-Officer Employee after he or she has ceased to be a Non-Officer Employee and shall inure to the benefit of his or her heirs, personal representatives, executors and administrators. Notwithstanding the foregoing, the Corporation may indemnify any Non-Officer Employee seeking indemnification in connection with a Proceeding initiated by such Non-Officer Employee only if such Proceeding was authorized in advance by the Board of Directors of the Corporation.

SECTION 4. Determination. Unless ordered by a court, no indemnification shall be provided pursuant to this Article V to a Director, to an Officer or to a Non-Officer Employee unless a determination shall have been made that such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal Proceeding, such person had no reasonable cause to believe his or her conduct was unlawful. Such determination shall be made by (a) a majority vote of the Disinterested Directors, even though less than a quorum of the Board of Directors, (b) a committee comprised of Disinterested Directors, such committee having been designated by a majority vote of the Disinterested Directors (even though less than a quorum), (c) if there are no such Disinterested Directors, or if a majority of Disinterested Directors so directs, by independent legal counsel in a written opinion, or (d) by the stockholders of the Corporation.

SECTION 5. Advancement of Expenses to Directors Prior to Final Disposition.

(a) The Corporation shall advance all Expenses incurred by or on behalf of any Director in connection with any Proceeding in which such Director is involved by reason of such Director's Corporate Status within thirty (30) days after the receipt by the Corporation of a written statement from such Director requesting such advance or advances from time to time,

whether prior to or after final disposition of such Proceeding. Such statement or statements shall reasonably evidence the Expenses incurred by such Director and shall be preceded or accompanied by an undertaking by or on behalf of such Director to repay any Expenses so advanced if it shall ultimately be determined that such Director is not entitled to be indemnified against such Expenses. Notwithstanding the foregoing, the Corporation shall advance all Expenses incurred by or on behalf of any Director seeking advancement of expenses hereunder in connection with a Proceeding initiated by such Director only if such Proceeding (including any parts of such Proceeding not initiated by such Director) was (i) authorized by the Board of Directors of the Corporation, or (ii) brought to enforce such Director's rights to indemnification or advancement of Expenses under these By-laws.

(b) If a claim for advancement of Expenses hereunder by a Director is not paid in full by the Corporation within thirty (30) days after receipt by the Corporation of documentation of Expenses and the required undertaking, such Director may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim and if successful in whole or in part, such Director shall also be entitled to be paid the expenses of prosecuting such claim. The failure of the Corporation (including its Board of Directors or any committee thereof, independent legal counsel, or stockholders) to make a determination concerning the permissibility of such advancement of Expenses under this Article V shall not be a defense to an action brought by a Director for recovery of the unpaid amount of an advancement claim and shall not create a presumption that such advancement is not permissible. The burden of proving that a Director is not entitled to an advancement of expenses shall be on the Corporation.

(c) In any suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Corporation shall be entitled to recover such expenses upon a final adjudication that the Director has not met any applicable standard for indemnification set forth in the DGCL.

SECTION 6. Advancement of Expenses to Officers and Non-Officer Employees Prior to Final Disposition.

(a) The Corporation may, at the discretion of the Board of Directors of the Corporation, advance any or all Expenses incurred by or on behalf of any Officer or any Non-Officer Employee in connection with any Proceeding in which such person is involved by reason of his or her Corporate Status as an Officer or Non-Officer Employee upon the receipt by the Corporation of a statement or statements from such Officer or Non-Officer Employee requesting such advance or advances from time to time, whether prior to or after final disposition of such Proceeding. Such statement or statements shall reasonably evidence the Expenses incurred by such Officer or Non-Officer Employee and shall be preceded or accompanied by an undertaking by or on behalf of such person to repay any Expenses so advanced if it shall ultimately be determined that such Officer or Non-Officer Employee is not entitled to be indemnified against such Expenses.

(b) In any suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Corporation shall be entitled to recover such expenses upon a final adjudication that the Officer or Non-Officer Employee has not met any applicable standard for indemnification set forth in the DGCL.

SECTION 7. Contractual Nature of Rights.

(a) The provisions of this Article V shall be deemed to be a contract between the Corporation and each Director and Officer entitled to the benefits hereof at any time while this Article V is in effect, in consideration of such person's past or current and any future performance of services for the Corporation. Neither amendment, repeal or modification of any

provision of this Article V nor the adoption of any provision of the Certificate inconsistent with this Article V shall eliminate or reduce any right conferred by this Article V in respect of any act or omission occurring, or any cause of action or claim that accrues or arises or any state of facts existing, at the time of or before such amendment, repeal, modification or adoption of an inconsistent provision (even in the case of a proceeding based on such a state of facts that is commenced after such time), and all rights to indemnification and advancement of Expenses granted herein or arising out of any act or omission shall vest at the time of the act or omission in question, regardless of when or if any proceeding with respect to such act or omission is commenced. The rights to indemnification and to advancement of expenses provided by, or granted pursuant to, this Article V shall continue notwithstanding that the person has ceased to be a director or officer of the Corporation and shall inure to the benefit of the estate, heirs, executors, administrators, legatees and distributes of such person.

(b) If a claim for indemnification hereunder by a Director or Officer is not paid in full by the Corporation within sixty (60) days after receipt by the Corporation of a written claim for indemnification, such Director or Officer may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim, and if successful in whole or in part, such Director or Officer shall also be entitled to be paid the expenses of prosecuting such claim. The failure of the Corporation (including its Board of Directors or any committee thereof, independent legal counsel, or stockholders) to make a determination concerning the permissibility of such indemnification under this Article V shall not be a defense to an action brought by a Director or Officer for recovery of the unpaid amount of an indemnification claim and shall not create a presumption that such indemnification is not permissible. The burden of proving that a Director or Officer is not entitled to indemnification shall be on the Corporation.

(c) In any suit brought by a Director or Officer to enforce a right to indemnification hereunder, it shall be a defense that such Director or Officer has not met any applicable standard for indemnification set forth in the DGCL.

SECTION 8. Non-Exclusivity of Rights. The rights to indemnification and to advancement of Expenses set forth in this Article V shall not be exclusive of any other right which any Director, Officer, or Non-Officer Employee may have or hereafter acquire under any statute, provision of the Certificate or these By-laws, agreement, vote of stockholders or Disinterested Directors or otherwise.

SECTION 9. Insurance. The Corporation may maintain insurance, at its expense, to protect itself and any Director, Officer or Non-Officer Employee against any liability of any character asserted against or incurred by the Corporation or any such Director, Officer or Non-Officer Employee, or arising out of any such person's Corporate Status, whether or not the Corporation would have the power to indemnify such person against such liability under the DGCL or the provisions of this Article V.

SECTION 10. Other Indemnification. The Corporation's obligation, if any, to indemnify or provide advancement of Expenses to any person under this Article V as a result of such person serving, at the request of the Corporation, as a director, partner, trustee, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall be reduced by any amount such person may collect as indemnification or advancement of Expenses from such other corporation, partnership, joint venture, trust, employee benefit plan or enterprise (the "Primary Indemnitor"). Any indemnification or advancement of Expenses under this Article V owed by the Corporation as a result of a person serving, at the request of the Corporation, as a director, partner, trustee, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall only be in excess of, and shall be secondary to, the indemnification or

advancement of Expenses available from the applicable Primary Indemnitor(s) and any applicable insurance policies.

SECTION 11. Savings Clause. If this Article V or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the Corporation shall nevertheless indemnify each indemnitee as to any expenses (including, without limitation, attorneys' fees), liabilities, losses, judgments, fines (including, without limitation, excise taxes and penalties arising under the Employee Retirement Income Security Act of 1974, as amended) and amounts paid in settlement in connection with any action, suit, proceeding or investigation, whether civil, criminal or administrative, including, without limitation, an action by or in the right of the Corporation, to the fullest extent permitted by any applicable portion of this Article V that shall not have been invalidated and to the fullest extent permitted by applicable law.

ARTICLE VI

Miscellaneous Provisions

SECTION 1. Fiscal Year. The fiscal year of the Corporation shall be determined by the Board of Directors.

SECTION 2. Seal. The Board of Directors shall have power to adopt and alter the seal of the Corporation.

SECTION 3. Execution of Instruments. All deeds, leases, transfers, contracts, bonds, notes and other obligations to be entered into by the Corporation in the ordinary course of its business without director action may be executed on behalf of the Corporation by the Chairman of the Board, if one is elected, the President or the Treasurer or any other officer, employee or agent of the Corporation as the Board of Directors or the executive committee of the Board may authorize.

SECTION 4. Voting of Securities. Unless the Board of Directors otherwise provides, the Chairman of the Board, if one is elected, the President or the Treasurer may waive notice of and act on behalf of the Corporation (including with regard to voting and actions by written consent), or appoint another person or persons to act as proxy or attorney in fact for the Corporation with or without discretionary power and/or power of substitution, at any meeting of stockholders or shareholders of any other corporation or organization, any of whose securities are held by the Corporation.

SECTION 5. Resident Agent. The Board of Directors may appoint a resident agent upon whom legal process may be served in any action or proceeding against the Corporation.

SECTION 6. Corporate Records. The original or attested copies of the Certificate, By-laws and records of all meetings of the incorporators, stockholders and the Board of Directors and the stock transfer books, which shall contain the names of all stockholders, their record addresses and the amount of stock held by each, may be kept outside the State of Delaware and shall be kept at the principal office of the Corporation, at an office of its counsel, at an office of its transfer agent or at such other place or places as may be designated from time to time by the Board of Directors.

SECTION 7. Certificate. All references in these By-laws to the Certificate shall be deemed to refer to the Third Amended and Restated Certificate of Incorporation of the Corporation, as amended and/or restated and in effect from time to time.

SECTION 8. Exclusive Jurisdiction of Delaware Courts or the United States Federal District Courts. Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for any state law claims for (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of, or a claim based on, a breach of a fiduciary duty owed by any current or former director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law or the Certificate or By-laws (including the interpretation, validity or enforceability thereof) or as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware, or (iv) any action asserting a claim governed by the internal affairs doctrine; provided, however, that this sentence will not apply to any causes of action arising under the Securities Act of 1933, as amended, or the Exchange Act or to any claim for which the federal courts have exclusive jurisdiction. Unless the Corporation consents in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be the sole and exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act of 1933, as amended, the Exchange Act, or the respective rules and regulations promulgated thereunder. To the fullest extent permitted by law, any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the Corporation shall be deemed to have notice of and consented to the provisions of this Section 8.

SECTION 9. Amendment of By-laws.

(a) Amendment by Directors. Except as provided otherwise by law, these By-laws may be amended or repealed by the Board of Directors by the affirmative vote of a majority of the directors then in office.

(b) Amendment by Stockholders. Except as otherwise provided herein, the By-laws of the Corporation may be amended or repealed at any Annual Meeting, or special meeting of stockholders called for such purpose, by the affirmative vote of not less than two-thirds (2/3) of the outstanding shares of capital stock entitled to vote on such amendment or repeal, voting together as a single class; provided, however, that if the Board of Directors recommends that stockholders approve such amendment or repeal at such meeting of stockholders, such amendment or repeal shall only require the affirmative vote of the majority of outstanding shares of capital stock entitled to vote on such amendment or repeal, voting together as a single class.

SECTION 10. Notices. If mailed, notice to stockholders shall be deemed given when deposited in the mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the Corporation. Without limiting the manner by which notice otherwise may be given to stockholders, any notice to stockholders may be given by electronic transmission in the manner provided in Section 232 of the DGCL.

SECTION 11. Waivers. A written waiver of any notice, signed by a stockholder or director, or waiver by electronic transmission by such person, whether given before or after the time of the event for which notice is to be given, shall be deemed equivalent to the notice required to be given to such person. Neither the business to be transacted at, nor the purpose of, any meeting need be specified in such a waiver.

Adopted September 19, 2022, effective upon the effectiveness of the S-1 registration statement.

AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

THIS AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT (this "**Agreement**"), is made as of the 20th day of April 2021 by and among Prime Medicine, Inc., a Delaware corporation (the "**Company**"), each of the investors listed on Schedule A hereto, each of which is referred to in this Agreement as an "**Investor**" and any additional party that becomes a party to this Agreement in accordance with Section 6.9 hereof.

RECITALS

WHEREAS, the Company and the Investors are parties to that certain Series B Preferred Stock Purchase Agreement of even date herewith (as may be amended or restated from time to time, the "**Purchase Agreement**"); and

WHEREAS, in order to induce the Company to enter into the Purchase Agreement and to induce the Investors to invest funds in the Company pursuant to the Purchase Agreement, the Investors and the Company hereby agree that this Agreement shall govern the rights of the Investors to cause the Company to register shares of Common Stock issuable to the Investors, to receive certain information from the Company, and to participate in future equity offerings by the Company, and shall govern certain other matters as set forth in this Agreement;

NOW, THEREFORE, the parties hereby agree as follows:

1. Definitions. For purposes of this Agreement:

1.1 "**Affiliate**" means, with respect to any specified Person, any other Person who, directly or indirectly, controls, is controlled by, or is under common control with such Person, including without limitation any general partner, limited partner, member, manager, managing member, employee, officer, director or trustee of such Person or any trust for the benefit of any of the foregoing or any Affiliate of the foregoing, or any venture capital fund, registered investment company, or other investment fund now or hereafter existing that is controlled by one or more general partners, managing members or investment adviser (or sub-adviser or affiliate adviser) of, or shares the same management company or investment adviser with, such Person. For purposes of this definition, the term "control" when used with respect to any Person means the power to direct the management or policies of such Person, directly or indirectly, whether through ownership of voting securities, by contract or otherwise, and the terms "controlling" or "controlled" shall have meanings correlative to the foregoing.

1.2 "**ARCH**" means ARCH Venture Fund X, L.P. and ARCH Venture Fund X Overage, L.P.

1.3 "**Board of Directors**" means the board of directors of the Company.

1.4 "**Broad License**" means the License Agreement, by and between the Company and The Broad Institute, Inc., dated as of September 26, 2019, as amended by a First Amendment dated on or around May 5, 2020 and as amended by a Second Amendment dated on or around February 18, 2021.

1.5 "**Certificate of Incorporation**" means the Company's Second Amended and Restated Certificate of Incorporation, as amended and/or restated from time to time.

1.6 "**Common Stock**" means shares of the Company's common stock, par value $0.00001 per share.

1.7 "**Competitor**" means a Person engaged, directly or indirectly (including through any partnership, limited liability company, corporation, joint venture or similar arrangement (whether now existing or formed hereafter)), in the field of gene editing, but shall not include (i) any financial investment firm, investment adviser, or collective investment vehicle solely by virtue of its ownership (and/or its Affiliates' ownership) of an equity interest in any Competitor held solely for investment purposes and (ii) any Investor solely by virtue of its (or any of its Affiliates') status as a venture capital investor.

1.8 "**Damages**" means any loss, damage, claim or liability (joint or several) to which a party hereto may become subject under the Securities Act, the Exchange Act, or other federal or state law, insofar as such loss, damage, claim or liability (or any action in respect thereof) arises out of or is based upon: (i) any untrue statement or alleged untrue statement of a material fact contained in any registration statement of the Company, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (ii) an omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading; or (iii) any violation or alleged violation by the indemnifying party (or any of its agents or Affiliates) of the Securities Act, the Exchange Act, any state securities law, or any rule or regulation promulgated under the Securities Act, the Exchange Act, or any state securities law.

1.9 "**Derivative Securities**" means any securities or rights convertible into, or exercisable or exchangeable for (in each case, directly or indirectly)**,** Common Stock, including options and warrants.

1.10 "**Exchange Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

1.11 "**Excluded Registration**" means (i) a registration relating to the sale or grant of securities to employees of the Company or a subsidiary pursuant to a stock option, stock purchase, equity incentive or similar plan; (ii) a registration relating to an SEC Rule 145 transaction; (iii) a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities; or (iv) a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered.

1.12 "**FOIA Party**" means a Person that, in the reasonable determination of the Board of Directors, may be subject to, and thereby required to disclose non-public information furnished by or relating to the Company under, the Freedom of Information Act, 5 U.S.C. 552 ("**FOIA**"), any state public records access law, any state or other jurisdiction's laws similar in intent or effect to FOIA, or any other similar statutory or regulatory requirement.

1.13 "**F-Prime**" means F-Prime Capital Partners Life Sciences Fund VI LP.

1.14 "**Form S-1**" means such form under the Securities Act as in effect on the date hereof or any successor registration form under the Securities Act subsequently adopted by the SEC.

1.15 "**Form S-3**" means such form under the Securities Act as in effect on the date hereof or any registration form under the Securities Act subsequently adopted by the SEC that permits forward incorporation of substantial information by reference to other documents filed by the Company with the SEC.

1.16 "**GAAP**" means generally accepted accounting principles in the United States.

1.17 "**GV**" means GV 2019, L.P. and GV 2021, L.P.

1.18 "**Holder**" means any holder of Registrable Securities who is a party to this Agreement.

1.19 "**Immediate Family Member**" means a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including, adoptive relationships, of a natural person referred to herein.

1.20 "**Initiating Holders**" means, collectively, Holders who properly initiate a registration request under this Agreement.

1.21 "**IPO**" means the Company's first underwritten public offering of its Common Stock under the Securities Act.

1.22 "**Major Investor**" means any Investor that, individually or together with such Investor's Affiliates, holds at least 8,000,000 shares of Series A Preferred Stock and/or 500,000 shares of Series B Preferred Stock, in each case, as adjusted for any stock split, stock dividend, combination, or other recapitalization or reclassification effected after the date hereof.

1.23 "**Newpath**" means Newpath Partners, L.P.

1.24 "**New Securities**" means, collectively, equity securities of the Company, whether or not currently authorized, as well as rights, options, or warrants to purchase such equity securities, or securities of any type whatsoever that are, or may become, convertible or exchangeable into or exercisable for such equity securities.

1.25 "**Person**" means any individual, corporation, partnership, trust, limited liability company, association or other entity.

1.26 "**Preferred Stock**" means collectively, all shares of Series A Preferred Stock and Series B Preferred Stock.

1.27 "**Registrable Securities**" means (i) the Common Stock issuable or issued upon conversion of the Preferred Stock, (ii) any Common Stock, or any Common Stock issued or issuable (director or indirectly) upon conversion and/or exercise of any other securities of the Company, acquired by the Investors after the date hereof; and (iii) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, the shares referenced in clauses (i) and (ii) above; excluding in all cases, however, any Registrable Securities sold by a Person in a transaction in which the applicable rights under this Agreement are not assigned pursuant to Subsection 6.1, and excluding for purposes of Section 2 any shares for which registration rights have terminated pursuant to Subsection 2.13 of this Agreement.

1.28 "**Registrable Securities then outstanding**" means the number of shares determined by adding the number of shares of outstanding Common Stock that are Registrable Securities and the number of shares of Common Stock issuable (directly or indirectly) pursuant to then exercisable and/or convertible securities that are Registrable Securities.

1.29 "**Restricted Securities**" means the securities of the Company required to be notated with the legend set forth in Subsection 2.12(b) hereof.

1.30 "**SEC**" means the Securities and Exchange Commission.

1.31 "**SEC Rule 144**" means Rule 144 promulgated by the SEC under the Securities Act.

1.32 "**SEC Rule 145**" means Rule 145 promulgated by the SEC under the Securities Act.

1.33 "**Securities Act**" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

1.34 "**Selling Expenses**" means all underwriting discounts, selling commissions, and stock transfer taxes applicable to the sale of Registrable Securities, and fees and disbursements of counsel for any Holder, except for the fees and disbursements of the Selling Holder Counsel borne and paid by the Company as provided in Subsection 2.6.

1.35 "**Series A Director**" means any director of the Company that the holders of record of the Series A Preferred Stock are entitled to elect, exclusively and as a separate class, pursuant to the Certificate of Incorporation.

1.36 "**Series A Preferred Stock**" means shares of the Company's Series A Preferred Stock, par value $0.00001 per share.

1.37 "**Series B Preferred Stock**" means shares of the Company's Series B Preferred Stock, par value $0.00001 per share.

1.38 "**T. Rowe Price**" means T. Rowe Price Associates, Inc. and any successor registered investment advisor or sub-advisor to the T. Rowe Price Investors.

1.39 "**T. Rowe Price Investors**" shall mean the Investors that are advisory or sub-advisory clients of T. Rowe Price with respect to holding shares of the Company. For the sake of clarity, as of the date hereof, the T. Rowe Price Investors are indicated on Exhibit A hereto.

1.40 "**Voting Agreement**" means the Voting Agreement dated as of the date hereof, by and among the Company, the Investors and the Key Holders (as defined therein), as the same may be amended, restated or otherwise modified from time to time.

2. Registration Rights. The Company covenants and agrees as follows:

2.1 Demand Registration.

(a) Form S-1 Demand. If at any time after the earlier of (i) five (5) years after the date of this Agreement or (ii) one hundred eighty (180) days after the effective date of the registration statement for the IPO, the Company receives a request from Holders of at least a majority of the Registrable Securities then outstanding that the Company file a Form S-1 registration statement with respect to all or some of the Registrable Securities then outstanding, then the Company shall (x) within ten (10) days after the date such request is given, give notice thereof (the "**Demand Notice**") to all Holders other than the Initiating Holders; and (y) as soon as practicable, and in any event within sixty (60) days after the date such request is given by the Initiating Holders, file a Form S-1 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered and any additional Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Subsections 2.1(c) and 2.3.

(b) Form S-3 Demand. If at any time when it is eligible to use a Form S-3 registration statement, the Company receives a request from Holders of at least twenty percent (20%) of the Registrable Securities then outstanding that the Company file a Form S-3 registration statement with respect to outstanding Registrable Securities of such Holders having an anticipated aggregate offering price, net of Selling Expenses, of at least $3 million, then the Company shall (i) within ten (10) days after the date such request is given, give a Demand Notice to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within forty-five (45) days after the date such request is given by the Initiating Holders, file a Form S-3 registration statement under the Securities Act covering all Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Subsections 2.1(c) and 2.3.

(c) Notwithstanding the foregoing obligations, if the Company furnishes to Holders requesting a registration pursuant to this Subsection 2.1 a certificate signed by the Company's chief executive officer stating that in the good faith judgment of the Board of Directors it would be materially detrimental to the Company and its stockholders for such registration statement to either become effective or remain effective for as long as such registration statement otherwise would be required to remain effective, because such action would (i) materially interfere with a significant acquisition, corporate reorganization, or other similar transaction involving the Company; (ii) require premature disclosure of material information that the Company has a bona fide business purpose for preserving as confidential; or (iii) render the Company unable to comply with requirements under the Securities Act or Exchange Act, then the Company shall have the right to defer taking action with respect to such filing, and any time periods with respect to filing or effectiveness thereof shall be tolled correspondingly, for a period of not more than sixty (60) days after the request of the Initiating Holders is given; provided, however, that the Company may not invoke this right more than once in any twelve (12) month period; and provided further that the Company shall not register any securities for its own account or that of any other stockholder during such sixty (60) day period other than an Excluded Registration.

(d) The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Subsection 2.1(a)(i) during the period that is sixty (60) days before the Company's good faith estimate of the date of filing of, and ending on a date that is one hundred eighty (180) days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; (ii) after the Company has effected two registrations pursuant to Subsection 2.1(a); or (iii) if the Initiating Holders propose to dispose of shares of Registrable Securities that may be immediately registered on Form S-3 pursuant to a request made pursuant to Subsection 2.1(b). The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Subsection 2.1(b) (i) during the period that is thirty (30) days before the Company's good faith estimate of the date of filing of, and ending on a date that is ninety (90) days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; or (ii) if the Company has effected two registrations pursuant to Subsection 2.1(b) within the twelve (12) month period immediately preceding the date of such request. A registration shall not be counted as "effected" for purposes of this Subsection 2.1(d) until such time as the applicable registration statement has been declared effective by the SEC, unless the Initiating Holders withdraw their request for such registration, elect not to pay the registration expenses therefor, and forfeit their right to one demand registration statement pursuant to Subsection 2.6, in which case such withdrawn registration statement shall be counted as "effected" for purposes of this Subsection 2.1(d); provided, that if such withdrawal is during a period the Company has deferred taking action pursuant to Subsection 2.1(c), then the Initiating Holders may withdraw their request for registration and such registration will not be counted as 'effected' for purposes of this Subsection 2.1(d).

2.2 Company Registration. If the Company proposes to register (including, for this purpose, a registration effected by the Company for stockholders other than the Holders) any of its Common Stock under the Securities Act in connection with the public offering of such securities solely for cash (other than in an Excluded Registration), the Company shall, at such

time, promptly give each Holder notice of such registration. Upon the request of each Holder given within twenty (20) days after such notice is given by the Company, the Company shall, subject to the provisions of Subsection 2.3, cause to be registered all of the Registrable Securities that each such Holder has requested to be included in such registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Subsection 2.2 before the effective date of such registration, whether or not any Holder has elected to include Registrable Securities in such registration. The expenses (other than Selling Expenses) of such withdrawn registration shall be borne by the Company in accordance with Subsection 2.6.

2.3 Underwriting Requirements.

(a) If, pursuant to Subsection 2.1, the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to Subsection 2.1, and the Company shall include such information in the Demand Notice. The underwriter(s) will be selected by the Board of Directors and shall be reasonably acceptable to a majority in interest of the Initiating Holders. In such event, the right of any Holder to include such Holder's Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided in Subsection 2.4(e)) enter into an underwriting agreement in customary form with the underwriter(s) selected for such underwriting; provided, however, that no Holder (or any of their assignees) shall be required to make any representations, warranties or indemnities except as they relate to such Holder's ownership of shares, authority to enter into the underwriting agreement, such Holder's intended method of distribution, and such other representations and warranties as may be required by the underwriters, and the liability of such Holder shall be several and not joint, and limited to an amount equal to the gross proceeds from the offering received by such Holder. Notwithstanding any other provision of this Subsection 2.3, if the managing underwriter(s) advise(s) the Initiating Holders in writing that marketing factors require a limitation on the number of shares to be underwritten, then the Initiating Holders shall so advise all Holders of Registrable Securities that otherwise would be underwritten pursuant hereto, and the number of Registrable Securities that may be included in the underwriting shall be allocated among such Holders of Registrable Securities, including the Initiating Holders, in proportion (as nearly as practicable) to the number of Registrable Securities owned by each Holder or in such other proportion as shall mutually be agreed to by all such selling Holders; provided, however, that the number of Registrable Securities held by the Holders to be included in such underwriting shall not be reduced unless all other securities are first entirely excluded from the underwriting. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest one hundred (100) shares.

(b) In connection with any offering involving an underwriting of shares of the Company's capital stock pursuant to Subsection 2.2, the Company shall not be required to include any of the Holders' Registrable Securities in such underwriting unless the Holders accept the terms of the underwriting as agreed upon between the Company and its underwriters, and then only in such quantity as the underwriters in their sole discretion determine will not jeopardize the

success of the offering by the Company. If the total number of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the number of securities to be sold (other than by the Company) that the underwriters in their reasonable discretion determine is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters and the Company in their sole discretion determine will not jeopardize the success of the offering. If the underwriters determine that less than all of the Registrable Securities requested to be registered can be included in such offering, then the Registrable Securities that are included in such offering shall be allocated among the selling Holders in proportion (as nearly as practicable to) the number of Registrable Securities owned by each selling Holder or in such other proportions as shall mutually be agreed to by all such selling Holders. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest one hundred (100) shares. Notwithstanding the foregoing, in no event shall (i) the number of Registrable Securities included in the offering be reduced unless all other securities (other than securities to be sold by the Company) are first entirely excluded from the offering, or (ii) the number of Registrable Securities included in the offering be reduced below twenty-five percent (25%) of the total number of securities included in such offering, unless such offering is the IPO, in which case the selling Holders may be excluded further if the underwriters make the determination described above and no other stockholder's securities are included in such offering. For purposes of the provision in this Subsection 2.3(b) concerning apportionment, for any selling Holder that is a partnership, limited liability company, or corporation, the partners, members, retired partners, retired members, stockholders, and Affiliates of such Holder, or the estates and Immediate Family Members of any such partners, retired partners, members, and retired members and any trusts for the benefit of any of the foregoing Persons, shall be deemed to be a single "selling Holder," and any pro rata reduction with respect to such "selling Holder" shall be based upon the aggregate number of Registrable Securities owned by all Persons included in such "selling Holder," as defined in this sentence.

(c) For purposes of Subsection 2.1, a registration shall not be counted as "effected" if, as a result of an exercise of the underwriter's cutback provisions in Subsection 2.3(a), fewer than fifty percent (50%) of the total number of Registrable Securities that Holders have requested to be included in such registration statement are actually included.

2.4 Obligations of the Company. Whenever required under this Section 2 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its commercially reasonable efforts to cause such registration statement to become effective and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to one hundred twenty (120) days or, if earlier, until the distribution contemplated in the registration statement has been completed; provided, however, that (i) such one hundred twenty (120) day period shall be extended for a period of time equal to the period the Holder refrains, at the request of an underwriter of Common Stock (or other securities) of the Company, from selling any securities included in such registration, and (ii) in the case of any registration of

Registrable Securities on Form S-3 that are intended to be offered on a continuous or delayed basis, subject to compliance with applicable SEC rules, such one hundred twenty (120) day period shall be extended for up to an additional 120 days, if necessary, to keep the registration statement effective until all such Registrable Securities are sold;

(b) prepare and file with the SEC such amendments and supplements to such registration statement, and the prospectus used in connection with such registration statement, as may be necessary to comply with the Securities Act in order to enable the disposition of all securities covered by such registration statement;

(c) furnish to the selling Holders such numbers of copies of a prospectus, including a preliminary prospectus, as required by the Securities Act, and such other documents as the Holders may reasonably request in order to facilitate their disposition of their Registrable Securities;

(d) use its commercially reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or blue-sky laws of such jurisdictions as shall be reasonably requested by the selling Holders; provided that the Company shall not be required to qualify to do business or to file a general consent to service of process in any such states or jurisdictions, unless the Company is already subject to service in such jurisdiction and except as may be required by the Securities Act;

(e) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriter(s) of such offering;

(f) use its commercially reasonable efforts to cause all such Registrable Securities covered by such registration statement to be listed on a national securities exchange or trading system and each securities exchange and trading system (if any) on which similar securities issued by the Company are then listed;

(g) provide a transfer agent and registrar for all Registrable Securities registered pursuant to this Agreement and provide a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration;

(h) promptly make available for inspection by the selling Holders, any managing underwriter(s) participating in any disposition pursuant to such registration statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the selling Holders, all financial and other records, pertinent corporate documents, and properties of the Company, and cause the Company's officers, directors, employees, and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant, or agent, in each case, as necessary or advisable to verify the accuracy of the information in such registration statement and to conduct appropriate due diligence in connection therewith;

(i) use its commercially reasonable efforts to cooperate as may be reasonably requested by the seller of such Registrable Securities in the disposition of the securities covered by such registration statement, including without limitation in the case of an underwritten offering causing key executives of the Company to participate under the direction of the managing underwriter in a single "road show" scheduled by such managing underwriter in such locations and of such duration as in the reasonable judgment of such managing underwriter are appropriate for such underwritten offering;

(j) notify each selling Holder, promptly after the Company receives notice thereof, of the time when such registration statement has been declared effective or a supplement to any prospectus forming a part of such registration statement has been filed; and

(k) after such registration statement becomes effective, notify each selling Holder of any request by the SEC that the Company amend or supplement such registration statement or prospectus.

In addition, the Company shall ensure that, at all times after any registration statement covering a public offering of securities of the Company under the Securities Act shall have become effective, its insider trading policy shall provide that the Company's directors may implement a trading program under Rule 10b5-1 of the Exchange Act.

2.5 Furnish Information. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 2 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as is reasonably required to effect the registration of such Holder's Registrable Securities.

2.6 Expenses of Registration. All expenses (other than Selling Expenses) incurred in connection with registrations, filings, or qualifications pursuant to Section 2, including all registration, filing, and qualification fees; printers' and accounting fees; fees and disbursements of counsel for the Company; and the reasonable fees and disbursements, of one counsel for the selling Holders ("**Selling Holder Counsel**"), shall be borne and paid by the Company; provided, however, that the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Subsection 2.1 if the registration request is subsequently withdrawn at the request of the Holders of a majority of the Registrable Securities to be registered (in which case all selling Holders shall bear such expenses pro rata based upon the number of Registrable Securities that were to be included in the withdrawn registration), unless the Holders of a majority of the Registrable Securities agree to forfeit their right to one registration pursuant to Subsections 2.1(a) or 2.1(b), as the case may be; provided further that if, at the time of such withdrawal, the Holders shall have learned of a material adverse change in the condition, business, or prospects of the Company from that known to the Holders at the time of their request and have withdrawn the request with reasonable promptness after learning of such information then the Holders shall not be required to pay any of such expenses and shall not forfeit their right to one registration pursuant to Subsections 2.1(a) or 2.1(b). All Selling Expenses relating to Registrable Securities registered

pursuant to this Section 2 shall be borne and paid by the Holders pro rata on the basis of the number of Registrable Securities registered on their behalf.

2.7 Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any registration pursuant to this Agreement as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

2.8 Indemnification. If any Registrable Securities are included in a registration statement under this Section 2:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each selling Holder, and the partners, members, officers, directors, and stockholders of each such Holder; registered investment advisers, legal counsel and accountants for each such Holder; any underwriter (as defined in the Securities Act) for each such Holder; and each Person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any Damages, and the Company will pay to each such Holder, underwriter, controlling Person, or other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Subsection 2.8(a) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable for any Damages to the extent that they arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of any such Holder, underwriter, controlling Person, or other aforementioned Person expressly for use in connection with such registration.

(b) To the extent permitted by law, each selling Holder, severally and not jointly, will indemnify and hold harmless the Company, and each of its directors, each of its officers who has signed the registration statement, each Person (if any), who controls the Company within the meaning of the Securities Act, legal counsel and accountants for the Company, any underwriter (as defined in the Securities Act), any other Holder selling securities in such registration statement, and any controlling Person of any such underwriter or other Holder, against any Damages, in each case only to the extent that such Damages arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of such selling Holder expressly for use in connection with such registration; and each such selling Holder will pay to the Company and each other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Subsection 2.8(b) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; and provided further that in no event shall the aggregate amounts payable by any Holder by way of indemnity or contribution under Subsections 2.8(b) and 2.8(d) exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of fraud or willful misconduct by such Holder.

(c) Promptly after receipt by an indemnified party under this Subsection 2.8 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification hereunder, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Subsection 2.8, give the indemnifying party notice of the commencement thereof. The indemnifying party shall have the right to participate in such action and, to the extent the indemnifying party so desires, participate jointly with any other indemnifying party to which notice has been given, and to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such action. The failure to give notice to the indemnifying party within a reasonable time of the commencement of any such action shall relieve such indemnifying party of any liability to the indemnified party under this Subsection 2.8, to the extent that such failure materially prejudices the indemnifying party's ability to defend such action. The failure to give notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Subsection 2.8.

(d) To provide for just and equitable contribution to joint liability under the Securities Act in any case in which either: (i) any party otherwise entitled to indemnification hereunder makes a claim for indemnification pursuant to this Subsection 2.8 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case, notwithstanding the fact that this Subsection 2.8 provides for indemnification in such case, or (ii) contribution under the Securities Act may be required on the part of any party hereto for which indemnification is provided under this Subsection 2.8, then, and in each such case, such parties will contribute to the aggregate losses, claims, damages, liabilities, or expenses to which they may be subject (after contribution from others) in such proportion as is appropriate to reflect the relative fault of each of the indemnifying party and the indemnified party in connection with the statements, omissions, or other actions that resulted in such loss, claim, damage, liability, or expense, as well as to reflect any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or allegedly untrue statement of a material fact, or the omission or alleged omission of a material fact, relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission; provided, however, that, in any such case (x) no Holder will be required to contribute any amount in excess of the public offering price of all such Registrable Securities offered and sold by such Holder pursuant to such registration statement, and (y) no Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation; and provided further that in no event shall a Holder's liability pursuant to this Subsection 2.8(d), when combined with the amounts paid or payable by such Holder pursuant to Subsection 2.8(b), exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of willful misconduct or fraud by such Holder.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) Unless otherwise superseded by an underwriting agreement entered into in connection with the underwritten public offering, the obligations of the Company and Holders under this Subsection 2.8 shall survive the completion of any offering of Registrable Securities in a registration under this Section 2, and otherwise shall survive the termination of this Agreement.

2.9 Reports Under Exchange Act. With a view to making available to the Holders the benefits of SEC Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company shall:

(a) make and keep available adequate current public information, as those terms are understood and defined in SEC Rule 144, at all times after the effective date of the registration statement filed by the Company for the IPO;

(b) use commercially reasonable efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (at any time after the Company has become subject to such reporting requirements); and

(c) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) to the extent accurate, a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144 (at any time after ninety (90) days after the effective date of the registration statement filed by the Company for the IPO), the Securities Act, and the Exchange Act (at any time after the Company has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after the Company so qualifies); (ii) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company; and (iii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration (at any time after the Company has become subject to the reporting requirements under the Exchange Act) or pursuant to Form S-3 (at any time after the Company so qualifies to use such form).

2.10 Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of at least a majority of the Preferred Stock then outstanding, enter into any agreement with any

holder or prospective holder of any securities of the Company that would (i) provide to such holder or prospective holder the right to include securities in any registration on other than on a subordinate basis to the Holders after all Holders have had the opportunity to include in the registration and offering all shares of Registrable Securities that they wish to so include; or (ii) allow such holder or prospective holder to initiate a demand for registration of any securities held

by such holder or prospective holder; provided that this limitation shall not apply to Registrable Securities acquired by any additional Investor that becomes a party to this Agreement in accordance with Subsection 6.9.

2.11 "Market Stand-off" Agreement. Each Holder hereby agrees that it will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the registration by the Company of shares of its Common Stock or any other equity securities under the Securities Act on a registration statement on Form S-1 or Form S-3, and ending on the date specified by the Company and the managing underwriter (such period not to exceed one hundred eighty (180) days in the case of the IPO (i) lend; offer; pledge; sell; contract to sell; sell any option or contract to purchase; purchase any option or contract to sell; grant any option, right, or warrant to purchase; or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable (directly or indirectly) for Common Stock (whether such shares or any such securities are then owned by the Holder or are thereafter acquired) or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of such securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash, or otherwise. The foregoing provisions of this Subsection 2.11 shall apply only to the IPO, and shall not apply to (a) the sale of any shares to an underwriter pursuant to an underwriting agreement, or (b) the transfer of any shares to any trust for the direct or indirect benefit of the Holder or the immediate family of the Holder, provided that the trustee of the trust agrees to be bound in writing by the restrictions set forth herein, or (c) the transfer of any shares owned by a Holder in the Company to its Affiliates, provided that the Affiliate of the Holder agrees to be bound in writing by the restrictions set forth herein, or (d) shares purchased by a Holder in the IPO or the open market, and provided further that any such transfer in case of (a) or (b) shall not involve a disposition for value, and shall be applicable to the Holders only if all officers and directors are subject to the same restrictions and the Company uses commercially reasonable efforts to obtain a similar agreement from all stockholders individually owning more than one percent (1%) of the Company's outstanding Common Stock (after giving effect to conversion into Common Stock of all outstanding Preferred Stock). The underwriters in connection with such registration are intended third-party beneficiaries of this Subsection 2.11 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto. Each Holder further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Subsection 2.11 or that are necessary to give further effect thereto. Any discretionary waiver or termination of the restrictions of any or all of such agreements by the Company or the underwriters shall apply pro rata to all Holders subject to such agreements, based on the number of shares subject to such agreements.

2.12 Restrictions on Transfer.

(a) The Preferred Stock and the Registrable Securities shall not be sold, pledged, or otherwise transferred, and the Company shall not recognize and shall issue stop-transfer instructions to its transfer agent with respect to any such sale, pledge, or transfer, except upon the conditions specified in this Agreement, which conditions are intended to ensure compliance with the provisions of the Securities Act. A transferring Holder will cause any

proposed purchaser, pledgee, or transferee of the Preferred Stock and the Registrable Securities held by such Holder to agree to take and hold such securities subject to the provisions and upon the conditions specified in this Agreement.

(b) Each certificate, instrument, or book entry representing (i) the Preferred Stock, (ii) the Registrable Securities, and (iii) any other securities issued in respect of the securities referenced in clauses (i) and (ii), upon any stock split, stock dividend, recapitalization, merger, consolidation, or similar event, shall (unless otherwise permitted by the provisions of Subsection 2.12(c)) be notated with a legend substantially in the following form:

THE SECURITIES REPRESENTED HEREBY HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED. SUCH SHARES MAY NOT BE SOLD, PLEDGED, OR TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR A VALID EXEMPTION FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF SAID ACT.

THE SECURITIES REPRESENTED HEREBY MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

The Holders consent to the Company making a notation in its records and giving instructions to any transfer agent of the Restricted Securities in order to implement the restrictions on transfer set forth in this Subsection 2.12.

(c) The first legend referring to federal securities laws identified in Section 2.12(b) stamped on a certificate evidencing the Restricted Securities and the stock transfer instructions and record notations with respect to the Restricted Securities shall be removed and the Company shall issue a certificate without such legend to the holder of Restricted Securities if (i) those securities are registered under the Securities Act, or (ii) the holder providers the Company with an opinion of counsel reasonably acceptable to the Copmany (it being understood that internal securities counsel at T.Rowe Price shall be acceptable with respect to the T. Rowe Price Investors) to the effect that a sale or transfer of those securities may be made without registration or qualification.

(d) The holder of such Restricted Securities, by acceptance of ownership thereof, agrees to comply in all respects with the provisions of this Section 2. Before any proposed sale, pledge, or transfer of any Restricted Securities, unless there is in effect a

registration statement under the Securities Act covering the proposed transaction, the Holder thereof shall give notice to the Company of such Holder's intention to effect such sale, pledge, or transfer. Each such notice shall describe the manner and circumstances of the proposed sale, pledge, or transfer in sufficient detail and, if reasonably requested by the Company, shall be accompanied at such Holder's expense by either (i) a written opinion of legal counsel who shall, and whose legal opinion shall, be reasonably satisfactory to the Company (it being understood that internal securities counsel at T.Rowe Price shall be acceptable with respect to the T. Rowe

Price Investors), addressed to the Company, to the effect that the proposed transaction may be effected without registration under the Securities Act; (ii) a "no action" letter from the SEC to the effect that the proposed sale, pledge, or transfer of such Restricted Securities without registration will not result in a recommendation by the staff of the SEC that action be taken with respect thereto; or (iii) any other evidence reasonably satisfactory to counsel to the Company to the effect that the proposed sale, pledge, or transfer of the Restricted Securities may be effected without registration under the Securities Act, whereupon the Holder of such Restricted Securities shall be entitled to sell, pledge, or transfer such Restricted Securities in accordance with the terms of the notice given by the Holder to the Company. The Company will not require such a notice, legal opinion or "no action" letter (x) in any transaction in compliance with SEC Rule 144; or (y) in any transaction in which such Holder distributes Restricted Securities to an Affiliate of such Holder for no consideration; provided that each transferee agrees in writing to be subject to the terms of this Subsection 2.12. Each certificate, instrument, or book entry representing the Restricted Securities transferred as above provided shall be notated with, except if such transfer is made pursuant to SEC Rule 144, the appropriate restrictive legend set forth in Subsection 2.12(b), except that such certificate instrument, or book entry shall not be notated with such restrictive legend if, in the opinion of counsel for such Holder and the Company, such legend is not required in order to establish compliance with any provisions of the Securities Act.

2.13 Termination of Registration Rights. The right of any Holder to request registration or inclusion of Registrable Securities in any registration pursuant to Subsections 2.1 or 2.2 shall terminate upon the earliest to occur of:

(a) the closing of a Deemed Liquidation Event, as such term is defined in the Certificate of Incorporation;

(b) such time after consummation of the IPO as Rule 144 or another similar exemption under the Securities Act is available for the sale of all such Holder's shares without limitation during a three-month period without registration; and

(c) the fifth anniversary of the IPO.

3. Information Rights.

3.1 Delivery of Financial Statements. The Company shall deliver to each Major Investor, provided that the Board of Directors has not reasonably determined that such Major Investor is a Competitor:

(a) as soon as practicable, but in any event within one hundred twenty (120) days after the end of each fiscal year of the Company commencing with fiscal year 2020 (i) a balance sheet as of the end of such year, (ii) statements of income and of cash flows for such year, and (iii) a statement of stockholders' equity as of the end of such year, all such financial statements audited and certified by independent public accountants of nationally recognized standing selected by the Company;

(b) as soon as practicable, but in any event within forty-five (45) days after the end of each of the four (4) quarters of each fiscal year of the Company, unaudited statements of income and cash flows for such fiscal quarter, and an unaudited balance sheet as of the end of such fiscal quarter, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to normal year-end audit adjustments; and (ii) not contain all notes thereto that may be required in accordance with GAAP);

(c) as soon as practicable, but in any event within forty-five (45) days after the end of each of the four (4) quarters of each fiscal year of the Company, a statement showing the number of shares of each class and series of capital stock and securities convertible into or exercisable for shares of capital stock outstanding at the end of the period, the Common Stock issuable upon conversion or exercise of any outstanding securities convertible or exercisable for Common Stock and the exchange ratio or exercise price applicable thereto, and the number of shares of issued stock options and stock options not yet issued but reserved for issuance, if any, all in sufficient detail as to permit the Major Investors to calculate their respective percentage equity ownership in the Company, and certified by the chief financial officer or chief executive officer of the Company as being true, complete, and correct;

(d) as soon as practicable, but in any event thirty (30) days before the end of each fiscal year, a budget and business plan for the next fiscal year, approved by the Board of Directors and prepared on a monthly basis, including balance sheets, income statements, and statements of cash flow for such months and, promptly after prepared, any other budgets or revised budgets prepared by the Company; and

(e) such other information relating to the financial condition, business, prospects, or corporate affairs of the Company as any Major Investor may from time to time reasonably request; provided, however, that the Company shall not be obligated under this Subsection 3.1 to provide information (i) that the Company reasonably determines in good faith to be a trade secret or similarly confidential information (unless covered by an enforceable confidentiality agreement, in a form acceptable to the Company); or (ii) the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

If, for any period, the Company has any subsidiary whose accounts are consolidated with those of the Company, then in respect of such period the financial statements delivered pursuant to the foregoing sections shall be the consolidated and consolidating financial statements of the Company and all such consolidated subsidiaries.

Notwithstanding anything else in this Subsection 3.1 to the contrary, the Company may cease providing the information set forth in this Subsection 3.1 during the period starting with the date sixty (60) days before the Company's good-faith estimate of the date of filing of a registration statement if it reasonably concludes it must do so to comply with the SEC rules applicable to such registration statement and related offering; provided that the Company's covenants under this Subsection 3.1 shall be reinstated at such time as the Company is no longer actively employing its commercially reasonable efforts to cause such registration statement to become effective.

3.2 Inspection. The Company shall permit each Major Investor (provided that the Board of Directors has not reasonably determined that such Major Investor is a Competitor), at such Major Investor's expense, to visit and inspect the Company's properties; examine its books of account and records; and discuss the Company's affairs, finances, and accounts with its officers, during normal business hours of the Company as may be reasonably requested by the Major Investor; provided, however, that the Company shall not be obligated pursuant to this Subsection 3.2 to provide access to any information that it reasonably and in good faith considers to be a trade secret or confidential information (unless covered by an enforceable confidentiality agreement, in form acceptable to the Company) or the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

3.3 Termination of Information Rights. The covenants set forth in Subsection 3.1 and Subsection 3.2 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, or (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon the closing of a Deemed Liquidation Event, as such term is defined in the Certificate of Incorporation in which the Major Investors receive cash, publicly traded securities or any combination thereof in exchange for the Company securities then held by the Major Investors, whichever event occurs first.

3.4 Confidentiality. Each Investor agrees that such Investor will keep confidential and will not disclose, divulge, or use for any purpose (other than to monitor its investment in the Company) any confidential information obtained from the Company pursuant to the terms of this Agreement (including notice of the Company's intention to file a registration statement), unless such confidential information (a) is known or becomes known to the public in general (other than as a result of a breach of this Subsection 3.4 by such Investor), (b) is or has been independently developed or conceived by such Investor without use of the Company's confidential information, or (c) is or has been made known or disclosed to such Investor by a third party without a breach of any obligation of confidentiality such third party may have to the Company; provided, however, that an Investor may disclose confidential information (i) to its attorneys, accountants, consultants, registered investment adviser or sub-adviser (or any employee, representative, attorney, accountant or consultant of such person) and other professionals to the extent necessary to obtain their services in connection with monitoring its investment in the Company; (ii) to any prospective purchaser of any Registrable Securities from such Investor, if such prospective purchaser agrees to be bound by the provisions of this Subsection 3.4; (iii) to any existing or prospective Affiliate, partner, member, stockholder, or wholly owned subsidiary of such Investor in the ordinary course of business, provided that such Investor informs such Person that such information is confidential and directs such Person to maintain the confidentiality of such information; or (iv) as may otherwise be required by law, regulation, rule, court order or subpoena, provided that such Investor promptly notifies the Company of such disclosure and takes reasonable steps to minimize the extent of any such required disclosure ; provided, however, that no such notice of disclosure shall be required in connection with any routine or periodic examination or similar process by any regulatory or self-regulatory body or authority not specifically directed at the Company.

4. Rights to Future Stock Issuances.

4.1 Right of First Offer. Subject to the terms and conditions of this Subsection 4.1, the preemptive rights granted to The Broad Institute, Inc. and its designees pursuant to the Broad License, and applicable securities laws, if the Company proposes to offer or sell any New Securities, the Company shall first offer such New Securities to each Major Investor (provided that the Board of Directors has not reasonably determined that such Major Investor is a Competitor). A Major Investor shall be entitled to apportion the right of first offer hereby granted to it in such proportions as it deems appropriate, among (i) itself, (ii) its Affiliates and (iii) its beneficial interest holders, such as limited partners, members or any other Person having "beneficial ownership," as such term is defined in Rule 13d-3 promulgated under the Exchange Act, of such Major Investor ("**Investor Beneficial Owners**"); provided that each such Affiliate or Investor Beneficial Owner (x) is not a Competitor or FOIA Party, unless such party's purchase of New Securities is otherwise consented to by the Board of Directors and (y) agrees to enter into this Agreement and each of the Voting Agreement , and Right of First Refusal and Co-Sale Agreement of even date hereof among the Company, the Investors and the other parties named therein, as an "**Investor**" under each such agreement (provided that any Competitor or FOIA Party to whom the foregoing right of first offer is apportioned shall not be entitled to any rights as a Major Investor or Investor, as applicable, under Subsections 3.1, 3.2 and 4.1 hereof), but the Investor that so apportioned the right of first offer shall retain all rights hereunder to which it would otherwise be entitled in accordance with the terms hereof.

(a) The Company shall give notice (the "**Offer Notice**") to each Major Investor, stating (i) its bona fide intention to offer such New Securities, (ii) the number of such New Securities to be offered, and (iii) the price and terms, if any, upon which it proposes to offer such New Securities.

(b) By notification to the Company within twenty (20) days after the Offer Notice is given, each Major Investor may elect to purchase or otherwise acquire, at the price and on the terms specified in the Offer Notice, up to that portion of such New Securities which equals the proportion that the Common Stock then held by such Major Investor (including all shares of Common Stock then issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held by such Major Investor) bears to the total Common Stock of the Company then outstanding (assuming full conversion and/or exercise, as applicable, of all Preferred Stock and any other Derivative Securities then outstanding (such portion the "**Pro Rata Share**"). At the expiration of such twenty (20) day period, the Company shall promptly notify each Major Investor that elects to purchase or acquire all the shares available to it (each, a "**Fully Exercising Investor**") of any other Major Investor's failure to do likewise. During the ten (10) day period commencing after the Company has given such notice, each Fully Exercising Investor may, by giving notice to the Company, elect to purchase or acquire, in addition to the number of shares specified above, up to that portion of the New Securities for which Major Investors were entitled to subscribe but that were not subscribed for by the Major Investors which is equal to the proportion that the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of Preferred Stock and any other Derivative Securities then held, by such Fully Exercising Investor bears to the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held, by all Fully Exercising Investors who wish to purchase such

unsubscribed shares. The closing of any sale pursuant to this Subsection 4.1(b) shall occur within the later of ninety (90) days of the date that the Offer Notice is given and the date of initial sale of New Securities pursuant to Subsection 4.1(c).

(c) If all New Securities referred to in the Offer Notice are not elected to be purchased or acquired as provided in Subsection 4.1(b), the Company may, during the ninety (90) day period following the expiration of the periods provided in Subsection 4.1(b), offer and sell the remaining unsubscribed portion of such New Securities to any Person or Persons at a price not less than, and upon terms no more favorable to the offeree than, those specified in the Offer Notice. If the Company does not enter into an agreement for the sale of the New Securities within such period, or if such agreement is not consummated within ninety (90) days of the execution thereof, the right provided hereunder shall be deemed to be revived and such New Securities shall not be offered unless first reoffered to the Major Investors in accordance with this Subsection 4.1.

(d) The right of first offer in this Subsection 4.1 shall not be applicable to (i) Exempted Securities (as defined in the Certificate of Incorporation); (ii) shares of Common Stock issued in the IPO; and (iii) shares of Series B Preferred Stock issued pursuant to the Purchase Agreement.

4.2 Termination. The covenants set forth in Subsection 4.1 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon a Deemed Liquidation Event, as such term is defined in the Certificate of Incorporation, whichever event occurs first.

5. Additional Covenants.

5.1 Insurance. The Company shall obtain, within ninety (90) days of the date hereof, from financially sound and reputable insurers Directors and Officers liability insurance each in an amount and on terms and conditions satisfactory to the Board of Directors, including a majority of the Series A Directors, and will use commercially reasonable efforts to cause such insurance policies to be maintained until such time as the Board of Directors, including a majority of the Series A Directors, determines that such insurance should be discontinued.

5.2 Employee Agreements. The Company will cause (i) each person now or hereafter employed by it or by any subsidiary (or engaged by the Company or any subsidiary as a consultant/independent contractor) with access to confidential information and/or trade secrets to enter into a nondisclosure and proprietary rights assignment agreement; and (ii) each employee to enter into a one (1) year noncompetition and nonsolicitation agreement, substantially in the form approved by the Board of Directors. In addition, the Company shall not amend, modify, terminate, waive, or otherwise alter, in whole or in part, any of the above-referenced agreements or any restricted stock agreement between the Company and any employee, without the consent of a majority of the Series A Directors.

5.3 Employee Stock. Unless otherwise approved by the Board of Directors, including a majority of the Series A Directors, all future employees and consultants of the Company who purchase, receive options to purchase, or receive awards of shares of the

Company's capital stock after the date hereof shall be required to execute restricted stock or option agreements, as applicable, providing for (i) vesting of shares over a four (4) year period, with the first twenty-five percent (25%) of such shares vesting following twelve (12) months of continued employment or service, and the remaining shares vesting in equal monthly installments over the following thirty-six (36) months, and (ii) a market stand-off provision substantially similar to that in Subsection 2.11. Without the prior approval by the Board of Directors, including at least a majority of the Series A Directors, the Company shall not amend, modify, terminate, waive or otherwise alter, in whole or in part, any stock purchase, stock restriction or option agreement with any existing employee or service provider if such amendment would cause it to be inconsistent with this Subsection 5.3. In addition, unless otherwise approved by the Board of Directors, including a majority of the Series A Directors, the Company shall retain a "right of first refusal" on employee transfers until the Company's IPO and shall have the right to repurchase unvested shares at cost upon termination of employment of a holder of restricted stock.

5.4 Qualified Small Business Stock. The Company shall use commercially reasonable efforts to cause certain shares of the Series A Preferred Stock issued prior to October 6, 2020 pursuant to the Series A Preferred Stock Purchase Agreement, dated as of September 26, 2019 and as amended, as well as any shares into which such shares are converted, within the meaning of Section 1202(f) of the Internal Revenue Code (the "**Code**"), to constitute "qualified small business stock" as defined in Section 1202(c) of the Code; provided, however, that such requirement shall not be applicable if the Board of Directors of the Company determines, in its good faith business judgment, that such qualification is inconsistent with the best interests of the Company. Within twenty (20) business days after any Investor's written request therefor, the Company shall deliver to such Investor such factual information in the Company's possession as is reasonably necessary to enable such Investor to determine whether (and what portion of) such Investor's interest in the Company constitutes "qualified small business stock" as defined in Section 1202(c) of the Code.

5.5 Matters Requiring Investor Director Approval. So long as the holders of Series A Preferred Stock are entitled to elect at least one Series A Director, the Company hereby covenants and agrees with each of the Investors that it shall not, without approval of the Board of Directors, which approval must include the affirmative vote of a majority of the Series A Directors; provided that such majority shall not include an interested Series A Director's approval in connection with Subsection 5.5(f) below (and if all Series A Directors disqualify as a result of the foregoing proviso, a majority of the disinterested directors on the Board shall approve the matter described in subsection 5.5(f) below):

(a) make, or permit any subsidiary to make, any loan or advance to, or own any stock or other securities of, any subsidiary or other corporation, partnership, or other entity unless it is wholly owned by the Company;

(b) make, or permit any subsidiary to make, any loan or advance to any Person, including, without limitation, any employee or director of the Company or any subsidiary, except advances and similar expenditures in the ordinary course of business or under the terms of an employee stock or option plan approved by the Board of Directors;

(c) guarantee, directly or indirectly, or permit any subsidiary to guarantee, directly or indirectly, any indebtedness except for trade accounts of the Company or any subsidiary arising in the ordinary course of business;

(d) make any investment inconsistent with any investment policy approved by the Board of Directors;

(e) incur any aggregate indebtedness in excess of $250,000 that is not already included in a budget approved by the Board of Directors, other than trade credit incurred in the ordinary course of business;

(f) otherwise enter into or be a party to any transaction with any director, officer, or employee of the Company or any "associate" (as defined in Rule 12b-2 promulgated under the Exchange Act) of any such Person, including without limitation any "management bonus" or similar plan providing payments to employees in connection with a Deemed Liquidation Event, as such term is defined in the Company's Certificate of Incorporation, except for transactions contemplated by this Agreement or the Purchase Agreement;

(g) hire, terminate, or change the compensation of the executive officers, including approving any option grants or stock awards to executive officers;

(h) change the principal business of the Company, enter new lines of business, or exit the current line of business;

(i) acquire, sell, assign, license, pledge, or encumber material technology or intellectual property, other than licenses granted in the ordinary course of business;

(j) adopt or amend any budget or business plan;

(k) enter into any corporate strategic relationship involving the payment, contribution, or assignment by the Company or to the Company of money or assets greater than $250,000; or

(l) adopt or amend any employee equity incentive plans, including any increase in the aggregate number of shares issuable pursuant thereto.

5.6 Board Matters. Unless otherwise determined by the vote of a majority of the directors then in office, the Board of Directors shall meet at least quarterly in accordance with an agreed-upon schedule. The Company shall reimburse the nonemployee directors for all reasonable out-of-pocket travel expenses incurred (consistent with the Company's travel policy) in connection with attending meetings of the Board of Directors. The Company shall cause to be established, as soon as practicable after such request, and will maintain, an audit and compensation committee, each of which shall consist solely of non-management directors. Each non-employee director shall be entitled in such person's discretion to be a member of any committee of the Board of Directors.

5.7 Successor Indemnification. If the Company or any of its successors or assignees consolidates with or merges into any other Person and is not the continuing or surviving corporation or entity of such consolidation or merger, then to the extent necessary, proper provision shall be made so that the successors and assignees of the Company assume the obligations of the Company with respect to indemnification of members of the Board of Directors as in effect immediately before such transaction, whether such obligations are contained in the Company's bylaws, the Certificate of Incorporation, or elsewhere, as the case may be.

5.8 Indemnification Matters. The Company hereby acknowledges that one (1) or more of the directors nominated to serve on the Board of Directors by the Investors (each an "**Investor Director**") may have certain rights to indemnification, advancement of expenses and/or insurance provided by one or more of the Investors and certain of their Affiliates (collectively, the "**Investor Indemnitors**"). The Company hereby agrees (a) that it is the indemnitor of first resort (*i.e.*, its obligations to any such Investor Director are primary and any obligation of the Investor Indemnitors to advance expenses or to provide indemnification for the same expenses or liabilities incurred by such Investor Director are secondary), (b) that it shall be required to advance the full amount of expenses incurred by such Investor Director and shall be liable for the full amount of all expenses, judgments, penalties, fines and amounts paid in settlement by or on behalf of any such Investor Director to the extent legally permitted and as required by the Company's Certificate of Incorporation or Bylaws of the Company (or any agreement between the Company and such Investor Director), without regard to any rights such Investor Director may have against the Investor Indemnitors, and, (c) that it irrevocably waives, relinquishes and releases the Investor Indemnitors from any and all claims against the Investor Indemnitors for contribution, subrogation or any other recovery of any kind in respect thereof. The Company further agrees that no advancement or payment by the Investor Indemnitors on behalf of any such Investor Director with respect to any claim for which such Investor Director has sought indemnification from the Company shall affect the foregoing and the Investor Indemnitors shall have a right of contribution and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery of such Investor Director against the Company. The Investor Directors and the Investor Indemnitors are intended third-party beneficiaries of this Subsection 5.8 and shall have the right, power and authority to enforce the provisions of this Subsection 5.8 as though they were a party to this Agreement.

5.9 Right to Conduct Activities The Company hereby agrees and acknowledges that Investors that are professional investment funds (including without limitation ARCH, F-Prime, GV and Newpath, together with their respective Affiliates) invest in numerous portfolio companies, some of which may be deemed competitive with the Company's business (as currently conducted or as currently proposed to be conducted). The Company hereby agrees that, to the extent permitted under applicable law, such Investors (and their respective Affiliates) shall not be liable to the Company for any claim arising out of, or based upon, (i) the investment by such Investor (or their respective Affiliates) in any entity competitive with the Company, or (ii) actions taken by any partner, officer, employee or other representative of such Investor (or their respective Affiliates) to assist any such competitive company, whether or not such action was taken as a member of the board of directors of such competitive company or otherwise, and whether or not such action has a detrimental effect on the Company; provided, however, that the foregoing shall not relieve (x) any of the Investors from liability associated with the unauthorized disclosure of the Company's confidential information obtained pursuant to this Agreement, or (y)

any director or officer of the Company from any liability associated with his or her fiduciary duties to the Company.

5.10 Cybersecurity. The Company shall, within 180 days following the Initial Closing (as defined in the Purchase Agreement), (a) identify its sensitive data and information, and restrict access (through physical and electronic controls) to those individuals who have a need to access it and (b) implement cybersecurity solution(s) ("**Cybersecurity Solutions**") designed to protect its technology and systems (including servers, laptops, desktops, cloud, containers, virtual environments and data centers) and all data contained in such systems. The Company shall use commercially reasonable efforts to ensure that the Cybersecurity Solutions (x) are up-to-date and include industry-standard protections (e.g., antivirus, endpoint detection and response and threat hunting), (y) to the extent determined necessary by the Company or its Board of Directors, are backed by a breach prevention warranty from the vendor certifying the effectiveness of such solutions, and (z) require the vendors to notify the Company of any security incidents posing a risk to the Company's information (regardless of whether information was actually compromised). The Company shall evaluate on a regular basis whether the Cybersecurity Solutions should be updated to ensure continued effectiveness and industry-standard protections. The Company shall also educate its employees about the proper use and storage of sensitive information, including regular training as determined reasonably necessary by the Company or its Board of Directors.

5.11 Expenses of Counsel. In the event of a transaction which is a Sale of the Company (as defined in the Voting Agreement), the reasonable fees and disbursements of one counsel for the Major Investors ("**Investor Counsel**"), in their capacities as stockholders, shall be borne and paid by the Company. At the outset of considering a transaction which, if consummated would constitute a Sale of the Company, the Company shall obtain the ability to share with the Investor Counsel (and such counsel's clients) and shall share the confidential information (including, without limitation, the initial and all subsequent drafts of memoranda of understanding, letters of intent and other transaction documents and related noncompete, employment, consulting and other compensation agreements and plans) pertaining to and memorializing any of the transactions which, individually or when aggregated with others would constitute the Sale of the Company. The Company shall be obligated to share (and cause the Company's counsel and investment bankers to share) such materials when distributed to the Company's executives and/or any one or more of the other parties to such transaction(s). In the event that Investor Counsel deems it appropriate, in its reasonable discretion, to enter into a joint defense agreement or other arrangement to enhance the ability of the parties to protect their communications and other reviewed materials under the attorney client privilege, the Company shall, and shall direct its counsel to, execute and deliver to Investor Counsel and its clients such an agreement in form and substance reasonably acceptable to Investor Counsel. In the event that one or more of the other party or parties to such transactions require the clients of Investor Counsel to enter into a confidentiality agreement and/or joint defense agreement in order to receive such information, then the Company shall share whatever information can be shared without entry into such agreement and shall, at the same time, in good faith work expeditiously to enable Investor Counsel and its clients to negotiate and enter into the appropriate agreement(s) without undue burden to the clients of Investor Counsel.

5.12 Tax Reporting. The Company will comply with any obligation imposed on the Company to make any filing (including any filing on Internal Revenue Service Form 5471) as a result of any interest that the Company holds in a non-U.S. Person or any activities that the Company conducts outside of the U.S. and shall include in such filing any information necessary to obviate (to the extent possible) any similar obligation to which any shareholder would otherwise be subject with respect to such interest or such activity. The Company shall promptly provide each Investor with a copy of any such filing.

5.13 Termination of Covenants. The covenants set forth in this Section 5, except for Subsection 5.7 (Successor Indemnification), 5.8 (Indemnification Matters), and 5.9 (Right to Conduct Activities), shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon a Deemed Liquidation Event, as such term is defined in the Certificate of Incorporation, whichever event occurs first.

6. Miscellaneous.

6.1 Successors and Assigns. The rights under this Agreement may be assigned (but only with all related obligations) by a Holder to a transferee of Registrable Securities that (i) is an Affiliate of a Holder; (ii) is a Holder's Immediate Family Member or trust for the benefit of an individual Holder or one or more of such Holder's Immediate Family Members; or (iii) after such transfer, holds at least 500,000 shares of Registrable Securities (subject to appropriate adjustment for stock splits, stock dividends, combinations, and other recapitalizations); provided, however, that (x) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee and the Registrable Securities with respect to which such rights are being transferred; and (y) such transferee agrees in a written instrument delivered to the Company to be bound by and subject to the terms and conditions of this Agreement, including the provisions of Subsection 2.11. For the purposes of determining the number of shares of Registrable Securities held by a transferee, the holdings of a transferee (1) that is an Affiliate or stockholder of a Holder; (2) who is a Holder's Immediate Family Member; or (3) that is a trust for the benefit of an individual Holder or such Holder's Immediate Family Member shall be aggregated together and with those of the transferring Holder; provided further that all transferees who would not qualify individually for assignment of rights shall have a single attorney-in-fact for the purpose of exercising any rights, receiving notices, or taking any action under this Agreement. The terms and conditions of this Agreement inure to the benefit of and are binding upon the respective successors and permitted assignees of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assignees any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

6.2 Governing Law. This Agreement shall be governed by the internal law of the State of Delaware, without regard to conflict of law principles that would result in the application of any law other than the law of the State of Delaware.

6.3 Counterparts. This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute

one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *e.g.*, www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes**.**

6.4 Titles and Subtitles. The titles and subtitles used in this Agreement are for convenience only and are not to be considered in construing or interpreting this Agreement.

6.5 Notices.

(a) All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given upon the earlier of actual receipt or (i) personal delivery to the party to be notified; (ii) when sent, if sent by electronic mail or facsimile during the recipient's normal business hours, and if not sent during normal business hours, then on the recipient's next business day; (iii) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid; or (iv) one (1) business day after the business day of deposit with a nationally recognized overnight courier, freight prepaid, specifying next-day delivery, with written verification of receipt. All communications shall be sent to the respective parties at their addresses as set forth on Schedule A hereto, or to the principal office of the Company and to the attention of the Chief Executive Officer, in the case of the Company, or to such email address, facsimile number, or address as subsequently modified by written notice given in accordance with this Subsection 6.5. If notice is given to the Company, a copy, which shall not constitute notice, shall also be sent to Goodwin Procter LLP, 100 Northern Avenue, Boston, MA 02210, Attn: Kingsley L. Taft.

(b) Consent to Electronic Notice. Each Investor consents to the delivery of any stockholder notice pursuant to the Delaware General Corporation Law (the "**DGCL**"), as amended or superseded from time to time, by electronic transmission pursuant to Section 232 of the DGCL (or any successor thereto) at the electronic mail address or the facsimile number set forth below such Investor's name on the Schedules hereto, as updated from time to time by notice to the Company, or as on the books of the Company. To the extent that any notice given by means of electronic transmission is returned or undeliverable for any reason, the foregoing consent shall be deemed to have been revoked until a new or corrected electronic mail address has been provided, and such attempted electronic notice shall be ineffective and deemed to not have been given. Each Investor agrees to promptly notify the Company of any change in such stockholder's electronic mail address, and that failure to do so shall not affect the foregoing.

6.6 Amendments and Waivers. Any term of this Agreement may be amended, modified or terminated and the observance of any term of this Agreement may be waived (either generally or in a particular instance, and either retroactively or prospectively) only with the written consent of the Company and the holders of at least a majority of the Preferred Stock then outstanding; provided that the Company may in its sole discretion waive compliance with Subsection 2.12(d) (and the Company's failure to object promptly in writing after notification of a proposed assignment allegedly in violation of Subsection 2.12(d) shall be deemed to be a waiver); and provided further that any provision hereof may be waived by any

waiving party on such party's own behalf, without the consent of any other party. Notwithstanding the foregoing, (a) this Agreement may not be amended, modified or terminated and the observance of any term hereof may not be waived with respect to any Investor without the written consent of such Investor, unless such amendment, modification, termination, or waiver applies to all Investors in the same fashion (it being agreed that a waiver of the provisions of Section 4 with respect to a particular transaction shall be deemed to apply to all Investors in the same fashion if such waiver does so by its terms, notwithstanding the fact that certain Investors may nonetheless, by agreement with the Company, purchase securities in such transaction; provided that, all Major Investors have been provided the opportunity to participate to the same extent (i.e. a participating Major Investor's pro rata percentage will not be greater than any other participating Major Investor's pro rata percentage) in such transaction, which opportunity to participate may be after the initial closing of such transaction), (b) the definitions of "Affiliate", "Competitor" and Section 5.9 shall not be amended or waived in a manner disproportionately adverse to any Investor without the written consent of such disproportionately affected party, (c) Sections 3 and 4 and any other provision of this Agreement pertaining to the rights of the Major Investors may not be amended, modified, terminated or waived without the written consent of the holders of at least a majority of the Preferred Stock then outstanding and held by the Major Investors, and (d) Section 1.22 (definition of Major Investor) may not be amended, modified, terminated or waived with respect to any Major Investor without the written consent of such Major Investor if, as a result of such amendment, modification, termination or waiver alone, such Major Investor would lose its Major Investor status. The Company shall give prompt notice of any amendment, modification or termination hereof or waiver hereunder to any party hereto that did not consent in writing to such amendment, modification, termination, or waiver. Any amendment, modification, termination, or waiver effected in accordance with this Subsection 6.6 shall be binding on all parties hereto, regardless of whether any such party has consented thereto. No waivers of or exceptions to any term, condition, or provision of this Agreement, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such term, condition, or provision.

6.7 Severability. In case any one or more of the provisions contained in this Agreement is for any reason held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of this Agreement, and such invalid, illegal, or unenforceable provision shall be reformed and construed so that it will be valid, legal, and enforceable to the maximum extent permitted by law.

6.8 Aggregation of Stock. All shares of Registrable Securities held or acquired by Affiliates shall be aggregated together for the purpose of determining the availability of any rights under this Agreement and such Affiliated persons may apportion such rights as among themselves in any manner they deem appropriate.

6.9 Additional Investors. Notwithstanding anything to the contrary contained herein, if the Company issues additional shares of the Series B Preferred Stock after the date hereof, whether pursuant to the Purchase Agreement or otherwise, any purchaser of such shares of Series B Preferred Stock may become a party to this Agreement by executing and delivering an additional counterpart signature page to this Agreement, and thereafter shall be deemed an "Investor" for all purposes hereunder. No action or consent by the Investors shall be required for such joinder to this Agreement by such additional Investor, so long as such

additional Investor has agreed in writing to be bound by all of the obligations as an "Investor" hereunder.

6.10 Entire Agreement. This Agreement (including any Schedules and Exhibits hereto) constitutes the full and entire understanding and agreement among the parties with respect to the subject matter hereof, and any other written or oral agreement relating to the subject matter hereof existing between the parties is expressly canceled.

6.11 Dispute Resolution. Any unresolved controversy or claim arising out of or relating to this Agreement, except as (a) otherwise provided in this Agreement, or (b) any such controversies or claims arising out of the Company's intellectual property rights for which a provisional remedy or equitable relief is sought, shall be submitted to arbitration by one arbitrator mutually agreed upon by the parties, and if no agreement can be reached within thirty (30) days after names of potential arbitrators have been proposed by the American Arbitration Association (the "**AAA**"), then by one arbitrator having reasonable experience in corporate finance transactions of the type provided for in this Agreement and who is chosen by the AAA. The arbitration shall take place in Boston, MA or Wilmington, DE, in accordance with the AAA rules then in effect, and judgment upon any award rendered in such arbitration will be binding and may be entered in any court having jurisdiction thereof. There shall be limited discovery prior to the arbitration hearing as follows: (a) exchange of witness lists and copies of documentary evidence and documents relating to or arising out of the issues to be arbitrated, (b) depositions of all party witnesses, and (c) such other depositions as may be allowed by the arbitrators upon a showing of good cause. Depositions shall be conducted in accordance with the Delaware Code of Civil Procedure, the arbitrator shall be required to provide in writing to the parties the basis for the award or order of such arbitrator, and a court reporter shall record all hearings, with such record constituting the official transcript of such proceedings. Each party will bear its own costs in respect of any disputes arising under this Agreement. Each of the parties to this Agreement consents to personal jurisdiction for any equitable action sought in the U.S. District Court for the District of Delaware or the Court of Chancery of the State of Delaware.

WAIVER OF JURY TRIAL: EACH PARTY HEREBY WAIVES ITS RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT, THE OTHER TRANSACTION DOCUMENTS, THE SECURITIES OR THE SUBJECT MATTER HEREOF OR THEREOF. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL-ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS TRANSACTION, INCLUDING, WITHOUT LIMITATION, CONTRACT CLAIMS, TORT CLAIMS (INCLUDING NEGLIGENCE), BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. THIS SECTION HAS BEEN FULLY DISCUSSED BY EACH OF THE PARTIES HERETO AND THESE PROVISIONS WILL NOT BE SUBJECT TO ANY EXCEPTIONS. EACH PARTY HERETO HEREBY FURTHER WARRANTS AND REPRESENTS THAT SUCH PARTY HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL, AND THAT SUCH PARTY KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

6.12 Delays or Omissions. No delay or omission to exercise any right, power, or remedy accruing to any party under this Agreement, upon any breach or default of any other party under this Agreement, shall impair any such right, power, or remedy of such

nonbreaching or nondefaulting party, nor shall it be construed to be a waiver of or acquiescence to any such breach or default, or to any similar breach or default thereafter occurring, nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. All remedies, whether under this Agreement or by law or otherwise afforded to any party, shall be cumulative and not alternative.

6.13 Acknowledgment. The Company acknowledges that the Investors are in the business of venture capital investing and therefore review the business plans and related proprietary information of many enterprises, including enterprises which may have products or services which compete directly or indirectly with those of the Company. Nothing in this Agreement shall preclude or in any way restrict the Investors from investing or participating in any particular enterprise whether or not such enterprise has products or services which compete with those of the Company.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

COMPANY:

PRIME MEDICINE, INC.

By: /s/ Keith Gottesdiener

Name: Keith Gottesdiener

Title: President and Chief Executive Officer

ZQ|CERT#|COY|CLS|RGSTRY|ACCT#|TRANSTYPE|RUN#|TRANS#

COMMON STOCK

PAR VALUE $0.00001

Certificate Number
ZQ00000000

COMMON STOCK

Shares
000000
000000
000000
000000
000000

prime medicine_

PRIME MEDICINE, INC.

INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE

SEE REVERSE FOR CERTAIN DEFINITIONS

THIS CERTIFIES THAT

CUSIP XXXXXX XX X

MR. SAMPLE & MRS. SAMPLE &
MR. SAMPLE & MRS. SAMPLE

is the owner of

***ZERO HUNDRED THOUSAND
ZERO HUNDRED AND ZERO***

THIS CERTIFICATE IS TRANSFERABLE IN CITIES DESIGNATED BY THE TRANSFER AGENT, AVAILABLE ONLINE AT www.computershare.com

FULLY-PAID AND NON-ASSESSABLE SHARES OF COMMON STOCK OF

Prime Medicine, Inc. (hereinafter called the "Company"), transferable on the books of the Company in person or by duly authorized attorney, upon surrender of this Certificate properly endorsed. This Certificate and the shares represented hereby, are issued and shall be held subject to all of the provisions of the Certificate of Incorporation, as amended, and the By-Laws, as amended, of the Company (copies of which are on file with the Company and with the Transfer Agent), to all of which each holder, by acceptance hereof, assents. This Certificate is not valid unless countersigned and registered by the Transfer Agent and Registrar.

Witness the facsimile seal of the Company and the facsimile signatures of its duly authorized officers.

DATED DD-MMM-YYYY

PRIME MEDICINE, INC. CORPORATE SEAL DELAWARE September 13, 2019

COUNTERSIGNED AND REGISTERED:
COMPUTERSHARE TRUST COMPANY, N.A.
TRANSFER AGENT AND REGISTRAR,

FACSIMILE SIGNATURE TO COME
President

FACSIMILE SIGNATURE TO COME
Secretary

By _____
AUTHORIZED SIGNATURE

SECURITY INSTRUCTIONS ON REVERSE

1234567

prime medicine_

PO BOX 505006, Louisville, KY 40233-5006

MR A SAMPLE
DESIGNATION (IF ANY)
ADD 1
ADD 2
ADD 3
ADD 4

CUSIP/IDENTIFIER		XXXXXX XX X
Holder ID		XXXXXXXXXX
Insurance Value		1,000,000.00
Number of Shares		123456
DTC	12345678	123456789012345

Certificate Numbers	Num/No.	Denom.	Total
1234567890/1234567890	1	1	1
1234567890/1234567890	2	2	2
1234567890/1234567890	3	3	3
1234567890/1234567890	4	4	4
1234567890/1234567890	5	5	5
1234567890/1234567890	6	6	6
Total Transaction			7

PRIME MEDICINE, INC.

THE COMPANY WILL FURNISH WITHOUT CHARGE TO EACH SHAREHOLDER WHO SO REQUESTS, A SUMMARY OF THE POWERS, DESIGNATIONS, PREFERENCES AND RELATIVE, PARTICIPATING, OPTIONAL OR OTHER SPECIAL RIGHTS OF EACH CLASS OF STOCK OF THE COMPANY AND THE QUALIFICATIONS, LIMITATIONS OR RESTRICTIONS OF SUCH PREFERENCES AND RIGHTS, AND THE VARIATIONS IN RIGHTS, PREFERENCES AND LIMITATIONS DETERMINED FOR EACH SERIES, WHICH ARE FIXED BY THE CERTIFICATE OF INCORPORATION OF THE COMPANY, AS AMENDED, AND THE RESOLUTIONS OF THE BOARD OF DIRECTORS OF THE COMPANY, AND THE AUTHORITY OF THE BOARD OF DIRECTORS TO DETERMINE VARIATIONS FOR FUTURE SERIES. SUCH REQUEST MAY BE MADE TO THE OFFICE OF THE SECRETARY OF THE COMPANY OR TO THE TRANSFER AGENT. THE BOARD OF DIRECTORS MAY REQUIRE THE OWNER OF A LOST OR DESTROYED STOCK CERTIFICATE, OR HIS LEGAL REPRESENTATIVES, TO GIVE THE COMPANY A BOND TO INDEMNIFY IT AND ITS TRANSFER AGENTS AND REGISTRARS AGAINST ANY CLAIM THAT MAY BE MADE AGAINST THEM ON ACCOUNT OF THE ALLEGED LOSS OR DESTRUCTION OF ANY SUCH CERTIFICATE.

The following abbreviations, when used in the inscription on the face of this certificate, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM - as tenants in common	UNIF GIFT MIN ACT -	(Cust) Custodian (Minor)
TEN ENT - as tenants by the entireties		under Uniform Gifts to Minors Act (State)
JT TEN - as joint tenants with right of survivorship and not as tenants in common	UNIF TRF MIN ACT -	(Cust) Custodian (until age)
		(Minor) under Uniform Transfers to Minors Act (State)

Additional abbreviations may also be used though not in the above list.

For value received, _____ hereby sell, assign and transfer unto

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE

_____

(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING POSTAL ZIP CODE, OF ASSIGNEE)

_____

_____

_____ Shares

of the common stock represented by the within Certificate, and do hereby irrevocably constitute and appoint

_____ Attorney

to transfer the said stock on the books of the within-named Company with full power of substitution in the premises.

Dated: _____ 20____

Signature: _____

Signature: _____

Notice: The signature to this assignment must correspond with the name as written upon the face of the certificate, in every particular, without alteration or enlargement, or any change whatever.

Signature(s) Guaranteed: Medallion Guarantee Stamp

THE SIGNATURE(S) SHOULD BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION (Banks, Stockbrokers, Savings and Loan Associations and Credit Unions) WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM, PURSUANT TO S.E.C. RULE 17Ad-15.

SECURITY INSTRUCTIONS

THIS IS WATERMARKED PAPER. DO NOT ACCEPT WITHOUT NOTING WATERMARK. HOLD TO LIGHT TO VERIFY WATERMARK.

The IRS requires that the named transfer agent ("we") report the cost basis of certain shares or units acquired after January 1, 2011. If your shares or units are covered by the legislation, and you requested to sell or transfer the shares or units using a specific cost basis calculation method, then we have processed as you requested. If you did not specify a cost basis calculation method, then we have defaulted to the first in, first out (FIFO) method. Please consult your tax advisor if you need additional information about cost basis.

If you do not keep in contact with the issuer or do not have any activity in your account for the time period specified by state law, your property may become subject to state unclaimed property laws and transferred to the appropriate state.

123457

PRIME MEDICINE, INC.

2019 STOCK OPTION AND GRANT PLAN

SECTION 1. GENERAL PURPOSE OF THE PLAN; DEFINITIONS

The name of the plan is the Prime Medicine, Inc. 2019 Stock Option and Grant Plan (the "Plan"). The purpose of the Plan is to encourage and enable the officers, employees, directors, Consultants and other key persons of Prime Medicine, Inc., a Delaware corporation (including any successor entity, the "Company") and its Subsidiaries, upon whose judgment, initiative and efforts the Company largely depends for the successful conduct of its business, to acquire a proprietary interest in the Company.

The following terms shall be defined as set forth below:

"*Affiliate*" of any Person means a Person that directly or indirectly, through one or more intermediaries, controls, is controlled by or is under common control with the first mentioned Person. A Person shall be deemed to control another Person if such first Person possesses directly or indirectly the power to direct, or cause the direction of, the management and policies of the second Person, whether through the ownership of voting securities, by contract or otherwise.

"*Award*" or "*Awards,*" except where referring to a particular category of grant under the Plan, shall include Incentive Stock Options, Non-Qualified Stock Options, Restricted Stock Awards, Unrestricted Stock Awards, Restricted Stock Units or any combination of the foregoing.

"Award Agreement" means a written or electronic agreement setting forth the terms and provisions applicable to an Award granted under the Plan. Each Award Agreement may contain terms and conditions in addition to those set forth in the Plan; *provided, however,* in the event of any conflict in the terms of the Plan and the Award Agreement, the terms of the Plan shall govern**.**

"*Board*" means the Board of Directors of the Company.

"*Cause*" shall have the meaning as set forth in the Award Agreement(s). In the case that any Award Agreement does not contain a definition of "Cause," it shall mean (i) the grantee's dishonest statements or acts with respect to the Company or any Affiliate of the Company, or any current or prospective customers, suppliers vendors or other third parties with which such entity does business; (ii) the grantee's commission of (A) a felony or (B) any misdemeanor involving moral turpitude, deceit, dishonesty or fraud; (iii) the grantee's failure to perform his assigned duties and responsibilities to the reasonable satisfaction of the Company which failure continues, in the reasonable judgment of the Company, after written notice given to the grantee by the Company; (iv) the grantee's gross negligence, willful misconduct or insubordination with respect to the Company or any Affiliate of the Company; or (v) the grantee's material violation of any provision of any agreement(s) between the grantee and the Company relating to noncompetition, nonsolicitation, nondisclosure and/or assignment of inventions.

"Chief Executive Officer" means the Chief Executive Officer of the Company or, if there is no Chief Executive Officer, then the President of the Company.

"*Code*" means the Internal Revenue Code of 1986, as amended, and any successor Code, and related rules, regulations and interpretations.

"*Committee*" means the Committee of the Board referred to in Section 2.

"Consultant" means any natural person that provides bona fide services to the Company (including a Subsidiary), and such services are not in connection with the offer or sale of securities in a capital-raising transaction and do not directly or indirectly promote or maintain a market for the Company's securities.

"*Disability*" means "disability" as defined in Section 422(c) of the Code.

"*Effective Date*" means the date on which the Plan is adopted as set forth on the final page of the Plan.

"*Exchange Act*" means the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder.

"*Fair Market Value*" of the Stock on any given date means the fair market value of the Stock determined in good faith by the Committee based on the reasonable application of a reasonable valuation method not inconsistent with Section 409A of the Code. If the Stock is admitted to trade on a national securities exchange, the determination shall be made by reference to the closing price reported on such exchange. If there is no closing price for such date, the determination shall be made by reference to the last date preceding such date for which there is a closing price. If the date for which Fair Market Value is determined is the first day when trading prices for the Stock are reported on a national securities exchange, the Fair Market Value shall be the "Price to the Public" (or equivalent) set forth on the cover page for the final prospectus relating to the Company's Initial Public Offering.

"Good Reason" shall have the meaning as set forth in the Award Agreement(s). In the case that any Award Agreement does not contain a definition of "Good Reason," it shall mean (i) a material diminution in the grantee's base salary except for across-the-board salary reductions similarly affecting all or substantially all similarly situated employees of the Company or (ii) a change of more than 50 miles in the geographic location at which the grantee provides services to the Company, so long as the grantee provides at least 90 days notice to the Company following the initial occurrence of any such event and the Company fails to cure such event within 30 days thereafter.

"*Grant Date"* means the date that the Committee designates in its approval of an Award in accordance with applicable law as the date on which the Award is granted, which date may not precede the date of such Committee approval.

"Holder" means, with respect to an Award or any Shares, the Person holding such Award or Shares, including the initial recipient of the Award or any Permitted Transferee.

"*Incentive Stock Option*" means any Stock Option designated and qualified as an "incentive stock option" as defined in Section 422 of the Code.

"*Initial Public Offering*" means the consummation of the first firm commitment underwritten public offering pursuant to an effective registration statement under the Securities Act covering the offer and sale by the Company of its equity securities, as a result of or following which the Stock shall be publicly held.

"*Non-Qualified Stock Option*" means any Stock Option that is not an Incentive Stock Option.

"*Option*" or "*Stock Option*" means any option to purchase shares of Stock granted pursuant to Section 5.

"*Permitted Transferees*" shall mean any of the following to whom a Holder may transfer Shares hereunder (as set forth in Section 9(a)(ii)(A)): the Holder's child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including adoptive relationships, any person sharing the Holder's household (other than a tenant or employee), a trust in which these persons have more than fifty percent of the beneficial interest, a foundation in which these persons control the management of assets, and any other entity in which these persons own more than fifty percent of the voting interests*; provided, however,* that any such trust does not require or permit distribution of any Shares during the term of the Award Agreement unless subject to its terms. Upon the death of the Holder, the term Permitted Transferees shall also include such deceased Holder's estate, executors, administrators, personal representatives, heirs, legatees and distributees, as the case may be.

"*Person*" shall mean any individual, corporation, partnership (limited or general), limited liability company, limited liability partnership, association, trust, joint venture, unincorporated organization or any similar entity.

"Restricted Stock Award" means Awards granted pursuant to Section 6 and *"Restricted Stock"* means Shares issued pursuant to such Awards.

"Restricted Stock Unit" means an Award of phantom stock units to a grantee, which may be settled in cash or Shares as determined by the Committee, pursuant to Section 8.

"*Sale Event"* means the consummation of (i) the dissolution or liquidation of the Company, (ii) the sale of all or substantially all of the assets of the Company on a consolidated basis to an unrelated person or entity, (iii) a merger, reorganization or consolidation pursuant to which the holders of the Company's outstanding voting power immediately prior to such transaction do not own a majority of the outstanding voting power of the surviving or resulting entity (or its ultimate parent, if applicable), (iv) the acquisition of all or a majority of the outstanding voting stock of the Company in a single transaction or a series of related transactions by a Person or group of Persons, or (v) any other acquisition of the business of the Company, as determined by the Board; *provided, however,* that the Company's Initial Public Offering, any subsequent public offering or another capital raising event, or a merger effected solely to change the Company's domicile shall not constitute a "Sale Event."

"Section 409A" means Section 409A of the Code and the regulations and other guidance promulgated thereunder.

"*Securities Act*" means the Securities Act of 1933, as amended, and the rules and regulations thereunder.

"Service Relationship" means any relationship as a full-time employee, part-time employee, director or other key person (including Consultants) of the Company or any Subsidiary or any successor entity (e.g., a Service Relationship shall be deemed to continue without interruption in the event an individual's status changes from full-time employee to part-time employee or Consultant).

"Shares" means shares of Stock.

"*Stock*" means the Common Stock, par value $0.00001 per share, of the Company.

"*Subsidiary*" means any corporation or other entity (other than the Company) in which the Company has more than a 50 percent interest, either directly or indirectly.

"Ten Percent Owner" means an employee who owns or is deemed to own (by reason of the attribution rules of Section 424(d) of the Code) more than 10 percent of the combined voting power of all classes of stock of the Company or any parent of the Company or any Subsidiary.

"Termination Event" means the termination of the Award recipient's Service Relationship with the Company and its Subsidiaries for any reason whatsoever, regardless of the circumstances thereof, and including, without limitation, upon death, disability, retirement, discharge or resignation for any reason, whether voluntarily or involuntarily. The following shall not constitute a Termination Event: (i) a transfer to the service of the Company from a Subsidiary or from the Company to a Subsidiary, or from one Subsidiary to another Subsidiary or (ii) an approved leave of absence for military service or sickness, or for any other purpose approved by the Committee, if the individual's right to re-employment is guaranteed either by a statute or by contract or under the policy pursuant to which the leave of absence was granted or if the Committee otherwise so provides in writing.

"*Unrestricted Stock Award"* means any Award granted pursuant to Section 7 and *"Unrestricted Stock"* means Shares issued pursuant to such Awards.

SECTION 2. ADMINISTRATION OF PLAN; COMMITTEE AUTHORITY TO SELECT GRANTEES AND DETERMINE AWARDS

(a) Administration of Plan. The Plan shall be administered by the Board, or at the discretion of the Board, by a committee of the Board, comprised of not less than two directors. All references herein to the "Committee" shall be deemed to refer to the group then responsible for administration of the Plan at the relevant time (i.e., either the Board of Directors or a committee or committees of the Board, as applicable).

(b) Powers of Committee. The Committee shall have the power and authority to grant Awards consistent with the terms of the Plan, including the power and authority:

(i) to select the individuals to whom Awards may from time to time be granted;

(ii) to determine the time or times of grant, and the amount, if any, of Incentive Stock Options, Non-Qualified Stock Options, Restricted Stock Awards, Unrestricted Stock Awards, Restricted Stock Units, or any combination of the foregoing, granted to any one or more grantees;

(iii) to determine the number of Shares to be covered by any Award and, subject to the provisions of the Plan, the price, exercise price, conversion ratio or other price relating thereto;

(iv) to determine and, subject to Section 12, to modify from time to time the terms and conditions, including restrictions, not inconsistent with the terms of the Plan, of any Award, which terms and conditions may differ among individual Awards and grantees, and to approve the form of Award Agreements;

(v) to accelerate at any time the exercisability or vesting of all or any portion of any Award;

(vi) to impose any limitations on Awards, including limitations on transfers, repurchase provisions and the like, and to exercise repurchase rights or obligations;

(vii) subject to Section 5(a)(ii) and any restrictions imposed by Section 409A, to extend at any time the period in which Stock Options may be exercised; and

(viii) at any time to adopt, alter and repeal such rules, guidelines and practices for administration of the Plan and for its own acts and proceedings as it shall deem advisable; to interpret the terms and provisions of the Plan and any Award (including Award Agreements); to make all determinations it deems advisable for the administration of the Plan; to decide all disputes arising in connection with the Plan; and to otherwise supervise the administration of the Plan.

All decisions and interpretations of the Committee shall be binding on all persons, including the Company and all Holders.

(c) Award Agreement. Awards under the Plan shall be evidenced by Award Agreements that set forth the terms, conditions and limitations for each Award.

(d) Indemnification. Neither the Board nor the Committee, nor any member of either or any delegate thereof, shall be liable for any act, omission, interpretation, construction or determination made in good faith in connection with the Plan, and the members of the Board and the Committee (and any delegate thereof) shall be entitled in all cases to indemnification and reimbursement by the Company in respect of any claim, loss, damage or expense (including, without limitation, reasonable attorneys' fees) arising or resulting therefrom to the fullest extent permitted by law and/or under the Company's governing documents, including its certificate of

incorporation or bylaws, or any directors' and officers' liability insurance coverage which may be in effect from time to time and/or any indemnification agreement between such individual and the Company.

(e) Foreign Award Recipients. Notwithstanding any provision of the Plan to the contrary, in order to comply with the laws in other countries in which the Company and any Subsidiary operate or have employees or other individuals eligible for Awards, the Committee, in its sole discretion, shall have the power and authority to: (i) determine which Subsidiaries, if any, shall be covered by the Plan; (ii) determine which individuals, if any, outside the United States are eligible to participate in the Plan; (iii) modify the terms and conditions of any Award granted to individuals outside the United States to comply with applicable foreign laws; (iv) establish subplans and modify exercise procedures and other terms and procedures, to the extent the Committee determines such actions to be necessary or advisable (and such subplans and/or modifications shall be attached to the Plan as appendices); provided, however, that no such subplans and/or modifications shall increase the share limitation contained in Section 3(a) hereof; and (v) take any action, before or after an Award is made, that the Committee determines to be necessary or advisable to obtain approval or comply with any local governmental regulatory exemptions or approvals.

SECTION 3. STOCK ISSUABLE UNDER THE PLAN; MERGERS AND OTHER TRANSACTIONS; SUBSTITUTION

(a) Stock Issuable. The maximum number of Shares reserved and available for issuance under the Plan shall be 19,186,379 Shares, subject to adjustment as provided in Section 3(b). For purposes of this limitation, the Shares underlying any Awards that are forfeited, canceled, reacquired by the Company prior to vesting, satisfied without the issuance of Stock or otherwise terminated (other than by exercise) and Shares that are withheld upon exercise of an Option or settlement of an Award to cover the exercise price or tax withholding shall be added back to the Shares available for issuance under the Plan. Subject to such overall limitations, Shares may be issued up to such maximum number pursuant to any type or types of Award, and no more than 19,186,379 Shares may be issued pursuant to Incentive Stock Options. The Shares available for issuance under the Plan may be authorized but unissued Shares or Shares reacquired by the Company. Beginning on the date that the Company becomes subject to Section 162(m) of the Code, Options with respect to no more than 19,186,379 Shares shall be granted to any one individual in any calendar year period.

(b) Changes in Stock. Subject to Section 3(c) hereof, if, as a result of any reorganization, recapitalization, reclassification, stock dividend, stock split, reverse stock split or other similar change in the Company's capital stock, the outstanding Shares are increased or decreased or are exchanged for a different number or kind of shares or other securities of the Company, or additional Shares or new or different shares or other securities of the Company or other non-cash assets are distributed with respect to such Shares or other securities, in each case, without the receipt of consideration by the Company, or, if, as a result of any merger or consolidation, or sale of all or substantially all of the assets of the Company, the outstanding Shares are converted into or exchanged for other securities of the Company or any successor entity (or a parent or subsidiary thereof), the Committee shall make an appropriate and

proportionate adjustment in (i) the maximum number of Shares reserved for issuance under the Plan, (ii) the number and kind of Shares or other securities subject to any then outstanding Awards under the Plan, (iii) the repurchase price, if any, per Share subject to each outstanding Award, and (iv) the exercise price for each Share subject to any then outstanding Stock Options under the Plan, without changing the aggregate exercise price (i.e., the exercise price multiplied by the number of Stock Options) as to which such Stock Options remain exercisable. The Committee shall in any event make such adjustments as may be required by Section 25102(o) of the California Corporation Code and the rules and regulations promulgated thereunder. The adjustment by the Committee shall be final, binding and conclusive. No fractional Shares shall be issued under the Plan resulting from any such adjustment, but the Committee in its discretion may make a cash payment in lieu of fractional shares.

(c) Sale Events.

(i) Options.

(A) In the case of and subject to the consummation of a Sale Event, the Plan and all outstanding Options issued hereunder shall terminate upon the effective time of any such Sale Event unless assumed or continued by the successor entity, or new stock options or other awards of the successor entity or parent thereof are substituted therefor, with an equitable or proportionate adjustment as to the number and kind of shares and, if appropriate, the per share exercise prices, as such parties shall agree (after taking into account any acceleration hereunder and/or pursuant to the terms of any Award Agreement).

(B) In the event of the termination of the Plan and all outstanding Options issued hereunder pursuant to Section 3(c), each Holder of Options shall be permitted, within a period of time prior to the consummation of the Sale Event as specified by the Committee, to exercise all such Options which are then exercisable or will become exercisable as of the effective time of the Sale Event; *provided, however*, that the exercise of Options not exercisable prior to the Sale Event shall be subject to the consummation of the Sale Event.

(C) Notwithstanding anything to the contrary in Section 3(c)(i)(A), in the event of a Sale Event, the Company shall have the right, but not the obligation, to make or provide for a cash payment to the Holders of Options, without any consent of the Holders, in exchange for the cancellation thereof, in an amount equal to the difference between (A) the value as determined by the Committee of the consideration payable per share of Stock pursuant to the Sale Event (the "Sale Price") times the number of Shares subject to outstanding Options being cancelled (to the extent then vested and exercisable, including by reason of acceleration in connection with such Sale Event, at prices not in excess of the Sale Price) and (B) the aggregate exercise price of all such outstanding vested and exercisable Options.

(ii) Restricted Stock and Restricted Stock Unit Awards.

(A) In the case of and subject to the consummation of a Sale Event, all unvested Restricted Stock and unvested Restricted Stock Unit Awards (other than those becoming vested as a result of the Sale Event) issued hereunder shall be forfeited immediately prior to the effective time of any such Sale Event unless assumed or continued by the successor entity, or awards of the successor entity or parent thereof are substituted therefor, with an equitable or proportionate adjustment as to the number and kind of shares subject to such awards as such parties shall agree (after taking into account any acceleration hereunder and/or pursuant to the terms of any Award Agreement).

(B) In the event of the forfeiture of Restricted Stock pursuant to Section 3(c)(ii)(A), such Restricted Stock shall be repurchased from the Holder thereof at a price per share equal to the original per share purchase price paid by the Holder (subject to adjustment as provided in Section 3(b)) for such Shares.

(C) Notwithstanding anything to the contrary in Section 3(c)(ii)(A), in the event of a Sale Event, the Company shall have the right, but not the obligation, to make or provide for a cash payment to the Holders of Restricted Stock or Restricted Stock Unit Awards, without consent of the Holders, in exchange for the cancellation thereof, in an amount equal to the Sale Price times the number of Shares subject to such Awards, to be paid at the time of such Sale Event or upon the later vesting of such Awards.

SECTION 4. ELIGIBILITY

Grantees under the Plan will be such full or part-time officers and other employees, directors, Consultants and key persons of the Company and any Subsidiary who are selected from time to time by the Committee in its sole discretion; provided, however, that Awards shall be granted only to those individuals described in Rule 701(c) of the Securities Act.

SECTION 5. STOCK OPTIONS

Upon the grant of a Stock Option, the Company and the grantee shall enter into an Award Agreement. The terms and conditions of each such Award Agreement shall be determined by the Committee, and such terms and conditions may differ among individual Awards and grantees.

Stock Options granted under the Plan may be either Incentive Stock Options or Non-Qualified Stock Options. Incentive Stock Options may be granted only to employees of the Company or any Subsidiary that is a "subsidiary corporation" within the meaning of Section 424(f) of the Code. To the extent that any Option does not qualify as an Incentive Stock Option, it shall be deemed a Non-Qualified Stock Option.

(a) Terms of Stock Options. The Committee in its discretion may grant Stock Options to those individuals who meet the eligibility requirements of Section 4. Stock Options shall be

subject to the following terms and conditions and shall contain such additional terms and conditions, not inconsistent with the terms of the Plan, as the Committee shall deem desirable.

(i) Exercise Price. The exercise price per share for the Shares covered by a Stock Option shall be determined by the Committee at the time of grant but shall not be less than 100 percent of the Fair Market Value on the Grant Date. In the case of an Incentive Stock Option that is granted to a Ten Percent Owner, the exercise price per share for the Shares covered by such Incentive Stock Option shall not be less than 110 percent of the Fair Market Value on the Grant Date.

(ii) Option Term. The term of each Stock Option shall be fixed by the Committee, but no Stock Option shall be exercisable more than ten years from the Grant Date. In the case of an Incentive Stock Option that is granted to a Ten Percent Owner, the term of such Stock Option shall be no more than five years from the Grant Date.

(iii) Exercisability; Rights of a Stockholder. Stock Options shall become exercisable and/or vested at such time or times, whether or not in installments, as shall be determined by the Committee at or after the Grant Date. The Award Agreement may permit a grantee to exercise all or a portion of a Stock Option immediately at grant; provided that the Shares issued upon such exercise shall be subject to restrictions and a vesting schedule identical to the vesting schedule of the related Stock Option, such Shares shall be deemed to be Restricted Stock for purposes of the Plan, and the optionee may be required to enter into an additional or new Award Agreement as a condition to exercise of such Stock Option. An optionee shall have the rights of a stockholder only as to Shares acquired upon the exercise of a Stock Option and not as to unexercised Stock Options. An optionee shall not be deemed to have acquired any Shares unless and until a Stock Option shall have been exercised pursuant to the terms of the Award Agreement and this Plan and the optionee's name has been entered on the books of the Company as a stockholder.

(iv) Method of Exercise. Stock Options may be exercised by an optionee in whole or in part, by the optionee giving written or electronic notice of exercise to the Company, specifying the number of Shares to be purchased. Payment of the purchase price may be made by one or more of the following methods (or any combination thereof) to the extent provided in the Award Agreement:

(A) In cash, by certified or bank check, by wire transfer of immediately available funds, or other instrument acceptable to the Committee;

(B) If permitted by the Committee, by the optionee delivering to the Company a promissory note, if the Board has expressly authorized the loan of funds to the optionee for the purpose of enabling or assisting the optionee to effect the exercise of his or her Stock Option; provided, that at least so much of the exercise price as represents the par value of the Stock shall be paid in cash if required by state law;

(C) If permitted by the Committee and the Initial Public Offering has occurred (or the Stock otherwise becomes publicly-traded), through the delivery (or attestation to the ownership) of Shares that have been purchased by the optionee on the

open market or that are beneficially owned by the optionee and are not then subject to restrictions under any Company plan. To the extent required to avoid variable accounting treatment under ASC 718 or other applicable accounting rules, such surrendered Shares if originally purchased from the Company shall have been owned by the optionee for at least six months. Such surrendered Shares shall be valued at Fair Market Value on the exercise date;

(D) If permitted by the Committee and the Initial Public Offering has occurred (or the Stock otherwise becomes publicly-traded), by the optionee delivering to the Company a properly executed exercise notice together with irrevocable instructions to a broker to promptly deliver to the Company cash or a check payable and acceptable to the Company for the purchase price; provided that in the event the optionee chooses to pay the purchase price as so provided, the optionee and the broker shall comply with such procedures and enter into such agreements of indemnity and other agreements as the Committee shall prescribe as a condition of such payment procedure; or

(E) If permitted by the Committee, and only with respect to Stock Options that are not Incentive Stock Options, by a "net exercise" arrangement pursuant to which the Company will reduce the number of Shares issuable upon exercise by the largest whole number of Shares with a Fair Market Value that does not exceed the aggregate exercise price.

Payment instruments will be received subject to collection. No certificates for Shares so purchased will be issued to the optionee or, with respect to uncertificated Stock, no transfer to the optionee on the records of the Company will take place, until the Company has completed all steps it has deemed necessary to satisfy legal requirements relating to the issuance and sale of the Shares, which steps may include, without limitation, (i) receipt of a representation from the optionee at the time of exercise of the Option that the optionee is purchasing the Shares for the optionee's own account and not with a view to any sale or distribution of the Shares or other representations relating to compliance with applicable law governing the issuance of securities, (ii) the legending of the certificate (or notation on any book entry) representing the Shares to evidence the foregoing restrictions, and (iii) obtaining from optionee payment or provision for all withholding taxes due as a result of the exercise of the Option. The delivery of certificates representing the shares of Stock (or the transfer to the optionee on the records of the Company with respect to uncertificated Stock) to be purchased pursuant to the exercise of a Stock Option will be contingent upon (A) receipt from the optionee (or a purchaser acting in his or her stead in accordance with the provisions of the Stock Option) by the Company of the full purchase price for such Shares and the fulfillment of any other requirements contained in the Award Agreement or applicable provisions of laws and (B) if required by the Company, the optionee shall have entered into any stockholders agreements or other agreements with the Company and/or certain other of the Company's stockholders relating to the Stock. In the event an optionee chooses to pay the purchase price by previously-owned Shares through the attestation method, the number of Shares transferred to the optionee upon the exercise of the Stock Option shall be net of the number of Shares attested to.

(b) Annual Limit on Incentive Stock Options. To the extent required for "incentive stock option" treatment under Section 422 of the Code, the aggregate Fair Market Value (determined as of the Grant Date) of the Shares with respect to which Incentive Stock Options granted under the Plan and any other plan of the Company or its parent and any Subsidiary that become exercisable for the first time by an optionee during any calendar year shall not exceed $100,000 or such other limit as may be in effect from time to time under Section 422 of the Code. To the extent that any Stock Option exceeds this limit, it shall constitute a Non-Qualified Stock Option.

(c) Termination. Any portion of a Stock Option that is not vested and exercisable on the date of termination of an optionee's Service Relationship shall immediately expire and be null and void. Once any portion of the Stock Option becomes vested and exercisable, the optionee's right to exercise such portion of the Stock Option (or the optionee's representatives and legatees as applicable) in the event of a termination of the optionee's Service Relationship shall continue until the earliest of: (i) the date which is: (A) 12 months following the date on which the optionee's Service Relationship terminates due to death or Disability (or such longer period of time as determined by the Committee and set forth in the applicable Award Agreement), or (B) three months following the date on which the optionee's Service Relationship terminates if the termination is due to any reason other than death or Disability (or such longer period of time as determined by the Committee and set forth in the applicable Award Agreement), or (ii) the Expiration Date set forth in the Award Agreement; provided that notwithstanding the foregoing, an Award Agreement may provide that if the optionee's Service Relationship is terminated for Cause, the Stock Option shall terminate immediately and be null and void upon the date of the optionee's termination and shall not thereafter be exercisable.

SECTION 6. RESTRICTED STOCK AWARDS

(a) Nature of Restricted Stock Awards. The Committee may, in its sole discretion, grant (or sell at par value or such other purchase price determined by the Committee) to an eligible individual under Section 4 hereof a Restricted Stock Award under the Plan. The Committee shall determine the restrictions and conditions applicable to each Restricted Stock Award at the time of grant. Conditions may be based on continuing employment (or other Service Relationship), achievement of pre-established performance goals and objectives and/or such other criteria as the Committee may determine. Upon the grant of a Restricted Stock Award, the Company and the grantee shall enter into an Award Agreement. The terms and conditions of each such Award Agreement shall be determined by the Committee, and such terms and conditions may differ among individual Awards and grantees.

(b) Rights as a Stockholder. Upon the grant of the Restricted Stock Award and payment of any applicable purchase price, a grantee of Restricted Stock shall be considered the record owner of and shall be entitled to vote the Restricted Stock if, and to the extent, such Shares are entitled to voting rights, subject to such conditions contained in the Award Agreement. The grantee shall be entitled to receive all dividends and any other distributions declared on the Shares; provided, however, that the Company is under no duty to declare any such dividends or to make any such distribution. Unless the Committee shall otherwise determine, certificates evidencing the Restricted Stock shall remain in the possession of the

Company until such Restricted Stock is vested as provided in subsection (d) below of this Section, and the grantee shall be required, as a condition of the grant, to deliver to the Company a stock power endorsed in blank and such other instruments of transfer as the Committee may prescribe.

(c) Restrictions. Restricted Stock may not be sold, assigned, transferred, pledged or otherwise encumbered or disposed of except as specifically provided herein or in the Award Agreement. Except as may otherwise be provided by the Committee either in the Award Agreement or, subject to Section 12 below, in writing after the Award Agreement is issued, if a grantee's Service Relationship with the Company and any Subsidiary terminates, the Company or its assigns shall have the right, as may be specified in the relevant instrument, to repurchase some or all of the Shares subject to the Award at such purchase price as is set forth in the Award Agreement.

(d) Vesting of Restricted Stock. The Committee at the time of grant shall specify in the Award Agreement the date or dates and/or the attainment of pre-established performance goals, objectives and other conditions on which the substantial risk of forfeiture imposed shall lapse and the Restricted Stock shall become vested, subject to such further rights of the Company or its assigns as may be specified in the Award Agreement.

SECTION 7. UNRESTRICTED STOCK AWARDS

The Committee may, in its sole discretion, grant (or sell at par value or such other purchase price determined by the Committee) to an eligible person under Section 4 hereof an Unrestricted Stock Award under the Plan. Unrestricted Stock Awards may be granted in respect of past services or other valid consideration, or in lieu of cash compensation due to such grantee.

SECTION 8. RESTRICTED STOCK UNITS

(a) Nature of Restricted Stock Units. The Committee may, in its sole discretion, grant to an eligible person under Section 4 hereof Restricted Stock Units under the Plan. The Committee shall determine the restrictions and conditions applicable to each Restricted Stock Unit at the time of grant. Vesting conditions may be based on continuing employment (or other Service Relationship), achievement of pre-established performance goals and objectives and/or other such criteria as the Committee may determine. Upon the grant of Restricted Stock Units, the grantee and the Company shall enter into an Award Agreement. The terms and conditions of each such Award Agreement shall be determined by the Committee and may differ among individual Awards and grantees. On or promptly following the vesting date or dates applicable to any Restricted Stock Unit, but in no event later than March 15 of the year following the year in which such vesting occurs, such Restricted Stock Unit(s) shall be settled in the form of cash or shares of Stock, as specified in the Award Agreement. Restricted Stock Units may not be sold, assigned, transferred, pledged, or otherwise encumbered or disposed of.

(b) Rights as a Stockholder. A grantee shall have the rights of a stockholder only as to Shares, if any, acquired upon settlement of Restricted Stock Units. A grantee shall not be deemed to have acquired any such Shares unless and until the Restricted Stock Units shall have been settled in Shares pursuant to the terms of the Plan and the Award Agreement, the Company

shall have issued and delivered a certificate representing the Shares to the grantee (or transferred on the records of the Company with respect to uncertificated stock), and the grantee's name has been entered in the books of the Company as a stockholder.

(c) Termination. Except as may otherwise be provided by the Committee either in the Award Agreement or in writing after the Award Agreement is issued, a grantee's right in all Restricted Stock Units that have not vested shall automatically terminate upon the grantee's cessation of Service Relationship with the Company and any Subsidiary for any reason.

SECTION 9. TRANSFER RESTRICTIONS; COMPANY RIGHT OF FIRST REFUSAL; COMPANY REPURCHASE RIGHTS

(a) Restrictions on Transfer.

(i) Non-Transferability of Stock Options. Stock Options and, prior to exercise, the Shares issuable upon exercise of such Stock Option, shall not be transferable by the optionee otherwise than by will, or by the laws of descent and distribution, and all Stock Options shall be exercisable, during the optionee's lifetime, only by the optionee, or by the optionee's legal representative or guardian in the event of the optionee's incapacity. Notwithstanding the foregoing, the Committee, in its sole discretion, may provide in the Award Agreement regarding a given Stock Option that the optionee may transfer by gift, without consideration for the transfer, his or her Non-Qualified Stock Options to his or her family members (as defined in Rule 701 of the Securities Act), to trusts for the benefit of such family members, or to partnerships in which such family members are the only partners (to the extent such trusts or partnerships are considered "family members" for purposes of Rule 701 of the Securities Act), provided that the transferee agrees in writing with the Company to be bound by all of the terms and conditions of this Plan and the applicable Award Agreement, including the execution of a stock power upon the issuance of Shares. Stock Options, and the Shares issuable upon exercise of such Stock Options, shall be restricted as to any pledge, hypothecation, or other transfer, including any short position, any "put equivalent position" (as defined in the Exchange Act) or any "call equivalent position" (as defined in the Exchange Act) prior to exercise.

(ii) Shares. No Shares shall be sold, assigned, transferred, pledged, hypothecated, given away or in any other manner disposed of or encumbered, whether voluntarily or by operation of law, unless (i) the transfer is in compliance with the terms of the applicable Award Agreement, all applicable securities laws (including, without limitation, the Securities Act), and with the terms and conditions of this Section 9, (ii) the transfer does not cause the Company to become subject to the reporting requirements of the Exchange Act, and

(iii) the transferee consents in writing to be bound by the provisions of the Plan and the Award Agreement, including this Section 9. In connection with any proposed transfer, the Committee may require the transferor to provide at the transferor's own expense an opinion of counsel to the transferor, satisfactory to the Committee, that such transfer is in compliance with all foreign, federal and state securities laws (including, without limitation, the Securities Act). Any attempted transfer of Shares not in accordance with the terms and conditions of this Section 9 shall be null and void, and the Company shall not reflect on its records any change in record ownership of any Shares as a result of any such transfer, shall otherwise refuse to

recognize any such transfer and shall not in any way give effect to any such transfer of Shares. The Company shall be entitled to seek protective orders, injunctive relief and other remedies available at law or in equity including, without limitation, seeking specific performance or the rescission of any transfer not made in strict compliance with the provisions of this Section 9. Subject to the foregoing general provisions, and unless otherwise provided in the applicable Award Agreement, Shares may be transferred pursuant to the following specific terms and conditions (provided that with respect to any transfer of Restricted Stock, all vesting and forfeiture provisions shall continue to apply with respect to the original recipient):

(A) Transfers to Permitted Transferees. The Holder may transfer any or all of the Shares to one or more Permitted Transferees; *provided, however*, that following such transfer, such Shares shall continue to be subject to the terms of this Plan (including this Section 9) and such Permitted Transferee(s) shall, as a condition to any such transfer, deliver a written acknowledgment to that effect to the Company and shall deliver a stock power to the Company with respect to the Shares. Notwithstanding the foregoing, the Holder may not transfer any of the Shares to a Person whom the Company reasonably determines is a direct competitor or a potential competitor of the Company or any of its Subsidiaries.

(B) Transfers Upon Death. Upon the death of the Holder, any Shares then held by the Holder at the time of such death and any Shares acquired after the Holder's death by the Holder's legal representative shall be subject to the provisions of this Plan, and the Holder's estate, executors, administrators, personal representatives, heirs, legatees and distributees shall be obligated to convey such Shares to the Company or its assigns under the terms contemplated by the Plan and the Award Agreement.

(b) Right of First Refusal. In the event that a Holder desires at any time to sell or otherwise transfer all or any part of his or her Shares (other than shares of Restricted Stock which by their terms are not transferrable), the Holder first shall give written notice to the Company of the Holder's intention to make such transfer. Such notice shall state the number of Shares that the Holder proposes to sell (the "Offered Shares"), the price and the terms at which the proposed sale is to be made and the name and address of the proposed transferee. At any time within 30 days after the receipt of such notice by the Company, the Company or its assigns may elect to purchase all or any portion of the Offered Shares at the price and on the terms offered by the proposed transferee and specified in the notice. The Company or its assigns shall exercise this right by mailing or delivering written notice to the Holder within the foregoing 30-day period. If the Company or its assigns elect to exercise its purchase rights under this Section 9(b), the closing for such purchase shall, in any event, take place within 45 days after the receipt by the Company of the initial notice from the Holder. In the event that the Company or its assigns do not elect to exercise such purchase right, or in the event that the Company or its assigns do not pay the full purchase price within such 45-day period, the Holder shall be required to pay a transaction processing fee of $10,000 to the Company (unless waived by the Committee) and then may, within 60 days thereafter, sell the Offered Shares to the proposed transferee and at the same price and on the same terms as specified in the Holder's notice. Any Shares not sold to the proposed transferee shall remain subject to the Plan. If the Holder is a party to any stockholders agreements or other agreements with the Company and/or certain other of the Company's

stockholders relating to the Shares, (i) the transferring Holder shall comply with the requirements of such stockholders agreements or other agreements relating to any proposed transfer of the Offered Shares, and (ii) any proposed transferee that purchases Offered Shares shall enter into such stockholders agreements or other agreements with the Company and/or certain of the Company's stockholders relating to the Offered Shares on the same terms and in the same capacity as the transferring Holder.

(c) Company's Right of Repurchase.

(i) Right of Repurchase for Unvested Shares Issued Upon the Exercise of an Option. Upon a Termination Event, the Company or its assigns shall have the right and option to repurchase from a Holder of Shares acquired upon exercise of a Stock Option which are still subject to a risk of forfeiture as of the Termination Event. Such repurchase rights may be exercised by the Company within the later of (A) six months following the date of such Termination Event or (B) seven months after the acquisition of Shares upon exercise of a Stock Option. The repurchase price shall be equal to the lower of the original per share price paid by the Holder, subject to adjustment as provided in Section 3(b) of the Plan, or the current Fair Market Value of such Shares as of the date the Company elects to exercise its repurchase rights.

(ii) Right of Repurchase With Respect to Restricted Stock. Upon a Termination Event, the Company or its assigns shall have the right and option to repurchase from a Holder of Shares received pursuant to a Restricted Stock Award any Shares that are still subject to a risk of forfeiture as of the Termination Event. Such repurchase right may be exercised by the Company within six months following the date of such Termination Event. The repurchase price shall be the lower of the original per share purchase price paid by the Holder, subject to adjustment as provided in Section 3(b) of the Plan, or the current Fair Market Value of such Shares as of the date the Company elects to exercise its repurchase rights.

(iii) Procedure. Any repurchase right of the Company shall be exercised by the Company or its assigns by giving the Holder written notice on or before the last day of the repurchase period of its intention to exercise such repurchase right. Upon such notification, the Holder shall promptly surrender to the Company, free and clear of any liens or encumbrances, any certificates representing the Shares being purchased, together with a duly executed stock power for the transfer of such Shares to the Company or the Company's assignee or assignees. Upon the Company's or its assignee's receipt of the certificates from the Holder, the Company or its assignee or assignees shall deliver to him, her or them a check for the applicable repurchase price; *provided, however*, that the Company may pay the repurchase price by offsetting and canceling any indebtedness then owed by the Holder to the Company.

(d) Drag Along Right. In the event that at any time during which the Company is a party to an agreement with one or more holders of the Company's outstanding preferred stock containing a "drag-along" provision (a "Drag-Along Agreement"), the holders of the requisite number or percentage of shares of the applicable classes or series of preferred stock required to trigger the "drag-along" provision under such Drag-Along Agreement (the "Majority Shareholders") determine to enter into a Sale Event in a bona fide negotiated transaction (a "Sale"), with any non-Affiliate of the Company (in each case, the "Buyer"), a Holder of Shares, including any Permitted Transferee, shall be obligated to and shall upon the written request of

the Majority Shareholders: (a) sell, transfer and deliver, or cause to be sold, transferred and delivered, to the Buyer, his or her Shares (including for this purpose all of such Holder's Shares that presently or as a result of any such transaction may be acquired upon the exercise of an Option (following the payment of the exercise price therefor)) on substantially the same terms applicable to the Majority Shareholders (with appropriate adjustments to reflect the conversion of convertible securities, the redemption of redeemable securities and the exercise of exercisable securities as well as the relative preferences and priorities of preferred stock); and (b) execute and deliver such instruments of conveyance and transfer and take such other action, including voting such Shares in favor of any Sale proposed by the Majority Shareholders and executing any purchase agreements, merger agreements, indemnity agreements, escrow agreements or related documents as the Majority Shareholders or the Buyer may reasonably require in order to carry out the terms and provisions of this Section 9(d).

(e) Escrow Arrangement.

(i) Escrow. In order to carry out the provisions of this Section 9 of this Plan more effectively, the Company shall hold any Shares issued pursuant to Awards granted under the Plan in escrow together with separate stock powers executed by the Holder in blank for transfer. The Company shall not dispose of the Shares except as otherwise provided in this Plan. In the event of any repurchase by the Company (or any of its assigns), the Company is hereby authorized by the Holder, as the Holder's attorney-in-fact, to date and complete the stock powers necessary for the transfer of the Shares being purchased and to transfer such Shares in accordance with the terms hereof. At such time as any Shares are no longer subject to the Company's repurchase and first refusal rights, the Company shall, at the written request of the Holder, deliver to the Holder a certificate representing such Shares with the balance of the Shares to be held in escrow pursuant to this Section.

(ii) Remedy. Without limitation of any other provision of this Plan or other rights, in the event that a Holder or any other Person is required to sell a Holder's Shares pursuant to the provisions of Sections 9(b) or (c) hereof and in the further event that he or she refuses or for any reason fails to deliver to the Company or its designated purchaser of such Shares the certificate or certificates evidencing such Shares together with a related stock power, the Company or such designated purchaser may deposit the applicable purchase price for such Shares with a bank designated by the Company, or with the Company's independent public accounting firm, as agent or trustee, or in escrow, for such Holder or other Person, to be held by such bank or accounting firm for the benefit of and for delivery to him, her, them or it, and/or, in its discretion, pay such purchase price by offsetting any indebtedness then owed by such Holder as provided above. Upon any such deposit and/or offset by the Company or its designated purchaser of such amount and upon notice to the Person who was required to sell the Shares to be sold pursuant to the provisions of Sections 9(b) or (c), such Shares shall at such time be deemed to have been sold, assigned, transferred and conveyed to such purchaser, such Holder shall have no further rights thereto (other than the right to withdraw the payment thereof held in escrow, if applicable), and the Company shall record such transfer in its stock transfer book or in any appropriate manner.

(f) Lockup Provision. If requested by the Company, a Holder shall not sell or otherwise transfer or dispose of any Shares (including, without limitation, pursuant to Rule 144 under the Securities Act) held by him or her for such period following the effective date of a public offering by the Company of Shares as the Company shall specify reasonably and in good faith. If requested by the underwriter engaged by the Company, each Holder shall execute a separate letter confirming his or her agreement to comply with this Section.

(g) Adjustments for Changes in Capital Structure. If, as a result of any reorganization, recapitalization, reclassification, stock dividend, stock split, reverse stock split or other similar change in the Common Stock, the outstanding Shares are increased or decreased or are exchanged for a different number or kind of securities of the Company, the restrictions contained in this Section 9 shall apply with equal force to additional and/or substitute securities, if any, received by Holder in exchange for, or by virtue of his or her ownership of, Shares.

(h) Termination. The terms and provisions of Section 9(b) and Section 9(c) (except for the Company's right to repurchase Shares still subject to a risk of forfeiture upon a Termination Event) shall terminate upon the closing of the Company's Initial Public Offering or upon consummation of any Sale Event, in either case as a result of which Shares are registered under Section 12 of the Exchange Act and publicly-traded on any national security exchange.

SECTION 10. TAX WITHHOLDING

(a) Payment by Grantee. Each grantee shall, no later than the date as of which the value of an Award or of any Shares or other amounts received thereunder first becomes includable in the gross income of the grantee for income tax purposes, pay to the Company, or make arrangements satisfactory to the Committee regarding payment of, any Federal, state, or local taxes of any kind required by law to be withheld by the Company with respect to such income. The Company and any Subsidiary shall, to the extent permitted by law, have the right to deduct any such taxes from any payment of any kind otherwise due to the grantee. The Company's obligation to deliver stock certificates (or evidence of book entry) to any grantee is subject to and conditioned on any such tax withholding obligations being satisfied by the grantee.

(b) Payment in Stock. The Company's minimum required tax withholding obligation may be satisfied, in whole or in part, by the Company withholding from Shares to be issued pursuant to an Award a number of Shares having an aggregate Fair Market Value (as of the date the withholding is effected) that would satisfy the minimum withholding amount due.

SECTION 11. SECTION 409A AWARDS.

To the extent that any Award is determined to constitute "nonqualified deferred compensation" within the meaning of Section 409A (a "409A Award"), the Award shall be subject to such additional rules and requirements as may be specified by the Committee from time to time. In this regard, if any amount under a 409A Award is payable upon a "separation from service" (within the meaning of Section 409A) to a grantee who is considered a "specified employee" (within the meaning of Section 409A), then no such payment shall be made prior to the date that is the earlier of (i) six months and one day after the grantee's separation from service, or (ii) the grantee's death, but only to the extent such delay is necessary to prevent such

payment from being subject to interest, penalties and/or additional tax imposed pursuant to Section 409A. The Company makes no representation or warranty and shall have no liability to any grantee under the Plan or any other Person with respect to any penalties or taxes under Section 409A that are, or may be, imposed with respect to any Award.

SECTION 12. AMENDMENTS AND TERMINATION

The Board may, at any time, amend or discontinue the Plan and the Committee may, at any time, amend or cancel any outstanding Award for the purpose of satisfying changes in law or for any other lawful purpose, but no such action shall adversely affect rights under any outstanding Award without the consent of the holder of the Award. The Committee may exercise its discretion to reduce the exercise price of outstanding Stock Options or effect repricing through cancellation of outstanding Stock Options and by granting such holders new Awards in replacement of the cancelled Stock Options. To the extent determined by the Committee to be required either by the Code to ensure that Incentive Stock Options granted under the Plan are qualified under Section 422 of the Code or otherwise, Plan amendments shall be subject to approval by the Company stockholders entitled to vote at a meeting of stockholders. Nothing in this Section 12 shall limit the Board's or Committee's authority to take any action permitted pursuant to Section 3(c). The Board reserves the right to amend the Plan and/or the terms of any outstanding Stock Options to the extent reasonably necessary to comply with the requirements of the exemption pursuant to paragraph (f)(4) of Rule 12h-1 of the Exchange Act.

SECTION 13. STATUS OF PLAN

With respect to the portion of any Award that has not been exercised and any payments in cash, Stock or other consideration not received by a grantee, a grantee shall have no rights greater than those of a general creditor of the Company unless the Committee shall otherwise expressly so determine in connection with any Award.

SECTION 14. GENERAL PROVISIONS

(a) No Distribution; Compliance with Legal Requirements. The Committee may require each person acquiring Shares pursuant to an Award to represent to and agree with the Company in writing that such person is acquiring the Shares without a view to distribution thereof. No Shares shall be issued pursuant to an Award until all applicable securities law and other legal and stock exchange or similar requirements have been satisfied. The Committee may require the placing of such stop-orders and restrictive legends on certificates for Stock and Awards as it deems appropriate.

(b) Delivery of Stock Certificates. Stock certificates to grantees under the Plan shall be deemed delivered for all purposes when the Company or a stock transfer agent of the Company shall have mailed such certificates in the United States mail, addressed to the grantee, at the grantee's last known address on file with the Company; provided that stock certificates to be held in escrow pursuant to Section 9 of the Plan shall be deemed delivered when the Company shall have recorded the issuance in its records. Uncertificated Stock shall be deemed delivered for all purposes when the Company or a stock transfer agent of the Company shall have given to the grantee by electronic mail (with proof of receipt) or by United States mail, addressed to the

grantee, at the grantee's last known address on file with the Company, notice of issuance and recorded the issuance in its records (which may include electronic "book entry" records).

(c) No Employment Rights**.** The adoption of the Plan and the grant of Awards do not confer upon any Person any right to continued employment or Service Relationship with the Company or any Subsidiary.

(d) Trading Policy Restrictions. Option exercises and other Awards under the Plan shall be subject to the Company's insider trading policy-related restrictions, terms and conditions as may be established by the Committee, or in accordance with policies set by the Committee, from time to time.

(e) Designation of Beneficiary. Each grantee to whom an Award has been made under the Plan may designate a beneficiary or beneficiaries to exercise any Award on or after the grantee's death or receive any payment under any Award payable on or after the grantee's death. Any such designation shall be on a form provided for that purpose by the Committee and shall not be effective until received by the Committee. If no beneficiary has been designated by a deceased grantee, or if the designated beneficiaries have predeceased the grantee, the beneficiary shall be the grantee's estate.

(f) Legend. Any certificate(s) representing the Shares shall carry substantially the following legend (and with respect to uncertificated Stock, the book entries evidencing such shares shall contain the following notation):

> The transferability of this certificate and the shares of stock represented hereby are subject to the restrictions, terms and conditions (including repurchase and restrictions against transfers) contained in the Prime Medicine, Inc. 2019 Stock Option and Grant Plan and any agreements entered into thereunder by and between the company and the holder of this certificate (a copy of which is available at the offices of the company for examination).

(g) Information to Holders of Options. In the event the Company is relying on the exemption from the registration requirements of Section 12(g) of the Exchange Act contained in paragraph (f)(1) of Rule 12h-1 of the Exchange Act, the Company shall provide the information described in Rule 701(e)(3), (4) and (5) of the Securities Act to all holders of Options in accordance with the requirements thereunder. The foregoing notwithstanding, the Company shall not be required to provide such information unless the optionholder has agreed in writing, on a form prescribed by the Company, to keep such information confidential.

SECTION 15. EFFECTIVE DATE OF PLAN

The Plan shall become effective upon adoption by the Board and shall be approved by stockholders in accordance with applicable state law and the Company's articles of incorporation and bylaws within 12 months thereafter. If the stockholders fail to approve the Plan within 12 months after its adoption by the Board of Directors, then any Awards granted or sold under the Plan shall be rescinded and no additional grants or sales shall thereafter be made under the Plan. Subject to such approval by stockholders and to the requirement that no Shares may be issued

hereunder prior to such approval, Stock Options and other Awards may be granted hereunder on and after adoption of the Plan by the Board. No grants of Stock Options and other Awards may be made hereunder after the tenth anniversary of the date the Plan is adopted by the Board or the date the Plan is approved by the Company's stockholders, whichever is earlier.

SECTION 16. GOVERNING LAW

This Plan, all Awards and any controversy arising out of or relating to this Plan and all Awards shall be governed by and construed in accordance with the General Corporation Law of the State of Delaware as to matters within the scope thereof, and as to all other matters shall be governed by and construed in accordance with the internal laws of the Commonwealth of Massachusetts, without regard to conflict of law principles that would result in the application of any law other than the law of the Commonwealth of Massachusetts.

DATE ADOPTED BY THE BOARD OF DIRECTORS: September 26, 2019

DATE APPROVED BY THE STOCKHOLDERS: September 26, 2019

INCENTIVE STOCK OPTION GRANT NOTICE
UNDER THE PRIME MEDICINE, INC.
2019 STOCK OPTION AND GRANT PLAN

Pursuant to the Prime Medicine, Inc. 2019 Stock Option and Grant Plan (the "Plan"), Prime Medicine, Inc., a Delaware corporation (together with any successor, the "Company"), has granted to the individual named below, an option (the "Stock Option") to purchase on or prior to the Expiration Date, or such earlier date as is specified herein, all or any part of the number of shares of Common Stock, par value $0.00001 per share ("Common Stock"), of the Company indicated below (the "Shares"), at the Option Exercise Price per share, subject to the terms and conditions set forth in this Incentive Stock Option Grant Notice (the "Grant Notice"), the attached Incentive Stock Option Agreement (the "Agreement") and the Plan. This Stock Option is intended to qualify as an "incentive stock option" as defined in Section 422(b) of the Internal Revenue Code of 1986, as amended from time to time (the "Code"). To the extent that any portion of the Stock Option does not so qualify, it shall be deemed a non-qualified stock option.

Name of Optionee:	_____ (the "Optionee")
No. of Shares:	_____ Shares of Common Stock
Grant Date:	_____
Vesting Commencement Date:	_____ (the "Vesting Commencement Date")
Expiration Date:	_____ (the "Expiration Date")
Option Exercise Price/Share:	$ _____ (the "Option Exercise Price")
Vesting Schedule:	25 percent of the Shares shall vest and become exercisable on the first anniversary of the Vesting Commencement Date; provided that the Optionee continues to have a Service Relationship with the Company at such time. Thereafter, the remaining 75 percent of the Shares shall vest and become exercisable in 36 equal monthly installments following the first anniversary of the Vesting Commencement Date, provided the Optionee continues to have a Service Relationship with the Company on each vesting date. Notwithstanding anything in the Agreement to the contrary, in the case of a Sale Event, this Stock Option and the Shares shall be treated as provided in Section 3(c) of the Plan**.**

Attachments: Incentive Stock Option Agreement, 2019 Stock Option and Grant Plan

INCENTIVE STOCK OPTION AGREEMENT
UNDER THE PRIME MEDICINE, INC.
2019 STOCK OPTION AND GRANT PLAN

All capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Grant Notice and the Plan.

1. Vesting, Exercisability and Termination.

(a) No portion of this Stock Option may be exercised until such portion shall have vested and become exercisable.

(b) Except as set forth below, and subject to the determination of the Committee in its sole discretion to accelerate the vesting schedule hereunder, this Stock Option shall be vested and exercisable on the respective dates indicated below:

(i) This Stock Option shall initially be unvested and unexercisable.

(ii) This Stock Option shall vest and become exercisable in accordance with the Vesting Schedule set forth in the Grant Notice.

(c) Termination. Except as may otherwise be provided by the Committee, if the Optionee's Service Relationship is terminated, the period within which to exercise this Stock Option will be subject to earlier termination as set forth below (and if not exercised within such period, shall thereafter terminate subject, in each case, to Section 3(c) of the Plan):

(i) Termination Due to Death or Disability. If the Optionee's Service Relationship terminates by reason of such Optionee's death or Disability, this Stock Option may be exercised, to the extent exercisable on the date of such termination, by the Optionee, the Optionee's legal representative or legatee for a period of 12 months from the date of death or Disability or until the Expiration Date, if earlier.

(ii) Other Termination. If the Optionee's Service Relationship terminates for any reason other than death or Disability, and unless otherwise determined by the Committee, this Stock Option may be exercised, to the extent exercisable on the date of termination, for a period of 90 days from the date of termination or until the Expiration Date, if earlier; provided however, if the Optionee's Service Relationship is terminated for Cause, this Stock Option shall terminate immediately upon the date of such termination.

For purposes hereof, the Committee's determination of the reason for termination of the Optionee's Service Relationship shall be conclusive and binding on the Optionee and his or her representatives or legatees. Any portion of this Stock Option that is not vested and exercisable on the date of termination of the Service Relationship shall terminate immediately and be null and void.

(d) It is understood and intended that this Stock Option is intended to qualify as an "incentive stock option" as defined in Section 422 of the Code to the extent permitted

under applicable law. Accordingly, the Optionee understands that in order to obtain the benefits of an incentive stock option under Section 422 of the Code, no sale or other disposition may be made of Shares for which incentive stock option treatment is desired within the one-year period beginning on the day after the day of the transfer of such Shares to him or her, nor within the two-year period beginning on the day after Grant Date of this Stock Option and further that this Stock Option must be exercised within three months after termination of employment as an employee (or 12 months in the case of death or disability) to qualify as an incentive stock option. If the Optionee disposes (whether by sale, gift, transfer or otherwise) of any such Shares within either of these periods, he or she will notify the Company within 30 days after such disposition. The Optionee also agrees to provide the Company with any information concerning any such dispositions required by the Company for tax purposes. Further, to the extent this Stock Option and any other incentive stock options of the Optionee having an aggregate Fair Market Value in excess of $100,000 (determined as of the Grant Date) first become exercisable in any year, such options will not qualify as incentive stock options.

2. Exercise of Stock Option.

(a) The Optionee may exercise this Stock Option only in the following manner: Prior to the Expiration Date, the Optionee may deliver a Stock Option exercise notice (an "Exercise Notice") in the form of Appendix A hereto indicating his or her election to purchase some or all of the Shares with respect to which this Stock Option is then exercisable. Such notice shall specify the number of Shares to be purchased. Payment of the purchase price may be made by one or more of the methods described in Section 5 of the Plan, subject to the limitations contained in such Section of the Plan, including the requirement that the Committee specifically approve in advance certain payment methods.

(b) Notwithstanding any other provision hereof or of the Plan, no portion of this Stock Option shall be exercisable after the Expiration Date.

3. Incorporation of Plan. Notwithstanding anything herein to the contrary, this Stock Option shall be subject to and governed by all the terms and conditions of the Plan.

4. Transferability of Stock Option. This Stock Option is personal to the Optionee and is not transferable by the Optionee in any manner other than by will or by the laws of descent and distribution. The Stock Option may be exercised during the Optionee's lifetime only by the Optionee (or by the Optionee's guardian or personal representative in the event of the Optionee's incapacity). The Optionee may elect to designate a beneficiary by providing written notice of the name of such beneficiary to the Company, and may revoke or change such designation at any time by filing written notice of revocation or change with the Company; such beneficiary may exercise the Optionee's Stock Option in the event of the Optionee's death to the extent provided herein. If the Optionee does not designate a beneficiary, or if the designated beneficiary predeceases the Optionee, the legal representative of the Optionee may exercise this Stock Option to the extent provided herein in the event of the Optionee's death.

5. Restrictions on Transfer of Shares. The Shares acquired upon exercise of the Stock Option shall be subject to certain transfer restrictions and other limitations including, without limitation, the provisions contained in Section 9 of the Plan.

6. Miscellaneous Provisions.

(a) Equitable Relief. The parties hereto agree and declare that legal remedies may be inadequate to enforce the provisions of this Agreement and that equitable relief, including specific performance and injunctive relief, may be used to enforce the provisions of this Agreement.

(b) Adjustments for Changes in Capital Structure. If, as a result of any reorganization, recapitalization, reincorporation, reclassification, stock dividend, stock split, reverse stock split or other similar change in the Common Stock, the outstanding shares of Common Stock are increased or decreased or are exchanged for a different number or kind of securities of the Company, the restrictions contained in this Agreement shall apply with equal force to additional and/or substitute securities, if any, received by the Optionee in exchange for, or by virtue of his or her ownership of, this Stock Option or Shares acquired pursuant thereto.

(c) Change and Modifications. This Agreement may not be orally changed, modified or terminated, nor shall any oral waiver of any of its terms be effective. This Agreement may be changed, modified or terminated only by an agreement in writing signed by the Company and the Optionee.

(d) Governing Law. This Agreement shall be governed by and construed in accordance with the General Corporation Law of the State of Delaware as to matters within the scope thereof, and as to all other matters shall be governed by and construed in accordance with the internal laws of the Commonwealth of Massachusetts, without regard to conflict of law principles that would result in the application of any law other than the law of the Commonwealth of Massachusetts.

(e) Headings. The headings are intended only for convenience in finding the subject matter and do not constitute part of the text of this Agreement and shall not be considered in the interpretation of this Agreement.

(f) Saving Clause. If any provision(s) of this Agreement shall be determined to be illegal or unenforceable, such determination shall in no manner affect the legality or enforceability of any other provision hereof.

(g) Notices. All notices, requests, consents and other communications shall be in writing and be deemed given when delivered personally, by telex or facsimile transmission or when received if mailed by first class registered or certified mail, postage prepaid. Notices to the Company or the Optionee shall be addressed as set forth underneath their signatures below, or to such other address or addresses as may have been furnished by such party in writing to the other.

(h) Benefit and Binding Effect. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto, their respective successors, assigns, and legal representatives. The Company has the right to assign this Agreement, and such assignee shall become entitled to all the rights of the Company hereunder to the extent of such assignment.

(i) Counterparts. For the convenience of the parties and to facilitate execution, this Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same document.

(j) Integration. This Agreement constitutes the entire agreement between the parties with respect to this Stock Option and supersedes all prior agreements and discussions between the parties concerning such subject matter.

7. Dispute Resolution.

(a) Except as provided below, any dispute arising out of or relating to the Plan or this Stock Option, this Agreement, or the breach, termination or validity of the Plan, this Stock Option or this Agreement, shall be finally settled by binding arbitration conducted expeditiously in accordance with the J.A.M.S./Endispute Comprehensive Arbitration Rules and Procedures (the "J.A.M.S. Rules"). The arbitration shall be governed by the United States Arbitration Act, 9 U.S.C. Sections 1 16, and judgment upon the award rendered by the arbitrators may be entered by any court having jurisdiction thereof. The place of arbitration shall be Boston, Massachusetts.

(b) The arbitration shall commence within 60 days of the date on which a written demand for arbitration is filed by any party hereto. In connection with the arbitration proceeding, the arbitrator shall have the power to order the production of documents by each party and any third-party witnesses. In addition, each party may take up to three depositions as of right, and the arbitrator may in his or her discretion allow additional depositions upon good cause shown by the moving party. However, the arbitrator shall not have the power to order the answering of interrogatories or the response to requests for admission. In connection with any arbitration, each party to the arbitration shall provide to the other, no later than seven business days before the date of the arbitration, the identity of all persons that may testify at the arbitration and a copy of all documents that may be introduced at the arbitration or considered or used by a party's witness or expert. The arbitrator's decision and award shall be made and delivered within six months of the selection of the arbitrator. The arbitrator's decision shall set forth a reasoned basis for any award of damages or finding of liability. The arbitrator shall not have power to award damages in excess of actual compensatory damages and shall not multiply actual damages or award punitive damages, and each party hereby irrevocably waives any claim to such damages.

(c) The Company, the Optionee, each party to the Agreement and any other holder of Shares issued pursuant to this Agreement (each, a "Party") covenants and agrees that such party will participate in the arbitration in good faith. This Section 7 applies equally to requests for temporary, preliminary or permanent injunctive relief, except that in the case of temporary or preliminary injunctive relief any party may proceed in court without prior arbitration for the limited purpose of avoiding immediate and irreparable harm.

(d) Each Party (i) hereby irrevocably submits to the jurisdiction of any United States District Court of competent jurisdiction for the purpose of enforcing the award or decision in any such proceeding, (ii) hereby waives, and agrees not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above named courts, that its property is exempt or immune

from attachment or execution (except as protected by applicable law), that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court, and (iii) hereby waives and agrees not to seek any review by any court of any other jurisdiction which may be called upon to grant an enforcement of the judgment of any such court. Each Party hereby consents to service of process by registered mail at the address to which notices are to be given. Each Party agrees that its, his or her submission to jurisdiction and its, his or her consent to service of process by mail is made for the express benefit of each other Party. Final judgment against any Party in any such action, suit or proceeding may be enforced in other jurisdictions by suit, action or proceeding on the judgment, or in any other manner provided by or pursuant to the laws of such other jurisdiction.

8. Waiver of Statutory Information Rights. The Optionee understands and agrees that, but for the waiver made herein, the Optionee would be entitled, upon written demand under oath stating the purpose thereof, to inspect for any proper purpose, and to make copies and extracts from, the Company's stock ledger, a list of its stockholders, and its other books and records, and the books and records of subsidiaries of the Company, if any, under the circumstances and in the manner provided in Section 220 of the General Corporation Law of Delaware (any and all such rights, and any and all such other rights of the Optionee as may be provided for in Section 220, the "Inspection Rights"). In light of the foregoing, until the first sale of Stock of the Company to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act, the Optionee hereby unconditionally and irrevocably waives the Inspection Rights, whether such Inspection Rights would be exercised or pursued directly or indirectly pursuant to Section 220 or otherwise, and covenants and agrees never to directly or indirectly commence, voluntarily aid in any way, prosecute, assign, transfer, or cause to be commenced any claim, action, cause of action, or other proceeding to pursue or exercise the Inspection Rights. The foregoing waiver shall not affect any rights of a director, in his or her capacity as such, under Section 220. The foregoing waiver shall not apply to any contractual inspection rights of the Optionee under any other written agreement between the Optionee and the Company.

[SIGNATURE PAGE FOLLOWS]

The foregoing Agreement is hereby accepted and the terms and conditions thereof hereby agreed to by the undersigned as of the date first above written.

PRIME MEDICINE, INC.

By: _____

Name:
Title:

Address:

_____

_____

_____

The undersigned hereby acknowledges receiving and reviewing a copy of the Plan, including, without limitation, Section 9 thereof, and understands that this Stock Option is subject to the terms of the Plan and of this Agreement. This Agreement is hereby accepted, and the terms and conditions of the Plan, the Grant Notice and this Agreement, SPECIFICALLY INCLUDING THE ARBITRATION PROVISIONS SET FORTH IN SECTION 7 AND THE WAIVER OF STATUTORY INFORMATION RIGHTS SET FORTH IN SECTION 8 OF THIS AGREEMENT, are hereby agreed to, by the undersigned as of the date first above written.

OPTIONEE:

_____

Name:

Address:

_____

_____

_____

[SPOUSE'S CONSENT[1]
I acknowledge that I have read the
foregoing Incentive Stock Option Agreement
and understand the contents thereof.

_____]

[1] A spouse's consent is recommended only if the Optionee's state of residence is one of the following community property states: Arizona, California, Idaho, Louisiana, Nevada, New Mexico, Texas, Washington and Wisconsin.

DESIGNATED BENEFICIARY:

Beneficiary's Address:

Appendix A

STOCK OPTION EXERCISE NOTICE

Prime Medicine, Inc.
Attention: President

_____
_____

Pursuant to the terms of the grant notice and stock option agreement between the undersigned and Prime Medicine, Inc. (the "Company") dated_____(the "Agreement") under the Prime Medicine, Inc. 2019 Stock Option and Grant Plan, I, [Insert Name] _____, hereby [Circle One] partially/fully exercise such option by including herein payment in the amount of $_____ representing the purchase price for [Fill in number of Shares] _____Shares. I have chosen the following form(s) of payment:

[ ] 1. Cash
[ ] 2. Certified or bank check payable to Prime Medicine, Inc.
[ ] 3. Other (as referenced in the Agreement and described in the Plan (please describe))

_____.

In connection with my exercise of the option as set forth above, I hereby represent and warrant to the Company as follows:

(i) I am purchasing the Shares for my own account for investment only, and not for resale or with a view to the distribution thereof.

(ii) I have had such an opportunity as I have deemed adequate to obtain from the Company such information as is necessary to permit me to evaluate the merits and risks of my investment in the Company and have consulted with my own advisers with respect to my investment in the Company.

(iii) I have sufficient experience in business, financial and investment matters to be able to evaluate the risks involved in the purchase of the Shares and to make an informed investment decision with respect to such purchase.

(iv) I can afford a complete loss of the value of the Shares and am able to bear the economic risk of holding such Shares for an indefinite period of time.

(v) I understand that the Shares may not be registered under the Securities Act of 1933 (it being understood that the Shares are being issued and sold in reliance on the exemption provided in Rule 701 thereunder) or any applicable state securities or "blue sky" laws and may not be sold or otherwise transferred or disposed of in the absence of an effective registration statement under the Securities Act of 1933 and under any applicable state securities or "blue sky" laws (or exemptions from the registration requirement thereof). I further acknowledge that certificates representing

Shares will bear restrictive legends reflecting the foregoing and/or that book entries for uncertificated Shares will include similar restrictive notations.

(vi) I have read and understand the Plan and acknowledge and agree that the Shares are subject to all of the relevant terms of the Plan, including without limitation, the transfer restrictions set forth in Section 9 of the Plan.

(vii) I understand and agree that the Company has a right of first refusal with respect to the Shares pursuant to Section 9(b) of the Plan.

(viii) I understand and agree that the Company has certain repurchase rights with respect to the Shares pursuant to Section 9(c) of the Plan.

(ix) I understand and agree that I may not sell or otherwise transfer or dispose of the Shares for a period of time following the effective date of a public offering by the Company as described in Section 9(f) of the Plan.

(x) I understand and agree to the waiver of statutory information rights as set forth in Section 8 of the Agreement.

Sincerely yours,

_____

Name:

Address:

_____

_____

_____

Date: _____

EARLY EXERCISE
INCENTIVE STOCK OPTION GRANT NOTICE
UNDER THE PRIME MEDICINE, INC.

2019 STOCK OPTION AND GRANT PLAN

Pursuant to the Prime Medicine, Inc. 2019 Stock Option and Grant Plan (the "Plan"), Prime Medicine, Inc., a Delaware corporation (together with any successor thereto, the "Company"), has granted to the individual named below, an option (the "Stock Option") to purchase on or prior to the Expiration Date, or such earlier date as is specified herein, all or any part of the number of shares of Common Stock, par value $0.00001 per share ("Common Stock"), of the Company indicated below (the "Shares"), at the Option Exercise Price per share, subject to the terms and conditions set forth in this Early Exercise Incentive Stock Option Grant Notice (the "Grant Notice"), the attached Early Exercise Incentive Stock Option Agreement (the "Agreement") and the Plan. This Stock Option is intended to qualify as an "incentive stock option" as defined in Section 422(b) of the Internal Revenue Code of 1986, as amended from time to time (the "Code"). To the extent that any portion of the Stock Option does not so qualify, it shall be deemed a non-qualified stock option.

Name of Optionee:	_____ (the "Optionee")
No. of Shares:	_____ Shares of Common Stock
Grant Date:	_____
Vesting Commencement Date:	_____ (the "Vesting Commencement Date")
Expiration Date:	_____ (the "Expiration Date")
Option Exercise Price/Share:	$ _____ (the "Option Exercise Price")
Vesting Schedule:	[25] percent of the Shares shall vest on the first anniversary of the Vesting Commencement Date; provided that the Optionee continues to have a Service Relationship with the Company at such time. Thereafter, the remaining [75] percent of the Shares shall vest in [36] equal monthly installments following the first anniversary of the Vesting Commencement Date, provided the Optionee continues to have a Service Relationship with the Company on each vesting date. Notwithstanding anything in the Agreement to the contrary, in the case of a Sale Event, this Stock Option and the Shares shall be treated as provided in Section 3(c) of the Plan**[provided; however INSERT ANY ACCELERATED VESTING PROVISION HERE]**.

Attachments: Early Exercise Incentive Stock Option Agreement, Restricted Stock Agreement, 2019 Stock Option and Grant Plan

EARLY EXERCISE
INCENTIVE STOCK OPTION AGREEMENT
UNDER THE PRIME MEDICINE, INC.
2019 STOCK OPTION AND GRANT PLAN

All capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Grant Notice and the Plan.

1. Vesting, Exercisability and Termination.

(a) This Stock Option shall be immediately exercisable, regardless of whether the Shares are vested.

(b) Except as set forth below, and subject to the determination of the Committee in its sole discretion to accelerate the vesting schedule hereunder, the Shares shall be vested on the respective dates indicated below:

(i) All Shares shall initially be unvested.

(ii) The Shares shall vest in accordance with the Vesting Schedule set forth in the Grant Notice.

(c) Termination. Except as may otherwise be provided by the Committee, if the Optionee's Service Relationship is terminated, the period within which to exercise this Stock Option will be subject to earlier termination as set forth below (and if not exercised within such period, shall thereafter terminate subject, in each case to Section 3(c) of the Plan):

(i) Termination Due to Death or Disability. If the Optionee's Service Relationship terminates by reason of such Optionee's death or Disability, this Stock Option may continue to be exercised, to the extent the Shares are vested on the date of termination, by the Optionee, the Optionee's legal representative or legatee for a period of 12 months from the date of death or Disability or until the Expiration Date, if earlier.

(ii) Other Termination. If the Optionee's Service Relationship terminates for any reason other than death or Disability, and unless otherwise determined by the Committee, this Stock Option may continue to be exercised, to the extent the Shares are vested on the date of termination, for a period of 90 days from the date of termination or until the Expiration Date, if earlier; provided however, if the Optionee's Service Relationship is terminated for Cause, this Stock Option shall terminate immediately upon the date of such termination.

For purposes hereof, the Committee's determination of the reason for termination of the Optionee's Service Relationship shall be conclusive and binding on the Optionee and his or her representatives or legatees. Any portion of this Stock Option with respect to Shares that are not vested on the date of termination of the Service Relationship shall terminate immediately and be null and void.

(d) It is understood and intended that this Stock Option is intended to qualify as an "incentive stock option" as defined in Section 422 of the Code to the extent permitted under applicable law. Accordingly, the Optionee understands that in order to obtain the benefits of an incentive stock option under Section 422 of the Code, no sale or other disposition may be made of Shares for which incentive stock option treatment is desired within the one-year period beginning on the day after the day of the transfer of such Shares to him or her, nor within the two-year period beginning on the day after Grant Date of this Stock Option and further that this Stock Option must be exercised within three months after termination of employment as an employee (or 12 months in the case of death or disability) to qualify as an incentive stock option. If the Optionee disposes (whether by sale, gift, transfer or otherwise) of any such Shares within either of these periods, he or she will notify the Company within 30 days after such disposition. The Optionee also agrees to provide the Company with any information concerning any such dispositions required by the Company for tax purposes. Further, to the extent this Stock Option and any other incentive stock options of the Optionee having an aggregate Fair Market Value in excess of $100,000 (determined as of the Grant Date) first become exercisable in any year, such options will not qualify as incentive stock options.

2. Exercise of Stock Option.

(a) The Optionee may exercise this Stock Option only in the following manner: Prior to the Expiration Date, the Optionee may deliver a Stock Option exercise notice (an "Exercise Notice") in the form of Appendix A hereto indicating his or her election to purchase some or all of the Shares. Such notice shall specify the number of Shares to be purchased. To the extent this Stock Option is only partially exercised, such exercise shall first be with respect to the Shares, if any, that have previously vested, and then with respect to the Shares that will next vest, with the Shares that vest at the latest date being exercised last. Payment of the purchase price may be made by one or more of the methods described in Section 5 of the Plan, subject to the limitations contained in such Section of the Plan, including the requirement that the Committee specifically approve in advance certain payment methods.

(b) In the event the Optionee exercises a portion of this Stock Option with respect to Shares that have not vested, the Optionee shall also deliver a Restricted Stock Agreement covering such unvested Shares in the form of Appendix B hereto (the "Restricted Stock Agreement") with the same vesting schedule for such Shares as set forth for such Shares herein.

(c) Notwithstanding any other provision hereof or of the Plan, no portion of this Stock Option shall be exercisable after the Expiration Date.

3. Incorporation of Plan. Notwithstanding anything herein to the contrary, this Stock Option shall be subject to and governed by all the terms and conditions of the Plan.

4. Transferability of Stock Option. This Stock Option is personal to the Optionee and is not transferable by the Optionee in any manner other than by will or by the laws of descent and distribution. The Stock Option may be exercised during the Optionee's lifetime only by the Optionee (or by the Optionee's guardian or personal representative in the event of the Optionee's incapacity). The Optionee may elect to designate a beneficiary by providing written notice of the

name of such beneficiary to the Company, and may revoke or change such designation at any time by filing written notice of revocation or change with the Company; such beneficiary may exercise the Optionee's Stock Option in the event of the Optionee's death to the extent provided herein. If the Optionee does not designate a beneficiary, or if the designated beneficiary predeceases the Optionee, the legal representative of the Optionee may exercise this Stock Option to the extent provided herein in the event of the Optionee's death.

5. Restrictions on Transfer of Shares. The Shares acquired upon exercise of the Stock Option shall be subject to certain transfer restrictions and other limitations including, without limitation, the provisions contained in Section 9 of the Plan and, if applicable, the Restricted Stock Agreement.

6. Miscellaneous Provisions.

(a) Equitable Relief. The parties hereto agree and declare that legal remedies may be inadequate to enforce the provisions of this Agreement and that equitable relief, including specific performance and injunctive relief, may be used to enforce the provisions of this Agreement.

(b) Adjustments for Changes in Capital Structure. If, as a result of any reorganization, recapitalization, reincorporation, reclassification, stock dividend, stock split, reverse stock split or other similar change in the Common Stock, the outstanding shares of Common Stock are increased or decreased or are exchanged for a different number or kind of securities of the Company, the restrictions contained in this Agreement shall apply with equal force to additional and/or substitute securities, if any, received by the Optionee in exchange for, or by virtue of his or her ownership of, this Stock Option or Shares acquired pursuant thereto.

(c) Change and Modifications. This Agreement may not be orally changed, modified or terminated, nor shall any oral waiver of any of its terms be effective. This Agreement may be changed, modified or terminated only by an agreement in writing signed by the Company and the Optionee.

(d) Governing Law. This Agreement shall be governed by and construed in accordance with the General Corporation Law of the State of **Delaware** as to matters within the scope thereof, and as to all other matters shall be governed by and construed in accordance with the internal laws of the Commonwealth of Massachusetts without regard to conflict of law principles that would result in the application of any law other than the law of the Commonwealth of Massachusetts.

(e) Headings. The headings are intended only for convenience in finding the subject matter and do not constitute part of the text of this Agreement and shall not be considered in the interpretation of this Agreement.

(f) Saving Clause. If any provision(s) of this Agreement shall be determined to be illegal or unenforceable, such determination shall in no manner affect the legality or enforceability of any other provision hereof.

(g) Notices. All notices, requests, consents and other communications shall be in writing and be deemed given when delivered personally, by telex or facsimile transmission or when received if mailed by first class registered or certified mail, postage prepaid. Notices to the Company or the Optionee shall be addressed as set forth underneath their signatures below, or to such other address or addresses as may have been furnished by such party in writing to the other.

(h) Benefit and Binding Effect. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto, their respective successors, permitted assigns, and legal representatives. The Company has the right to assign this Agreement, and such assignee shall become entitled to all the rights of the Company hereunder to the extent of such assignment.

(i) Counterparts. For the convenience of the parties and to facilitate execution, this Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same document.

(j) Integration. This Agreement constitutes the entire agreement between the parties with respect to this Stock Option and supersedes all prior agreements and discussions between the parties concerning such subject matter.

7. Dispute Resolution.

(a) Except as provided below, any dispute arising out of or relating to the Plan or this Stock Option, this Agreement, or the breach, termination or validity of the Plan, this Stock Option or this Agreement, shall be finally settled by binding arbitration conducted expeditiously in accordance with the J.A.M.S./Endispute Comprehensive Arbitration Rules and Procedures (the "J.A.M.S. Rules"). The arbitration shall be governed by the United States Arbitration Act, 9 U.S.C. Sections 1 - 16, and judgment upon the award rendered by the arbitrators may be entered by any court having jurisdiction thereof. The place of arbitration shall be Boston, Massachusetts.

(b) The arbitration shall commence within 60 days of the date on which a written demand for arbitration is filed by any party hereto. In connection with the arbitration proceeding, the arbitrator shall have the power to order the production of documents by each party and any third-party witnesses. In addition, each party may take up to three depositions as of right, and the arbitrator may in his or her discretion allow additional depositions upon good cause shown by the moving party. However, the arbitrator shall not have the power to order the answering of interrogatories or the response to requests for admission. In connection with any arbitration, each party to the arbitration shall provide to the other, no later than seven business days before the date of the arbitration, the identity of all persons that may testify at the arbitration and a copy of all documents that may be introduced at the arbitration or considered or used by a party's witness or expert. The arbitrator's decision and award shall be made and delivered within six months of the selection of the arbitrator. The arbitrator's decision shall set forth a reasoned basis for any award of damages or finding of liability. The arbitrator shall not have power to award damages in excess of actual compensatory damages and shall not multiply actual damages or award punitive damages, and each party hereby irrevocably waives any claim to such damages.

(c) The Company, the Optionee, each party to the Agreement and any other holder of Shares issued pursuant to this Agreement (each, a "Party") covenants and agrees that such party will participate in the arbitration in good faith. This Section 7 applies equally to requests for temporary, preliminary or permanent injunctive relief, except that in the case of temporary or preliminary injunctive relief any party may proceed in court without prior arbitration for the limited purpose of avoiding immediate and irreparable harm.

(d) Each Party (i) hereby irrevocably submits to the jurisdiction of any United States District Court of competent jurisdiction for the purpose of enforcing the award or decision in any such proceeding, (ii) hereby waives, and agrees not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above named courts, that its property is exempt or immune from attachment or execution (except as protected by applicable law), that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court, and (iii) hereby waives and agrees not to seek any review by any court of any other jurisdiction which may be called upon to grant an enforcement of the judgment of any such court. Each Party hereby consents to service of process by registered mail at the address to which notices are to be given. Each Party agrees that its, his or her submission to jurisdiction and its, his or her consent to service of process by mail is made for the express benefit of each other Party. Final judgment against any Party in any such action, suit or proceeding may be enforced in other jurisdictions by suit, action or proceeding on the judgment, or in any other manner provided by or pursuant to the laws of such other jurisdiction.

8. Waiver of Statutory Information Rights. The Optionee understands and agrees that, but for the waiver made herein, the Optionee would be entitled, upon written demand under oath stating the purpose thereof, to inspect for any proper purpose, and to make copies and extracts from, the Company's stock ledger, a list of its stockholders, and its other books and records, and the books and records of subsidiaries of the Company, if any, under the circumstances and in the manner provided in Section 220 of the General Corporation Law of Delaware (any and all such rights, and any and all such other rights of the Optionee as may be provided for in Section 220, the "Inspection Rights"). In light of the foregoing, until the first sale of Stock of the Company to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act, the Optionee hereby unconditionally and irrevocably waives the Inspection Rights, whether such Inspection Rights would be exercised or pursued directly or indirectly pursuant to Section 220 or otherwise, and covenants and agrees never to directly or indirectly commence, voluntarily aid in any way, prosecute, assign, transfer, or cause to be commenced any claim, action, cause of action, or other proceeding to pursue or exercise the Inspection Rights. The foregoing waiver shall not affect any rights of a director, in his or her capacity as such, under Section 220. The foregoing waiver shall not apply to any contractual inspection rights of the Optionee under any other written agreement between the Optionee and the Company.

[SIGNATURE PAGE FOLLOWS]

The foregoing Agreement is hereby accepted and the terms and conditions thereof hereby agreed to by the undersigned as of the date first above written.

Prime Medicine, Inc.

By: _____

Name:
Title:

Address:

_____

_____

_____

The undersigned hereby acknowledges receiving and reviewing a copy of the Plan, including, without limitation, Section 9 thereof, and understands that this Stock Option is subject to the terms of the Plan and this Agreement. This Agreement is hereby accepted, and the terms and conditions of the Plan, the Grant Notice and this Agreement, SPECIFICALLY INCLUDING THE ARBITRATION PROVISIONS SET FORTH IN SECTION 7 AND THE WAIVER OF STATUTORY INFORMATION RIGHTS SET FORTH IN SECTION 8 OF THIS AGREEMENT, are hereby agreed to, by the undersigned as of the date first above written.

OPTIONEE:

_____

Name:

Address:

_____

_____

_____

[SPOUSE'S CONSENT[2]
I acknowledge that I have read the
foregoing Incentive Stock Option Agreement
and understand the contents thereof.

_____]

[2] A spouse's consent is recommended only if the Optionee's state of residence is one of the following community property states: Arizona, California, Idaho, Louisiana, Nevada, New Mexico, Texas, Washington and Wisconsin.

DESIGNATED BENEFICIARY:

Beneficiary's Address:

Appendix A

STOCK OPTION EXERCISE NOTICE

Prime Medicine, Inc.
Attention: [_____]
_____
_____

Pursuant to the terms of the grant notice and stock option agreement between the undersigned and **Prime Medicine, Inc.** (the "Company") dated _____ (the "Agreement") under the **Prime Medicine, Inc.** 2019 Stock Option and Grant Plan, I, [Insert Name] _____, hereby [Circle One] partially/fully exercise such option by including herein payment in the amount of $_____ representing the purchase price for [Fill in number of Shares] _____ Shares. I have chosen the following form(s) of payment:

[ ] 1. Cash
[ ] 2. Certified or bank check payable to **Prime Medicine, Inc.**
[ ] 3. Other (as referenced in the Agreement and described in the Plan (please describe))
_____.

In connection with my exercise of the option as set forth above, I hereby represent and warrant to the Company as follows:

(i) I am purchasing the Shares for my own account for investment only, and not for resale or with a view to the distribution thereof.

(ii) I have had such an opportunity as I have deemed adequate to obtain from the Company such information as is necessary to permit me to evaluate the merits and risks of my investment in the Company and have consulted with my own advisers with respect to my investment in the Company.

(iii) I have sufficient experience in business, financial and investment matters to be able to evaluate the risks involved in the purchase of the Shares and to make an informed investment decision with respect to such purchase.

(iv) I can afford a complete loss of the value of the Shares and am able to bear the economic risk of holding such Shares for an indefinite period of time.

(v) I understand that the Shares may not be registered under the Securities Act of 1933 (it being understood that the Shares are being issued and sold in reliance on the exemption provided in Rule 701 thereunder) or any applicable state securities or "blue sky" laws and may not be sold or otherwise transferred or disposed of in the absence of an effective registration statement under the Securities Act of 1933 and under any applicable state securities or "blue sky" laws (or exemptions from the registration requirement thereof). I further acknowledge that certificates representing

Shares will bear restrictive legends reflecting the foregoing and/or that book entries for uncertificated Shares will include similar restrictive notations.

(vi) To the extent required, I have executed and delivered to the Company the Restricted Stock Agreement attached as Appendix B to the Agreement.

(vii) I have read and understand the Plan and acknowledge and agree that the Shares are subject to all of the relevant terms of the Plan, including without limitation, the transfer restrictions set forth in Section 9 of the Plan.

(viii) I understand and agree that the Company has a right of first refusal with respect to the Shares pursuant to Section 9(b) of the Plan.

(ix) I understand and agree that the Company has certain repurchase rights with respect to the Shares pursuant to Section 9(c) of the Plan.

(x) I understand and agree that I may not sell or otherwise transfer or dispose of the Shares for a period of time following the effective date of a public offering by the Company as described in Section 9(f) of the Plan.

(xi) I understand and agree to the waiver of statutory information rights as set forth in Section 8 of the Agreement.

Sincerely yours,

_____

Name:

Address:

_____

_____

_____

Date: _____

Appendix B

RESTRICTED STOCK AGREEMENT FOR EARLY EXERCISE OPTION UNDER THE PRIME MEDICINE, INC. 2019 STOCK OPTION AND GRANT PLAN

All capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Early Exercise Incentive Stock Option Grant Notice (the "Grant Notice") and Early Exercise Incentive Stock Option Agreement (the "Option Agreement") between **Prime Medicine, Inc.** (the "Company") and _____ (the "Grantee") for_____Shares of Common Stock with a Grant Date of_____, _____under the **Prime Medicine, Inc.** 2019 Stock Option and Grant Plan (the "Plan").

1. Purchase and Sale of Shares; Vesting.

(a) Purchase and Sale. The Company hereby sells to the Grantee, and the Grantee hereby purchases from the Company, on_____, 2019, the number of Shares set forth in the Stock Option Exercise Notice (_____Shares) dated_____, pursuant to the Grant Notice and Option Agreement, for the aggregate Option Exercise Price for the Shares so purchased.

(b) Vesting. The risk of forfeiture shall lapse with respect to the Shares, and such Shares shall become vested, on the respective dates indicated on the Vesting Schedule set forth in the Grant Notice.

2. Repurchase Right. Upon a Termination Event, the Company shall have the right to repurchase the Shares of Restricted Stock that are unvested as of the date of such Termination Event as set forth in Section 9(c) of the Plan.

3. Restrictions on Transfer of Shares. The Shares (whether or not vested) shall be subject to certain transfer restrictions and other limitations including, without limitation, the provisions contained in Section 9 of the Plan

4. Incorporation of Plan. Notwithstanding anything herein to the contrary, this Restricted Stock Agreement shall be subject to and governed by all the terms and conditions of the Plan.

5. Miscellaneous Provisions.

(a) Record Owner; Dividends. The Grantee and any Permitted Transferees, during the duration of this Agreement, shall be considered the record owners of and shall be entitled to vote the Shares if and to the extent the Shares are entitled to voting rights. The Grantee and any Permitted Transferees shall be entitled to receive all dividends and any other distributions declared on the Shares; provided, however, that the Company is under no duty to declare any such dividends or to make any such distribution.

(b) Section 83(b) Election. The Grantee shall consult with the Grantee's tax advisor to determine whether it would be appropriate for the Grantee to make an election under

Section 83(b) of the Code with respect to the Shares. Any such election must be filed with the Internal Revenue Service within 30 days of the date of exercise. If the Grantee makes an election under Section 83(b) of the Code, the Grantee shall give prompt notice to the Company (and provide a copy of such election to the Company). A sample Section 83(b) election is attached to this Agreement as Exhibit A.

(c) Equitable Relief. The parties hereto agree and declare that legal remedies may be inadequate to enforce the provisions of this Agreement and that equitable relief, including specific performance and injunctive relief, may be used to enforce the provisions of this Agreement.

(d) Change and Modifications. This Agreement may not be orally changed, modified or terminated, nor shall any oral waiver of any of its terms be effective. This Agreement may be changed, modified or terminated only by an agreement in writing signed by the Company and the Grantee.

(e) Governing Law. This Agreement shall be governed by and construed in accordance with the General Corporation Law of the State of Delaware as to matters within the scope thereof, and as to all other matters shall be governed by and construed in accordance with the internal laws of the Commonwealth of Massachusetts, without regard to conflict of law principles that would result in the application of any law other than the law of the Commonwealth of Massachusetts.

(f) Headings. The headings are intended only for convenience in finding the subject matter and do not constitute part of the text of this Agreement and shall not be considered in the interpretation of this Agreement.

(g) Saving Clause. If any provision(s) of this Agreement shall be determined to be illegal or unenforceable, such determination shall in no manner affect the legality or enforceability of any other provision hereof.

(h) Notices. All notices, requests, consents and other communications shall be in writing and be deemed given when delivered personally, by telex or facsimile transmission or when received if mailed by first class registered or certified mail, postage prepaid. Notices to the Company or the Grantee shall be addressed as set forth underneath their signatures below, or to such other address or addresses as may have been furnished by such party in writing to the other.

(i) Benefit and Binding Effect. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto, their respective successors, assigns, and legal representatives. The Company has the right to assign this Agreement, and such assignee shall become entitled to all the rights of the Company hereunder to the extent of such assignment.

(j) Counterparts. For the convenience of the parties and to facilitate execution, this Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same document.

6. Dispute Resolution.

(a) Except as provided below, any dispute arising out of or relating to the Plan or the Shares, this Agreement, or the breach, termination or validity of the Plan, the Shares or this Agreement, shall be finally settled by binding arbitration conducted expeditiously in accordance with the J.A.M.S./Endispute Comprehensive Arbitration Rules and Procedures (the "J.A.M.S. Rules"). The arbitration shall be governed by the United States Arbitration Act, 9 U.S.C. Sections 1 - 16, and judgment upon the award rendered by the arbitrators may be entered by any court having jurisdiction thereof. The place of arbitration shall be Boston, Massachusetts.

(b) The arbitration shall commence within 60 days of the date on which a written demand for arbitration is filed by any party hereto. In connection with the arbitration proceeding, the arbitrator shall have the power to order the production of documents by each party and any third-party witnesses. In addition, each party may take up to three depositions as of right, and the arbitrator may in his or her discretion allow additional depositions upon good cause shown by the moving party. However, the arbitrator shall not have the power to order the answering of interrogatories or the response to requests for admission. In connection with any arbitration, each party to the arbitration shall provide to the other, no later than seven business days before the date of the arbitration, the identity of all persons that may testify at the arbitration and a copy of all documents that may be introduced at the arbitration or considered or used by a party's witness or expert. The arbitrator's decision and award shall be made and delivered within six months of the selection of the arbitrator. The arbitrator's decision shall set forth a reasoned basis for any award of damages or finding of liability. The arbitrator shall not have power to award damages in excess of actual compensatory damages and shall not multiply actual damages or award punitive damages, and each party hereby irrevocably waives any claim to such damages.

(c) The Company, the Grantee, each party to the Agreement and any other holder of Shares issued pursuant to this Agreement (each, a "Party") covenants and agrees that such party will participate in the arbitration in good faith. This Section 6 applies equally to requests for temporary, preliminary or permanent injunctive relief, except that in the case of temporary or preliminary injunctive relief any party may proceed in court without prior arbitration for the limited purpose of avoiding immediate and irreparable harm.

(d) Each Party (i) hereby irrevocably submits to the jurisdiction of any United States District Court of competent jurisdiction for the purpose of enforcing the award or decision in any such proceeding, (ii) hereby waives, and agrees not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above named courts, that its property is exempt or immune from attachment or execution (except as protected by applicable law), that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court, and (iii) hereby waives and agrees not to seek any review by any court of any other jurisdiction which may be called upon to grant an enforcement of the judgment of any such court. Each Party hereby consents to service of process by registered mail at the address to which notices are to be given. Each Party agrees that its, his or her submission to jurisdiction and its, his

or her consent to service of process by mail is made for the express benefit of each other Party. Final judgment against any Party in any such action, suit or proceeding may be enforced in other jurisdictions by suit, action or proceeding on the judgment, or in any other manner provided by or pursuant to the laws of such other jurisdiction.

7. Waiver of Statutory Information Rights. The Grantee understands and agrees that, but for the waiver made herein, the Grantee would be entitled, upon written demand under oath stating the purpose thereof, to inspect for any proper purpose, and to make copies and extracts from, the Company's stock ledger, a list of its stockholders, and its other books and records, and the books and records of subsidiaries of the Company, if any, under the circumstances and in the manner provided in Section 220 of the General Corporation Law of Delaware (any and all such rights, and any and all such other rights of the Grantee as may be provided for in Section 220, the "Inspection Rights"). In light of the foregoing, until the first sale of Stock of the Company to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act, the Grantee hereby unconditionally and irrevocably waives the Inspection Rights, whether such Inspection Rights would be exercised or pursued directly or indirectly pursuant to Section 220 or otherwise, and covenants and agrees never to directly or indirectly commence, voluntarily aid in any way, prosecute, assign, transfer, or cause to be commenced any claim, action, cause of action, or other proceeding to pursue or exercise the Inspection Rights. The foregoing waiver shall not affect any rights of a director, in his or her capacity as such, under Section 220. The foregoing waiver shall not apply to any contractual inspection rights of the Grantee under any other written agreement between the Grantee and the Company.

[SIGNATURE PAGE FOLLOWS]

The foregoing Restricted Stock Agreement is hereby accepted and the terms and conditions thereof are hereby agreed to by the undersigned as of the date written in Section 1(a) above.

Prime Medicine, Inc.

By: _____

Name:
Title:

Address:

_____

_____

_____

The undersigned hereby acknowledges receiving and reviewing a copy of the Plan, including, without limitation, Section 9 thereof and understands that the Shares purchased hereby are subject to the terms of the Plan, the Grant Notice, and this Agreement. This Agreement is hereby accepted, and the terms and conditions of the Plan, the Grant Notice and this Agreement, SPECIFICALLY INCLUDING THE ARBITRATION PROVISIONS SET FORTH IN SECTION 6 AND THE WAIVER OF STATUTORY INFORMATION RIGHTS SET FORTH IN SECTION 7 OF THIS AGREEMENT, are hereby agreed to, by the undersigned as of the date first above written.

GRANTEE:

_____

Name:

Address:

_____

_____

_____

[SPOUSE'S CONSENT[3]
I acknowledge that I have read the
foregoing Restricted Stock Agreement
and understand the contents thereof.

_____]

[3] A spouse's consent is required only if the Grantee's state of residence is one of the following community property states: Arizona, California, Idaho, Louisiana, New Mexico, Nevada, Texas, Washington and Wisconsin.

EXHIBIT A
Section 83(b) Election

The undersigned hereby elects pursuant to §83(b) of the Internal Revenue Code of 1986, as amended, to include in gross income as compensation for services the excess (if any) of the fair market value of the shares described below over the amount paid for those shares.

1. The name, taxpayer identification number, address of the undersigned, and the taxable year for which this election is being made are:

   Name: _____

   Address: _____

   Social Security No.: _____

   Taxable Year: Calendar Year 20__

2. The property which is the subject of this election is [number of unvested shares] shares of common stock of Prime Medicine, Inc..

3. The property was transferred to the undersigned on [date of purchase/transfer].

4. The property is subject to the following restrictions:

   The Shares will be subject to restrictions on transfer and risk of forfeiture upon termination of service relationship and in certain other events.

5. The fair market value of the property at time of transfer (determined without regard to any restrictions other than nonlapse restrictions as defined in §1.83-3(h) of the Income Tax Regulations) is $[current FMV] per share x [number of unvested shares] shares = $_____.

6. For the property transferred, the undersigned paid $[exercise price] per share x [number of unvested shares] shares = $_____.

7. The amount to include in gross income is $[amount reported in Item 5 minus the amount reported in Item 6].

The undersigned taxpayer will file this election with the Internal Revenue Service Office with which the taxpayer files his or her annual income tax return not later than 30 days after the date of transfer of the property, at the IRS address listed for the taxpayer's state under "Are you not including a check or money order . . ." given in *Where Do You File* in the Instructions for Form 1040 and the Instructions for Form 1040A (which information can also be found at: https://www.irs.gov/uac/where-to-file-addresses-for- taxpayers-and-tax-professionals). A copy of the election will also be furnished to the person for whom the services were performed. The undersigned is the person performing services in connection with which the property was transferred.

Dated: _____, 20_

_____
Taxpayer

NON-QUALIFIED STOCK OPTION GRANT NOTICE
UNDER THE PRIME MEDICINE, INC.
2019 STOCK OPTION AND GRANT PLAN

Pursuant to the Prime Medicine, Inc. 2019 Stock Option and Grant Plan (the "Plan"), Prime Medicine, Inc., a Delaware corporation (together with any successor, the "Company"), has granted to the individual named below, an option (the "Stock Option") to purchase on or prior to the Expiration Date, or such earlier date as is specified herein, all or any part of the number of shares of Common Stock, par value $0.00001 per share ("Common Stock"), of the Company indicated below (the "Shares"), at the Option Exercise Price per share, subject to the terms and conditions set forth in this Non-Qualified Stock Option Grant Notice (the "Grant Notice"), the attached Non-Qualified Stock Option Agreement (the "Agreement") and the Plan. This Stock Option is not intended to qualify as an "incentive stock option" as defined in Section 422(b) of the Internal Revenue Code of 1986, as amended from time to time (the "Code").

Name of Optionee:	_____ (the "Optionee")
No. of Shares:	_____ Shares of Common Stock
Grant Date:	_____
Vesting Commencement Date:	_____ (the "Vesting Commencement Date")
Expiration Date:	_____ (the "Expiration Date")
Option Exercise Price/Share:	$ _____ (the "Option Exercise Price")
Vesting Schedule:	25 percent of the Shares shall vest and become exercisable on the first anniversary of the Vesting Commencement Date; provided that the Optionee continues to have a Service Relationship with the Company at such time. Thereafter, the remaining 75 percent of the Shares shall vest and become exercisable in 36 equal monthly installments following the first anniversary of the Vesting Commencement Date, provided the Optionee continues to have a Service Relationship with the Company on each vesting date. Notwithstanding anything in the Agreement to the contrary, in the case of a Sale Event, this Stock Option and the Shares shall be treated as provided in Section 3(c) of the Plan.

Attachments: Non-Qualified Stock Option Agreement, 2019 Stock Option and Grant Plan

NON-QUALIFIED STOCK OPTION AGREEMENT
UNDER THE PRIME MEDICINE, INC.
2019 STOCK OPTION AND GRANT PLAN

All capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Grant Notice and the Plan.

1. Vesting, Exercisability and Termination.

(a) No portion of this Stock Option may be exercised until such portion shall have vested and become exercisable.

(b) Except as set forth below, and subject to the determination of the Committee in its sole discretion to accelerate the vesting schedule hereunder, this Stock Option shall be vested and exercisable on the respective dates indicated below:

(i) This Stock Option shall initially be unvested and unexercisable.

(ii) This Stock Option shall vest and become exercisable in accordance with the Vesting Schedule set forth in the Grant Notice.

(c) Termination. Except as may otherwise be provided by the Committee, if the Optionee's Service Relationship is terminated, the period within which to exercise this Stock Option will be subject to earlier termination as set forth below (and if not exercised within such period, shall thereafter terminate subject, in each case, to Section 3(c) of the Plan):

(i) Termination Due to Death or Disability. If the Optionee's Service Relationship terminates by reason of such Optionee's death or Disability, this Stock Option may be exercised, to the extent exercisable on the date of such termination, by the Optionee, the Optionee's legal representative or legatee for a period of 12 months from the date of death or Disability or until the Expiration Date, if earlier.

(ii) Other Termination. If the Optionee's Service Relationship terminates for any reason other than death or Disability, and unless otherwise determined by the Committee, this Stock Option may be exercised, to the extent exercisable on the date of termination, for a period of 90 days from the date of termination or until the Expiration Date, if earlier; provided however, if the Optionee's Service Relationship is terminated for Cause, this Stock Option shall terminate immediately upon the date of such termination.

For purposes hereof, the Committee's determination of the reason for termination of the Optionee's Service Relationship shall be conclusive and binding on the Optionee and his or her representatives or legatees and any Permitted Transferee. Any portion of this Stock Option that is not vested and exercisable on the date of termination of the Service Relationship shall terminate immediately and be null and void.

2. Exercise of Stock Option.

(a) The Optionee may exercise this Stock Option only in the following manner: Prior to the Expiration Date, the Optionee may deliver a Stock Option exercise notice (an "Exercise Notice") in the form of Appendix A hereto indicating his or her election to purchase some or all of the Shares with respect to which this Stock Option is then exercisable. Such notice shall specify the number of Shares to be purchased. Payment of the purchase price may be made by one or more of the methods described in Section 5 of the Plan, subject to the limitations contained in such Section of the Plan, including the requirement that the Committee specifically approve in advance certain payment methods.

(b) Notwithstanding any other provision hereof or of the Plan, no portion of this Stock Option shall be exercisable after the Expiration Date.

3. Incorporation of Plan. Notwithstanding anything herein to the contrary, this Stock Option shall be subject to and governed by all the terms and conditions of the Plan.

4. Transferability of Stock Option. This Stock Option is personal to the Optionee and is not transferable by the Optionee in any manner other than by will or by the laws of descent and distribution. The Stock Option may be exercised during the Optionee's lifetime only by the Optionee (or by the Optionee's guardian or personal representative in the event of the Optionee's incapacity). The Optionee may elect to designate a beneficiary by providing written notice of the name of such beneficiary to the Company, and may revoke or change such designation at any time by filing written notice of revocation or change with the Company; such beneficiary may exercise the Optionee's Stock Option in the event of the Optionee's death to the extent provided herein. If the Optionee does not designate a beneficiary, or if the designated beneficiary predeceases the Optionee, the legal representative of the Optionee may exercise this Stock Option to the extent provided herein in the event of the Optionee's death.

5. Restrictions on Transfer of Shares. The Shares acquired upon exercise of the Stock Option shall be subject to certain transfer restrictions and other limitations including, without limitation, the provisions contained in Section 9 of the Plan.

6. Miscellaneous Provisions.

(a) Equitable Relief. The parties hereto agree and declare that legal remedies may be inadequate to enforce the provisions of this Agreement and that equitable relief, including specific performance and injunctive relief, may be used to enforce the provisions of this Agreement.

(b) Adjustments for Changes in Capital Structure. If, as a result of any reorganization, recapitalization, reincorporation, reclassification, stock dividend, stock split, reverse stock split or other similar change in the Common Stock, the outstanding shares of Common Stock are increased or decreased or are exchanged for a different number or kind of securities of the Company, the restrictions contained in this Agreement shall apply with equal force to additional and/or substitute securities, if any, received by the Optionee in exchange for, or by virtue of his or her ownership of, this Stock Option or Shares acquired pursuant thereto.

(c) Change and Modifications. This Agreement may not be orally changed, modified or terminated, nor shall any oral waiver of any of its terms be effective. This Agreement may be changed, modified or terminated only by an agreement in writing signed by the Company and the Optionee.

(d) Governing Law. This Agreement shall be governed by and construed in accordance with the General Corporation Law of the State of Delaware as to matters within the scope thereof, and as to all other matters shall be governed by and construed in accordance with the internal laws of the Commonwealth of Massachusetts, without regard to conflict of law principles that would result in the application of any law other than the law of the Commonwealth of Massachusetts.

(e) Headings. The headings are intended only for convenience in finding the subject matter and do not constitute part of the text of this Agreement and shall not be considered in the interpretation of this Agreement.

(f) Saving Clause. If any provision(s) of this Agreement shall be determined to be illegal or unenforceable, such determination shall in no manner affect the legality or enforceability of any other provision hereof.

(g) Notices. All notices, requests, consents and other communications shall be in writing and be deemed given when delivered personally, by telex or facsimile transmission or when received if mailed by first class registered or certified mail, postage prepaid. Notices to the Company or the Optionee shall be addressed as set forth underneath their signatures below, or to such other address or addresses as may have been furnished by such party in writing to the other.

(h) Benefit and Binding Effect. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto, their respective successors, assigns, and legal representatives. The Company has the right to assign this Agreement, and such assignee shall become entitled to all the rights of the Company hereunder to the extent of such assignment.

(i) Counterparts. For the convenience of the parties and to facilitate execution, this Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same document.

(j) Integration. This Agreement constitutes the entire agreement between the parties with respect to this Stock Option and supersedes all prior agreements and discussions between the parties concerning such subject matter.

7. Dispute Resolution.

(a) Except as provided below, any dispute arising out of or relating to the Plan or this Stock Option, this Agreement, or the breach, termination or validity of the Plan, this Stock Option or this Agreement, shall be finally settled by binding arbitration conducted expeditiously in accordance with the J.A.M.S./Endispute Comprehensive Arbitration Rules and Procedures (the "J.A.M.S. Rules"). The arbitration shall be governed by the United States Arbitration Act, 9 U.S.C. Sections 1-16, and judgment upon the award rendered by the arbitrators may be entered by any court having jurisdiction thereof. The place of arbitration shall be Boston, Massachusetts.

(b) The arbitration shall commence within 60 days of the date on which a written demand for arbitration is filed by any party hereto. In connection with the arbitration proceeding, the arbitrator shall have the power to order the production of documents by each party and any third-party witnesses. In addition, each party may take up to three depositions as of right, and the arbitrator may in his or her discretion allow additional depositions upon good cause shown by the moving party. However, the arbitrator shall not have the power to order the answering of interrogatories or the response to requests for admission. In connection with any arbitration, each party to the arbitration shall provide to the other, no later than seven business days before the date of the arbitration, the identity of all persons that may testify at the arbitration and a copy of all documents that may be introduced at the arbitration or considered or used by a party's witness or expert. The arbitrator's decision and award shall be made and delivered within six months of the selection of the arbitrator. The arbitrator's decision shall set forth a reasoned basis for any award of damages or finding of liability. The arbitrator shall not have power to award damages in excess of actual compensatory damages and shall not multiply actual damages or award punitive damages, and each party hereby irrevocably waives any claim to such damages.

(c) The Company, the Optionee, each party to the Agreement and any other holder of Shares issued pursuant to this Agreement (each, a "Party") covenants and agrees that such party will participate in the arbitration in good faith. This Section 7 applies equally to requests for temporary, preliminary or permanent injunctive relief, except that in the case of temporary or preliminary injunctive relief any party may proceed in court without prior arbitration for the limited purpose of avoiding immediate and irreparable harm.

(d) Each Party (i) hereby irrevocably submits to the jurisdiction of any United States District Court of competent jurisdiction for the purpose of enforcing the award or decision in any such proceeding, (ii) hereby waives, and agrees not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above named courts, that its property is exempt or immune from attachment or execution (except as protected by applicable law), that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court, and (iii) hereby waives and agrees not to seek any review by any court of any other jurisdiction which may be called upon to grant an enforcement of the judgment of any such court. Each Party hereby consents to service of process by registered mail at the address to which notices are to be given. Each Party agrees that its, his or her submission to jurisdiction and its, his or her consent to service of process by mail is made for the express benefit of each other Party. Final judgment against any Party in any such action, suit or proceeding may be enforced in other jurisdictions by suit, action or proceeding on the judgment, or in any other manner provided by or pursuant to the laws of such other jurisdiction.

8. Waiver of Statutory Information Rights. The Optionee understands and agrees that, but for the waiver made herein, the Optionee would be entitled, upon written demand under oath stating the purpose thereof, to inspect for any proper purpose, and to make copies and extracts from, the Company's stock ledger, a list of its stockholders, and its other books and records, and the books and records of subsidiaries of the Company, if any, under the

circumstances and in the manner provided in Section 220 of the General Corporation Law of Delaware (any and all such rights, and any and all such other rights of the Optionee as may be provided for in Section 220, the "Inspection Rights"). In light of the foregoing, until the first sale of Stock of the Company to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act, the Optionee hereby unconditionally and irrevocably waives the Inspection Rights, whether such Inspection Rights would be exercised or pursued directly or indirectly pursuant to Section 220 or otherwise, and covenants and agrees never to directly or indirectly commence, voluntarily aid in any way, prosecute, assign, transfer, or cause to be commenced any claim, action, cause of action, or other proceeding to pursue or exercise the Inspection Rights. The foregoing waiver shall not affect any rights of a director, in his or her capacity as such, under Section 220. The foregoing waiver shall not apply to any contractual inspection rights of the Optionee under any other written agreement between the Optionee and the Company.

[SIGNATURE PAGE FOLLOWS]

The foregoing Agreement is hereby accepted and the terms and conditions thereof hereby agreed to by the undersigned as of the date first above written.

PRIME MEDICINE, INC.

By: _____

Name:
Title:

Address:

_____

_____

_____

The undersigned hereby acknowledges receiving and reviewing a copy of the Plan, including, without limitation, Section 9 thereof, and understands that this Stock Option is subject to the terms of the Plan and of this Agreement. This Agreement is hereby accepted, and the terms and conditions of the Plan, the Grant Notice and this Agreement, SPECIFICALLY INCLUDING THE ARBITRATION PROVISIONS SET FORTH IN SECTION 7 AND THE WAIVER OF STATUTORY INFORMATION RIGHTS SET FORTH IN SECTION 8 OF THIS AGREEMENT, are hereby agreed to, by the undersigned as of the date first above written.

OPTIONEE:

_____

Name:

Address:

_____

_____

_____

[SPOUSE'S CONSENT[4]
I acknowledge that I have read the
foregoing Non-Qualified Stock Option Agreement
and understand the contents thereof.

_____]

[4] A spouse's consent is recommended only if the Optionee's state of residence is one of the following community property states: Arizona, California, Idaho, Louisiana, Nevada, New Mexico, Texas, Washington and Wisconsin.

DESIGNATED BENEFICIARY:

_____

Beneficiary's Address:

_____

_____

Appendix A

STOCK OPTION EXERCISE NOTICE

Prime Medicine, Inc.
Attention: President

_____
_____

Pursuant to the terms of the grant notice and stock option agreement between the undersigned and Prime Medicine, Inc. (the "Company") dated_____(the "Agreement") under the Prime Medicine, Inc. 2019 Stock Option and Grant Plan, I, [Insert Name] _____, hereby [Circle One] partially/fully exercise such option by including herein payment in the amount of $_____ representing the purchase price for [Fill in number of Shares] _____ Shares. I have chosen the following form(s) of payment:

[ ] 1. Cash
[ ] 2. Certified or bank check payable to Prime Medicine, Inc.
[ ] 3. Other (as referenced in the Agreement and described in the Plan (please describe))
_____.

In connection with my exercise of the option as set forth above, I hereby represent and warrant to the Company as follows:

(i) I am purchasing the Shares for my own account for investment only, and not for resale or with a view to the distribution thereof.

(ii) I have had such an opportunity as I have deemed adequate to obtain from the Company such information as is necessary to permit me to evaluate the merits and risks of my investment in the Company and have consulted with my own advisers with respect to my investment in the Company.

(iii) I have sufficient experience in business, financial and investment matters to be able to evaluate the risks involved in the purchase of the Shares and to make an informed investment decision with respect to such purchase.

(iv) I can afford a complete loss of the value of the Shares and am able to bear the economic risk of holding such Shares for an indefinite period of time.

(v) I understand that the Shares may not be registered under the Securities Act of 1933 (it being understood that the Shares are being issued and sold in reliance on the exemption provided in Rule 701 thereunder) or any applicable state securities or "blue sky" laws and may not be sold or otherwise transferred or disposed of in the absence of an effective registration statement under the Securities Act of 1933 and under any applicable state securities or "blue sky" laws (or exemptions from the registration requirement thereof). I further acknowledge that certificates representing

Shares will bear restrictive legends reflecting the foregoing and/or that book entries for uncertificated Shares will include similar restrictive notations.

(vi) I have read and understand the Plan and acknowledge and agree that the Shares are subject to all of the relevant terms of the Plan, including without limitation, the transfer restrictions set forth in Section 9 of the Plan.

(vii) I understand and agree that the Company has a right of first refusal with respect to the Shares pursuant to Section 9(b) of the Plan.

(viii) I understand and agree that the Company has certain repurchase rights with respect to the Shares pursuant to Section 9(c) of the Plan.

(ix) I understand and agree that I may not sell or otherwise transfer or dispose of the Shares for a period of time following the effective date of a public offering by the Company as described in Section 9(f) of the Plan.

(x) I understand and agree to the waiver of statutory information rights as set forth in Section 8 of the Agreement.

Sincerely yours,

_____

Name:

Address:

_____

_____

_____

Date: _____

EARLY EXERCISE
NON-QUALIFIED STOCK OPTION GRANT NOTICE
UNDER THE PRIME MEDICINE, INC.
2019 STOCK OPTION AND GRANT PLAN

Pursuant to the Prime Medicine, Inc. 2019 Stock Option and Grant Plan (the "Plan"), Prime Medicine, Inc., a Delaware corporation (together with any successor thereto, the "Company"), has granted to the individual named below, an option (the "Stock Option") to purchase on or prior to the Expiration Date, or such earlier date as is specified herein, all or any part of the number of shares of Common Stock, par value $0.00001 per share ("Common Stock"), of the Company indicated below (the "Shares"), at the Option Exercise Price per share, subject to the terms and conditions set forth in this Early Exercise Non-Qualified Stock Option Grant Notice (the "Grant Notice"), the attached Early Exercise Non-Qualified Stock Option Agreement (the "Agreement") and the Plan. This Stock Option is not intended to qualify as an "incentive stock option" as defined in Section 422(b) of the Internal Revenue Code of 1986, as amended from time to time (the "Code").

Name of Optionee:	_____ (the "Optionee")
No. of Shares:	_____ Shares of Common Stock
Grant Date:	_____
Vesting Commencement Date:	_____ (the "Vesting Commencement Date")
Expiration Date:	_____ (the "Expiration Date")
Option Exercise Price/Share:	$ _____ (the "Option Exercise Price")
Vesting Schedule:	[25] percent of the Shares shall vest on the first anniversary of the Vesting Commencement Date; provided that the Optionee continues to have a Service Relationship with the Company at such time. Thereafter, the remaining [75] percent of the Shares shall vest in [36] equal monthly installments following the first anniversary of the Vesting Commencement Date, provided the Optionee continues to have a Service Relationship with the Company on each vesting date. Notwithstanding anything in the Agreement to the contrary, in the case of a Sale Event, this Stock Option and the Shares shall be treated as provided in Section 3(c) of the Plan**[provided; however INSERT ANY ACCELERATED VESTING PROVISION HERE]**.

Attachments: Early Exercise Non-Qualified Stock Option Agreement, Restricted Stock Agreement, 2019 Stock Option and Grant Plan

EARLY EXERCISE

NON-QUALIFIED STOCK OPTION AGREEMENT
UNDER THE PRIME MEDICINE, INC.
2019 STOCK OPTION AND GRANT PLAN

All capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Grant Notice and the Plan.

1. Vesting, Exercisability and Termination.

(a) This Stock Option shall be immediately exercisable, regardless of whether the Shares are vested.

(b) Except as set forth below, and subject to the determination of the Committee in its sole discretion to accelerate the vesting schedule hereunder, the Shares shall be vested on the respective dates indicated below:

(i) All Shares shall initially be unvested.

(ii) The Shares shall vest in accordance with the Vesting Schedule set forth in the Grant Notice.

(c) Termination. Except as may otherwise be provided by the Committee, if the Optionee's Service Relationship is terminated, the period within which to exercise this Stock Option will be subject to earlier termination as set forth below (and if not exercised within such period, shall thereafter terminate subject, in each case, to Section 3(c) of the Plan):

(i) Termination Due to Death or Disability. If the Optionee's Service Relationship terminates by reason of such Optionee's death or Disability, this Stock Option may continue to be exercised, to the extent the Shares are vested on the date of termination, by the Optionee, the Optionee's legal representative or legatee for a period of 12 months from the date of death or Disability or until the Expiration Date, if earlier.

(ii) Other Termination. If the Optionee's Service Relationship terminates for any reason other than death or Disability, and unless otherwise determined by the Committee, this Stock Option may continue to be exercised, to the extent the Shares are vested on the date of termination, for a period of 90 days from the date of termination or until the Expiration Date, if earlier; provided however, if the Optionee's Service Relationship is terminated for Cause, this Stock Option shall terminate immediately upon the date of such termination.

For purposes hereof, the Committee's determination of the reason for termination of the Optionee's Service Relationship shall be conclusive and binding on the Optionee and his or her representatives or legatees and any Permitted Transferee. Any portion of this Stock Option with respect to Shares that are not vested and exercisable on the date of termination of the Service Relationship shall terminate immediately and be null and void.

2. Exercise of Stock Option.

(a) The Optionee may exercise this Stock Option only in the following manner: Prior to the Expiration Date, the Optionee may deliver a Stock Option exercise notice (an "Exercise Notice") in the form of Appendix A hereto indicating his or her election to purchase some or all of the Shares. Such notice shall specify the number of Shares to be purchased. To the extent this Stock Option is only partially exercised, such exercise shall first be with respect to the Shares, if any, that have previously vested, and then with respect to the Shares that will next vest, with the Shares that vest at the latest date being exercised last. Payment of the purchase price may be made by one or more of the methods described in Section 5 of the Plan, subject to the limitations contained in such Section of the Plan, including the requirement that the Committee specifically approve in advance certain payment methods.

(b) In the event the Optionee exercises a portion of this Stock Option with respect to Shares that have not vested, the Optionee shall also deliver a Restricted Stock Agreement covering such unvested Shares in the form of Appendix B hereto (the "Restricted Stock Agreement") with the same vesting schedule for such Shares as set forth for such Shares herein.

(c) Notwithstanding any other provision hereof or of the Plan, no portion of this Stock Option shall be exercisable after the Expiration Date.

3. Incorporation of Plan. Notwithstanding anything herein to the contrary, this Stock Option shall be subject to and governed by all the terms and conditions of the Plan.

4. Transferability of Stock Option. This Stock Option is personal to the Optionee and is not transferable by the Optionee in any manner other than by will or by the laws of descent and distribution. The Stock Option may be exercised during the Optionee's lifetime only by the Optionee (or by the Optionee's guardian or personal representative in the event of the Optionee's incapacity). The Optionee may elect to designate a beneficiary by providing written notice of the name of such beneficiary to the Company, and may revoke or change such designation at any time by filing written notice of revocation or change with the Company; such beneficiary may exercise the Optionee's Stock Option in the event of the Optionee's death to the extent provided herein. If the Optionee does not designate a beneficiary, or if the designated beneficiary predeceases the Optionee, the legal representative of the Optionee may exercise this Stock Option to the extent provided herein in the event of the Optionee's death.

5. Restrictions on Transfer of Shares. The Shares acquired upon exercise of the Stock Option shall be subject to certain transfer restrictions and other limitations including, without limitation, the provisions contained in Section 9 of the Plan and, if applicable, the Restricted Stock Agreement.

6. Miscellaneous Provisions.

(a) Equitable Relief. The parties hereto agree and declare that legal remedies may be inadequate to enforce the provisions of this Agreement and that equitable relief, including specific performance and injunctive relief, may be used to enforce the provisions of this Agreement.

(b) Adjustments for Changes in Capital Structure. If, as a result of any reorganization, recapitalization, reincorporation, reclassification, stock dividend, stock split, reverse stock split or other similar change in the Common Stock, the outstanding shares of Common Stock are increased or decreased or are exchanged for a different number or kind of securities of the Company, the restrictions contained in this Agreement shall apply with equal force to additional and/or substitute securities, if any, received by the Optionee in exchange for, or by virtue of his or her ownership of, this Stock Option or Shares acquired pursuant thereto.

(c) Change and Modifications. This Agreement may not be orally changed, modified or terminated, nor shall any oral waiver of any of its terms be effective. This Agreement may be changed, modified or terminated only by an agreement in writing signed by the Company and the Optionee.

(d) Governing Law. This Agreement shall be governed by and construed in accordance with the General Corporation Law of the State of Delaware as to matters within the scope thereof, and as to all other matters shall be governed by and construed in accordance with the internal laws of Commonwealth of Massachusetts, without regard to conflict of law principles that would result in the application of any law other than the law of the Commonwealth of Massachusetts.

(e) Headings. The headings are intended only for convenience in finding the subject matter and do not constitute part of the text of this Agreement and shall not be considered in the interpretation of this Agreement.

(f) Saving Clause. If any provision(s) of this Agreement shall be determined to be illegal or unenforceable, such determination shall in no manner affect the legality or enforceability of any other provision hereof.

(g) Notices. All notices, requests, consents and other communications shall be in writing and be deemed given when delivered personally, by telex or facsimile transmission or when received if mailed by first class registered or certified mail, postage prepaid. Notices to the Company or the Optionee shall be addressed as set forth underneath their signatures below, or to such other address or addresses as may have been furnished by such party in writing to the other.

(h) Benefit and Binding Effect. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto, their respective successors, assigns, and legal representatives. The Company has the right to assign this Agreement, and such assignee shall become entitled to all the rights of the Company hereunder to the extent of such assignment.

(i) Counterparts. For the convenience of the parties and to facilitate execution, this Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same document.

(j) Integration. This Agreement constitutes the entire agreement between the parties with respect to this Stock Option and supersedes all prior agreements and discussions between the parties concerning such subject matter.

7. Dispute Resolution.

(a) Except as provided below, any dispute arising out of or relating to the Plan or this Stock Option, this Agreement, or the breach, termination or validity of the Plan, this Stock Option or this Agreement, shall be finally settled by binding arbitration conducted expeditiously in accordance with the J.A.M.S./Endispute Comprehensive Arbitration Rules and Procedures (the "J.A.M.S. Rules"). The arbitration shall be governed by the United States Arbitration Act, 9 U.S.C. Sections 1 - 16, and judgment upon the award rendered by the arbitrators may be entered by any court having jurisdiction thereof. The place of arbitration shall be Boston, Massachusetts.

(b) The arbitration shall commence within 60 days of the date on which a written demand for arbitration is filed by any party hereto. In connection with the arbitration proceeding, the arbitrator shall have the power to order the production of documents by each party and any third-party witnesses. In addition, each party may take up to three depositions as of right, and the arbitrator may in his or her discretion allow additional depositions upon good cause shown by the moving party. However, the arbitrator shall not have the power to order the answering of interrogatories or the response to requests for admission. In connection with any arbitration, each party to the arbitration shall provide to the other, no later than seven business days before the date of the arbitration, the identity of all persons that may testify at the arbitration and a copy of all documents that may be introduced at the arbitration or considered or used by a party's witness or expert. The arbitrator's decision and award shall be made and delivered within six months of the selection of the arbitrator. The arbitrator's decision shall set forth a reasoned basis for any award of damages or finding of liability. The arbitrator shall not have power to award damages in excess of actual compensatory damages and shall not multiply actual damages or award punitive damages, and each party hereby irrevocably waives any claim to such damages.

(c) The Company, the Optionee, each party to the Agreement and any other holder of Shares issued pursuant to this Agreement (each, a "Party") covenants and agrees that such party will participate in the arbitration in good faith. This Section 7 applies equally to requests for temporary, preliminary or permanent injunctive relief, except that in the case of temporary or preliminary injunctive relief any party may proceed in court without prior arbitration for the limited purpose of avoiding immediate and irreparable harm.

(d) Each Party (i) hereby irrevocably submits to the jurisdiction of any United States District Court of competent jurisdiction for the purpose of enforcing the award or decision in any such proceeding, (ii) hereby waives, and agrees not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above named courts, that its property is exempt or immune from attachment or execution (except as protected by applicable law), that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court, and (iii) hereby waives and agrees not to seek any review by any court of any other jurisdiction which may be called upon to grant an enforcement of the judgment of any such court. Each Party hereby consents to service of process by registered mail at the address to which notices are to be given. Each Party agrees that its, his or her submission to jurisdiction and its, his

or her consent to service of process by mail is made for the express benefit of each other Party. Final judgment against any Party in any such action, suit or proceeding may be enforced in other jurisdictions by suit, action or proceeding on the judgment, or in any other manner provided by or pursuant to the laws of such other jurisdiction.

8. Waiver of Statutory Information Rights. The Optionee understands and agrees that, but for the waiver made herein, the Optionee would be entitled, upon written demand under oath stating the purpose thereof, to inspect for any proper purpose, and to make copies and extracts from, the Company's stock ledger, a list of its stockholders, and its other books and records, and the books and records of subsidiaries of the Company, if any, under the circumstances and in the manner provided in Section 220 of the General Corporation Law of Delaware (any and all such rights, and any and all such other rights of the Optionee as may be provided for in Section 220, the "Inspection Rights"). In light of the foregoing, until the first sale of Stock of the Company to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act, the Optionee hereby unconditionally and irrevocably waives the Inspection Rights, whether such Inspection Rights would be exercised or pursued directly or indirectly pursuant to Section 220 or otherwise, and covenants and agrees never to directly or indirectly commence, voluntarily aid in any way, prosecute, assign, transfer, or cause to be commenced any claim, action, cause of action, or other proceeding to pursue or exercise the Inspection Rights. The foregoing waiver shall not affect any rights of a director, in his or her capacity as such, under Section 220. The foregoing waiver shall not apply to any contractual inspection rights of the Optionee under any other written agreement between the Optionee and the Company.

[SIGNATURE PAGE FOLLOWS]

The foregoing Agreement is hereby accepted and the terms and conditions thereof hereby agreed to by the undersigned as of the date first above written.

Prime Medicine, Inc.

By: _____
Name:
Title:

Address:

_____

_____

_____

The undersigned hereby acknowledges receiving and reviewing a copy of the Plan, including, without limitation, Section 9 thereof, and understands that this Stock Option is subject to the terms of the Plan and of this Agreement. This Agreement is hereby accepted, and the terms and conditions of the Plan, the Grant Notice and this Agreement, SPECIFICALLY INCLUDING THE ARBITRATION PROVISIONS SET FORTH IN SECTION 7 AND THE WAIVER OF STATUTORY INFORMATION RIGHTS SET FORTH IN SECTION 8 OF THIS AGREEMENT, are hereby agreed to, by the undersigned as of the date first above written.

OPTIONEE:

_____
Name:

Address:

_____

_____

_____

[SPOUSE'S CONSENT[5]
I acknowledge that I have read the
foregoing Non-Qualified Stock Option Agreement
and understand the contents thereof.

_____]

[5] A spouse's consent is recommended only if the Optionee's state of residence is one of the following community property states: Arizona, California, Idaho, Louisiana, Nevada, New Mexico, Texas, Washington and Wisconsin.

DESIGNATED BENEFICIARY:

_____

Beneficiary's Address:

_____

_____

_____

Appendix A

STOCK OPTION EXERCISE NOTICE

Prime Medicine, Inc.
Attention: [_____]
_____
_____

Pursuant to the terms of the grant notice and stock option agreement between the undersigned and **Prime Medicine, Inc.** (the "Company") dated_____(the "Agreement") under the **Prime Medicine, Inc.** 2019 Stock Option and Grant Plan, I, [Insert Name] _____, hereby [Circle One] partially/fully exercise such option by including herein payment in the amount of $_____representing the purchase price for [Fill in number of Shares] _____ Shares. I have chosen the following form(s) of payment:

[ ]	1.	Cash
[ ]	2.	Certified or bank check payable to **Prime Medicine, Inc.**
[ ]	3.	Other (as referenced in the Agreement and described in the Plan (please describe)) _____.

In connection with my exercise of the option as set forth above, I hereby represent and warrant to the Company as follows:

(i) I am purchasing the Shares for my own account for investment only, and not for resale or with a view to the distribution thereof.

(ii) I have had such an opportunity as I have deemed adequate to obtain from the Company such information as is necessary to permit me to evaluate the merits and risks of my investment in the Company and have consulted with my own advisers with respect to my investment in the Company.

(iii) I have sufficient experience in business, financial and investment matters to be able to evaluate the risks involved in the purchase of the Shares and to make an informed investment decision with respect to such purchase.

(iv) I can afford a complete loss of the value of the Shares and am able to bear the economic risk of holding such Shares for an indefinite period of time.

(v) I understand that the Shares may not be registered under the Securities Act of 1933 (it being understood that the Shares are being issued and sold in reliance on the exemption provided in Rule 701 thereunder) or any applicable state securities or "blue sky" laws and may not be sold or otherwise transferred or disposed of in the absence of an effective registration statement under the Securities Act of 1933 and under any applicable state securities or "blue sky" laws (or exemptions from the registration requirement thereof). I further acknowledge that certificates representing

Shares will bear restrictive legends reflecting the foregoing and/or that book entries for uncertificated Shares will include similar restrictive notations.

(vi) To the extent required, I have executed and delivered to the Company the Restricted Stock Agreement attached as Appendix B to the Agreement.

(vii) I have read and understand the Plan and acknowledge and agree that the Shares are subject to all of the relevant terms of the Plan, including without limitation, the transfer restrictions set forth in Section 9 of the Plan.

(viii) I understand and agree that the Company has a right of first refusal with respect to the Shares pursuant to Section 9(b) of the Plan.

(ix) I understand and agree that the Company has certain repurchase rights with respect to the Shares pursuant to Section 9(c) of the Plan.

(x) I understand and agree that I may not sell or otherwise transfer or dispose of the Shares for a period of time following the effective date of a public offering by the Company as described in Section 9(f) of the Plan.

(xi) I understand and agree to the waiver of statutory information rights as set forth in Section 8 of the Agreement.

Sincerely yours,

_____

Name:

Address:

_____

_____

_____

Date: _____

Appendix B

RESTRICTED STOCK AGREEMENT FOR EARLY EXERCISE OPTION UNDER THE PRIME MEDICINE, INC. 2019 STOCK OPTION AND GRANT PLAN

All capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Early Exercise Non-Qualified Stock Option Grant Notice (the "Grant Notice") and Early Exercise Non-Qualified Stock Option Agreement (the "Option Agreement") between **Prime Medicine, Inc.** (the "Company") and_____ (the "Grantee") for _____ Shares of Common Stock with a Grant Date of_____,_____under the **Prime Medicine, Inc.** 2019 Stock Option and Grant Plan (the "Plan").

1. Purchase and Sale of Shares; Vesting.

(a) Purchase and Sale. The Company hereby sells to the Grantee, and the Grantee hereby purchases from the Company, on_____, 2019, the number of Shares set forth in the Stock Option Exercise Notice (_____Shares) dated_____, pursuant to the Grant Notice and Option Agreement, for the aggregate Option Exercise Price for the Shares so purchased.

(b) Vesting. The risk of forfeiture shall lapse with respect to the Shares, and such Shares shall become vested, on the respective dates indicated on the Vesting Schedule set forth in the Grant Notice.

2. Repurchase Right. Upon a Termination Event, the Company shall have the right to repurchase Shares of Restricted Stock that are unvested as of the date of such Termination Event as set forth in Section 9(c) of the Plan.

3. Restrictions on Transfer of Shares. The Shares (whether or not vested) shall be subject to certain transfer restrictions and other limitations including, without limitation, the provisions contained in Section 9 of the Plan

4. Incorporation of Plan. Notwithstanding anything herein to the contrary, this Restricted Stock Agreement shall be subject to and governed by all the terms and conditions of the Plan.

5. Miscellaneous Provisions.

(a) Record Owner; Dividends. The Grantee and any Permitted Transferees, during the duration of this Agreement, shall be considered the record owners of and shall be entitled to vote the Shares if and to the extent the Shares are entitled to voting rights. The Grantee and any Permitted Transferees shall be entitled to receive all dividends and any other distributions declared on the Shares; provided, however, that the Company is under no duty to declare any such dividends or to make any such distribution.

(b) Section 83(b) Election. The Grantee shall consult with the Grantee's tax advisor to determine whether it would be appropriate for the Grantee to make an election under

Section 83(b) of the Code with respect to the Shares. Any such election must be filed with the Internal Revenue Service within 30 days of the date of exercise. If the Grantee makes an election under Section 83(b) of the Code, the Grantee shall give prompt notice to the Company (and provide a copy of such election to the Company). A sample Section 83(b) election is attached to this Agreement as Exhibit A.

(c) Equitable Relief. The parties hereto agree and declare that legal remedies may be inadequate to enforce the provisions of this Agreement and that equitable relief, including specific performance and injunctive relief, may be used to enforce the provisions of this Agreement.

(d) Change and Modifications. This Agreement may not be orally changed, modified or terminated, nor shall any oral waiver of any of its terms be effective. This Agreement may be changed, modified or terminated only by an agreement in writing signed by the Company and the Grantee.

(e) Governing Law. This Agreement shall be governed by and construed in accordance with the General Corporation Law of the State of Delaware as to matters within the scope thereof, and as to all other matters shall be governed by and construed in accordance with the internal laws of the Commonwealth of Massachusetts, without regard to conflict of law principles that would result in the application of any law other than the law of the Commonwealth of Massachusetts.

(f) Headings. The headings are intended only for convenience in finding the subject matter and do not constitute part of the text of this Agreement and shall not be considered in the interpretation of this Agreement.

(g) Saving Clause. If any provision(s) of this Agreement shall be determined to be illegal or unenforceable, such determination shall in no manner affect the legality or enforceability of any other provision hereof.

(h) Notices. All notices, requests, consents and other communications shall be in writing and be deemed given when delivered personally, by telex or facsimile transmission or when received if mailed by first class registered or certified mail, postage prepaid. Notices to the Company or the Grantee shall be addressed as set forth underneath their signatures below, or to such other address or addresses as may have been furnished by such party in writing to the other.

(i) Benefit and Binding Effect. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto, their respective successors, assigns, and legal representatives. The Company has the right to assign this Agreement, and such assignee shall become entitled to all the rights of the Company hereunder to the extent of such assignment.

(j) Counterparts. For the convenience of the parties and to facilitate execution, this Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same document.

6. Dispute Resolution.

(a) Except as provided below, any dispute arising out of or relating to the Plan or the Shares, this Agreement, or the breach, termination or validity of the Plan, the Shares or this Agreement, shall be finally settled by binding arbitration conducted expeditiously in accordance with the J.A.M.S./Endispute Comprehensive Arbitration Rules and Procedures (the "J.A.M.S. Rules"). The arbitration shall be governed by the United States Arbitration Act, 9 U.S.C. Sections 1 - 16, and judgment upon the award rendered by the arbitrators may be entered by any court having jurisdiction thereof. The place of arbitration shall be Boston, Massachusetts.

(b) The arbitration shall commence within 60 days of the date on which a written demand for arbitration is filed by any party hereto. In connection with the arbitration proceeding, the arbitrator shall have the power to order the production of documents by each party and any third-party witnesses. In addition, each party may take up to three depositions as of right, and the arbitrator may in his or her discretion allow additional depositions upon good cause shown by the moving party. However, the arbitrator shall not have the power to order the answering of interrogatories or the response to requests for admission. In connection with any arbitration, each party to the arbitration shall provide to the other, no later than seven business days before the date of the arbitration, the identity of all persons that may testify at the arbitration and a copy of all documents that may be introduced at the arbitration or considered or used by a party's witness or expert. The arbitrator's decision and award shall be made and delivered within six months of the selection of the arbitrator. The arbitrator's decision shall set forth a reasoned basis for any award of damages or finding of liability. The arbitrator shall not have power to award damages in excess of actual compensatory damages and shall not multiply actual damages or award punitive damages, and each party hereby irrevocably waives any claim to such damages.

(c) The Company, the Grantee, each party to the Agreement and any other holder of Shares issued pursuant to this Agreement (each, a "Party") covenants and agrees that such party will participate in the arbitration in good faith. This Section 6 applies equally to requests for temporary, preliminary or permanent injunctive relief, except that in the case of temporary or preliminary injunctive relief any party may proceed in court without prior arbitration for the limited purpose of avoiding immediate and irreparable harm.

(d) Each Party (i) hereby irrevocably submits to the jurisdiction of any United States District Court of competent jurisdiction for the purpose of enforcing the award or decision in any such proceeding, (ii) hereby waives, and agrees not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above named courts, that its property is exempt or immune from attachment or execution (except as protected by applicable law), that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court, and (iii) hereby waives and agrees not to seek any review by any court of any other jurisdiction which may be called upon to grant an enforcement of the judgment of any such court. Each Party hereby consents to service of process by registered mail at the address to which notices are to be given. Each Party agrees that its, his or her submission to jurisdiction and its, his

or her consent to service of process by mail is made for the express benefit of each other Party. Final judgment against any Party in any such action, suit or proceeding may be enforced in other jurisdictions by suit, action or proceeding on the judgment, or in any other manner provided by or pursuant to the laws of such other jurisdiction.

7. Waiver of Statutory Information Rights. The Grantee understands and agrees that, but for the waiver made herein, the Grantee would be entitled, upon written demand under oath stating the purpose thereof, to inspect for any proper purpose, and to make copies and extracts from, the Company's stock ledger, a list of its stockholders, and its other books and records, and the books and records of subsidiaries of the Company, if any, under the circumstances and in the manner provided in Section 220 of the General Corporation Law of Delaware (any and all such rights, and any and all such other rights of the Grantee as may be provided for in Section 220, the "Inspection Rights"). In light of the foregoing, until the first sale of Stock of the Company to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act, the Grantee hereby unconditionally and irrevocably waives the Inspection Rights, whether such Inspection Rights would be exercised or pursued directly or indirectly pursuant to Section 220 or otherwise, and covenants and agrees never to directly or indirectly commence, voluntarily aid in any way, prosecute, assign, transfer, or cause to be commenced any claim, action, cause of action, or other proceeding to pursue or exercise the Inspection Rights. The foregoing waiver shall not affect any rights of a director, in his or her capacity as such, under Section 220. The foregoing waiver shall not apply to any contractual inspection rights of the Grantee under any other written agreement between the Grantee and the Company.

[SIGNATURE PAGE FOLLOWS]

The foregoing Restricted Stock Agreement is hereby accepted and the terms and conditions thereof are hereby agreed to by the undersigned as of the date written in Section 1(a) above.

Prime Medicine, Inc.

By: _____
Name:
Title:

Address:

_____

_____

_____

The undersigned hereby acknowledges receiving and reviewing a copy of the Plan, including, without limitation, Section 9 thereof and understands that the Shares purchased hereby are subject to the terms of the Plan, the Grant Notice, and this Agreement. This Agreement is hereby accepted, and the terms and conditions of the Plan, the Grant Notice and this Agreement, SPECIFICALLY INCLUDING THE ARBITRATION PROVISIONS SET FORTH IN SECTION 6 AND THE WAIVER OF STATUTORY INFORMATION RIGHTS SET FORTH IN SECTION 7 OF THIS AGREEMENT, are hereby agreed to, by the undersigned as of the date first above written.

GRANTEE:

_____
Name:

Address:

_____

_____

_____

[SPOUSE'S CONSENT[6]
I acknowledge that I have read the
foregoing Restricted Stock Agreement
and understand the contents thereof.

_____]

[6] A spouse's consent is required only if the Grantee's state of residence is one of the following community property states: Arizona, California, Idaho, Louisiana, New Mexico, Nevada, Texas, Washington and Wisconsin.

EXHIBIT A
Section 83(b) Election

The undersigned hereby elects pursuant to §83(b) of the Internal Revenue Code of 1986, as amended, to include in gross income as compensation for services the excess (if any) of the fair market value of the shares described below over the amount paid for those shares.

1. The name, taxpayer identification number, address of the undersigned, and the taxable year for which this election is being made are:

   Name: _____

   Address: _____

   Social Security No.: _____

   Taxable Year: Calendar Year 20__

2. The property which is the subject of this election is [number of unvested shares] shares of common stock of Prime Medicine, Inc..

3. The property was transferred to the undersigned on [date of purchase/transfer].

4. The property is subject to the following restrictions:

   The Shares will be subject to restrictions on transfer and risk of forfeiture upon termination of service relationship and in certain other events.

5. The fair market value of the property at time of transfer (determined without regard to any restrictions other than nonlapse restrictions as defined in §1.83-3(h) of the Income Tax Regulations) is $[current FMV] per share x [number of unvested shares] shares = $_____.

6. For the property transferred, the undersigned paid $[exercise price] per share x [number of unvested shares] shares = $_____.

7. The amount to include in gross income is $[amount reported in Item 5 minus the amount reported in Item 6].

The undersigned taxpayer will file this election with the Internal Revenue Service Office with which the taxpayer files his or her annual income tax return not later than 30 days after the date of transfer of the property, at the IRS address listed for the taxpayer's state under "Are you not including a check or money order . . ." given in *Where Do You File* in the Instructions for Form 1040 and the Instructions for Form 1040A (which information can also be found at: https://www.irs.gov/uac/where-to-file-addresses-for- taxpayers-and-tax-professionals). A copy of the election will also be furnished to the person for whom the services were performed. The undersigned is the person performing services in connection with which the property was transferred.

Dated: _____, 20_

_____
Taxpayer

RESTRICTED STOCK AWARD NOTICE
UNDER THE PRIME MEDICINE, INC.
2019 STOCK OPTION AND GRANT PLAN

Pursuant to the Prime Medicine, Inc. 2019 Stock Option and Grant Plan (the "Plan"), Prime Medicine, Inc., a Delaware corporation (together with any successor, the "Company"), hereby grants, sells and issues to the individual named below, the Shares at the Per Share Purchase Price, subject to the terms and conditions set forth in this Restricted Stock Award Notice (the "Award Notice"), the attached Restricted Stock Agreement (the "Agreement") and the Plan. The Grantee agrees to the provisions set forth herein and acknowledges that each such provision is a material condition of the Company's agreement to issue and sell the Shares to him or her. The Company hereby acknowledges receipt of $[_____] in full payment for the Shares. All references to share prices and amounts herein shall be equitably adjusted to reflect stock splits, stock dividends, recapitalizations, mergers, reorganizations and similar changes affecting the capital stock of the Company, and any shares of capital stock of the Company received on or in respect of Shares in connection with any such event (including any shares of capital stock or any right, option or warrant to receive the same or any security convertible into or exchangeable for any such shares or received upon conversion of any such shares) shall be subject to this Agreement on the same basis and extent at the relevant time as the Shares in respect of which they were issued, and shall be deemed Shares as if and to the same extent they were issued at the date hereof.

Name of Grantee:	_____ (the "Grantee")
No. of Shares:	_____ Shares of Common Stock (the "Shares")
Grant Date:	_____ ____,_____
Date of Purchase of Shares:	_____ ____,_____
Vesting Commencement Date:	_____,_____ (the "Vesting Commencement Date")
Per Share Purchase Price:	(the "Per Share Purchase Price")
Vesting Schedule:	25 percent of the Shares shall vest on the first anniversary of the Vesting Commencement Date; provided that the Grantee continues to have a Service Relationship with the Company at such time. Thereafter, the remaining 75 percent of the Shares shall vest in 36 equal monthly installments following the first anniversary of the Vesting Commencement Date, provided the Grantee continues to have a Service Relationship with the Company at such time. Notwithstanding anything in the Agreement to the contrary in the case of a Sale Event, the Shares of Restricted Stock shall be treated as provided in Section 3(c) of the Plan.

Attachments: Restricted Stock Agreement, 2019 Stock Option and Grant Plan

RESTRICTED STOCK AGREEMENT
UNDER THE PRIME MEDICINE, INC.
2019 STOCK OPTION AND GRANT PLAN

All capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Award Notice and the Plan.

1. Purchase and Sale of Shares; Vesting; Investment Representations.

(a) Purchase and Sale. The Company hereby sells to the Grantee, and the Grantee hereby purchases from the Company, the number of Shares set forth in the Award Notice for the Per Share Purchase Price.

(b) Vesting. Initially, all of the Shares are non-transferable and subject to a substantial risk of forfeiture and are Shares of Restricted Stock. The risk of forfeiture shall lapse with respect to the Shares on the respective dates indicated on the Vesting Schedule set forth in the Award Notice.

(c) Investment Representations. In connection with the purchase and sale of the Shares contemplated by Section 1(a) above, the Grantee hereby represents and warrants to the Company as follows:

(i) The Grantee is purchasing the Shares for the Grantee's own account for investment only, and not for resale or with a view to the distribution thereof.

(ii) The Grantee has had such an opportunity as he or she has deemed adequate to obtain from the Company such information as is necessary to permit him or her to evaluate the merits and risks of the Grantee's investment in the Company and has consulted with the Grantee's own advisers with respect to the Grantee's investment in the Company.

(iii) The Grantee has sufficient experience in business, financial and investment matters to be able to evaluate the risks involved in the purchase of the Shares and to make an informed investment decision with respect to such purchase.

(iv) The Grantee can afford a complete loss of the value of the Shares and is able to bear the economic risk of holding such Shares for an indefinite period.

(v) The Grantee understands that the Shares are not registered under the Act (it being understood that the Shares are being issued and sold in reliance on the exemption provided in Rule 701 thereunder) or any applicable state securities or "blue sky" laws and may not be sold or otherwise transferred or disposed of in the absence of an effective registration statement under the Act and under any applicable state securities or "blue sky" laws (or exemptions from the registration requirements thereof). The Grantee further acknowledges that certificates representing the Shares will bear restrictive legends reflecting the foregoing and/or that book entries for uncertificated Shares will include similar restrictive notations.

(vi) The Grantee has read and understands the Plan and acknowledges and agrees that the Shares are subject to all of the relevant terms of the Plan, including without limitation, the transfer restrictions set forth in Section 9 of the Plan.

(vii) The Grantee understands and agrees that the Company has a right of first refusal with respect to the Shares pursuant to Section 9(b) of the Plan.

(viii) The Grantee understands and agree that the Company has certain repurchase rights with respect to the Shares pursuant to Section 9(c) of the Plan.

(ix) The Grantee understands and agrees that the Grantee may not sell or otherwise transfer or dispose of the Shares for a period of time following the effective date of a public offering by the Company as described in Section 9(f) of the Plan.

2. Repurchase Right. Upon a Termination Event, the Company shall have the right to repurchase Shares of Restricted Stock that are unvested as of the date of such Termination Event as set forth in Section 9(c) of the Plan.

3. Restrictions on Transfer of Shares. The Shares (whether or not vested) shall be subject to certain transfer restrictions and other limitations including, without limitation, the provisions contained in Section 9 of the Plan

4. Incorporation of Plan. Notwithstanding anything herein to the contrary, this Restricted Stock Award shall be subject to and governed by all the terms and conditions of the Plan.

5. Miscellaneous Provisions.

(a) Record Owner; Dividends. The Grantee and any Permitted Transferees, during the duration of this Agreement, shall be considered the record owners of and shall be entitled to vote the Shares if and to the extent the Shares are entitled to voting rights. The Grantee and any Permitted Transferees shall be entitled to receive all dividends and any other distributions declared on the Shares; provided, however, that the Company is under no duty to declare any such dividends or to make any such distribution.

(b) Section 83(b) Election. The Grantee shall consult with the Grantee's tax advisor to determine whether it would be appropriate for the Grantee to make an election under Section 83(b) of the Code with respect to this Award. Any such election must be filed with the Internal Revenue Service within 30 days of the date of this Award. If the Grantee makes an election under Section 83(b) of the Code, the Grantee shall give prompt notice to the Company (and provide a copy of such election to the Company). A sample Section 83(b) election is attached to this Agreement as Exhibit A.

(c) Equitable Relief. The parties hereto agree and declare that legal remedies may be inadequate to enforce the provisions of this Agreement and that equitable relief, including specific performance and injunctive relief, may be used to enforce the provisions of this Agreement.

(d) Change and Modifications. This Agreement may not be orally changed, modified or terminated, nor shall any oral waiver of any of its terms be effective. This Agreement may be changed, modified or terminated only by an agreement in writing signed by the Company and the Grantee.

(e) Governing Law. This Agreement shall be governed by and construed in accordance with the General Corporation Law of the State of Delaware as to matters within the scope thereof, and as to all other matters shall be governed by and construed in accordance with the internal laws of the Commonwealth of Massachusetts, without regard to conflict of law principles that would result in the application of any law other than the law of the Commonwealth of Massachusetts.

(f) Headings. The headings are intended only for convenience in finding the subject matter and do not constitute part of the text of this Agreement and shall not be considered in the interpretation of this Agreement.

(g) Saving Clause. If any provision(s) of this Agreement shall be determined to be illegal or unenforceable, such determination shall in no manner affect the legality or enforceability of any other provision hereof.

(h) Notices. All notices, requests, consents and other communications shall be in writing and be deemed given when delivered personally, by telex or facsimile transmission or when received if mailed by first class registered or certified mail, postage prepaid. Notices to the Company or the Grantee shall be addressed as set forth underneath their signatures below, or to such other address or addresses as may have been furnished by such party in writing to the other.

(i) Benefit and Binding Effect. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto, their respective successors, assigns, and legal representatives. The Company has the right to assign this Agreement, and such assignee shall become entitled to all the rights of the Company hereunder to the extent of such assignment.

(j) Counterparts. For the convenience of the parties and to facilitate execution, this Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same document.

(k) Integration. This Agreement constitutes the entire agreement between the parties with respect to this Award and supersedes all prior agreements and discussions between the parties concerning such subject matter.

6. Dispute Resolution.

(a) Except as provided below, any dispute arising out of or relating to the Plan or the Shares, this Agreement, or the breach, termination or validity of the Plan, the Shares or this Agreement, shall be finally settled by binding arbitration conducted expeditiously in accordance with the J.A.M.S./Endispute Comprehensive Arbitration Rules and Procedures (the "J.A.M.S. Rules"). The arbitration shall be governed by the United States Arbitration Act, 9 U.S.C. Sections 1 - 16, and judgment upon the award rendered by the arbitrators may be entered by any court having jurisdiction thereof. The place of arbitration shall be Boston, Massachusetts.

(b) The arbitration shall commence within 60 days of the date on which a written demand for arbitration is filed by any party hereto. In connection with the arbitration proceeding, the arbitrator shall have the power to order the production of documents by each party and any third-party witnesses. In addition, each party may take up to three depositions as of right, and the arbitrator may in his or her discretion allow additional depositions upon good cause shown by the moving party. However, the arbitrator shall not have the power to order the answering of interrogatories or the response to requests for admission. In connection with any arbitration, each party to the arbitration shall provide to the other, no later than seven business days before the date of the arbitration, the identity of all persons that may testify at the arbitration and a copy of all documents that may be introduced at the arbitration or considered or used by a party's witness or expert. The arbitrator's decision and award shall be made and delivered within six months of the selection of the arbitrator. The arbitrator's decision shall set forth a reasoned basis for any award of damages or finding of liability. The arbitrator shall not have power to award damages in excess of actual compensatory damages and shall not multiply actual damages or award punitive damages, and each party hereby irrevocably waives any claim to such damages.

(c) The Company, the Grantee, each party to the Agreement and any other holder of Shares issued pursuant to this Agreement (each, a "Party") covenants and agrees that such party will participate in the arbitration in good faith. This Section 6 applies equally to requests for temporary, preliminary or permanent injunctive relief, except that in the case of temporary or preliminary injunctive relief any party may proceed in court without prior arbitration for the limited purpose of avoiding immediate and irreparable harm.

(d) Each Party (i) hereby irrevocably submits to the jurisdiction of any United States District Court of competent jurisdiction for the purpose of enforcing the award or decision in any such proceeding, (ii) hereby waives, and agrees not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above named courts, that its property is exempt or immune from attachment or execution (except as protected by applicable law), that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court, and (iii) hereby waives and agrees not to seek any review by any court of any other jurisdiction which may be called upon to grant an enforcement of the judgment of any such court. Each Party hereby consents to service of process by registered mail at the address to which notices are to be given. Each Party agrees that its, his or her submission to jurisdiction and its, his or her consent to service of process by mail is made for the express benefit of each other Party. Final judgment against any Party in any such action, suit or proceeding may be enforced in other jurisdictions by suit, action or proceeding on the judgment, or in any other manner provided by or pursuant to the laws of such other jurisdiction.

7. Waiver of Statutory Information Rights. The Grantee understands and agrees that, but for the waiver made herein, the Grantee would be entitled, upon written demand under oath stating the purpose thereof, to inspect for any proper purpose, and to make copies and extracts from, the Company's stock ledger, a list of its stockholders, and its other books and records, and the books and records of subsidiaries of the Company, if any, under the circumstances and in the

manner provided in Section 220 of the General Corporation Law of Delaware (any and all such rights, and any and all such other rights of the Grantee as may be provided for in Section 220, the "Inspection Rights"). In light of the foregoing, until the first sale of Stock of the Company to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act, the Grantee hereby unconditionally and irrevocably waives the Inspection Rights, whether such Inspection Rights would be exercised or pursued directly or indirectly pursuant to Section 220 or otherwise, and covenants and agrees never to directly or indirectly commence, voluntarily aid in any way, prosecute, assign, transfer, or cause to be commenced any claim, action, cause of action, or other proceeding to pursue or exercise the Inspection Rights. The foregoing waiver shall not affect any rights of a director, in his or her capacity as such, under Section 220. The foregoing waiver shall not apply to any contractual inspection rights of the Grantee under any other written agreement between the Grantee and the Company.

[SIGNATURE PAGE FOLLOWS]

The foregoing Restricted Stock Agreement is hereby accepted and the terms and conditions thereof are hereby agreed to by the undersigned as of the date of purchase of Shares above written.

PRIME MEDICINE, INC.

By: _____
Name:
Title:

Address:

_____

_____

_____

The undersigned hereby acknowledges receiving and reviewing a copy of the Plan, including, without limitation, Section 9 thereof and understands that the Shares granted hereby are subject to the terms of the Plan and of this Agreement. This Agreement is hereby accepted, and the terms and conditions of the Plan, the Award Notice and this Agreement, SPECIFICALLY INCLUDING THE ARBITRATION PROVISIONS SET FORTH IN SECTION 6 AND THE WAIVER OF STATUTORY INFORMATION RIGHTS SET FORTH IN SECTION 7 OF THIS AGREEMENT, are hereby agreed to, by the undersigned as of the date first above written.

GRANTEE:

_____
Name:

Address:

_____

_____

_____

[SPOUSE'S CONSENT[7]
I acknowledge that I have read the
foregoing Restricted Stock Agreement
and understand the contents thereof.

_____]

[7] A spouse's consent is required only if the Grantee's state of residence is one of the following community property states: Arizona, California, Idaho, Louisiana, New Mexico, Nevada, Texas, Washington and Wisconsin.

EXHIBIT A
Section 83(b) Election

The undersigned hereby elects pursuant to §83(b) of the Internal Revenue Code of 1986, as amended, to include in gross income as compensation for services the excess (if any) of the fair market value of the shares described below over the amount paid for those shares.

1. The name, taxpayer identification number, address of the undersigned, and the taxable year for which this election is being made are:

   Name: _____

   Address: _____

   _____

   Social Security No.: _____

   Taxable Year: Calendar Year 20__

2. The property which is the subject of this election is [number of unvested shares] shares of common stock of Prime Medicine, Inc.

3. The property was transferred to the undersigned on [date of purchase/transfer].

4. The property is subject to the following restrictions:

   The Shares will be subject to restrictions on transfer and risk of forfeiture upon termination of service relationship and in certain other events.

5. The fair market value of the property at time of transfer (determined without regard to any restrictions other than nonlapse restrictions as defined in §1.83-3(h) of the Income Tax Regulations) is $[current FMV] per share x [number of unvested shares] shares = $_____.

6. For the property transferred, the undersigned paid $[exercise price] per share x [number of unvested shares] shares = $_____.

7. The amount to include in gross income is $[amount reported in Item 5 minus the amount reported in Item 6].

The undersigned taxpayer will file this election with the Internal Revenue Service Office with which the taxpayer files his or her annual income tax return not later than 30 days after the date of transfer of the property, at the IRS address listed for the taxpayer's state under "Are you not including a check or money order . . ." given in *Where Do You File* in the Instructions for Form 1040 and the Instructions for Form 1040A (which information can also be found at: https://www.irs.gov/uac/where-to-file-addresses-for- taxpayers-and-tax-professionals). A copy of the election will also be furnished to the person for whom the services were performed. The undersigned is the person performing services in connection with which the property was transferred.

Dated: _____, 20_

_____
Taxpayer

PRIME MEDICINE, INC.
SENIOR EXECUTIVE CASH INCENTIVE BONUS PLAN

1. Purpose

This Senior Executive Cash Incentive Bonus Plan (the "Incentive Plan") is intended to provide an incentive for superior work and to motivate eligible executives of Prime Medicine, Inc. (the "Company") and its subsidiaries toward even higher achievement and business results, to tie their goals and interests to those of the Company and its stockholders and to enable the Company to attract and retain highly qualified executives. The Incentive Plan is for the benefit of Covered Executives (as defined below).

2. Covered Executives

From time to time, the Compensation Committee of the Board of Directors of the Company (the "Compensation Committee") may select certain key executives (the "Covered Executives") to be eligible to receive bonuses hereunder. Participation in the Incentive Plan does not change the "at will" nature of a Covered Executive's employment with the Company. Unless otherwise determined by the Compensation Committee, the Covered Executives shall consist of the members of the Company's Executive Leadership Team and any other executive officers who are subject to the reporting and other provisions of Section 16 of the Securities Exchange Act of 1934, as amended.

3. Administration

The Compensation Committee shall have the sole discretion and authority to administer and interpret the Incentive Plan.

4. Bonus Determinations

(a) Corporate Performance Goals. A Covered Executive may receive a bonus payment under the Incentive Plan based upon the attainment of one or more performance objectives that are established by the Compensation Committee and relate to financial and operational metrics with respect to the Company or any of its subsidiaries (the "Corporate Performance Goals"), including the following: developmental, publication, preclinical, delivery and/or manufacturing, business development and/or partnering, translational, clinical or regulatory milestones; cash flow (including, but not limited to, operating cash flow and free cash flow); revenue; corporate revenue; earnings before interest, taxes, depreciation and amortization; net income (loss) (either before or after interest, taxes, depreciation and/or amortization); changes in the market price of the Company's common stock; economic value-added; acquisitions, licenses or strategic transactions; financing or other capital raising transactions; operating income (loss); return on capital, assets, equity, or investment; stockholder returns; return on sales; total shareholder return; gross or net profit levels; productivity; expense efficiency; margins; operating efficiency; customer satisfaction; working capital; earnings (loss) per share of the Company's common stock; bookings, new bookings or renewals; sales or market

shares; number of prescriptions or prescribing physicians; coverage decisions; leadership development, employee retention, and recruiting and other human resources matters; operating income and/or net annual recurring revenue, any of which may be (A) measured in absolute terms or compared to any incremental increase, (B) measured in terms of growth, (C) compared to another company or companies or to results of a peer group, (D) measured against the market as a whole and/or as compared to applicable market indices and/or (E) measured on a pre-tax or post-tax basis (if applicable). Further, any Corporate Performance Goals may be used to measure the performance of the Company as a whole or a business unit or other segment of the Company, or one or more product lines or specific markets. The Corporate Performance Goals may differ from Covered Executive to Covered Executive.

(b) Calculation of Corporate Performance Goals. At or around the beginning of each applicable performance period, the Compensation Committee will determine whether any significant element(s) will be included in or excluded from the calculation of any Corporate Performance Goal with respect to any Covered Executive. In all other respects, Corporate Performance Goals will be calculated in accordance with the Company's financial statements, generally accepted accounting principles, or under a methodology established by the Compensation Committee at or around the beginning of the performance period and which is consistently applied with respect to a Corporate Performance Goal in the relevant performance period.

(c) Target; Minimum; Maximum. Generally, each Corporate Performance Goal shall have a "target" (i.e., 100 percent attainment of the Corporate Performance Goal) and may also have a "minimum" hurdle and/or a "maximum" amount.

(d) Bonus Requirements; Individual Goals. Except as otherwise set forth in this Section 4(d): (i) any bonuses paid to Covered Executives under the Incentive Plan shall be based upon objectively determinable bonus criteria that tie such bonuses to one or more performance targets relating to the Corporate Performance Goals, (ii) bonus criteria for Covered Executives shall be adopted in each performance period by the Compensation Committee and communicated to each Covered Executive at the beginning of each performance period and (iii) no bonuses shall be paid to Covered Executives unless and until the Compensation Committee makes a determination with respect to the attainment of the performance targets relating to the Corporate Performance Goals. Notwithstanding the foregoing, the Compensation Committee may adjust bonuses payable under the Incentive Plan based on achievement of one or more individual performance objectives or pay bonuses (including, without limitation, discretionary bonuses) to Covered Executives under the Incentive Plan based on individual performance goals and/or upon such other terms and conditions as the Compensation Committee may in its discretion determine.

(e) Individual Target Bonuses. The Compensation Committee shall establish a target bonus opportunity for each Covered Executive for each performance period. For each Covered Executive, the Compensation Committee shall have the authority to apportion the target award so that a portion of the target award shall be tied to attainment of Corporate Performance Goals and a portion of the target award shall be tied to attainment of individual performance objectives.

(f) Employment Requirement. Subject to any additional terms contained in a written agreement between the Covered Executive and the Company, the payment of a bonus to a Covered Executive with respect to a performance period shall be conditioned upon the Covered Executive's employment by the Company on the bonus payment date. If a Covered Executive was not employed for an entire performance period, the Compensation Committee may pro rate the bonus based on the number of days employed during such period.

5. Timing of Payment

(a) Corporate Performance Goals will be measured at the end of each applicable performance period or at another time as determined by the Compensation Committee. If the Corporate Performance Goals and/or individual goals for such period are met, payments will be made as soon as practicable following achievement of such goals or the end of such period, as applicable, but not later than two and one-half months after the end of the fiscal year in which such goals are met.

(b) For the avoidance of doubt, bonuses earned at any time in a fiscal year must be paid no later than two and one-half months after the last day of such fiscal year.

6. Amendment and Termination

The Company reserves the right to amend or terminate the Incentive Plan at any time in its sole discretion.

Date Approved: February 9, 2022, effective upon the effectiveness of the S-1 registration statement.

PRIME MEDICINE, INC.
NON-EMPLOYEE DIRECTOR COMPENSATION POLICY

The purpose of this Non-Employee Director Compensation Policy (the "Policy") of Prime Medicine, Inc., a Delaware corporation (the "Company"), is to provide a total compensation package that enables the Company to attract and retain, on a long-term basis, high-caliber directors who are not employees or officers of the Company or its subsidiaries ("Outside Directors"). This Policy will become effective as of the effective time of the registration statement for the Company's initial public offering of equity securities (the "Effective Date"). In furtherance of the purpose stated above, all Outside Directors shall be paid compensation for services provided to the Company as set forth below:

I. Cash Retainers

(a) Annual Retainer for Board Membership: $40,000 for general availability and participation in meetings and conference calls of our Board of Directors, to be paid quarterly in arrears, pro-rated based on the number of actual days served by the director during such calendar quarter. No additional compensation for attending individual Board meetings.

(b) Additional Annual Retainers for Committee Membership:

Audit Committee Chairperson:	$15,(
Audit Committee member:	$7,5
Compensation Committee Chairperson:	$12,(
Compensation Committee member:	$6,(
Nominating and Corporate Governance Committee Chairperson:	$10,(
Nominating and Corporate Governance Committee member:	$5,(

II. Equity Retainers

All grants of equity retainer awards to Outside Directors pursuant to this Policy will be automatic and nondiscretionary and will be made in accordance with the following provisions:

(a) Value. For purposes of this Policy, "Value" means with respect to (i) any award of stock options the grant date fair value of the option (i.e., Black-Scholes Value) determined in accordance with the reasonable assumptions and methodologies employed by the Company for calculating the fair value of options under ASC 718; and (ii) any award of restricted stock and restricted stock units the product of (A) the closing market price on the NASDAQ (or such other market on which the Company's Common Stock is then principally listed) of one share of the Company's Common Stock on the effective date of grant, or if no closing price is reported for such date, the closing price on the immediately preceding date for which a closing price is reported and (B) the aggregate number of shares pursuant to such award.

(b) Revisions. The Board of Directors, in its discretion, may change and otherwise revise the terms of awards to be granted under this Policy, including, without limitation, the number of shares subject thereto, for awards of the same or different type granted on or after the date the Board of Directors determines to make any such change or revision.

(c) Sale Event Acceleration. In the event of a Sale Event (as defined in the Company's 2022 Stock Option and Incentive Plan (as amended from time to time, the "2022 Plan")), the equity retainer awards granted to Outside Directors pursuant to this Policy shall become 100% vested and exercisable.

(d) Initial Grant. Upon initial election to the Board of Directors, each new Outside Director will receive an initial, one-time grant of a non-statutory stock option (the "Initial Grant") with a Value of $800,000, an exercise price per share equal to the closing price of a share of the Company's Common Stock on the date of grant and a term of ten years, that vests in three equal annual installments over three years; provided, however, that all vesting ceases if the director resigns from our Board of Directors or otherwise ceases to serve as a director, unless the Board of Directors determines that the circumstances warrant continuation of vesting. If any Initial Grant to an Outside Directors is to become effective as of the date of the Company's initial public offering, it shall have an exercise price per share equal to the per share "price to the public" (or equivalent) set forth on the cover page for the final prospectus relating to the Company's initial public offering. This Initial Grant applies to Outside Directors who are first elected to the Board of Directors effective as of or subsequent to the Company's initial public offering.

(e) Annual Grant. On the date of the Company's Annual Meeting of Stockholders, each Outside Director who has served as a member of the Board of Directors for the previous six months and who will continue as a member of the Board of Directors following such Annual Meeting of Stockholders will receive a grant of a non-statutory stock option on the date of such Annual Meeting (the "Annual Grant") with a Value of $400,000, with an exercise price per share equal to the closing price of a share of the Company's Common Stock on the date of grant and a term of ten years, that vests in full on the earlier of (i) the one-year anniversary of the grant date or (ii) the next Annual Meeting of Stockholders; provided, however, that all vesting ceases if the director resigns from our Board of Directors or otherwise ceases to serve as a director, unless the Board of Directors determines that the circumstances warrant continuation of vesting.

III. Expenses

The Company will reimburse all reasonable out-of-pocket expenses incurred by Outside Directors in attending meetings of the Board of Directors or any Committee thereof.

IV. Maximum Annual Compensation

The aggregate amount of compensation, including both equity compensation and cash compensation, paid to any Outside Director in a calendar year period shall not exceed (i) $1,600,000 in the first calendar year an individual becomes an Outside Director and (ii) $1,000,000 in any other year (or in each case, such other limits as may be set forth in Section

3(b) of the 2022 Plan or any similar provision of a successor plan). For this purpose, the "amount" of equity compensation paid in a calendar year shall be determined based on the grant date fair value thereof, as determined in accordance with ASC Topic 718 or its successor provision, but excluding the impact of estimated forfeitures related to service-based vesting conditions.

Date Policy Approved: February 9th, 2022, effective upon the effectiveness of the S-1 registration statement.

PRIME MEDICINE, INC.

[FORM OF] OFFICER INDEMNIFICATION AGREEMENT

This Indemnification Agreement ("Agreement") is made as of [Date] by and between Prime Medicine, Inc., a Delaware corporation (the "Company"), and [Officer Name] ("Indemnitee").[1]

RECITALS

WHEREAS, the Company desires to attract and retain the services of highly qualified individuals, such as Indemnitee, to serve the Company;

WHEREAS, in order to induce Indemnitee to provide or continue to provide services to the Company, the Company wishes to provide for the indemnification of, and advancement of expenses to, Indemnitee to the maximum extent permitted by law;

WHEREAS, the Third Amended and Restated Certificate of Incorporation (as amended and in effect from time to time, the "Charter") and the Amended and Restated By-laws (as amended and in effect from time to time, the "By-laws") of the Company require indemnification of the officers and directors of the Company, and Indemnitee may also be entitled to indemnification pursuant to the General Corporation Law of the State of Delaware (the "DGCL");

WHEREAS, the Charter, the By-laws and the DGCL expressly provide that the indemnification provisions set forth therein are not exclusive, and thereby contemplate that contracts may be entered into between the Company and members of the board of directors, officers and other persons with respect to indemnification;

WHEREAS, the Board of Directors of the Company (the "Board") has determined that the increased difficulty in attracting and retaining highly qualified persons such as Indemnitee is detrimental to the best interests of the Company's stockholders;

WHEREAS, it is reasonable and prudent for the Company contractually to obligate itself to indemnify, and to advance expenses on behalf of, such persons to the fullest extent permitted by applicable law, regardless of any amendment or revocation of the Charter or the By-laws, so that they will serve or continue to serve the Company free from undue concern that they will not be so indemnified; and

WHEREAS, this Agreement is a supplement to and in furtherance of the indemnification provided in the Charter, the By-laws and any resolutions adopted pursuant thereto, and shall not be deemed a substitute therefor, nor to diminish or abrogate any rights of Indemnitee thereunder;

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[1] To be entered into with all C-level officers and Section 16 officers.

NOW, THEREFORE, in consideration of the premises and the covenants contained herein, the Company and Indemnitee do hereby covenant and agree as follows:

Section 1. Services to the Company. Indemnitee agrees to serve or continue to serve as [a director and] an officer of the Company. Indemnitee may at any time and for any reason resign from [any] such position (subject to any other contractual obligation or any obligation imposed by law), in which event the Company shall have no obligation under this Agreement to continue Indemnitee in such position. This Agreement shall not be deemed an employment contract between the Company (or any of its subsidiaries or any Enterprise) and Indemnitee.

Section 2. Definitions.

As used in this Agreement:

(a) "Affiliate" and "Associate" shall have the respective meanings ascribed to such terms in Rule 12b-2 of the General Rules and Regulations under the Securities Exchange Act of 1934, as amended, as in effect on the date of this Agreement; provided, however, that no Person who is a director or officer of the Company shall be deemed an Affiliate or an Associate of any other director or officer of the Company solely as a result of his or her position as director or officer of the Company.

(b) A Person shall be deemed the "Beneficial Owner" of, and shall be deemed to "Beneficially Own" and have "Beneficial Ownership" of, any securities:

(i) which such Person or any of such Person's Affiliates or Associates, directly or indirectly, Beneficially Owns (as determined pursuant to Rule 13d-3 of the Rules under the Exchange Act, as in effect on the date of this Agreement);

(ii) which such Person or any of such Person's Affiliates or Associates, directly or indirectly, has: (A) the legal, equitable or contractual right or obligation to acquire (whether directly or indirectly and whether exercisable immediately or only after the passage of time, compliance with regulatory requirements, satisfaction of one or more conditions (whether or not within the control of such Person) or otherwise) upon the exercise of any conversion rights, exchange rights, rights, warrants or options, or otherwise; (B) the right to vote pursuant to any agreement, arrangement or understanding (whether or not in writing); or (C) the right to dispose of pursuant to any agreement, arrangement or understanding (whether or not in writing) (other than customary arrangements with and between underwriters and selling group members with respect to a bona fide public offering of securities);

(iii) which are Beneficially Owned, directly or indirectly, by any other Person (or any Affiliate or Associate thereof) with which such Person or any of such Person's Affiliates or Associates has any agreement, arrangement or understanding (whether or not in writing) (other than customary agreements with and between underwriters and selling group members with respect to a bona fide public offering of securities) for the purpose of acquiring, holding, voting or disposing of any securities of the Company; or

(iv) that are the subject of a derivative transaction entered into by such Person or any of such Person's Affiliates or Associates, including, for these purposes, any derivative

security acquired by such Person or any of such Person's Affiliates or Associates that gives such Person or any of such Person's Affiliates or Associates the economic equivalent of ownership of an amount of securities due to the fact that the value of the derivative security is explicitly determined by reference to the price or value of such securities, or that provides such Person or any of such Person's Affiliates or Associates an opportunity, directly or indirectly, to profit or to share in any profit derived from any change in the value of such securities, in any case without regard to whether (A) such derivative security conveys any voting rights in such securities to such Person or any of such Person's Affiliates or Associates; (B) the derivative security is required to be, or capable of being, settled through delivery of such securities; or (C) such Person or any of such Person's Affiliates or Associates may have entered into other transactions that hedge the economic effect of such derivative security;

Notwithstanding the foregoing, no Person engaged in business as an underwriter of securities shall be deemed the Beneficial Owner of any securities acquired through such Person's participation as an underwriter in good faith in a firm commitment underwriting.

(c) A "Change in Control" shall be deemed to occur upon the earliest to occur after the date of this Agreement of any of the following events*:*

(i) Acquisition of Stock by Third Party. Any Person is or becomes the Beneficial Owner (as defined above), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the combined voting power of the Company's then outstanding securities [(other than acquisitions of Class B Common Stock by a Qualified Stockholder or its Permitted Transferees (as such terms are defined in the Charter))] unless the change in relative Beneficial Ownership of the Company's securities by any Person results solely from a reduction in the aggregate number of outstanding shares of securities entitled to vote generally in the election of directors [or as a result of conversions of Class B Common Stock], provided that a Change of Control shall be deemed to have occurred if subsequent to such reduction such Person becomes the Beneficial Owner, directly or indirectly, of any additional securities of the Company conferring upon such Person any additional voting power;

(ii) Change in Board of Directors. During any period of two (2) consecutive years (not including any period prior to the execution of this Agreement), individuals who at the beginning of such period constitute the Board, and any new director (other than a director designated by a Person who has entered into an agreement with the Company to effect a transaction described in Sections 2(c)(i), 2(c)(iii) or 2(c)(iv)) whose election by the Board or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds of the directors then still in office who either were directors at the beginning of the period or whose election or nomination for election was previously so approved, cease for any reason to constitute at least a majority of the members of the Board;

(iii) Corporate Transactions. The effective date of a merger or consolidation of the Company with any other entity, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior to such merger or consolidation continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving or successor entity) more than 50% of the combined voting power of the voting securities of the surviving or successor entity outstanding immediately after

such merger or consolidation and with the power to elect at least a majority of the board of directors or other governing body of such surviving or successor entity;

(iv) Liquidation. The approval by the stockholders of the Company of a complete liquidation of the Company or an agreement for the sale, lease, exchange or other transfer by the Company, in one or a series of related transactions, of all or substantially all of the Company's assets; and

(v) Other Events. There occurs any other event of a nature that would be required to be reported in response to Item 6(e) of Schedule 14A of Regulation 14A (or a response to any similar item on any similar schedule or form) promulgated under the Securities Exchange Act of 1934, as amended, whether or not the Company is then subject to such reporting requirement.

(d) "Corporate Status" describes the status of a person as a current or former [director or] officer of the Company or current or former director, manager, partner, officer, employee, agent or trustee of any other Enterprise which such person is or was serving at the request of the Company.

(e) "Enforcement Expenses" shall include all reasonable attorneys' fees, court costs, transcript costs, fees of experts, travel expenses, duplicating costs, printing and binding costs, telephone charges, postage, delivery service fees, and all other out-of-pocket disbursements or expenses of the types customarily incurred in connection with an action to enforce indemnification or advancement rights, or an appeal from such action. Expenses, however, shall not include fees, salaries, wages or benefits owed to Indemnitee.

(f) "Enterprise" shall mean any corporation (other than the Company), partnership, joint venture, trust, employee benefit plan, limited liability company, or other legal entity of which Indemnitee is or was serving at the request of the Company as a director, manager, partner, officer, employee, agent or trustee.

(g) "Expenses" shall include all reasonable attorneys' fees, court costs, transcript costs, fees of experts, travel expenses, duplicating costs, printing and binding costs, telephone charges, postage, delivery service fees, and all other out-of-pocket disbursements or expenses of the types customarily incurred in connection with prosecuting, defending, preparing to prosecute or defend, investigating, being or preparing to be a witness in, or otherwise participating in, a Proceeding or an appeal resulting from a Proceeding. Expenses, however, shall not include amounts paid in settlement by Indemnitee, the amount of judgments or fines against Indemnitee or fees, salaries, wages or benefits owed to Indemnitee.

(h) "Independent Counsel" means a law firm, or a partner (or, if applicable, member or shareholder) of such a law firm, that is experienced in matters of Delaware corporation law and neither presently is, nor in the past five (5) years has been, retained to represent: (i) the Company, any subsidiary of the Company, any Enterprise or Indemnitee in any matter material to any such party; or (ii) any other party to the Proceeding giving rise to a claim for indemnification hereunder. Notwithstanding the foregoing, the term "Independent Counsel" shall not include any Person who, under the applicable standards of professional conduct then

prevailing, would have a conflict of interest in representing either the Company or Indemnitee in an action to determine Indemnitee's rights under this Agreement. The Company agrees to pay the reasonable fees and expenses of the Independent Counsel referred to above and to fully indemnify such counsel against any and all expenses, claims, liabilities and damages arising out of or relating to this Agreement or its engagement pursuant hereto.

(i) "Person" shall mean (i) an individual, a corporation, a partnership, a limited liability company, an association, a joint stock company, a trust, a business trust, a government or political subdivision, any unincorporated organization, or any other association or entity including any successor (by merger or otherwise) thereof or thereto, and (ii) a "group" as that term is used for purposes of Section 13(d)(3) of the Securities Exchange Act of 1934, as amended.

(j) The term "Proceeding" shall include any threatened, pending or completed action, suit, arbitration, alternate dispute resolution mechanism, investigation, inquiry, administrative hearing or any other actual, threatened or completed proceeding, whether brought in the right of the Company or otherwise and whether of a civil, criminal, administrative, regulatory or investigative nature, and whether formal or informal, in which Indemnitee was, is or will be involved as a party or otherwise by reason of the fact that Indemnitee is or was [a director or] an officer of the Company or is or was serving at the request of the Company as a director, manager, partner, officer, employee, agent or trustee of any Enterprise or by reason of any action taken by Indemnitee or of any action taken on his or her part while acting as [a director or] an officer of the Company or while serving at the request of the Company as a director, manager, partner, officer, employee, agent or trustee of any Enterprise, in each case whether or not serving in such capacity at the time any liability or expense is incurred for which indemnification, reimbursement or advancement of expenses can be provided under this Agreement; provided, however, that the term "Proceeding" shall not include any action, suit or arbitration, or part thereof, initiated by Indemnitee to enforce Indemnitee's rights under this Agreement as provided for in Section 12(a) of this Agreement.

Section 3. Indemnity in Third-Party Proceedings. The Company shall indemnify Indemnitee to the extent set forth in this Section 3 if Indemnitee is, or is threatened to be made, a party to or a participant in any Proceeding, other than a Proceeding by or in the right of the Company to procure a judgment in its favor. Pursuant to this Section 3, Indemnitee shall be indemnified against all Expenses, judgments, fines, penalties, excise taxes, and amounts paid in settlement actually and reasonably incurred by Indemnitee or on his or her behalf in connection with such Proceeding or any claim, issue or matter therein, if Indemnitee acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Company and, in the case of a criminal proceeding, had no reasonable cause to believe that his or her conduct was unlawful.

Section 4. Indemnity in Proceedings by or in the Right of the Company. The Company shall indemnify Indemnitee to the extent set forth in this Section 4 if Indemnitee is, or is threatened to be made, a party to or a participant in any Proceeding by or in the right of the Company to procure a judgment in its favor. Pursuant to this Section 4, Indemnitee shall be indemnified against all Expenses actually and reasonably incurred by Indemnitee or on his or her

behalf in connection with such Proceeding or any claim, issue or matter therein, if Indemnitee acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Company. No indemnification for Expenses shall be made under this Section 4 in respect of any claim, issue or matter as to which Indemnitee shall have been finally adjudged by a court to be liable to the Company, unless and only to the extent that the Delaware Court of Chancery (the "Delaware Court") shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, Indemnitee is fairly and reasonably entitled to indemnification for such expenses as the Delaware Court shall deem proper.

Section 5. Indemnification for Expenses of a Party Who is Wholly or Partly Successful. Notwithstanding any other provisions of this Agreement and except as provided in Section 7, to the extent that Indemnitee is a party to or a participant in any Proceeding and is successful in such Proceeding or in defense of any claim, issue or matter therein, the Company shall indemnify Indemnitee against all Expenses actually and reasonably incurred by him or her in connection therewith. If Indemnitee is not wholly successful in such Proceeding but is successful as to one or more but less than all claims, issues or matters in such Proceeding, the Company shall indemnify Indemnitee against all Expenses actually and reasonably incurred by Indemnitee or on his or her behalf in connection with each successfully resolved claim, issue or matter. For purposes of this Section and without limitation, the termination of any claim, issue or matter in such a Proceeding by dismissal, with or without prejudice, shall be deemed to be a successful result as to such claim, issue or matter.

Section 6. Reimbursement for Expenses of a Witness or in Response to a Subpoena. Notwithstanding any other provision of this Agreement, to the extent that Indemnitee, by reason of his or her Corporate Status, (i) is a witness in any Proceeding to which Indemnitee is not a party and is not threatened to be made a party or (ii) receives a subpoena with respect to any Proceeding to which Indemnitee is not a party and is not threatened to be made a party, the Company shall reimburse Indemnitee for all Expenses actually and reasonably incurred by him or her or on his or her behalf in connection therewith.

Section 7. Exclusions. Notwithstanding any provision in this Agreement to the contrary, the Company shall not be obligated under this Agreement:

(a) to indemnify for amounts otherwise indemnifiable hereunder (or for which advancement is provided hereunder) if and to the extent that Indemnitee has otherwise actually received such amounts under any insurance policy, contract, agreement or otherwise; provided that the foregoing shall not apply to any personal or umbrella liability insurance maintained by Indemnitee;

(b) to indemnify for an accounting of profits made from the purchase and sale (or sale and purchase) by Indemnitee of securities of the Company within the meaning of Section 16(b) of the Securities Exchange Act of 1934, as amended, or similar provisions of state statutory law or common law, or from the purchase or sale by Indemnitee of such securities in violation of Section 306 of the Sarbanes-Oxley Act of 2002 ("SOX");

(c) to indemnify for any reimbursement of, or payment to, the Company by Indemnitee of any bonus or other incentive-based or equity-based compensation or of any profits realized by Indemnitee from the sale of securities of the Company pursuant to Section 304 of SOX or any formal policy of the Company adopted by the Board (or a committee thereof), or any other remuneration paid to Indemnitee if it shall be determined by a final judgment or other final adjudication that such remuneration was in violation of law;

(d) to indemnify with respect to any Proceeding, or part thereof, brought by Indemnitee against the Company, any legal entity which it controls, any director or officer thereof or any third party, unless (i) the Board has consented to the initiation of such Proceeding or part thereof and (ii) the Company provides the indemnification, in its sole discretion, pursuant to the powers vested in the Company under applicable law; provided, however, that this Section 7(d) shall not apply to (A) counterclaims or affirmative defenses asserted by Indemnitee in an action brought against Indemnitee or (B) any action brought by Indemnitee for indemnification or advancement from the Company under this Agreement or under any directors' and officers' liability insurance policies maintained by the Company in the suit for which indemnification or advancement is being sought as described in Section 12; or

(e) to provide any indemnification or advancement of expenses that is prohibited by applicable law (as such law exists at the time payment would otherwise be required pursuant to this Agreement).

Section 8. Advancement of Expenses. Subject to Section 9(b), the Company shall advance, to the extent not prohibited by law, the Expenses incurred by Indemnitee in connection with any Proceeding, and such advancement shall be made within thirty (30) days after the receipt by the Company of a statement or statements requesting such advances (including any invoices received by Indemnitee, which such invoices may be redacted as necessary to avoid the waiver of any privilege accorded by applicable law) from time to time, whether prior to or after final disposition of any Proceeding. Advances shall be unsecured and interest free. Advances shall be made without regard to Indemnitee's (i) ability to repay the expenses, (ii) ultimate entitlement to indemnification under the other provisions of this Agreement, and (iii) entitlement to and availability of insurance coverage, including advancement, payment or reimbursement of defense costs, expenses of covered loss under the provisions of any applicable insurance policy (including, without limitation, whether such advancement, payment or reimbursement is withheld, conditioned or delayed by the insurer(s)). Indemnitee shall qualify for advances upon the execution and delivery to the Company of this Agreement which shall constitute an undertaking providing that Indemnitee undertakes to the fullest extent required by law to repay the advance if and to the extent that it is ultimately determined by a court of competent jurisdiction in a final judgment, not subject to appeal, that Indemnitee is not entitled to be indemnified by the Company. No other form of undertaking shall be required. The right to advances under this paragraph shall in all events continue until final disposition of any Proceeding, including any appeal therein. Nothing in this Section 8 shall limit Indemnitee's right to advancement pursuant to Section 12(e) of this Agreement.

Section 9. Procedure for Notification and Defense of Claim.

(a) To obtain indemnification under this Agreement, Indemnitee shall submit to the Company a written request therefor specifying the basis for the claim, the amounts for which Indemnitee is seeking payment under this Agreement, and all documentation related thereto as reasonably requested by the Company.

(b) In the event that the Company shall be obligated hereunder to provide indemnification for or make any advancement of Expenses with respect to any Proceeding, the Company shall be entitled to assume the defense of such Proceeding, or any claim, issue or matter therein, with counsel approved by Indemnitee (which approval shall not be unreasonably withheld or delayed) upon the delivery to Indemnitee of written notice of the Company's election to do so. After delivery of such notice, approval of such counsel by Indemnitee and the retention of such counsel by the Company, the Company will not be liable to Indemnitee under this Agreement for any fees or expenses of separate counsel subsequently employed by or on behalf of Indemnitee with respect to the same Proceeding; provided that (i) Indemnitee shall have the right to employ separate counsel in any such Proceeding at Indemnitee's expense and (ii) if (A) the employment of separate counsel by Indemnitee has been previously authorized by the Company, (B) Indemnitee shall have reasonably concluded that there may be a conflict of interest between the Company and Indemnitee in the conduct of such defense, (C) the Company shall not continue to retain such counsel to defend such Proceeding, or (D) a Change in Control shall have occurred, then the fees and expenses actually and reasonably incurred by Indemnitee with respect to his or her separate counsel shall be Expenses hereunder.

(c) In the event that the Company does not assume the defense in a Proceeding pursuant to paragraph (b) above, then the Company will be entitled to participate in the Proceeding at its own expense.

(d) The Company shall not be liable to indemnify Indemnitee under this Agreement for any amounts paid in settlement of any Proceeding effected without its prior written consent (which consent shall not be unreasonably withheld or delayed). Without limiting the generality of the foregoing, the fact that an insurer under an applicable insurance policy delays or is unwilling to consent to such settlement or is or may be in breach of its obligations under such policy, or the fact that directors' and officers' liability insurance is otherwise unavailable or not maintained by the Company, may not be taken into account by the Company in determining whether to provide its consent. The Company shall not, without the prior written consent of Indemnitee (which consent shall not be unreasonably withheld or delayed), enter into any settlement which (i) includes an admission of fault of Indemnitee, any non-monetary remedy imposed on Indemnitee or any monetary damages for which Indemnitee is not wholly and actually indemnified hereunder or (ii) with respect to any Proceeding with respect to which Indemnitee may be or is made a party or may be otherwise entitled to seek indemnification hereunder, does not include the full release of Indemnitee from all liability in respect of such Proceeding.

Section 10. Procedure Upon Application for Indemnification.

(a) Upon written request by Indemnitee for indemnification pursuant to Section 9(a), a determination, if such determination is required by applicable law, with respect to Indemnitee's entitlement to indemnification hereunder shall be made in the specific case by one of the following methods: [(x) if a Change in Control shall have occurred and indemnification is being requested by Indemnitee hereunder in his or her capacity as a director of the Company, by Independent Counsel in a written opinion to the Board; or (y) in any other case,] (i) by a majority vote of the disinterested directors, even though less than a quorum; (ii) by a committee of disinterested directors designated by a majority vote of the disinterested directors, even though less than a quorum; or (iii) if there are no disinterested directors or if the disinterested directors so direct, by Independent Counsel in a written opinion to the Board. For purposes hereof, disinterested directors are those members of the Board who are not parties to the action, suit or proceeding in respect of which indemnification is sought. In the case that such determination is made by Independent Counsel, a copy of Independent Counsel's written opinion shall be delivered to Indemnitee and, if it is so determined that Indemnitee is entitled to indemnification, payment to Indemnitee shall be made within thirty (30) days after such determination. Indemnitee shall cooperate with the Independent Counsel or the Company, as applicable, in making such determination with respect to Indemnitee's entitlement to indemnification, including providing to such counsel or the Company, upon reasonable advance request, any documentation or information which is not privileged or otherwise protected from disclosure and which is reasonably available to Indemnitee and reasonably necessary to such determination. The Company shall likewise cooperate with Indemnitee and Independent Counsel, if applicable, in making such determination with respect to Indemnitee's entitlement to indemnification, including providing to such counsel and Indemnitee, upon reasonable advance request, any documentation or information which is not privileged or otherwise protected from disclosure and which is reasonably available to the Company and reasonably necessary to such determination. Any out-of-pocket costs or expenses (including reasonable attorneys' fees and disbursements) actually and reasonably incurred by Indemnitee in so cooperating with the Independent Counsel or the Company shall be borne by the Company (irrespective of the determination as to Indemnitee's entitlement to indemnification) and the Company hereby indemnifies and agrees to hold Indemnitee harmless therefrom.

(b) If the determination of entitlement to indemnification is to be made by Independent Counsel pursuant to Section 10(a), the Independent Counsel shall be selected by the Board[; provided that, if a Change in Control shall have occurred and indemnification is being requested by Indemnitee hereunder in his or her capacity as a director of the Company, the Independent Counsel shall be selected by Indemnitee. Indemnitee or the Company, as the case may be, may, within ten (10) days after written notice of such selection, deliver to the Company or Indemnitee, as the case may be, a written objection to such selection; provided, however, that such objection may be asserted only on the ground that the Independent Counsel so selected does not meet the requirements of "Independent Counsel" as defined in Section 2 of this Agreement, and the objection shall set forth with particularity the factual basis of such assertion. Absent a proper and timely objection, the Person so selected shall act as Independent Counsel. If such written objection is so made and substantiated, the Independent Counsel so selected may not

serve as Independent Counsel unless and until such objection is withdrawn or the Delaware Court has determined that such objection is without merit. If, within twenty (20) days after the later of (i) submission by Indemnitee of a written request for indemnification pursuant to Section 9(a), and (ii) the final disposition of the Proceeding, including any appeal therein, no Independent Counsel shall have been selected without objection, either Indemnitee or the Company may petition the Delaware Court for resolution of any objection which shall have been made by Indemnitee or the Company to the selection of Independent Counsel and/or for the appointment as Independent Counsel of a Person selected by the court or by such other Person as the court shall designate. The Person with respect to whom all objections are so resolved or the Person so appointed shall act as Independent Counsel under Section 10(a) hereof. Upon the due commencement of any judicial proceeding or arbitration pursuant to Section 12(a) of this Agreement, Independent Counsel shall be discharged and relieved of any further responsibility in such capacity (subject to the applicable standards of professional conduct then prevailing).

(c) Notwithstanding anything to the contrary contained in this Agreement, the determination of entitlement to indemnification under this Agreement shall be made without regard to the Indemnitee's entitlement to and availability of insurance coverage, including advancement, payment or reimbursement of defense costs, expenses or covered loss under the provisions of any applicable insurance policy (including, without limitation, whether such advancement, payment or reimbursement is withheld, conditioned or delayed by the insurer(s)).

Section 11. Presumptions and Effect of Certain Proceedings.

(a) To the extent permitted by applicable law, in making a determination with respect to entitlement to indemnification hereunder, it shall be presumed that Indemnitee is entitled to indemnification under this Agreement if Indemnitee has submitted a request for indemnification in accordance with Section 9(a) of this Agreement, and the Company shall have the burden of proof and the burden of persuasion by clear and convincing evidence to overcome that presumption in connection with the making of any determination contrary to that presumption.

(b) The termination of any Proceeding or of any claim, issue or matter therein, by judgment, order, settlement or conviction, or upon a plea of guilty, nolo contendere or its equivalent, shall not (except as otherwise expressly provided in this Agreement) of itself adversely affect the right of Indemnitee to indemnification or create a presumption that Indemnitee did not act in good faith and in a manner which he or she reasonably believed to be in or not opposed to the best interests of the Company or, with respect to any criminal Proceeding, that Indemnitee had reasonable cause to believe that his or her conduct was unlawful.

(c) Indemnitee shall be deemed to have acted in good faith if Indemnitee's actions were based on the records or books of account of the Company or any other Enterprise, including financial statements, or on information supplied to Indemnitee by the directors, officers, agents or employees of the Company or any other Enterprise in the course of their duties, or on the advice of legal counsel for the Company or any other Enterprise or on information or records given or reports made to the Company or any other Enterprise by an independent certified public accountant or by an appraiser or other expert selected with reasonable care by the Company or any other Enterprise. The provisions of this Section 11(c)

shall not be deemed to be exclusive or to limit in any way the other circumstances in which Indemnitee may be deemed to have met the applicable standard of conduct set forth in this Agreement. In addition, the knowledge and/or actions, or failure to act, of any director, manager, partner, officer, employee, agent or trustee of the Company, any subsidiary of the Company, or any Enterprise shall not be imputed to Indemnitee for purposes of determining the right to indemnification under this Agreement. Whether or not the foregoing provisions of this Section 11(c) are satisfied, it shall in any event be presumed that Indemnitee has at all times acted in good faith and in a manner Indemnitee reasonably believed to be in or not opposed to the best interests of the Company. Anyone seeking to overcome this presumption shall have the burden of proof and the burden of persuasion by clear and convincing evidence.

Section 12. Remedies of Indemnitee.

(a) Subject to Section 12(f), in the event that (i) a determination is made pursuant to Section 10 of this Agreement that Indemnitee is not entitled to indemnification under this Agreement, (ii) advancement of Expenses is not timely made pursuant to Section 8 of this Agreement, (iii) no determination of entitlement to indemnification shall have been made pursuant to Section 10(a) of this Agreement within sixty (60) days after receipt by the Company of the request for indemnification for which a determination is to be made other than by Independent Counsel, (iv) payment of indemnification or reimbursement of expenses is not made pursuant to Section 5 or 6 or the last sentence of Section 10(a) of this Agreement within thirty (30) days after receipt by the Company of a written request therefor (including any invoices received by Indemnitee, which such invoices may be redacted as necessary to avoid the waiver of any privilege accorded by applicable law) or (v) payment of indemnification pursuant to Section 3 or 4 of this Agreement is not made within thirty (30) days after a determination has been made that Indemnitee is entitled to indemnification, Indemnitee shall be entitled to an adjudication by the Delaware Court of his or her entitlement to such indemnification or advancement. Alternatively, Indemnitee, at his or her option, may seek an award in arbitration to be conducted by a single arbitrator pursuant to the Commercial Arbitration Rules of the American Arbitration Association. Indemnitee shall commence such proceeding seeking an adjudication or an award in arbitration within 180 days following the date on which Indemnitee first has the right to commence such proceeding pursuant to this Section 12(a); provided, however, that the foregoing time limitation shall not apply in respect of a proceeding brought by Indemnitee to enforce his or her rights under Section 5 of this Agreement. The Company shall not oppose Indemnitee's right to seek any such adjudication or award in arbitration.

(b) In the event that a determination shall have been made pursuant to Section 10(a) of this Agreement that Indemnitee is not entitled to indemnification, any judicial proceeding or arbitration commenced pursuant to this Section 12 shall be conducted in all respects as a de novo trial, or arbitration, on the merits and Indemnitee shall not be prejudiced by reason of that adverse determination. In any judicial proceeding or arbitration commenced pursuant to this Section 12, the Company shall have the burden of proving Indemnitee is not entitled to indemnification or advancement, as the case may be.

(c) If a determination shall have been made pursuant to Section 10(a) of this Agreement that Indemnitee is entitled to indemnification, the Company shall be bound by such

determination in any judicial proceeding or arbitration commenced pursuant to this Section 12, absent (i) a misstatement by Indemnitee of a material fact, or an omission of a material fact necessary to make Indemnitee's statement not materially misleading, in connection with the request for indemnification, or (ii) a prohibition of such indemnification under applicable law.

(d) The Company shall be precluded from asserting in any judicial proceeding or arbitration commenced pursuant to this Section 12 that the procedures and presumptions of this Agreement are not valid, binding and enforceable and shall stipulate in any such court or before any such arbitrator that the Company is bound by all the provisions of this Agreement.

(e) The Company shall indemnify Indemnitee to the fullest extent permitted by law against any and all Enforcement Expenses and, if requested by Indemnitee, shall (within thirty (30) days after receipt by the Company of a written request therefor) advance, to the extent not prohibited by law, such Enforcement Expenses to Indemnitee, which are incurred by Indemnitee in connection with any action brought by Indemnitee for indemnification or advancement from the Company under this Agreement or under any directors' and officers' liability insurance policies maintained by the Company in the suit for which indemnification or advancement is being sought. Such written request for advancement shall include invoices received by Indemnitee in connection with such Enforcement Expenses but, in the case of invoices in connection with legal services, any references to legal work performed or to expenditures made that would cause Indemnitee to waive any privilege accorded by applicable law need not be included with the invoice.

(f) Notwithstanding anything in this Agreement to the contrary, no determination as to entitlement to indemnification under this Agreement shall be required to be made prior to the final disposition of the Proceeding, including any appeal therein.

Section 13. Non-exclusivity; Survival of Rights; Insurance; Subrogation.

(a) The rights of indemnification and to receive advancement as provided by this Agreement shall not be deemed exclusive of any other rights to which Indemnitee may at any time be entitled under applicable law, the Charter, the By-laws, any agreement, a vote of stockholders or a resolution of directors, or otherwise. No amendment, alteration or repeal of this Agreement or of any provision hereof shall limit or restrict any right of Indemnitee under this Agreement in respect of any action taken or omitted by such Indemnitee in his or her Corporate Status prior to such amendment, alteration or repeal. To the extent that a change in Delaware law, whether by statute or judicial decision, permits greater indemnification or advancement than would be afforded currently under the Charter, By-laws and this Agreement, it is the intent of the parties hereto that Indemnitee shall enjoy by this Agreement the greater benefits so afforded by such change. No right or remedy herein conferred is intended to be exclusive of any other right or remedy, and every other right and remedy shall be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other right or remedy.

(b) To the extent that the Company maintains an insurance policy or policies providing liability insurance for directors, managers, partners, officers, employees, agents or

trustees of the Company or of any other Enterprise, Indemnitee shall be covered by such policy or policies in accordance with its or their terms to the maximum extent of the coverage available for any such director, manager, partner, officer, employee, agent or trustee under such policy or policies. If, at the time of the receipt of a notice of a claim pursuant to the terms hereof, the Company has director and officer liability insurance in effect, the Company shall give prompt notice of the commencement of such Proceeding to the insurers in accordance with the procedures set forth in the respective policies. The Company shall thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of Indemnitee, all amounts payable as a result of such Proceeding in accordance with the terms of such policies. Upon request of Indemnitee, the Company shall also promptly provide to Indemnitee: (i) copies of all of the Company's potentially applicable directors' and officers' liability insurance policies, (ii) copies of such notices delivered to the applicable insurers, and (iii) copies of all subsequent communications and correspondence between the Company and such insurers regarding the Proceeding.

(c) In the event of any payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the rights of recovery of Indemnitee, who shall execute all papers required and take all action necessary to secure such rights, including execution of such documents as are necessary to enable the Company to bring suit to enforce such rights.

(d) The Company's obligation to provide indemnification or advancement hereunder to Indemnitee who is or was serving at the request of the Company as a director, manager, partner, officer, employee, agent or trustee of any other Enterprise shall be reduced by any amount Indemnitee has actually received as indemnification or advancement from such other Enterprise.

Section 14. Duration of Agreement. This Agreement shall continue until and terminate upon the later of: (a) ten (10) years after the date that Indemnitee shall have ceased to serve as [both a director and] an officer of the Company or (b) one (1) year after the final termination of any Proceeding, including any appeal, then pending in respect of which Indemnitee is granted rights of indemnification or advancement hereunder and of any proceeding commenced by Indemnitee pursuant to Section 12 of this Agreement relating thereto. This Agreement shall be binding upon the Company and its successors and assigns and shall inure to the benefit of Indemnitee and his or her heirs, executors and administrators. The Company shall require and cause any successor (whether direct or indirect by purchase, merger, consolidation or otherwise) to all, substantially all or a substantial part, of the business and/or assets of the Company, by written agreement in form and substance satisfactory to Indemnitee, expressly to assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform if no such succession had taken place.

Section 15. Severability. If any provision or provisions of this Agreement shall be held to be invalid, illegal or unenforceable for any reason whatsoever: (a) the validity, legality and enforceability of the remaining provisions of this Agreement (including, without limitation, each portion of any section of this Agreement containing any such provision held to be invalid, illegal or unenforceable, that is not itself invalid, illegal or unenforceable) shall not in any way

be affected or impaired thereby and shall remain enforceable to the fullest extent permitted by law; (b) such provision or provisions shall be deemed reformed to the extent necessary to conform to applicable law and to give the maximum effect to the intent of the parties hereto; and (c) to the fullest extent possible, the provisions of this Agreement (including, without limitation, each portion of any section of this Agreement containing any such provision held to be invalid, illegal or unenforceable, that is not itself invalid, illegal or unenforceable) shall be construed so as to give effect to the intent manifested thereby.

Section 16. Enforcement.

(a) The Company expressly confirms and agrees that it has entered into this Agreement and assumed the obligations imposed on it hereby in order to induce Indemnitee to serve or continue to serve as [a director and] an officer of the Company, and the Company acknowledges that Indemnitee is relying upon this Agreement in serving as [a director and] an officer of the Company.

(b) This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter hereof and supersedes all prior agreements and understandings, oral, written and implied, between the parties hereto with respect to the subject matter hereof; provided, however, that this Agreement is a supplement to and in furtherance of the Charter, the By-laws and applicable law, and shall not be deemed a substitute therefor, nor to diminish or abrogate any rights of Indemnitee thereunder.

Section 17. Modification and Waiver. No supplement, modification or amendment, or waiver of any provision, of this Agreement shall be binding unless executed in writing by the parties thereto. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provisions of this Agreement nor shall any waiver constitute a continuing waiver. No supplement, modification or amendment of this Agreement or of any provision hereof shall limit or restrict any right of Indemnitee under this Agreement in respect of any action taken or omitted by such Indemnitee prior to such supplement, modification or amendment.

Section 18. Notice by Indemnitee. Indemnitee agrees promptly to notify the Company in writing upon being served with any summons, citation, subpoena, complaint, indictment, information or other document relating to any Proceeding or matter which may be subject to indemnification, reimbursement or advancement as provided hereunder. The failure of Indemnitee to so notify the Company or any delay in notification shall not relieve the Company of any obligation which it may have to Indemnitee under this Agreement or otherwise, unless, and then only to the extent that, the Company did not otherwise learn of the Proceeding and such delay is materially prejudicial to the Company's ability to defend such Proceeding or matter; and, provided, further, that notice will be deemed to have been given without any action on the part of Indemnitee in the event the Company is a party to the same Proceeding.

Section 19. Notices. All notices, requests, demands and other communications under this Agreement shall be in writing and shall be deemed to have been duly given if (i) delivered by hand and receipted for by the party to whom said notice or other communication shall have been directed, (ii) mailed by certified or registered mail with postage prepaid, on the third

business day after the date on which it is so mailed, (iii) mailed by reputable overnight courier and receipted for by the party to whom said notice or other communication shall have been directed or (iv) sent by facsimile transmission, with receipt of oral confirmation that such transmission has been received:

(a) If to Indemnitee, at such address as Indemnitee shall provide to the Company.

(b) If to the Company to:

Prime Medicine, Inc.
21 Erie Street
Cambridge, MA 02139
Attention: Chief Executive Officer

or to any other address as may have been furnished to Indemnitee by the Company.

Section 20. Contribution. To the fullest extent permissible under applicable law, if the indemnification provided for in this Agreement is unavailable to Indemnitee for any reason whatsoever, the Company, in lieu of indemnifying Indemnitee, shall contribute to the amount incurred by Indemnitee, whether for judgments, fines, penalties, excise taxes, amounts paid or to be paid in settlement and/or for Expenses, in connection with any Proceeding in such proportion as is deemed fair and reasonable in light of all of the circumstances in order to reflect (i) the relative benefits received by the Company and Indemnitee in connection with the event(s) and/or transaction(s) giving rise to such Proceeding; and/or (ii) the relative fault of the Company (and its directors, officers, employees and agents) and Indemnitee in connection with such event(s) and/or transactions.

Section 21. Internal Revenue Code Section 409A. The Company intends for this Agreement to comply with the Indemnification exception under Section 1.409A-1(b)(10) of the regulations promulgated under the Internal Revenue Code of 1986, as amended (the "Code"), which provides that indemnification of, or the purchase of an insurance policy providing for payments of, all or part of the expenses incurred or damages paid or payable by Indemnitee with respect to a bona fide claim against Indemnitee or the Company do not provide for a deferral of compensation, subject to Section 409A of the Code, where such claim is based on actions or failures to act by Indemnitee in his or her capacity as a service provider of the Company. The parties intend that this Agreement be interpreted and construed with such intent.

Section 22. Applicable Law and Consent to Jurisdiction. This Agreement and the legal relations among the parties shall be governed by, and construed and enforced in accordance with, the laws of the State of Delaware, without regard to its conflict of laws rules. Except with respect to any arbitration commenced by Indemnitee pursuant to Section 12(a) of this Agreement, the Company and Indemnitee hereby irrevocably and unconditionally (i) agree that any action or proceeding arising out of or in connection with this Agreement shall be brought only in the Delaware Court, and not in any other state or federal court in the United States of America or any court in any other country, (ii) consent to submit to the exclusive jurisdiction of the Delaware Court for purposes of any action or proceeding arising out of or in connection with

this Agreement, (iii) consent to service of process at the address set forth in Section 19 of this Agreement with the same legal force and validity as if served upon such party personally within the State of Delaware, (iv) waive any objection to the laying of venue of any such action or proceeding in the Delaware Court, and (v) waive, and agree not to plead or to make, any claim that any such action or proceeding brought in the Delaware Court has been brought in an improper or inconvenient forum.

Section 23. Headings. The headings of the paragraphs of this Agreement are inserted for convenience only and shall not be deemed to constitute part of this Agreement or to affect the construction thereof.

Section 24. Identical Counterparts. This Agreement may be executed in one or more counterparts, each of which shall for all purposes be deemed to be an original but all of which together shall constitute one and the same Agreement. Only one such counterpart signed by the party against whom enforceability is sought needs to be produced to evidence the existence of this Agreement.

Section 25. Monetary Damages Insufficient/Specific Enforcement. The Company and Indemnitee agree that a monetary remedy for breach of this Agreement may be inadequate, impracticable and difficult of proof, and further agree that such breach may cause Indemnitee irreparable harm. Accordingly, the parties hereto agree that Indemnitee may enforce this Agreement by seeking injunctive relief and/or specific performance hereof, without any necessity of showing actual damage or irreparable harm (having agreed that actual and irreparable harm will result in not forcing the Company to specifically perform its obligations pursuant to this Agreement) and that by seeking injunctive relief and/or specific performance, Indemnitee shall not be precluded from seeking or obtaining any other relief to which he may be entitled. The Company and Indemnitee further agree that Indemnitee shall be entitled to such specific performance and injunctive relief, including temporary restraining orders, preliminary injunctions and permanent injunctions, without the necessity of posting bonds or other undertaking in connection therewith. The Company acknowledges that in the absence of a waiver, a bond or undertaking may be required of Indemnitee by the Court, and the Company hereby waives any such requirement of a bond or undertaking.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties have caused this Agreement to be signed as of the day and year first above written.

PRIME MEDICINE, INC.

By: _____

Name:
Title:

_____

[Name of Indemnitee]

PRIME MEDICINE, INC.

[FORM OF] DIRECTOR INDEMNIFICATION AGREEMENT

This Indemnification Agreement ("Agreement") is made as of [Date] by and between Prime Medicine, Inc., a Delaware corporation (the "Company"), and [Director Name] ("Indemnitee").

RECITALS

WHEREAS, the Company desires to attract and retain the services of highly qualified individuals, such as Indemnitee, to serve the Company;

WHEREAS, in order to induce Indemnitee to provide or continue to provide services to the Company, the Company wishes to provide for the indemnification of, and advancement of expenses to, Indemnitee to the maximum extent permitted by law;

WHEREAS, the Third Amended and Restated Certificate of Incorporation (as amended and in effect from time to time, the "Charter") and the Amended and Restated By-laws (as amended and in effect from time to time, the "By-laws") of the Company require indemnification of the officers and directors of the Company, and Indemnitee may also be entitled to indemnification pursuant to the General Corporation Law of the State of Delaware (the "DGCL");

WHEREAS, the Charter, the By-laws and the DGCL expressly provide that the indemnification provisions set forth therein are not exclusive, and thereby contemplate that contracts may be entered into between the Company and members of the board of directors, officers and other persons with respect to indemnification;

WHEREAS, the Board of Directors of the Company (the "Board") has determined that the increased difficulty in attracting and retaining highly qualified persons such as Indemnitee is detrimental to the best interests of the Company's stockholders;

WHEREAS, it is reasonable and prudent for the Company contractually to obligate itself to indemnify, and to advance expenses on behalf of, such persons to the fullest extent permitted by applicable law, regardless of any amendment or revocation of the Charter or the By-laws, so that they will serve or continue to serve the Company free from undue concern that they will not be so indemnified;

WHEREAS, this Agreement is a supplement to and in furtherance of the indemnification provided in the Charter, the By-laws and any resolutions adopted pursuant thereto, and shall not be deemed a substitute therefor, nor to diminish or abrogate any rights of Indemnitee thereunder; and

[WHEREAS, Indemnitee has certain rights to indemnification and/or insurance provided by [Name of Fund/Sponsor] ("[Name of Fund/Sponsor]") which Indemnitee and [Name of Fund/Sponsor] intend to be secondary to the primary obligation of the Company to indemnify

Indemnitee as provided in this Agreement, with the Company's acknowledgment and agreement to the foregoing being a material condition to Indemnitee's willingness to serve or continue to serve on the Board.]

NOW, THEREFORE, in consideration of the premises and the covenants contained herein, the Company and Indemnitee do hereby covenant and agree as follows:

Section 1. Services to the Company. Indemnitee agrees to serve or continue to serve as a director of the Company. Indemnitee may at any time and for any reason resign from such position (subject to any other contractual obligation or any obligation imposed by law), in which event the Company shall have no obligation under this Agreement to continue Indemnitee in such position. This Agreement shall not be deemed an employment contract between the Company (or any of its subsidiaries or any Enterprise) and Indemnitee.

Section 2. Definitions.

As used in this Agreement:

(a) "Affiliate" and "Associate" shall have the respective meanings ascribed to such terms in Rule 12b-2 of the General Rules and Regulations under the Securities Exchange Act of 1934, as amended, as in effect on the date of this Agreement; provided, however, that no Person who is a director or officer of the Company shall be deemed an Affiliate or an Associate of any other director or officer of the Company solely as a result of his or her position as director or officer of the Company.

(b) A Person shall be deemed the "Beneficial Owner" of, and shall be deemed to "Beneficially Own" and have "Beneficial Ownership" of, any securities:

(i) which such Person or any of such Person's Affiliates or Associates, directly or indirectly, Beneficially Owns (as determined pursuant to Rule 13d-3 of the Rules under the Exchange Act, as in effect on the date of this Agreement);

(ii) which such Person or any of such Person's Affiliates or Associates, directly or indirectly, has: (A) the legal, equitable or contractual right or obligation to acquire (whether directly or indirectly and whether exercisable immediately or only after the passage of time, compliance with regulatory requirements, satisfaction of one or more conditions (whether or not within the control of such Person) or otherwise) upon the exercise of any conversion rights, exchange rights, rights, warrants or options, or otherwise; (B) the right to vote pursuant to any agreement, arrangement or understanding (whether or not in writing); or (C) the right to dispose of pursuant to any agreement, arrangement or understanding (whether or not in writing) (other than customary arrangements with and between underwriters and selling group members with respect to a bona fide public offering of securities);

(iii) which are Beneficially Owned, directly or indirectly, by any other Person (or any Affiliate or Associate thereof) with which such Person or any of such Person's Affiliates or Associates has any agreement, arrangement or understanding (whether or not in writing)

(other than customary agreements with and between underwriters and selling group members with respect to a bona fide public offering of securities) for the purpose of acquiring, holding, voting or disposing of any securities of the Company; or

(iv) that are the subject of a derivative transaction entered into by such Person or any of such Person's Affiliates or Associates, including, for these purposes, any derivative security acquired by such Person or any of such Person's Affiliates or Associates that gives such Person or any of such Person's Affiliates or Associates the economic equivalent of ownership of an amount of securities due to the fact that the value of the derivative security is explicitly determined by reference to the price or value of such securities, or that provides such Person or any of such Person's Affiliates or Associates an opportunity, directly or indirectly, to profit or to share in any profit derived from any change in the value of such securities, in any case without regard to whether (A) such derivative security conveys any voting rights in such securities to such Person or any of such Person's Affiliates or Associates; (B) the derivative security is required to be, or capable of being, settled through delivery of such securities; or (C) such Person or any of such Person's Affiliates or Associates may have entered into other transactions that hedge the economic effect of such derivative security;

Notwithstanding the foregoing, no Person engaged in business as an underwriter of securities shall be deemed the Beneficial Owner of any securities acquired through such Person's participation as an underwriter in good faith in a firm commitment underwriting.

(c) A "Change in Control" shall be deemed to occur upon the earliest to occur after the date of this Agreement of any of the following events*:*

(i) Acquisition of Stock by Third Party. Any Person is or becomes the Beneficial Owner (as defined above), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the combined voting power of the Company's then outstanding securities [(other than acquisitions of Class B Common Stock by a Qualified Stockholder or its Permitted Transferees (as such terms are defined in the Charter))] unless the change in relative Beneficial Ownership of the Company's securities by any Person results solely from a reduction in the aggregate number of outstanding shares of securities entitled to vote generally in the election of directors [or as a result of conversions of Class B Common Stock], provided that a Change of Control shall be deemed to have occurred if subsequent to such reduction such Person becomes the Beneficial Owner, directly or indirectly, of any additional securities of the Company conferring upon such Person any additional voting power;

(ii) Change in Board of Directors. During any period of two (2) consecutive years (not including any period prior to the execution of this Agreement), individuals who at the beginning of such period constitute the Board, and any new director (other than a director designated by a Person who has entered into an agreement with the Company to effect a transaction described in Sections 2(c)(i), 2(c)(iii) or 2(c)(iv)) whose election by the Board or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds of the directors then still in office who either were directors at the beginning of the period or whose election or nomination for election was previously so approved, cease for any reason to constitute at least a majority of the members of the Board;

(iii) Corporate Transactions. The effective date of a merger or consolidation of the Company with any other entity, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior to such merger or consolidation continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving or successor entity) more than 50% of the combined voting power of the voting securities of the surviving or successor entity outstanding immediately after such merger or consolidation and with the power to elect at least a majority of the board of directors or other governing body of such surviving or successor entity;

(iv) Liquidation. The approval by the stockholders of the Company of a complete liquidation of the Company or an agreement for the sale, lease, exchange or other transfer by the Company, in one or a series of related transactions, of all or substantially all of the Company's assets; and

(v) Other Events. There occurs any other event of a nature that would be required to be reported in response to Item 6(e) of Schedule 14A of Regulation 14A (or a response to any similar item on any similar schedule or form) promulgated under the Securities Exchange Act of 1934, as amended, whether or not the Company is then subject to such reporting requirement.

(d) "Corporate Status" describes the status of a person as a current or former director of the Company or current or former director, manager, partner, officer, employee, agent or trustee of any other Enterprise which such person is or was serving at the request of the Company.

(e) "Enforcement Expenses" shall include all reasonable attorneys' fees, court costs, transcript costs, fees of experts, travel expenses, duplicating costs, printing and binding costs, telephone charges, postage, delivery service fees, and all other out-of-pocket disbursements or expenses of the types customarily incurred in connection with an action to enforce indemnification or advancement rights, or an appeal from such action. Expenses, however, shall not include fees, salaries, wages or benefits owed to Indemnitee.

(f) "Enterprise" shall mean any corporation (other than the Company), partnership, joint venture, trust, employee benefit plan, limited liability company, or other legal entity of which Indemnitee is or was serving at the request of the Company as a director, manager, partner, officer, employee, agent or trustee.

(g) "Expenses" shall include all reasonable attorneys' fees, court costs, transcript costs, fees of experts, travel expenses, duplicating costs, printing and binding costs, telephone charges, postage, delivery service fees, and all other out-of-pocket disbursements or expenses of the types customarily incurred in connection with prosecuting, defending, preparing to prosecute or defend, investigating, being or preparing to be a witness in, or otherwise participating in, a Proceeding or an appeal resulting from a Proceeding. Expenses, however, shall not include amounts paid in settlement by Indemnitee, the amount of judgments or fines against Indemnitee or fees, salaries, wages or benefits owed to Indemnitee.

(h) "Independent Counsel" means a law firm, or a partner (or, if applicable, member or shareholder) of such a law firm, that is experienced in matters of Delaware corporation law and neither presently is, nor in the past five (5) years has been, retained to represent: (i) the Company, any subsidiary of the Company, any Enterprise or Indemnitee in any matter material to any such party; or (ii) any other party to the Proceeding giving rise to a claim for indemnification hereunder. Notwithstanding the foregoing, the term "Independent Counsel" shall not include any Person who, under the applicable standards of professional conduct then prevailing, would have a conflict of interest in representing either the Company or Indemnitee in an action to determine Indemnitee's rights under this Agreement. The Company agrees to pay the reasonable fees and expenses of the Independent Counsel referred to above and to fully indemnify such counsel against any and all expenses, claims, liabilities and damages arising out of or relating to this Agreement or its engagement pursuant hereto.

(i) "Person" shall mean (i) an individual, a corporation, a partnership, a limited liability company, an association, a joint stock company, a trust, a business trust, a government or political subdivision, any unincorporated organization, or any other association or entity including any successor (by merger or otherwise) thereof or thereto, and (ii) a "group" as that term is used for purposes of Section 13(d)(3) of the Securities Exchange Act of 1934, as amended.

(j) The term "Proceeding" shall include any threatened, pending or completed action, suit, arbitration, alternate dispute resolution mechanism, investigation, inquiry, administrative hearing or any other actual, threatened or completed proceeding, whether brought in the right of the Company or otherwise and whether of a civil, criminal, administrative, regulatory or investigative nature, and whether formal or informal, in which Indemnitee was, is or will be involved as a party or otherwise by reason of the fact that Indemnitee is or was a director of the Company or is or was serving at the request of the Company as a director, manager, partner, officer, employee, agent or trustee of any Enterprise or by reason of any action taken by Indemnitee or of any action taken on his or her part while acting as a director of the Company or while serving at the request of the Company as a director, manager, partner, officer, employee, agent or trustee of any Enterprise, in each case whether or not serving in such capacity at the time any liability or expense is incurred for which indemnification, reimbursement or advancement of expenses can be provided under this Agreement; provided, however, that the term "Proceeding" shall not include any action, suit or arbitration, or part thereof, initiated by Indemnitee to enforce Indemnitee's rights under this Agreement as provided for in Section 12(a) of this Agreement.

Section 3. Indemnity in Third-Party Proceedings. The Company shall indemnify Indemnitee to the extent set forth in this Section 3 if Indemnitee is, or is threatened to be made, a party to or a participant in any Proceeding, other than a Proceeding by or in the right of the Company to procure a judgment in its favor. Pursuant to this Section 3, Indemnitee shall be indemnified against all Expenses, judgments, fines, penalties, excise taxes, and amounts paid in settlement actually and reasonably incurred by Indemnitee or on his or her behalf in connection with such Proceeding or any claim, issue or matter therein, if Indemnitee acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the

Company and, in the case of a criminal proceeding, had no reasonable cause to believe that his or her conduct was unlawful.

Section 4. Indemnity in Proceedings by or in the Right of the Company. The Company shall indemnify Indemnitee to the extent set forth in this Section 4 if Indemnitee is, or is threatened to be made, a party to or a participant in any Proceeding by or in the right of the Company to procure a judgment in its favor. Pursuant to this Section 4, Indemnitee shall be indemnified against all Expenses actually and reasonably incurred by Indemnitee or on his or her behalf in connection with such Proceeding or any claim, issue or matter therein, if Indemnitee acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Company. No indemnification for Expenses shall be made under this Section 4 in respect of any claim, issue or matter as to which Indemnitee shall have been finally adjudged by a court to be liable to the Company, unless and only to the extent that the Delaware Court of Chancery (the "Delaware Court") shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, Indemnitee is fairly and reasonably entitled to indemnification for such expenses as the Delaware Court shall deem proper.

Section 5. Indemnification for Expenses of a Party Who is Wholly or Partly Successful. Notwithstanding any other provisions of this Agreement and except as provided in Section 7, to the extent that Indemnitee is a party to or a participant in any Proceeding and is successful in such Proceeding or in defense of any claim, issue or matter therein, the Company shall indemnify Indemnitee against all Expenses actually and reasonably incurred by him or her in connection therewith. If Indemnitee is not wholly successful in such Proceeding but is successful as to one or more but less than all claims, issues or matters in such Proceeding, the Company shall indemnify Indemnitee against all Expenses actually and reasonably incurred by Indemnitee or on his or her behalf in connection with each successfully resolved claim, issue or matter. For purposes of this Section and without limitation, the termination of any claim, issue or matter in such a Proceeding by dismissal, with or without prejudice, shall be deemed to be a successful result as to such claim, issue or matter.

Section 6. Reimbursement for Expenses of a Witness or in Response to a Subpoena. Notwithstanding any other provision of this Agreement, to the extent that Indemnitee, by reason of his or her Corporate Status, (i) is a witness in any Proceeding to which Indemnitee is not a party and is not threatened to be made a party or (ii) receives a subpoena with respect to any Proceeding to which Indemnitee is not a party and is not threatened to be made a party, the Company shall reimburse Indemnitee for all Expenses actually and reasonably incurred by him or her or on his or her behalf in connection therewith.

Section 7. Exclusions. Notwithstanding any provision in this Agreement to the contrary, the Company shall not be obligated under this Agreement:

(a) to indemnify for amounts otherwise indemnifiable hereunder (or for which advancement is provided hereunder) if and to the extent that Indemnitee has otherwise actually received such amounts under any insurance policy, contract, agreement or otherwise; provided that the foregoing shall not [i] apply to any personal or umbrella liability insurance maintained

by Indemnitee, [or (ii) affect the rights of Indemnitee or the Fund Indemnitors as set forth in Section 13(c);

(b) to indemnify for an accounting of profits made from the purchase and sale (or sale and purchase) by Indemnitee of securities of the Company within the meaning of Section 16(b) of the Securities Exchange Act of 1934, as amended, or similar provisions of state statutory law or common law, or from the purchase or sale by Indemnitee of such securities in violation of Section 306 of the Sarbanes-Oxley Act of 2002 ("SOX");

(c) to indemnify with respect to any Proceeding, or part thereof, brought by Indemnitee against the Company, any legal entity which it controls, any director or officer thereof or any third party, unless (i) the Board has consented to the initiation of such Proceeding or part thereof and (ii) the Company provides the indemnification, in its sole discretion, pursuant to the powers vested in the Company under applicable law; provided, however, that this Section 7(c) shall not apply to (A) counterclaims or affirmative defenses asserted by Indemnitee in an action brought against Indemnitee or (B) any action brought by Indemnitee for indemnification or advancement from the Company under this Agreement or under any directors' and officers' liability insurance policies maintained by the Company in the suit for which indemnification or advancement is being sought as described in Section 12; or

(d) to provide any indemnification or advancement of expenses that is prohibited by applicable law (as such law exists at the time payment would otherwise be required pursuant to this Agreement).

Section 8. Advancement of Expenses. Subject to Section 9(b), the Company shall advance, to the extent not prohibited by law, the Expenses incurred by Indemnitee in connection with any Proceeding, and such advancement shall be made within thirty (30) days after the receipt by the Company of a statement or statements requesting such advances (including any invoices received by Indemnitee, which such invoices may be redacted as necessary to avoid the waiver of any privilege accorded by applicable law) from time to time, whether prior to or after final disposition of any Proceeding. Advances shall be unsecured and interest free. Advances shall be made without regard to Indemnitee's (i) ability to repay the expenses, (ii) ultimate entitlement to indemnification under the other provisions of this Agreement, and (iii) entitlement to and availability of insurance coverage, including advancement, payment or reimbursement of defense costs, expenses of covered loss under the provisions of any applicable insurance policy (including, without limitation, whether such advancement, payment or reimbursement is withheld, conditioned or delayed by the insurer(s)). Indemnitee shall qualify for advances upon the execution and delivery to the Company of this Agreement which shall constitute an undertaking providing that Indemnitee undertakes to the fullest extent required by law to repay the advance if and to the extent that it is ultimately determined by a court of competent jurisdiction in a final judgment, not subject to appeal, that Indemnitee is not entitled to be indemnified by the Company. No other form of undertaking shall be required. The right to advances under this paragraph shall in all events continue until final disposition of any Proceeding, including any appeal therein. Nothing in this Section 8 shall limit Indemnitee's right to advancement pursuant to Section 12(e) of this Agreement.

Section 9. Procedure for Notification and Defense of Claim.

(a) To obtain indemnification under this Agreement, Indemnitee shall submit to the Company a written request therefor specifying the basis for the claim, the amounts for which Indemnitee is seeking payment under this Agreement, and all documentation related thereto as reasonably requested by the Company.

(b) In the event that the Company shall be obligated hereunder to provide indemnification for or make any advancement of Expenses with respect to any Proceeding, the Company shall be entitled to assume the defense of such Proceeding, or any claim, issue or matter therein, with counsel approved by Indemnitee (which approval shall not be unreasonably withheld or delayed) upon the delivery to Indemnitee of written notice of the Company's election to do so. After delivery of such notice, approval of such counsel by Indemnitee and the retention of such counsel by the Company, the Company will not be liable to Indemnitee under this Agreement for any fees or expenses of separate counsel subsequently employed by or on behalf of Indemnitee with respect to the same Proceeding; provided that (i) Indemnitee shall have the right to employ separate counsel in any such Proceeding at Indemnitee's expense and (ii) if (A) the employment of separate counsel by Indemnitee has been previously authorized by the Company, (B) Indemnitee shall have reasonably concluded that there may be a conflict of interest between the Company and Indemnitee in the conduct of such defense, (C) the Company shall not continue to retain such counsel to defend such Proceeding, or (D) a Change in Control shall have occurred, then the fees and expenses actually and reasonably incurred by Indemnitee with respect to his or her separate counsel shall be Expenses hereunder.

(c) In the event that the Company does not assume the defense in a Proceeding pursuant to paragraph (b) above, then the Company will be entitled to participate in the Proceeding at its own expense.

(d) The Company shall not be liable to indemnify Indemnitee under this Agreement for any amounts paid in settlement of any Proceeding effected without its prior written consent (which consent shall not be unreasonably withheld or delayed). Without limiting the generality of the foregoing, the fact that an insurer under an applicable insurance policy delays or is unwilling to consent to such settlement or is or may be in breach of its obligations under such policy, or the fact that directors' and officers' liability insurance is otherwise unavailable or not maintained by the Company, may not be taken into account by the Company in determining whether to provide its consent. The Company shall not, without the prior written consent of Indemnitee (which consent shall not be unreasonably withheld or delayed), enter into any settlement which (i) includes an admission of fault of Indemnitee, any non-monetary remedy imposed on Indemnitee or any monetary damages for which Indemnitee is not wholly and actually indemnified hereunder or (ii) with respect to any Proceeding with respect to which Indemnitee may be or is made a party or may be otherwise entitled to seek indemnification hereunder, does not include the full release of Indemnitee from all liability in respect of such Proceeding.

Section 10. Procedure Upon Application for Indemnification.

(a) Upon written request by Indemnitee for indemnification pursuant to Section 9(a), a determination, if such determination is required by applicable law, with respect to Indemnitee's entitlement to indemnification hereunder shall be made in the specific case by one of the following methods: (x) if a Change in Control shall have occurred, by Independent Counsel in a written opinion to the Board; or (y) if a Change in Control shall not have occurred: (i) by a majority vote of the disinterested directors, even though less than a quorum; (ii) by a committee of disinterested directors designated by a majority vote of the disinterested directors, even though less than a quorum; or (iii) if there are no disinterested directors or if the disinterested directors so direct, by Independent Counsel in a written opinion to the Board. For purposes hereof, disinterested directors are those members of the Board who are not parties to the action, suit or proceeding in respect of which indemnification is sought. In the case that such determination is made by Independent Counsel, a copy of Independent Counsel's written opinion shall be delivered to Indemnitee and, if it is so determined that Indemnitee is entitled to indemnification, payment to Indemnitee shall be made within thirty (30) days after such determination. Indemnitee shall cooperate with the Independent Counsel or the Company, as applicable, in making such determination with respect to Indemnitee's entitlement to indemnification, including providing to such counsel or the Company, upon reasonable advance request, any documentation or information which is not privileged or otherwise protected from disclosure and which is reasonably available to Indemnitee and reasonably necessary to such determination. The Company shall likewise cooperate with Indemnitee and Independent Counsel, if applicable, in making such determination with respect to Indemnitee's entitlement to indemnification, including providing to such counsel and Indemnitee, upon reasonable advance request, any documentation or information which is not privileged or otherwise protected from disclosure and which is reasonably available to the Company and reasonably necessary to such determination. Any out-of-pocket costs or expenses (including reasonable attorneys' fees and disbursements) actually and reasonably incurred by Indemnitee in so cooperating with the Independent Counsel or the Company shall be borne by the Company (irrespective of the determination as to Indemnitee's entitlement to indemnification) and the Company hereby indemnifies and agrees to hold Indemnitee harmless therefrom.

(b) If the determination of entitlement to indemnification is to be made by Independent Counsel pursuant to Section 10(a), the Independent Counsel shall be selected by the Board if a Change in Control shall not have occurred or, if a Change in Control shall have occurred, by Indemnitee. Indemnitee or the Company, as the case may be, may, within ten (10) days after written notice of such selection, deliver to the Company or Indemnitee, as the case may be, a written objection to such selection; provided, however, that such objection may be asserted only on the ground that the Independent Counsel so selected does not meet the requirements of "Independent Counsel" as defined in Section 2 of this Agreement, and the objection shall set forth with particularity the factual basis of such assertion. Absent a proper and timely objection, the Person so selected shall act as Independent Counsel. If such written objection is so made and substantiated, the Independent Counsel so selected may not serve as Independent Counsel unless and until such objection is withdrawn or the Delaware Court has determined that such objection is without merit. If, within twenty (20) days after the later of (i)

submission by Indemnitee of a written request for indemnification pursuant to Section 9(a), and (ii) the final disposition of the Proceeding, including any appeal therein, no Independent Counsel shall have been selected without objection, either Indemnitee or the Company may petition the Delaware Court for resolution of any objection which shall have been made by Indemnitee or the Company to the selection of Independent Counsel and/or for the appointment as Independent Counsel of a Person selected by the court or by such other Person as the court shall designate. The Person with respect to whom all objections are so resolved or the Person so appointed shall act as Independent Counsel under Section 10(a) hereof. Upon the due commencement of any judicial proceeding or arbitration pursuant to Section 12(a) of this Agreement, Independent Counsel shall be discharged and relieved of any further responsibility in such capacity (subject to the applicable standards of professional conduct then prevailing).

(c) Notwithstanding anything to the contrary contained in this Agreement, the determination of entitlement to indemnification under this Agreement shall be made without regard to the Indemnitee's entitlement to and availability of insurance coverage, including advancement, payment or reimbursement of defense costs, expenses or covered loss under the provisions of any applicable insurance policy (including, without limitation, whether such advancement, payment or reimbursement is withheld, conditioned or delayed by the insurer(s)).

Section 11. Presumptions and Effect of Certain Proceedings.

(a) To the extent permitted by applicable law, in making a determination with respect to entitlement to indemnification hereunder, it shall be presumed that Indemnitee is entitled to indemnification under this Agreement if Indemnitee has submitted a request for indemnification in accordance with Section 9(a) of this Agreement, and the Company shall have the burden of proof and the burden of persuasion by clear and convincing evidence to overcome that presumption in connection with the making of any determination contrary to that presumption.

(b) The termination of any Proceeding or of any claim, issue or matter therein, by judgment, order, settlement or conviction, or upon a plea of guilty, nolo contendere or its equivalent, shall not (except as otherwise expressly provided in this Agreement) of itself adversely affect the right of Indemnitee to indemnification or create a presumption that Indemnitee did not act in good faith and in a manner which he or she reasonably believed to be in or not opposed to the best interests of the Company or, with respect to any criminal Proceeding, that Indemnitee had reasonable cause to believe that his or her conduct was unlawful.

(c) Indemnitee shall be deemed to have acted in good faith if Indemnitee's actions were based on the records or books of account of the Company or any other Enterprise, including financial statements, or on information supplied to Indemnitee by the directors, officers, agents or employees of the Company or any other Enterprise in the course of their duties, or on the advice of legal counsel for the Company or any other Enterprise or on information or records given or reports made to the Company or any other Enterprise by an independent certified public accountant or by an appraiser or other expert selected with reasonable care by the Company or any other Enterprise. The provisions of this Section 11(c) shall not be deemed to be exclusive or to limit in any way the other circumstances in which

Indemnitee may be deemed to have met the applicable standard of conduct set forth in this Agreement. In addition, the knowledge and/or actions, or failure to act, of any director, manager, partner, officer, employee, agent or trustee of the Company, any subsidiary of the Company, or any Enterprise shall not be imputed to Indemnitee for purposes of determining the right to indemnification under this Agreement. Whether or not the foregoing provisions of this Section 11(c) are satisfied, it shall in any event be presumed that Indemnitee has at all times acted in good faith and in a manner Indemnitee reasonably believed to be in or not opposed to the best interests of the Company. Anyone seeking to overcome this presumption shall have the burden of proof and the burden of persuasion by clear and convincing evidence.

Section 12. Remedies of Indemnitee.

(a) Subject to Section 12(f), in the event that (i) a determination is made pursuant to Section 10 of this Agreement that Indemnitee is not entitled to indemnification under this Agreement, (ii) advancement of Expenses is not timely made pursuant to Section 8 of this Agreement, (iii) no determination of entitlement to indemnification shall have been made pursuant to Section 10(a) of this Agreement within sixty (60) days after receipt by the Company of the request for indemnification for which a determination is to be made other than by Independent Counsel, (iv) payment of indemnification or reimbursement of expenses is not made pursuant to Section 5 or 6 or the last sentence of Section 10(a) of this Agreement within thirty (30) days after receipt by the Company of a written request therefor (including any invoices received by Indemnitee, which such invoices may be redacted as necessary to avoid the waiver of any privilege accorded by applicable law) or (v) payment of indemnification pursuant to Section 3 or 4 of this Agreement is not made within thirty (30) days after a determination has been made that Indemnitee is entitled to indemnification, Indemnitee shall be entitled to an adjudication by the Delaware Court of his or her entitlement to such indemnification or advancement. Alternatively, Indemnitee, at his or her option, may seek an award in arbitration to be conducted by a single arbitrator pursuant to the Commercial Arbitration Rules of the American Arbitration Association. Indemnitee shall commence such proceeding seeking an adjudication or an award in arbitration within 180 days following the date on which Indemnitee first has the right to commence such proceeding pursuant to this Section 12(a); provided, however, that the foregoing time limitation shall not apply in respect of a proceeding brought by Indemnitee to enforce his or her rights under Section 5 of this Agreement. The Company shall not oppose Indemnitee's right to seek any such adjudication or award in arbitration.

(b) In the event that a determination shall have been made pursuant to Section 10(a) of this Agreement that Indemnitee is not entitled to indemnification, any judicial proceeding or arbitration commenced pursuant to this Section 12 shall be conducted in all respects as a de novo trial, or arbitration, on the merits and Indemnitee shall not be prejudiced by reason of that adverse determination. In any judicial proceeding or arbitration commenced pursuant to this Section 12, the Company shall have the burden of proving Indemnitee is not entitled to indemnification or advancement, as the case may be.

(c) If a determination shall have been made pursuant to Section 10(a) of this Agreement that Indemnitee is entitled to indemnification, the Company shall be bound by such

determination in any judicial proceeding or arbitration commenced pursuant to this Section 12, absent (i) a misstatement by Indemnitee of a material fact, or an omission of a material fact necessary to make Indemnitee's statement not materially misleading, in connection with the request for indemnification, or (ii) a prohibition of such indemnification under applicable law.

(d) The Company shall be precluded from asserting in any judicial proceeding or arbitration commenced pursuant to this Section 12 that the procedures and presumptions of this Agreement are not valid, binding and enforceable and shall stipulate in any such court or before any such arbitrator that the Company is bound by all the provisions of this Agreement.

(e) The Company shall indemnify Indemnitee to the fullest extent permitted by law against any and all Enforcement Expenses and, if requested by Indemnitee, shall (within thirty (30) days after receipt by the Company of a written request therefor) advance, to the extent not prohibited by law, such Enforcement Expenses to Indemnitee, which are incurred by Indemnitee in connection with any action brought by Indemnitee for indemnification or advancement from the Company under this Agreement or under any directors' and officers' liability insurance policies maintained by the Company in the suit for which indemnification or advancement is being sought. Such written request for advancement shall include invoices received by Indemnitee in connection with such Enforcement Expenses but, in the case of invoices in connection with legal services, any references to legal work performed or to expenditures made that would cause Indemnitee to waive any privilege accorded by applicable law need not be included with the invoice.

(f) Notwithstanding anything in this Agreement to the contrary, no determination as to entitlement to indemnification under this Agreement shall be required to be made prior to the final disposition of the Proceeding, including any appeal therein.

Section 13. Non-exclusivity; Survival of Rights; Insurance; [Primacy of Indemnification;] Subrogation.

(a) The rights of indemnification and to receive advancement as provided by this Agreement shall not be deemed exclusive of any other rights to which Indemnitee may at any time be entitled under applicable law, the Charter, the By-laws, any agreement, a vote of stockholders or a resolution of directors, or otherwise. No amendment, alteration or repeal of this Agreement or of any provision hereof shall limit or restrict any right of Indemnitee under this Agreement in respect of any action taken or omitted by such Indemnitee in his or her Corporate Status prior to such amendment, alteration or repeal. To the extent that a change in Delaware law, whether by statute or judicial decision, permits greater indemnification or advancement than would be afforded currently under the Charter, By-laws and this Agreement, it is the intent of the parties hereto that Indemnitee shall enjoy by this Agreement the greater benefits so afforded by such change. No right or remedy herein conferred is intended to be exclusive of any other right or remedy, and every other right and remedy shall be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other right or remedy.

(b) To the extent that the Company maintains an insurance policy or policies providing liability insurance for directors, managers, partners, officers, employees, agents or trustees of the Company or of any other Enterprise, Indemnitee shall be covered by such policy or policies in accordance with its or their terms to the maximum extent of the coverage available for any such director, manager, partner, officer, employee, agent or trustee under such policy or policies. If, at the time of the receipt of a notice of a claim pursuant to the terms hereof, the Company has director and officer liability insurance in effect, the Company shall give prompt notice of the commencement of such Proceeding to the insurers in accordance with the procedures set forth in the respective policies. The Company shall thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of Indemnitee, all amounts payable as a result of such Proceeding in accordance with the terms of such policies. Upon request of Indemnitee, the Company shall also promptly provide to Indemnitee: (i) copies of all of the Company's potentially applicable directors' and officers' liability insurance policies, (ii) copies of such notices delivered to the applicable insurers, and (iii) copies of all subsequent communications and correspondence between the Company and such insurers regarding the Proceeding.

(c) [The Company hereby acknowledges that Indemnitee has certain rights to indemnification, advancement of expenses and/or insurance provided by [Name of Fund/Sponsor] and certain of [its][their] affiliates (collectively, the "Fund Indemnitors"). The Company hereby agrees (i) that it is the indemnitor of first resort (*i.e.*, its obligations to Indemnitee are primary and any obligation of the Fund Indemnitors to advance expenses or to provide indemnification for the same expenses or liabilities incurred by Indemnitee are secondary), (ii) that it shall be required to advance the full amount of expenses incurred by Indemnitee and shall be liable for the full amount of all Expenses, judgments, penalties, fines and amounts paid in settlement to the extent legally permitted and as required by the terms of this Agreement and the Charter and/or By-laws (or any other agreement between the Company and Indemnitee), without regard to any rights Indemnitee may have against the Fund Indemnitors, and (iii) that it irrevocably waives, relinquishes and releases the Fund Indemnitors from any and all claims against the Fund Indemnitors for contribution, subrogation or any other recovery of any kind in respect thereof. The Company further agrees that no advancement or payment by the Fund Indemnitors on behalf of Indemnitee with respect to any claim for which Indemnitee has sought indemnification from the Company shall affect the foregoing and the Fund Indemnitors shall have a right of contribution and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery of Indemnitee against the Company. The Company and Indemnitee agree that the Fund Indemnitors are express third party beneficiaries of the terms of this Section 13(c).]

(d) [Except as provided in paragraph (c) above,] [I/i]n the event of any payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the rights of recovery of Indemnitee [(other than against the Fund Indemnitors)], who shall execute all papers required and take all action necessary to secure such rights, including execution of such documents as are necessary to enable the Company to bring suit to enforce such rights.

(e) [Except as provided in paragraph (c) above,] [T/t]he Company's obligation to provide indemnification or advancement hereunder to Indemnitee who is or was serving at the request of the Company as a director, manager, partner, officer, employee, agent or trustee of any other Enterprise shall be reduced by any amount Indemnitee has actually received as indemnification or advancement from such other Enterprise.

Section 14. Duration of Agreement. This Agreement shall continue until and terminate upon the later of: (a) ten (10) years after the date that Indemnitee shall have ceased to serve as a director of the Company or (b) one (1) year after the final termination of any Proceeding, including any appeal, then pending in respect of which Indemnitee is granted rights of indemnification or advancement hereunder and of any proceeding commenced by Indemnitee pursuant to Section 12 of this Agreement relating thereto. This Agreement shall be binding upon the Company and its successors and assigns and shall inure to the benefit of Indemnitee and his or her heirs, executors and administrators. The Company shall require and cause any successor (whether direct or indirect by purchase, merger, consolidation or otherwise) to all, substantially all or a substantial part, of the business and/or assets of the Company, by written agreement in form and substance satisfactory to Indemnitee, expressly to assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform if no such succession had taken place.

Section 15. Severability. If any provision or provisions of this Agreement shall be held to be invalid, illegal or unenforceable for any reason whatsoever: (a) the validity, legality and enforceability of the remaining provisions of this Agreement (including, without limitation, each portion of any section of this Agreement containing any such provision held to be invalid, illegal or unenforceable, that is not itself invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby and shall remain enforceable to the fullest extent permitted by law; (b) such provision or provisions shall be deemed reformed to the extent necessary to conform to applicable law and to give the maximum effect to the intent of the parties hereto; and (c) to the fullest extent possible, the provisions of this Agreement (including, without limitation, each portion of any section of this Agreement containing any such provision held to be invalid, illegal or unenforceable, that is not itself invalid, illegal or unenforceable) shall be construed so as to give effect to the intent manifested thereby.

Section 16. Enforcement.

(a) The Company expressly confirms and agrees that it has entered into this Agreement and assumed the obligations imposed on it hereby in order to induce Indemnitee to serve or continue to serve as a director of the Company, and the Company acknowledges that Indemnitee is relying upon this Agreement in serving as a director of the Company.

(b) This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter hereof and supersedes all prior agreements and understandings, oral, written and implied, between the parties hereto with respect to the subject matter hereof; provided, however, that this Agreement is a supplement to and in furtherance of the Charter, the By-laws and applicable law, and shall not be deemed a substitute therefor, nor to diminish or abrogate any rights of Indemnitee thereunder.

Section 17. Modification and Waiver. No supplement, modification or amendment, or waiver of any provision, of this Agreement shall be binding unless executed in writing by the parties thereto. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provisions of this Agreement nor shall any waiver constitute a continuing waiver. No supplement, modification or amendment of this Agreement or of any provision hereof shall limit or restrict any right of Indemnitee under this Agreement in respect of any action taken or omitted by such Indemnitee prior to such supplement, modification or amendment.

Section 18. Notice by Indemnitee. Indemnitee agrees promptly to notify the Company in writing upon being served with any summons, citation, subpoena, complaint, indictment, information or other document relating to any Proceeding or matter which may be subject to indemnification, reimbursement or advancement as provided hereunder. The failure of Indemnitee to so notify the Company or any delay in notification shall not relieve the Company of any obligation which it may have to Indemnitee under this Agreement or otherwise, unless, and then only to the extent that, the Company did not otherwise learn of the Proceeding and such delay is materially prejudicial to the Company's ability to defend such Proceeding or matter; and, provided, further, that notice will be deemed to have been given without any action on the part of Indemnitee in the event the Company is a party to the same Proceeding.

Section 19. Notices. All notices, requests, demands and other communications under this Agreement shall be in writing and shall be deemed to have been duly given if (i) delivered by hand and receipted for by the party to whom said notice or other communication shall have been directed, (ii) mailed by certified or registered mail with postage prepaid, on the third business day after the date on which it is so mailed, (iii) mailed by reputable overnight courier and receipted for by the party to whom said notice or other communication shall have been directed or (iv) sent by facsimile transmission, with receipt of oral confirmation that such transmission has been received:

(a) If to Indemnitee, at such address as Indemnitee shall provide to the Company.

(b) If to the Company to:

Prime Medicine, Inc.
21 Erie Street
Cambridge, MA 02139
Attention: Chief Executive Officer

or to any other address as may have been furnished to Indemnitee by the Company.

Section 20. Contribution. To the fullest extent permissible under applicable law, if the indemnification provided for in this Agreement is unavailable to Indemnitee for any reason whatsoever, the Company, in lieu of indemnifying Indemnitee, shall contribute to the amount incurred by Indemnitee, whether for judgments, fines, penalties, excise taxes, amounts paid or to

be paid in settlement and/or for Expenses, in connection with any Proceeding in such proportion as is deemed fair and reasonable in light of all of the circumstances in order to reflect (i) the relative benefits received by the Company and Indemnitee in connection with the event(s) and/or transaction(s) giving rise to such Proceeding; and/or (ii) the relative fault of the Company (and its directors, officers, employees and agents) and Indemnitee in connection with such event(s) and/or transactions.

Section 21. Internal Revenue Code Section 409A. The Company intends for this Agreement to comply with the Indemnification exception under Section 1.409A-1(b)(10) of the regulations promulgated under the Internal Revenue Code of 1986, as amended (the "Code"), which provides that indemnification of, or the purchase of an insurance policy providing for payments of, all or part of the expenses incurred or damages paid or payable by Indemnitee with respect to a bona fide claim against Indemnitee or the Company do not provide for a deferral of compensation, subject to Section 409A of the Code, where such claim is based on actions or failures to act by Indemnitee in his or her capacity as a service provider of the Company. The parties intend that this Agreement be interpreted and construed with such intent.

Section 22. Applicable Law and Consent to Jurisdiction. This Agreement and the legal relations among the parties shall be governed by, and construed and enforced in accordance with, the laws of the State of Delaware, without regard to its conflict of laws rules. Except with respect to any arbitration commenced by Indemnitee pursuant to Section 12(a) of this Agreement, the Company and Indemnitee hereby irrevocably and unconditionally (i) agree that any action or proceeding arising out of or in connection with this Agreement shall be brought only in the Delaware Court, and not in any other state or federal court in the United States of America or any court in any other country, (ii) consent to submit to the exclusive jurisdiction of the Delaware Court for purposes of any action or proceeding arising out of or in connection with this Agreement, (iii) consent to service of process at the address set forth in Section 19 of this Agreement with the same legal force and validity as if served upon such party personally within the State of Delaware, (iv) waive any objection to the laying of venue of any such action or proceeding in the Delaware Court, and (v) waive, and agree not to plead or to make, any claim that any such action or proceeding brought in the Delaware Court has been brought in an improper or inconvenient forum.

Section 23. Headings. The headings of the paragraphs of this Agreement are inserted for convenience only and shall not be deemed to constitute part of this Agreement or to affect the construction thereof.

Section 24. Identical Counterparts. This Agreement may be executed in one or more counterparts, each of which shall for all purposes be deemed to be an original but all of which together shall constitute one and the same Agreement. Only one such counterpart signed by the party against whom enforceability is sought needs to be produced to evidence the existence of this Agreement.

Section 25. Monetary Damages Insufficient/Specific Enforcement. The Company and Indemnitee agree that a monetary remedy for breach of this Agreement may be inadequate, impracticable and difficult of proof, and further agree that such breach may cause Indemnitee

irreparable harm. Accordingly, the parties hereto agree that Indemnitee may enforce this Agreement by seeking injunctive relief and/or specific performance hereof, without any necessity of showing actual damage or irreparable harm (having agreed that actual and irreparable harm will result in not forcing the Company to specifically perform its obligations pursuant to this Agreement) and that by seeking injunctive relief and/or specific performance, Indemnitee shall not be precluded from seeking or obtaining any other relief to which he may be entitled. The Company and Indemnitee further agree that Indemnitee shall be entitled to such specific performance and injunctive relief, including temporary restraining orders, preliminary injunctions and permanent injunctions, without the necessity of posting bonds or other undertaking in connection therewith. The Company acknowledges that in the absence of a waiver, a bond or undertaking may be required of Indemnitee by the Court, and the Company hereby waives any such requirement of a bond or undertaking.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties have caused this Agreement to be signed as of the day and year first above written.

PRIME MEDICINE, INC.

By: _____
Name:
Title:

_____
[Name of Indemnitee]

AMENDED & RESTATED EMPLOYMENT AGREEMENT

This Amended and Restated Employment Agreement (this "Agreement") is made between Prime Medicine, Inc., a Delaware corporation (the "Company"), and Keith M. Gottesdiener, M.D. (the "Executive") to amend and restate that certain employment agreement between the Company and the Executive dated as of April 7, 2022 (the "2022 Prior Agreement"). This Agreement amends and restates the 2022 Prior Agreement and is effective upon the execution of the parties (the "Effective Date"). Except with respect to the Restrictive Covenants Agreement and the Equity Documents (each as defined below) and subject to Section 11, this Agreement supersedes in all respects all prior agreements between the Executive and the Company regarding the subject matter herein, including without limitation (i) the employment agreement between the Executive and the Company dated as of June 24, 2020 (the "Prior Agreement"), and (ii) any other offer letter, employment agreement or severance agreement.

WHEREAS, the Company desires to continue to employ the Executive and the Executive desires to continue to be employed by the Company on the new terms and conditions contained herein.

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Employment.

(a) Term. The Company shall employ the Executive and the Executive shall be employed by the Company pursuant to this Agreement commencing as of the Effective Date and continuing until such employment is terminated in accordance with the provisions hereof (the "Term"). The Executive's employment with the Company shall continue to be "at will," meaning that the Executive's employment may be terminated by the Company or the Executive at any time for any or no reason, subject to the terms of this Agreement.

(b) Position and Duties. The Executive shall serve as the President and Chief Executive Officer ("CEO") of the Company and shall report solely and directly to the Board of Directors of the Company (the "Board"). In addition, the Executive shall serve as a member of the Board for so long as he remains the CEO of the Company, subject to any required stockholder vote, provided that the Executive shall be deemed to have resigned from the Board and from any related positions upon ceasing to serve as CEO for any reason. This is a full-time position, and the Executive shall not engage in any other employment, consulting or other business activities (whether full-time or part-time), except as expressly authorized in writing by the Board; provided, however, that the Executive may continue to serve on the board of directors for Intercept Pharmaceuticals, Inc. and Cardurion Pharmaceuticals, Inc. and may continue to serve as a scientific advisor to Takeda Pharmaceutical Company Limited and Samsara BioCapital LLC. Notwithstanding the foregoing, the Executive may engage in professional and educational organizations, religious, charitable and other community activities (as well as manage the Executive's personal investments) so long as any outside activities do not interfere or conflict with the Executive's obligations to the Company. Any compensation received by the

Executive for outside board service or other activities shall belong solely to the Executive, and the Company shall have no right to such compensation.

(c) The Executive's primary work location will continue to be at the Company's office, which is presently located in Cambridge, Massachusetts, provided that the Executive may be required to travel for business, consistent with the Company's business needs.

2. Compensation and Related Matters.

(a) Base Salary. The Company will pay the Executive a base salary at the rate of $546,351 per year, payable in accordance with the Company's standard payroll schedule for its executive officers and subject to applicable deductions and withholdings. The Executive's base salary will be subject to periodic review and adjustments (for increase, but not decrease) by the Board or the Compensation Committee of the Board (the "Compensation Committee"). The base salary in effect at any given time is referred to herein as the "Base Salary."

(b) Annual Bonus. The Executive will be eligible to receive an annual target performance bonus of 55% of the Executive's Base Salary. The annual target performance bonus in effect at any given time is referred to herein as "Target Bonus." The actual bonus amount is discretionary. To earn an annual bonus, the Executive must be employed by the Company as of the payment date of such bonus, except as otherwise provided herein; provided that if the Executive is terminated by the Company without Cause or the Executive resigns for Good Reason (as such terms are defined in Section 3), in either event on or after January 1 but before the date bonuses for the prior year are paid to the Company's other executives (the "Bonus Payment Date"), the bonus amount (if any) that the Executive would have been paid if the Executive had remained employed through the Bonus Payment Date shall be paid to the Executive on the Bonus Payment Date if the Executive enters into, does not revoke and complies with the Separation Agreement (as defined below). Any annual bonus will be paid no later than March 15th of the calendar year following the calendar year to which such bonus relates.

(c) Expenses. The Company will promptly reimburse the Executive for all reasonable business expenses incurred by the Executive in performing services hereunder, in accordance with the policies and procedures then in effect and established by the Company for its executives.

(d) Commuting Costs. For three (3) years from the commencement of the Executive's employment with the Company, the Company shall reimburse the Executive for all reasonable and properly documented commuting expenses incurred by him in connection with his commute between Cambridge, Massachusetts and New York, New York. All required payments are subject to legally required tax withholdings.

(e) Benefits/Paid Time Off. The Executive will be eligible, subject to the terms of the applicable plans and programs, to participate in the employee benefits and insurance programs and be eligible for paid time off generally made available to the Company's full-time executive employees. The Company reserves the right to modify, amend or cancel any of its benefits plans or programs at any time. The Executive will be entitled to indemnification by the

Company in accordance with the Company's bylaws and, to the extent procured by the Company, any applicable directors and officers ("D&O") liability insurance policy.

(f) Equity. The equity awards held by the Executive shall continue to be governed by the terms and conditions of the Company's applicable equity incentive plan(s) and the applicable award agreement(s) (collectively, the "Equity Documents"); provided, however, and notwithstanding anything to the contrary in any applicable option agreement or other stock-based award agreement:

(i) in the event that the Executive's employment is terminated by the Company without Cause or by the Executive for Good Reason, the Company will negotiate in good faith to establish a non-exclusive limited consulting relationship with the Executive for a period of up to one year after the Date of Termination (as defined below), provided that, for the avoidance of doubt, in no event will the Executive be eligible to receive any cash compensation from the Company during such consulting relationship except as set forth in and subject to the terms of Sections 5 or 6 of this Agreement; provided further, that any such consulting relationship shall be subject to a consulting agreement that will contain, among other provisions, the Company's then current standard general release of claims against the Company and all related persons and entities and, in the Company's sole discretion, a one year post-employment noncompetition agreement, and shall include a seven (7) business day revocation period;

(ii) in the event that the Executive's employment is terminated by the Company without Cause or by the Executive for Good Reason, in each case, during the Change in Control Period (as defined below), all of the then-outstanding and unvested portion of the Executive's stock options and other stock-based awards that (A) are subject solely to time-based vesting or (B) were granted to the Executive prior to the Effective Date and are subject to performance-based vesting (the "Performance-Based Awards") shall become fully vested and exercisable or nonforfeitable immediately as of the Date of Termination or, if later, the Change in Control (as defined below), with any such Performance-Based Awards vesting at target. For the avoidance of doubt, (I) the forfeiture provisions upon a Change in Control described in the Plan (as defined below) shall not apply to the Executive's equity awards that are subject to acceleration pursuant to this subsection, and (II) any stock options or other stock-based awards that are subject to performance-based vesting and that are granted to the Executive after the Effective Date shall not be subject to acceleration pursuant to this subsection, and the vesting and any acceleration of vesting of such awards (if any) will be addressed in the applicable award agreements.

3. Termination. The Executive's employment hereunder may be terminated without any breach of this Agreement under the following circumstances:

(a) Death. The Executive's employment hereunder shall terminate upon death.

(b) Disability. The Company may terminate the Executive's employment if the Executive is disabled and unable to perform or expected to be unable to perform the essential functions of the Executive's then existing position or positions under this Agreement with or without reasonable accommodation for a period of 180 days (which need not be consecutive) in any 12-month period. If any question shall arise as to whether during any period the Executive is disabled so as to be unable to perform the essential functions of the Executive's then existing position or positions with or without reasonable accommodation, the Executive may, and at the request of the Company shall, submit to the Company a certification in reasonable detail by a physician selected by the Company to whom the Executive or the Executive's guardian has no reasonable objection as to whether the Executive is so disabled or how long such disability is expected to continue, and such certification shall for the purposes of this Agreement be conclusive of the issue. The Executive shall cooperate with any reasonable request of the physician in connection with such certification. If such question shall arise and the Executive shall fail to submit such certification, the Company's determination of such issue shall be binding on the Executive. Nothing in this Section 3(b) shall be construed to waive the Executive's rights, if any, under existing law including, without limitation, the Family and Medical Leave Act of 1993, 29 U.S.C. §2601 et seq. and the Americans with Disabilities Act, 42 U.S.C. §12101 et seq.

(c) Termination by the Company for Cause. The Company may terminate the Executive's employment hereunder for Cause. For purposes of this Agreement, "Cause" shall mean any of the following:

(i) the Executive's dishonest statements or acts with respect to the Company or any affiliate of the Company, or any current or prospective customers, suppliers, vendors or other third parties with which such entity does business that results in or is reasonably anticipated to result in material harm to the Company;

(ii) the Executive's commission of (A) a felony or (B) any misdemeanor involving moral turpitude, deceit, dishonesty or fraud;

(iii) the Executive's refusal to perform the Executive's assigned duties and responsibilities, which refusal to perform continues, in the reasonable judgment of the Board, for 30 days after written notice given to the Executive by the Board describing such refusal in reasonable detail;

(iv) the Executive's gross negligence, willful misconduct or insubordination with respect to the Company that results in or is reasonably anticipated to result in harm to the Company;

(v) the Executive's material violation of any material provision of any written employment policies or any agreement(s) between the Executive and the Company, including any agreement relating to noncompetition, nonsolicitation, nondisclosure and/or assignment of inventions; or

(vi) the Executive's failure to cooperate with a bona fide internal investigation or an investigation by regulatory or law enforcement authorities, after being instructed by the Company to cooperate, or the willful destruction or failure to preserve documents or other materials known to be relevant to such investigation or the inducement of others to fail to cooperate or to produce documents or other materials in connection with such investigation.

If the alleged act or omission giving rise to Cause is capable of cure, the Company shall provide the Executive with written notice referencing the occurrence of such alleged act or omission and the Executive shall have a period of up to 30 days in which to cure such alleged act or omission. If the Executive cures the alleged act or omission to the reasonable satisfaction of the Board, Cause shall not be deemed to have occurred.

(d) Termination by the Company without Cause. The Company may terminate the Executive's employment hereunder at any time without Cause. Any termination by the Company of the Executive's employment under this Agreement which does not constitute a termination for Cause under Section 3(c) and does not result from the death or disability of the Executive under Section 3(a) or (b) shall be deemed a termination without Cause.

(e) Termination by the Executive. The Executive may terminate employment hereunder at any time for any reason, including but not limited to, Good Reason. For purposes of this Agreement, "Good Reason" shall mean that the Executive has complied with the Good Reason Process (hereinafter defined) following the occurrence of any of the following events without the Executive's express written consent (each, a "Good Reason Condition"):

(i) a material diminution in the Executive's position or title, responsibilities (including reporting, provided, however, that nothing in this Agreement shall prevent the Board from appointing a Chairman of the Board other than the Executive), authority or duties (including the Executive's removal from the Board or the failure to nominate the Executive to the Board), except that a suspension of the Executive's responsibilities, authority and/or duties for the Company during any portion of a bona fide internal investigation or an investigation by regulatory or law enforcement authorities shall not be a Good Reason Condition;

(ii) a material diminution in the Executive's Base Salary or Target Bonus percentage except for across-the-board salary or Target Bonus percentage reductions based on the Company's financial performance similarly affecting all or substantially all senior management employees of the Company;

(iii) a change of more than 50 miles in the geographic location at which the Executive is required to provide services to the Company; or

(iv) a material breach of this Agreement or any equity award by the Company.

The "Good Reason Process" shall mean that:

(i) the Executive reasonably determines that a Good Reason Condition has occurred;

(ii) the Executive notifies the Company in writing of the occurrence of the Good Reason Condition within 30 days of the Executive's knowledge of such condition;

(iii) the Executive cooperates in good faith with the Company's efforts, for a period of not less than 30 days following such notice (the "Cure Period"), to remedy the Good Reason Condition;

(iv) notwithstanding such efforts, the Good Reason Condition continues to exist at the end of the Cure Period; and

(v) the Executive terminates employment within 30 days after the end of the Cure Period.

If the Company cures the Good Reason Condition during the Cure Period, Good Reason shall be deemed not to have occurred.

4. Matters related to Termination.

(a) Notice of Termination. Except for termination as specified in Section 3(a), any termination of the Executive's employment by the Company or any such termination by the Executive shall be communicated by written Notice of Termination to the other party hereto. For purposes of this Agreement, a "Notice of Termination" shall mean a notice which shall indicate the specific termination provision in this Agreement relied upon.

(b) Date of Termination. "Date of Termination" shall mean: (i) if the Executive's employment is terminated by death, the date of death; (ii) if the Executive's employment is terminated on account of disability under Section 3(b) or by the Company for Cause under Section 3(c), the date on which Notice of Termination is given; (iii) if the Executive's employment is terminated by the Company without Cause under Section 3(d), the date on which a Notice of Termination is given or the date otherwise specified by the Company in the Notice of Termination; (iv) if the Executive's employment is terminated by the Executive under Section 3(e) other than for Good Reason, 30 days after the date on which a Notice of Termination is given, and (v) if the Executive's employment is terminated by the Executive under Section 3(e) for Good Reason, the date on which a Notice of Termination is given after the end of the Cure Period. Notwithstanding the foregoing, in the event that the Executive gives a Notice of Termination to the Company, the Company may unilaterally accelerate the Date of Termination and such acceleration shall not result in a termination by the Company for purposes of this Agreement.

(c) Accrued Obligations. If the Executive's employment with the Company is terminated for any reason, the Company shall pay or provide to the Executive (or to the Executive's authorized representative or estate) (i) any Base Salary earned through the Date of Termination; (ii) unpaid expense reimbursements (subject to, and in accordance with, Section 2(c) of this Agreement); and (iii) any vested benefits the Executive may have under any employee benefit plan of the Company through the Date of Termination, which vested benefits shall be paid and/or provided in accordance with the terms of such employee benefit plans. The payments and benefits due to the Executive under this Section 4(c) are collectively referred to herein as the "Accrued Obligations."

(d) Resignation of All Other Positions. To the extent applicable, the Executive shall be deemed to have resigned from all officer and board member positions that the Executive holds with the Company or any of its respective subsidiaries and affiliates upon the termination of the Executive's employment for any reason. The Executive shall execute any documents in reasonable form as may be requested to confirm or effectuate any such resignations.

5. Severance Pay and Benefits Upon Termination by the Company without Cause or by the Executive for Good Reason Outside the Change in Control Period. If the Executive's employment is terminated by the Company without Cause as provided in Section 3(d), or the Executive terminates employment for Good Reason as provided in Section 3(e), in each case outside of the Change in Control Period, then, in addition to the Accrued Obligations, and subject to (i) the Executive signing a separation agreement and release in a form and manner reasonably satisfactory to the Company, which shall include, without limitation, the Company's then current standard general release of claims against the Company and all related persons and entities that shall not release the Executive's rights under this Agreement, a reaffirmation of the Executive's Continuing Obligations (as defined below), and, in the Company's sole discretion, a one year post-employment noncompetition agreement, and shall provide that if the Executive breaches in any material respect the Continuing Obligations, all payments of the Severance Amount (as defined below) shall immediately cease (the "Separation Agreement"), and (ii) the Separation Agreement becoming irrevocable, all within 60 days after the Date of Termination (or such shorter period as set forth in the Separation Agreement), which shall include a seven (7) business day revocation period:

(a) the Company shall pay the Executive an amount equal to the sum of (i) 12 months of the Executive's then-current Base Salary plus (ii) one times the Executive's Target Bonus for the then-current year (the "Severance Amount"); and

(b) subject to the Executive's copayment of premium amounts at the applicable active employees' rate and the Executive's proper election to receive benefits under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"), the Company shall pay to the group health plan provider or the COBRA provider a monthly payment equal to the monthly employer contribution that the Company would have made to provide health insurance to the Executive if the Executive had remained employed by the Company until the earliest of (A) the 12 month anniversary of the Date of Termination; (B) the date that the

Executive becomes eligible for group medical plan benefits under any other employer's group medical plan; or (C) the cessation of the Executive's health continuation rights under COBRA; provided, however, that if the Company determines that it cannot pay such amounts to the group health plan provider or the COBRA provider (if applicable) without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then the Company shall convert such payments to payroll payments directly to the Executive for the time period specified above. Such payments to the Executive shall be subject to tax-related deductions and withholdings and paid on the Company's regular payroll dates.

The amounts payable under Section 5, to the extent taxable, shall be paid out in substantially equal installments in accordance with the Company's payroll practice over 12 months commencing within 60 days after the Date of Termination; provided, however, that if the 60-day period begins in one calendar year and ends in a second calendar year, such payments, to the extent they qualify as "non-qualified deferred compensation" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended (the "Code"), shall begin to be paid in the second calendar year by the last day of such 60-day period; provided, further, that the initial payment shall include a catch-up payment to cover amounts retroactive to the day immediately following the Date of Termination. Each payment pursuant to this Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2). For the avoidance of doubt, the Executive shall not be obligated to seek other employment or take any other action by way of mitigation of the amounts payable to the Executive under this Section 5, subject to the terms of this Agreement.

6. Severance Pay and Benefits Upon Termination by the Company without Cause or by the Executive for Good Reason during the Change in Control Period. The provisions of this Section 6 shall apply in lieu of, and expressly supersede, the provisions of Section 5 if (i) the Executive's employment is terminated either (a) by the Company without Cause as provided in Section 3(d), or (b) by the Executive for Good Reason as provided in Section 3(e), and (ii) the Date of Termination occurs during the Change in Control Period. These provisions shall terminate and be of no further force or effect after the Change in Control Period. For the avoidance of doubt, (i) in no event will the Executive be entitled to severance benefits under both Section 5 and Section 6 of this Agreement, and (ii) if the Company has commenced providing severance pay and benefits to the Executive under Section 5 prior to the date that the Executive becomes eligible to receive severance pay and benefits under this Section 6, the severance pay and benefits previously provided to the Executive under Section 5 shall reduce the severance pay and benefits to be provided under this Section 6.

(a) If the Executive's employment is terminated by the Company without Cause as provided in Section 3(d) or the Executive terminates employment for Good Reason as provided in Section 3(e) and in each case the Date of Termination occurs during the Change in Control Period, then, in addition to the Accrued Obligations, and subject to the signing of the Separation Agreement by the Executive and the Separation Agreement becoming fully effective,

all within the time frame set forth in the Separation Agreement but in no event more than 60 days after the Date of Termination:

(i) the Company shall pay the Executive a lump sum in cash in an amount equal to the sum of (A) 18 months of the Executive's then-current Base Salary (or the Executive's Base Salary in effect immediately prior to the Change in Control, if higher) plus (B) 1.5 times the Executive's Target Bonus for the then-current year (or the Executive's Target Bonus in effect immediately prior to the Change in Control, if higher) (the "Change in Control Payment"); and

(ii) subject to the Executive's copayment of premium amounts at the applicable active employees' rate and the Executive's proper election to receive benefits under COBRA, the Company shall pay to the group health plan provider or the COBRA provider a monthly payment equal to the monthly employer contribution that the Company would have made to provide health insurance to the Executive if the Executive had remained employed by the Company until the earliest of (A) the 18 month anniversary of the Date of Termination; (B) the date that the Executive becomes eligible for group medical plan benefits under any other employer's group medical plan; or (C) the cessation of the Executive's health continuation rights under COBRA; provided, however, that if the Company determines that it cannot pay such amounts to the group health plan provider or the COBRA provider (if applicable) without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then the Company shall convert such payments to payroll payments directly to the Executive for the time period specified above. Such payments to the Executive shall be subject to tax-related deductions and withholdings and paid on the Company's regular payroll dates.

The amounts payable under this Section 6(a), to the extent taxable, shall be paid or commence to be paid within 60 days after the Date of Termination or, if later, the Change in Control; provided, however, that if the 60-day period begins in one calendar year and ends in a second calendar year, such payments to the extent they qualify as "non-qualified deferred compensation" within the meaning of Section 409A of the Code, shall be paid or commence to be paid in the second calendar year by the last day of such 60-day period. For the avoidance of doubt, the Executive shall not be obligated to seek other employment or take any other action by way of mitigation of the amounts payable to the Executive under this Section 6, subject to the terms of this Agreement.

(b) Additional Limitation.

(i) Anything in this Agreement to the contrary notwithstanding, in the event that the amount of any compensation, payment or distribution by the Company to or for the benefit of the Executive, whether paid or payable or distributed or distributable pursuant to the terms of this Agreement or otherwise, calculated in a manner consistent with Section 280G of the Code, and the applicable regulations thereunder (the "Aggregate Payments"), would be subject to the excise tax imposed by Section 4999 of the Code, then the Aggregate Payments shall be reduced (but not below zero) so that the

sum of all of the Aggregate Payments shall be $1.00 less than the amount at which the Executive becomes subject to the excise tax imposed by Section 4999 of the Code; provided that such reduction shall only occur if it would result in the Executive receiving a higher After Tax Amount (as defined below) than the Executive would receive if the Aggregate Payments were not subject to such reduction. In such event, the Aggregate Payments shall be reduced in the following order, in each case, in reverse chronological order beginning with the Aggregate Payments that are to be paid the furthest in time from consummation of the transaction that is subject to Section 280G of the Code: (1) cash payments not subject to Section 409A of the Code; (2) cash payments subject to Section 409A of the Code; (3) equity-based payments and acceleration; and (4) non-cash forms of benefits; provided that in the case of all the foregoing Aggregate Payments all amounts or payments that are not subject to calculation under Treas. Reg. §1.280G-1, Q&A-24(b) or (c) shall be reduced before any amounts that are subject to calculation under Treas. Reg. §1.280G-1, Q&A-24(b) or (c).

(ii) For purposes of this Section 6(b), the "After Tax Amount" means the amount of the Aggregate Payments less all federal, state, and local income, excise and employment taxes imposed on the Executive as a result of the Executive's receipt of the Aggregate Payments. For purposes of determining the After Tax Amount, the Executive shall be deemed to pay federal income taxes at the highest marginal rate of federal income taxation applicable to individuals for the calendar year in which the determination is to be made, and state and local income taxes at the highest marginal rates of individual taxation in each applicable state and locality, net of the maximum reduction in federal income taxes which could be obtained from deduction of such state and local taxes.

(iii) The determination as to whether a reduction in the Aggregate Payments shall be made pursuant to Section 6(b)(i) shall be made by a nationally recognized accounting firm selected by the Company (the "Accounting Firm"), which shall provide detailed supporting calculations both to the Company and the Executive within 15 business days of the Date of Termination, if applicable, or at such earlier time as is reasonably requested by the Company or the Executive. Any determination by the Accounting Firm shall be binding upon the Company and the Executive.

(c) Definitions. For purposes of this Agreement:

(i) "Change in Control" shall mean a "Sale Event" as defined in the Company's 2022 Stock Option and Incentive Plan, as the same may be amended from time to time (the "Plan").

(ii) "Change in Control Period" shall mean the period beginning on the date that is three (3) months prior to the date of the consummation of the first event constituting a Change in Control (the "Closing Date") and ending on the 12 month anniversary of the Closing Date.

7. Section 409A.

(a) Anything in this Agreement to the contrary notwithstanding, if at the time of the Executive's separation from service within the meaning of Section 409A of the Code, the Company determines that the Executive is a "specified employee" within the meaning of Section 409A(a)(2)(B)(i) of the Code, then to the extent any payment or benefit that the Executive becomes entitled to under this Agreement or otherwise on account of the Executive's separation from service would be considered deferred compensation otherwise subject to the 20 percent additional tax imposed pursuant to Section 409A(a) of the Code as a result of the application of Section 409A(a)(2)(B)(i) of the Code, such payment shall not be payable and such benefit shall not be provided until the date that is the earlier of (A) six months and one day after the Executive's separation from service, or (B) the Executive's death. If any such delayed cash payment is otherwise payable on an installment basis, the first payment shall include a catch-up payment covering amounts that would otherwise have been paid during the six-month period but for the application of this provision, and the balance of the installments shall be payable in accordance with their original schedule.

(b) All in-kind benefits provided and expenses eligible for reimbursement under this Agreement shall be provided by the Company or incurred by the Executive during the time periods set forth in this Agreement. All reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred. The amount of in-kind benefits provided or reimbursable expenses incurred in one taxable year shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other taxable year (except for any lifetime or other aggregate limitation applicable to medical expenses). Such right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit.

(c) To the extent that any payment or benefit described in this Agreement constitutes "non-qualified deferred compensation" under Section 409A of the Code, and to the extent that such payment or benefit is payable upon the Executive's termination of employment, then such payments or benefits shall be payable only upon the Executive's "separation from service." The determination of whether and when a separation from service has occurred shall be made in accordance with the presumptions set forth in Treasury Regulation Section 1.409A-1(h).

(d) The parties intend that this Agreement will be administered in accordance with Section 409A of the Code. To the extent that any provision of this Agreement is ambiguous as to its compliance with Section 409A of the Code, the provision shall be read in such a manner so that all payments hereunder comply with or are exempt from Section 409A of the Code. Each payment pursuant to this Agreement or the Restrictive Covenants Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2). The parties agree that this Agreement may be amended, as reasonably requested by either party, and as may be necessary to fully comply with Section 409A of the Code and all related rules and

regulations in order to preserve the payments and benefits provided hereunder without additional cost to either party.

(e) The Company makes no representation or warranty and shall have no liability to the Executive or any other person if any provisions of this Agreement are determined to constitute deferred compensation subject to Section 409A of the Code but do not satisfy an exemption from, or the conditions of, such Section.

8. Continuing Obligations.

(a) Restrictive Covenants Agreement. As a condition of employment, and in exchange for the benefits set forth in this Agreement, to which the Executive was not previously entitled, the Executive is required to enter into the Amendment to the Employee Confidentiality, Assignment and Nonsolicitation Agreement attached hereto as Exhibit A, which adds a post-employment noncompetition agreement to the Employee Confidentiality, Assignment and Nonsolicitation Agreement between the Executive and the Company entered into in connection with the commencement of the Executive's employment (as amended, the "Restrictive Covenants Agreement"). For purposes of this Agreement, the obligations in this Section 8 and those that arise in the Restrictive Covenants Agreement and any other agreement relating to confidentiality, assignment of inventions, or other restrictive covenants shall collectively be referred to as the "Continuing Obligations." For the avoidance of doubt, all restrictive covenants obligations are supplemental to one another, and in the event of any conflict between restrictive covenants obligations, the most restrictive provision that is enforceable shall govern. In the event the Executive is entitled to both payments pursuant to the Restrictive Covenants Agreement and severance payments pursuant to Section 5 or Section 6 of this Agreement, then the severance payments pursuant to Section 5 or Section 6 of this Agreement received in any calendar year will be reduced by the amount the Executive is paid in the same such calendar year pursuant to the Restrictive Covenants Agreement.

(b) Third-Party Agreements and Rights. The Executive represents to the Company that the Executive's execution of this Agreement, the Executive's employment with the Company and the performance of the Executive's proposed duties for the Company will not violate any obligations the Executive may have to any previous employer or other party. In the Executive's work for the Company, the Executive will not disclose or make use of any information in violation of any agreements with or rights of any such previous employer or other party, and the Executive will not bring to the premises of the Company any copies or other tangible embodiments of non-public information belonging to or obtained from any such previous employment or other party.

(c) Litigation and Regulatory Cooperation. During and for 36 months after the Executive's employment, the Executive shall cooperate reasonably with the Company in (i) the defense or prosecution of any claims or actions now in existence or which may be brought in the future against or on behalf of the Company which relate to events or occurrences that transpired while the Executive was employed by the Company, and (ii) the investigation, whether internal or external, of any matters about which the Company believes the Executive may have knowledge or information. The Executive's reasonable cooperation in connection with

such claims, actions or investigations shall include, but not be limited to, being available to meet with counsel to answer questions or to prepare for discovery or trial and to act as a witness on behalf of the Company at mutually convenient times. During and after the Executive's employment, the Executive also shall cooperate reasonably with the Company in connection with any investigation or review of any federal, state or local regulatory authority as any such investigation or review relates to events or occurrences that transpired while the Executive was employed by the Company. The Company shall reimburse the Executive for any reasonable out-of-pocket expenses incurred in connection with the Executive's performance of obligations pursuant to this Section 8(c).

(d) Relief. The Executive agrees that it would be difficult to measure any damages caused to the Company which might result from any breach by the Executive of the Continuing Obligations, and that in any event money damages would be an inadequate remedy for any such breach. Accordingly, the Executive agrees that if the Executive breaches, or proposes to breach, any portion of the Continuing Obligations, the Company shall be entitled, in addition to all other remedies that it may have, to an injunction or other appropriate equitable relief to restrain any such breach without showing or proving any actual damage to the Company.

9. Consent to Jurisdiction. The parties hereby consent to the jurisdiction of the state and federal courts of the Commonwealth of Massachusetts. Accordingly, with respect to any such court action, the Executive (a) submits to the exclusive personal jurisdiction of such courts; (b) consents to service of process; and (c) waives any other requirement (whether imposed by statute, rule of court, or otherwise) with respect to personal jurisdiction or service of process.

10. Waiver of Jury Trial. Each of the Executive and the Company irrevocably and unconditionally WAIVES ALL RIGHT TO TRIAL BY JURY IN ANY PROCEEDING (WHETHER BASED ON CONTRACT, TORT OR OTHERWISE) ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE EXECUTIVES'S EMPLOYMENT BY THE COMPANY OR ANY AFFILIATE OF THE COMPANY, INCLUDING WITHOUT LIMITATION THE EXECUTIVE'S OR THE COMPANY'S PERFORMANCE UNDER, OR THE ENFORCEMENT OF, THIS AGREEMENT.

11. Integration. This Agreement, together with the Restrictive Covenants Agreement, constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements between the parties concerning such subject matter, including the Prior Agreement, provided that the Equity Documents remain in full force and effect.

12. Withholding; Tax Effect. All forms of compensation referred to in this Agreement are subject to reduction to reflect applicable withholding and payroll taxes and other deductions required by law. The Executive hereby acknowledges that the Company does not have a duty to design its compensation policies in a manner that minimizes the Executive's tax liabilities, and the Executive will not make any claim against the Company or the Board related to tax liabilities arising from the Executive's compensation.

13. Assignment; Successors and Assigns. Neither the Executive nor the Company may make any assignment of this Agreement or any interest in it, by operation of law or otherwise, without the prior written consent of the other; provided, however, that the Company may assign its rights and obligations under this Agreement (including the Restrictive Covenants Agreement) without the Executive's consent to any affiliate or to any person or entity with whom the Company shall hereafter effect a reorganization or consolidation, into which the Company merges or to whom it transfers all or substantially all of its properties or assets; provided, further that if the Executive remains employed or becomes employed by the Company, the purchaser or any of their affiliates in connection with any such transaction, then the Executive shall not be entitled to any payments or benefits pursuant to Section 5 or Section 6 of this Agreement or any accelerated vesting pursuant to Section 2(f) of this Agreement solely as a result of such transaction except as otherwise provided herein (except that, for the avoidance of doubt, the Executive will be eligible for double trigger accelerated vesting as set forth herein). This Agreement shall inure to the benefit of and be binding upon the Executive and the Company, and each of the Executive's and the Company's respective successors, executors, administrators, heirs and permitted assigns. In the event of the Executive's death after the Executive's termination of employment but prior to the completion by the Company of all payments due to the Executive under this Agreement, the Company shall continue such payments to the Executive's beneficiary designated in writing to the Company prior to the Executive's death (or to the Executive's estate, if the Executive fails to make such designation).

14. Enforceability. If any portion or provision of this Agreement (including, without limitation, any portion or provision of any section of this Agreement) shall to any extent be declared illegal or unenforceable by a court of competent jurisdiction, then the remainder of this Agreement, or the application of such portion or provision in circumstances other than those as to which it is so declared illegal or unenforceable, shall not be affected thereby, and each portion and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

15. Survival. The provisions of this Agreement (and the Restrictive Covenants Agreement and the Equity Documents) shall survive the termination of this Agreement and/or the termination of the Executive's employment to the extent necessary to effectuate the terms contained herein.

16. Waiver. No waiver of any provision hereof shall be effective unless made in writing and signed by the waiving party. The failure of any party to require the performance of any term or obligation of this Agreement, or the waiver by any party of any breach of this Agreement, shall not prevent any subsequent enforcement of such term or obligation or be deemed a waiver of any subsequent breach.

17. Notices. Any notices, requests, demands and other communications provided for by this Agreement shall be sufficient if in writing and delivered in person or sent by a nationally recognized overnight courier service or by registered or certified mail, postage prepaid, return receipt requested, to the Executive at the last address the Executive has filed in writing with the Company or, in the case of the Company, at its main offices, attention of the Board. Notices,

requests, demands and other communications provided for by this Agreement shall also be sufficient if sent by email to the Company email address of the Executive or, in the case of Company, the email address of the Chairman of the Board, with confirmation of receipt.

18. Amendment. This Agreement may be amended or modified only by a written instrument signed by the Executive and by a director on the Board.

19. Effect on Other Plans and Agreements. An election by the Executive to resign for Good Reason under the provisions of this Agreement shall not be deemed a voluntary termination of employment by the Executive for the purpose of interpreting the provisions of any of the Company's benefit plans, programs or policies. Nothing in this Agreement shall be construed to limit the rights of the Executive under the Company's benefit plans, programs or policies except as otherwise provided in Section 8 hereof, and except that the Executive shall have no rights to any severance benefits under any Company severance pay plan, offer letter or otherwise. Except for the Restrictive Covenants Agreement, in the event that the Executive is party to an agreement with the Company providing for payments or benefits under such plan or agreement and under this Agreement, the terms of this Agreement shall govern and the Executive may receive payment under this Agreement only and not both. Further, Section 5 and Section 6 of this Agreement are mutually exclusive and in no event shall the Executive be entitled to payments or benefits pursuant to both Section 5 and Section 6 of this Agreement.

20. Governing Law. This is a Massachusetts contract and shall be construed under and be governed in all respects by the laws of the Commonwealth of Massachusetts, without giving effect to the conflict of laws principles thereof. With respect to any disputes concerning federal law, such disputes shall be determined in accordance with the law as it would be interpreted and applied by the United States Court of Appeals for the First Circuit.

21. Counterparts. This Agreement may be executed in separate counterparts. When both counterparts are signed, they shall be treated together as one and the same document. PDF copies of signed counterparts shall be equally effective as originals.

[Signature page follows]

IN WITNESS WHEREOF, the parties have executed this Agreement effective on the Effective Date.

PRIME MEDICINE, INC.

/s/ Kaye Foster

By: Kaye Foster

Its: Director & Compensation Committee Chair

Date: 7/7/2022

EXECUTIVE

/s/ Keith M. Gottesdiener

Keith M. Gottesdiener, M.D.

Date: 7/7/2022

Exhibit A

Amendment to the Employee Confidentiality, Assignment and Nonsolicitation Agreement

AMENDED & RESTATED EMPLOYMENT AGREEMENT

This Amended and Restated Employment Agreement (this "Agreement") is made between Prime Medicine, Inc., a Delaware corporation (the "Company"), and Jeremy Duffield, M.D., Ph.D. (the "Executive") to amend and restate that certain employment agreement between the Company and the Executive dated as of April 15, 2022 (the "2022 Prior Agreement"). This Agreement amends and restates the 2022 Prior Agreement and is effective upon the execution of the parties (the "Effective Date"). Except with respect to the Restrictive Covenants Agreement and the Equity Documents (each as defined below) and subject to Section 11, this Agreement supersedes in all respects all prior agreements between the Executive and the Company regarding the subject matter herein, including without limitation (i) the employment agreement between the Executive and the Company executed December 8, 2020 (the "Prior Agreement"), and (ii) any other offer letter, employment agreement or severance agreement.

WHEREAS, the Company desires to continue to employ the Executive and the Executive desires to continue to be employed by the Company on the new terms and conditions contained herein.

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Employment.

(a) Term. The Company shall employ the Executive and the Executive shall be employed by the Company pursuant to this Agreement commencing as of the Effective Date and continuing until such employment is terminated in accordance with the provisions hereof (the "Term"). The Executive's employment with the Company shall continue to be "at will," meaning that the Executive's employment may be terminated by the Company or the Executive at any time for any or no reason, subject to the terms of this Agreement.

(b) Position and Duties. The Executive shall serve as the Chief Scientific Officer of the Company and shall report to the Chief Executive Officer of the Company (the "CEO"). This is a full-time position, and the Executive shall not engage in any other employment, consulting or other business activities (whether full-time or part-time), except as expressly authorized in writing by the CEO. Notwithstanding the foregoing, the Executive may engage in professional and educational organizations, religious, charitable and other community activities (as well as manage the Executive's personal investments) so long as any outside activities do not interfere or conflict with the Executive's obligations to the Company. Any compensation received by the Executive for outside board service or other activities shall belong solely to the Executive, and the Company shall have no right to such compensation.

(c) The Executive's primary work location will continue to be at the Company's office, which is presently located in Cambridge, Massachusetts, provided that the Executive may be required to travel for business, consistent with the Company's business needs.

2. Compensation and Related Matters.

(a) Base Salary. The Company will pay the Executive a base salary at the rate of $447,120 per year, payable in accordance with the Company's standard payroll schedule for its executive officers and subject to applicable deductions and withholdings. The Executive's base salary will be subject to periodic review and adjustments by the Board or the Compensation Committee of the Board (the "Compensation Committee"). The base salary in effect at any given time is referred to herein as the "Base Salary."

(b) Annual Bonus. The Executive will be eligible to receive an annual target performance bonus of 40% of the Executive's Base Salary. The annual target performance bonus in effect at any given time is referred to herein as "Target Bonus." The actual bonus amount is discretionary. To earn an annual bonus, the Executive must be employed by the Company as of the payment date of such bonus, except as otherwise provided herein; provided that if the Executive is terminated by the Company without Cause or the Executive resigns for Good Reason (as such terms are defined in Section 3), in either event on or after January 1 but before the date bonuses for the prior year are paid to the Company's other executives (the "Bonus Payment Date"), the bonus amount (if any) that the Executive would have been paid if the Executive had remained employed through the Bonus Payment Date shall be paid to the Executive on the Bonus Payment Date if the Executive enters into, does not revoke and complies with the Separation Agreement (as defined below). Any annual bonus will be paid no later than March 15th of the calendar year following the calendar year to which such bonus relates. In addition, the Executive will remain eligible to receive the milestone bonuses set forth on Exhibit A.

(c) Expenses. The Company will promptly reimburse the Executive for all reasonable business expenses incurred by the Executive in performing services hereunder, in accordance with the policies and procedures then in effect and established by the Company for its executives.

(d) Benefits/Paid Time Off. The Executive will be eligible, subject to the terms of the applicable plans and programs, to participate in the employee benefits and insurance programs and be eligible for paid time off generally made available to the Company's full-time executive employees. The Company reserves the right to modify, amend or cancel any of its benefits plans or programs at any time. The Executive will be entitled to indemnification by the Company in accordance with the Company's bylaws and, to the extent procured by the Company, any applicable directors and officers ("D&O") liability insurance policy.

(e) Equity. The equity awards held by the Executive shall continue to be governed by the terms and conditions of the Company's applicable equity incentive plan(s) and the applicable award agreement(s) (collectively, the "Equity Documents"); provided, however, and notwithstanding anything to the contrary in any applicable option agreement or other stock-based award agreement, in the event that the Executive's employment is terminated by the Company without Cause or by the Executive for Good Reason, in each case during the Change in Control Period (as defined below), all of the then-outstanding and unvested portion of the Executive's stock options and other stock-based awards that (A) are subject solely to time-based

vesting or (B) were granted to the Executive prior to the Effective Date and are subject to performance-based vesting (the "Performance-Based Awards") shall become fully vested and exercisable or nonforfeitable immediately as of the Date of Termination (as defined below), with any such Performance-Based Awards vesting at target. For the avoidance of doubt, (I) the forfeiture provisions upon a Change in Control described in the Plan (as defined below) shall not apply to the Executive's equity awards that are subject to acceleration pursuant to this subsection, and (II) any stock options or other stock-based awards that are subject to performance-based vesting and that are granted to the Executive after the Effective Date shall not be subject to acceleration pursuant to this subsection, and the vesting and any acceleration of vesting of such awards (if any) will be addressed in the applicable award agreements.

3. Termination. The Executive's employment hereunder may be terminated without any breach of this Agreement under the following circumstances:

(a) Death. The Executive's employment hereunder shall terminate upon death.

(b) Disability. The Company may terminate the Executive's employment if the Executive is disabled and unable to perform or expected to be unable to perform the essential functions of the Executive's then existing position or positions under this Agreement with or without reasonable accommodation for a period of 180 days (which need not be consecutive) in any 12-month period. If any question shall arise as to whether during any period the Executive is disabled so as to be unable to perform the essential functions of the Executive's then existing position or positions with or without reasonable accommodation, the Executive may, and at the request of the Company shall, submit to the Company a certification in reasonable detail by a physician selected by the Company to whom the Executive or the Executive's guardian has no reasonable objection as to whether the Executive is so disabled or how long such disability is expected to continue, and such certification shall for the purposes of this Agreement be conclusive of the issue. The Executive shall cooperate with any reasonable request of the physician in connection with such certification. If such question shall arise and the Executive shall fail to submit such certification, the Company's determination of such issue shall be binding on the Executive. Nothing in this Section 3(b) shall be construed to waive the Executive's rights, if any, under existing law including, without limitation, the Family and Medical Leave Act of 1993, 29 U.S.C. §2601 et seq. and the Americans with Disabilities Act, 42 U.S.C. §12101 et seq.

(c) Termination by the Company for Cause. The Company may terminate the Executive's employment hereunder for Cause. For purposes of this Agreement, "Cause" shall mean any of the following:

(i) the Executive's dishonest statements or acts with respect to the Company or any affiliate of the Company, or any current or prospective customers, suppliers, vendors or other third parties with which such entity does business that results in or is reasonably anticipated to result in material harm to the Company;

(ii) the Executive's commission of (A) a felony or (B) any misdemeanor involving moral turpitude, deceit, dishonesty or fraud;

(iii) the Executive's refusal to perform the Executive's assigned duties and responsibilities, which refusal to perform continues, in the reasonable judgment of the CEO, for 30 days after written notice given to the Executive by the CEO describing such refusal in reasonable detail;

(iv) the Executive's gross negligence, willful misconduct or insubordination with respect to the Company that results in or is reasonably anticipated to result in harm to the Company;

(v) the Executive's material violation of any material provision of any written employment policies or any agreement(s) between the Executive and the Company, including any agreement relating to noncompetition, nonsolicitation, nondisclosure and/or assignment of inventions; or

(vi) the Executive's failure to cooperate with a bona fide internal investigation or an investigation by regulatory or law enforcement authorities, after being instructed by the Company to cooperate, or the willful destruction or failure to preserve documents or other materials known to be relevant to such investigation or the inducement of others to fail to cooperate or to produce documents or other materials in connection with such investigation.

(d) Termination by the Company without Cause. The Company may terminate the Executive's employment hereunder at any time without Cause. Any termination by the Company of the Executive's employment under this Agreement which does not constitute a termination for Cause under Section 3(c) and does not result from the death or disability of the Executive under Section 3(a) or (b) shall be deemed a termination without Cause.

(e) Termination by the Executive. The Executive may terminate employment hereunder at any time for any reason, including but not limited to, Good Reason. For purposes of this Agreement, "Good Reason" shall mean that the Executive has complied with the Good Reason Process (hereinafter defined) following the occurrence of any of the following events without the Executive's consent (each, a "Good Reason Condition"):

(i) a material diminution in the Executive's title, responsibilities, authority or duties, except that a suspension of the Executive's responsibilities, authority and/or duties for the Company during any portion of a bona fide internal investigation or an investigation by regulatory or law enforcement authorities shall not be a Good Reason Condition;

(ii) a material diminution in the Executive's Base Salary except for across-the-board salary reductions based on the Company's financial performance similarly affecting all or substantially all senior management employees of the Company;

(iii) a change of more than 50 miles in the geographic location at which the Executive is required to provide services to the Company; or

(iv) a material breach of this Agreement or any equity award by the Company.

The "Good Reason Process" shall mean that:

(i) the Executive reasonably determines that a Good Reason Condition has occurred;

(ii) the Executive notifies the Company in writing of the occurrence of the Good Reason Condition within 30 days of the Executive's knowledge of such condition;

(iii) the Executive cooperates in good faith with the Company's efforts, for a period of not less than 30 days following such notice (the "Cure Period"), to remedy the Good Reason Condition;

(iv) notwithstanding such efforts, the Good Reason Condition continues to exist at the end of the Cure Period; and

(v) the Executive terminates employment within 30 days after the end of the Cure Period.

If the Company cures the Good Reason Condition during the Cure Period, Good Reason shall be deemed not to have occurred.

4. Matters related to Termination.

(a) Notice of Termination. Except for termination as specified in Section 3(a), any termination of the Executive's employment by the Company or any such termination by the Executive shall be communicated by written Notice of Termination to the other party hereto. For purposes of this Agreement, a "Notice of Termination" shall mean a notice which shall indicate the specific termination provision in this Agreement relied upon.

(b) Date of Termination. "Date of Termination" shall mean: (i) if the Executive's employment is terminated by death, the date of death; (ii) if the Executive's employment is terminated on account of disability under Section 3(b) or by the Company for Cause under Section 3(c), the date on which Notice of Termination is given; (iii) if the Executive's employment is terminated by the Company without Cause under Section 3(d), the date on which a Notice of Termination is given or the date otherwise specified by the Company in the Notice of Termination; (iv) if the Executive's employment is terminated by the Executive under Section 3(e) other than for Good Reason, 30 days after the date on which a Notice of Termination is given, and (v) if the Executive's employment is terminated by the Executive under Section 3(e) for Good Reason, the date on which a Notice of Termination is given after the end of the Cure Period. Notwithstanding the foregoing, in the event that the Executive gives a Notice of Termination to the Company, the Company may unilaterally accelerate the Date of

Termination and such acceleration shall not result in a termination by the Company for purposes of this Agreement.

(c) Accrued Obligations. If the Executive's employment with the Company is terminated for any reason, the Company shall pay or provide to the Executive (or to the Executive's authorized representative or estate) (i) any Base Salary earned through the Date of Termination; (ii) unpaid expense reimbursements (subject to, and in accordance with, Section 2(c) of this Agreement); and (iii) any vested benefits the Executive may have under any employee benefit plan of the Company through the Date of Termination, which vested benefits shall be paid and/or provided in accordance with the terms of such employee benefit plans. The payments and benefits due to the Executive under this Section 4(c) are collectively referred to herein as the "Accrued Obligations."

(d) Resignation of All Other Positions. To the extent applicable, the Executive shall be deemed to have resigned from all officer and board member positions that the Executive holds with the Company or any of its respective subsidiaries and affiliates upon the termination of the Executive's employment for any reason. The Executive shall execute any documents in reasonable form as may be requested to confirm or effectuate any such resignations.

5. Severance Pay and Benefits Upon Termination by the Company without Cause or by the Executive for Good Reason Outside the Change in Control Period. If the Executive's employment is terminated by the Company without Cause as provided in Section 3(d), or the Executive terminates employment for Good Reason as provided in Section 3(e), in each case outside of the Change in Control Period, then, in addition to the Accrued Obligations, and subject to (i) the Executive signing a separation agreement and release in a form and manner reasonably satisfactory to the Company, which shall include, without limitation, a general release of claims against the Company and all related persons and entities that shall not release the Executive's rights under this Agreement, a reaffirmation of the Executive's Continuing Obligations (as defined below), and, in the Company's sole discretion, a one year post-employment noncompetition agreement, and shall provide that if the Executive breaches in any material respect the Continuing Obligations, all payments of the Severance Amount (as defined below) shall immediately cease (the "Separation Agreement"), and (ii) the Separation Agreement becoming irrevocable, all within 60 days after the Date of Termination (or such shorter period as set forth in the Separation Agreement), which shall include a seven (7) business day revocation period:

(a) the Company shall pay the Executive an amount equal to the sum of (i) nine (9) months of the Executive's then-current Base Salary plus (ii) 0.75 times the Executive's Target Bonus for the then-current year (the "Severance Amount"); and

(b) subject to the Executive's copayment of premium amounts at the applicable active employees' rate and the Executive's proper election to receive benefits under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"), the Company shall pay to the group health plan provider or the COBRA provider a monthly payment equal to the monthly employer contribution that the Company would have made to provide health insurance to the Executive if the Executive had remained employed by the Company until

the earliest of (A) the 12 month anniversary of the Date of Termination; (B) the date that the Executive becomes eligible for group medical plan benefits under any other employer's group medical plan; or (C) the cessation of the Executive's health continuation rights under COBRA; provided, however, that if the Company determines that it cannot pay such amounts to the group health plan provider or the COBRA provider (if applicable) without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then the Company shall convert such payments to payroll payments directly to the Executive for the time period specified above. Such payments to the Executive shall be subject to tax-related deductions and withholdings and paid on the Company's regular payroll dates.

The amounts payable under Section 5, to the extent taxable, shall be paid out in substantially equal installments in accordance with the Company's payroll practice over nine (9) months commencing within 60 days after the Date of Termination; provided, however, that if the 60-day period begins in one calendar year and ends in a second calendar year, such payments, to the extent they qualify as "non-qualified deferred compensation" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended (the "Code"), shall begin to be paid in the second calendar year by the last day of such 60-day period; provided, further, that the initial payment shall include a catch-up payment to cover amounts retroactive to the day immediately following the Date of Termination. Each payment pursuant to this Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2). For the avoidance of doubt, the Executive shall not be obligated to seek other employment or take any other action by way of mitigation of the amounts payable to the Executive under this Section 5, subject to the terms of this Agreement.

6. Severance Pay and Benefits Upon Termination by the Company without Cause or by the Executive for Good Reason during the Change in Control Period. The provisions of this Section 6 shall apply in lieu of, and expressly supersede, the provisions of Section 5 if (i) the Executive's employment is terminated either (a) by the Company without Cause as provided in Section 3(d), or (b) by the Executive for Good Reason as provided in Section 3(e), and (ii) the Date of Termination occurs during the Change in Control Period. These provisions shall terminate and be of no further force or effect after the Change in Control Period.

(a) If the Executive's employment is terminated by the Company without Cause as provided in Section 3(d) or the Executive terminates employment for Good Reason as provided in Section 3(e) and in each case the Date of Termination occurs during the Change in Control Period, then, in addition to the Accrued Obligations, and subject to the signing of the Separation Agreement by the Executive and the Separation Agreement becoming fully effective, all within the time frame set forth in the Separation Agreement but in no event more than 60 days after the Date of Termination:

(i) the Company shall pay the Executive a lump sum in cash in an amount equal to the sum of (A) 12 months of the Executive's then-current Base Salary (or the Executive's Base Salary in effect immediately prior to the Change in Control, if higher) plus (B) one times the Executive's Target Bonus for the then-current year (or the

Executive's Target Bonus in effect immediately prior to the Change in Control, if higher) (the "Change in Control Payment");

(ii) the Company shall pay the Executive for any unearned and unpaid Milestone Bonus, as referenced in the original employment agreement, section 3(c)(ii); and

(iii) subject to the Executive's copayment of premium amounts at the applicable active employees' rate and the Executive's proper election to receive benefits under COBRA, the Company shall pay to the group health plan provider or the COBRA provider a monthly payment equal to the monthly employer contribution that the Company would have made to provide health insurance to the Executive if the Executive had remained employed by the Company until the earliest of (A) the 12 month anniversary of the Date of Termination; (B) the date that the Executive becomes eligible for group medical plan benefits under any other employer's group medical plan; or (C) the cessation of the Executive's health continuation rights under COBRA; provided, however, that if the Company determines that it cannot pay such amounts to the group health plan provider or the COBRA provider (if applicable) without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then the Company shall convert such payments to payroll payments directly to the Executive for the time period specified above. Such payments to the Executive shall be subject to tax-related deductions and withholdings and paid on the Company's regular payroll dates.

The amounts payable under this Section 6(a), to the extent taxable, shall be paid or commence to be paid within 60 days after the Date of Termination; provided, however, that if the 60-day period begins in one calendar year and ends in a second calendar year, such payments to the extent they qualify as "non-qualified deferred compensation" within the meaning of Section 409A of the Code, shall be paid or commence to be paid in the second calendar year by the last day of such 60-day period. For the avoidance of doubt, the Executive shall not be obligated to seek other employment or take any other action by way of mitigation of the amounts payable to the Executive under this Section 6, subject to the terms of this Agreement.

(b) Additional Limitation.

(i) Anything in this Agreement to the contrary notwithstanding, in the event that the amount of any compensation, payment or distribution by the Company to or for the benefit of the Executive, whether paid or payable or distributed or distributable pursuant to the terms of this Agreement or otherwise, calculated in a manner consistent with Section 280G of the Code, and the applicable regulations thereunder (the "Aggregate Payments"), would be subject to the excise tax imposed by Section 4999 of the Code, then the Aggregate Payments shall be reduced (but not below zero) so that the sum of all of the Aggregate Payments shall be $1.00 less than the amount at which the Executive becomes subject to the excise tax imposed by Section 4999 of the Code; provided that such reduction shall only occur if it would result in the Executive receiving a higher After Tax Amount (as defined below) than the Executive would receive if the Aggregate Payments were not subject to such reduction. In such event, the Aggregate

Payments shall be reduced in the following order, in each case, in reverse chronological order beginning with the Aggregate Payments that are to be paid the furthest in time from consummation of the transaction that is subject to Section 280G of the Code: (1) cash payments not subject to Section 409A of the Code; (2) cash payments subject to Section 409A of the Code; (3) equity-based payments and acceleration; and (4) non-cash forms of benefits; provided that in the case of all the foregoing Aggregate Payments all amounts or payments that are not subject to calculation under Treas. Reg. §1.280G-1, Q&A-24(b) or (c) shall be reduced before any amounts that are subject to calculation under Treas. Reg. §1.280G-1, Q&A-24(b) or (c).

(ii) For purposes of this Section 6(b), the "After Tax Amount" means the amount of the Aggregate Payments less all federal, state, and local income, excise and employment taxes imposed on the Executive as a result of the Executive's receipt of the Aggregate Payments. For purposes of determining the After Tax Amount, the Executive shall be deemed to pay federal income taxes at the highest marginal rate of federal income taxation applicable to individuals for the calendar year in which the determination is to be made, and state and local income taxes at the highest marginal rates of individual taxation in each applicable state and locality, net of the maximum reduction in federal income taxes which could be obtained from deduction of such state and local taxes.

(iii) The determination as to whether a reduction in the Aggregate Payments shall be made pursuant to Section 6(b)(i) shall be made by a nationally recognized accounting firm selected by the Company (the "Accounting Firm"), which shall provide detailed supporting calculations both to the Company and the Executive within 15 business days of the Date of Termination, if applicable, or at such earlier time as is reasonably requested by the Company or the Executive. Any determination by the Accounting Firm shall be binding upon the Company and the Executive.

(c) Definitions. For purposes of this Agreement:

(i) "Change in Control" shall mean a "Sale Event" as defined in the Company's 2022 Stock Option and Incentive Plan, as the same may be amended from time to time (the "Plan").

(ii) "Change in Control Period" shall mean the period beginning on the date of the consummation of the first event constituting a Change in Control (the "Closing Date") and ending on the 12 month anniversary of the Closing Date.

7. Section 409A.

(a) Anything in this Agreement to the contrary notwithstanding, if at the time of the Executive's separation from service within the meaning of Section 409A of the Code, the Company determines that the Executive is a "specified employee" within the meaning of Section 409A(a)(2)(B)(i) of the Code, then to the extent any payment or benefit that the Executive becomes entitled to under this Agreement or otherwise on account of the Executive's separation from service would be considered deferred compensation otherwise subject to the 20 percent

additional tax imposed pursuant to Section 409A(a) of the Code as a result of the application of Section 409A(a)(2)(B)(i) of the Code, such payment shall not be payable and such benefit shall not be provided until the date that is the earlier of (A) six months and one day after the Executive's separation from service, or (B) the Executive's death. If any such delayed cash payment is otherwise payable on an installment basis, the first payment shall include a catch-up payment covering amounts that would otherwise have been paid during the six-month period but for the application of this provision, and the balance of the installments shall be payable in accordance with their original schedule.

(b) All in-kind benefits provided and expenses eligible for reimbursement under this Agreement shall be provided by the Company or incurred by the Executive during the time periods set forth in this Agreement. All reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred. The amount of in-kind benefits provided or reimbursable expenses incurred in one taxable year shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other taxable year (except for any lifetime or other aggregate limitation applicable to medical expenses). Such right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit.

(c) To the extent that any payment or benefit described in this Agreement constitutes "non-qualified deferred compensation" under Section 409A of the Code, and to the extent that such payment or benefit is payable upon the Executive's termination of employment, then such payments or benefits shall be payable only upon the Executive's "separation from service." The determination of whether and when a separation from service has occurred shall be made in accordance with the presumptions set forth in Treasury Regulation Section 1.409A-1(h).

(d) The parties intend that this Agreement will be administered in accordance with Section 409A of the Code. To the extent that any provision of this Agreement is ambiguous as to its compliance with Section 409A of the Code, the provision shall be read in such a manner so that all payments hereunder comply with or are exempt from Section 409A of the Code. Each payment pursuant to this Agreement or the Restrictive Covenants Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2). The parties agree that this Agreement may be amended, as reasonably requested by either party, and as may be necessary to fully comply with Section 409A of the Code and all related rules and regulations in order to preserve the payments and benefits provided hereunder without additional cost to either party.

(e) The Company makes no representation or warranty and shall have no liability to the Executive or any other person if any provisions of this Agreement are determined to constitute deferred compensation subject to Section 409A of the Code but do not satisfy an exemption from, or the conditions of, such Section.

8. Continuing Obligations.

(a) Restrictive Covenants Agreement. As a condition of employment, and in exchange for the benefits set forth in this Agreement, to which the Executive was not previously entitled, the Executive is required to enter into the Amendment to the Employee Confidentiality, Assignment, Nonsolicitation and Noncompetition Agreement attached hereto as Exhibit B, which amends the post-employment noncompetition provision in the Employee Confidentiality, Assignment, Nonsolicitation and Noncompetition Agreement between the Executive and the Company dated as of December 8, 2020 (as amended, the "Restrictive Covenants Agreement"). For purposes of this Agreement, the obligations in this Section 8 and those that arise in the Restrictive Covenants Agreement and any other agreement relating to confidentiality, assignment of inventions, or other restrictive covenants shall collectively be referred to as the "Continuing Obligations." For the avoidance of doubt, all restrictive covenants obligations are supplemental to one another, and in the event of any conflict between restrictive covenants obligations, the most restrictive provision that is enforceable shall govern. In the event the Executive is entitled to both payments pursuant to the Restrictive Covenants Agreement and severance payments pursuant to Section 5 or Section 6 of this Agreement, then the severance payments pursuant to Section 5 or Section 6 of this Agreement received in any calendar year will be reduced by the amount the Executive is paid in the same such calendar year pursuant to the Restrictive Covenants Agreement.

(b) Third-Party Agreements and Rights. The Executive represents to the Company that the Executive's execution of this Agreement, the Executive's employment with the Company and the performance of the Executive's proposed duties for the Company will not violate any obligations the Executive may have to any previous employer or other party. In the Executive's work for the Company, the Executive will not disclose or make use of any information in violation of any agreements with or rights of any such previous employer or other party, and the Executive will not bring to the premises of the Company any copies or other tangible embodiments of non-public information belonging to or obtained from any such previous employment or other party.

(c) Litigation and Regulatory Cooperation. During and for 36 months after the Executive's employment, the Executive shall cooperate reasonably with the Company in (i) the defense or prosecution of any claims or actions now in existence or which may be brought in the future against or on behalf of the Company which relate to events or occurrences that transpired while the Executive was employed by the Company, and (ii) the investigation, whether internal or external, of any matters about which the Company believes the Executive may have knowledge or information. The Executive's reasonable cooperation in connection with such claims, actions or investigations shall include, but not be limited to, being available to meet with counsel to answer questions or to prepare for discovery or trial and to act as a witness on behalf of the Company at mutually convenient times. During and after the Executive's employment, the Executive also shall cooperate reasonably with the Company in connection with any investigation or review of any federal, state or local regulatory authority as any such investigation or review relates to events or occurrences that transpired while the Executive was employed by the Company. The Company shall reimburse the Executive for any reasonable out-

of-pocket expenses incurred in connection with the Executive's performance of obligations pursuant to this Section 8(c).

(d) Relief. The Executive agrees that it would be difficult to measure any damages caused to the Company which might result from any breach by the Executive of the Continuing Obligations, and that in any event money damages would be an inadequate remedy for any such breach. Accordingly, the Executive agrees that if the Executive breaches, or proposes to breach, any portion of the Continuing Obligations, the Company shall be entitled, in addition to all other remedies that it may have, to an injunction or other appropriate equitable relief to restrain any such breach without showing or proving any actual damage to the Company.

9. Consent to Jurisdiction. The parties hereby consent to the jurisdiction of the state and federal courts of the Commonwealth of Massachusetts. Accordingly, with respect to any such court action, the Executive (a) submits to the exclusive personal jurisdiction of such courts; (b) consents to service of process; and (c) waives any other requirement (whether imposed by statute, rule of court, or otherwise) with respect to personal jurisdiction or service of process.

10. Waiver of Jury Trial. Each of the Executive and the Company irrevocably and unconditionally WAIVES ALL RIGHT TO TRIAL BY JURY IN ANY PROCEEDING (WHETHER BASED ON CONTRACT, TORT OR OTHERWISE) ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE EXECUTIVE'S EMPLOYMENT BY THE COMPANY OR ANY AFFILIATE OF THE COMPANY, INCLUDING WITHOUT LIMITATION THE EXECUTIVE'S OR THE COMPANY'S PERFORMANCE UNDER, OR THE ENFORCEMENT OF, THIS AGREEMENT.

11. Integration. This Agreement, together with the Restrictive Covenants Agreement, constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements between the parties concerning such subject matter, including the Prior Agreement, provided that the Equity Documents remain in full force and effect.

12. Withholding; Tax Effect. All forms of compensation referred to in this Agreement are subject to reduction to reflect applicable withholding and payroll taxes and other deductions required by law. The Executive hereby acknowledges that the Company does not have a duty to design its compensation policies in a manner that minimizes the Executive's tax liabilities, and the Executive will not make any claim against the Company or the Board related to tax liabilities arising from the Executive's compensation.

13. Assignment; Successors and Assigns. Neither the Executive nor the Company may make any assignment of this Agreement or any interest in it, by operation of law or otherwise, without the prior written consent of the other; provided, however, that the Company may assign its rights and obligations under this Agreement (including the Restrictive Covenants Agreement) without the Executive's consent to any affiliate or to any person or entity with whom the Company shall hereafter effect a reorganization or consolidation, into which the Company merges or to whom it transfers all or substantially all of its properties or assets; provided, further that if the Executive remains employed or becomes employed by the Company, the purchaser or

any of their affiliates in connection with any such transaction, then the Executive shall not be entitled to any payments or benefits pursuant to Section 5 or Section 6 of this Agreement or any accelerated vesting pursuant to Section 2(e) of this Agreement solely as a result of such transaction (except that, for the avoidance of doubt, the Executive will be eligible for double trigger accelerated vesting as set forth herein). This Agreement shall inure to the benefit of and be binding upon the Executive and the Company, and each of the Executive's and the Company's respective successors, executors, administrators, heirs and permitted assigns. In the event of the Executive's death after the Executive's termination of employment but prior to the completion by the Company of all payments due to the Executive under this Agreement, the Company shall continue such payments to the Executive's beneficiary designated in writing to the Company prior to the Executive's death (or to the Executive's estate, if the Executive fails to make such designation).

14. Enforceability. If any portion or provision of this Agreement (including, without limitation, any portion or provision of any section of this Agreement) shall to any extent be declared illegal or unenforceable by a court of competent jurisdiction, then the remainder of this Agreement, or the application of such portion or provision in circumstances other than those as to which it is so declared illegal or unenforceable, shall not be affected thereby, and each portion and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

15. Survival. The provisions of this Agreement (and the Restrictive Covenants Agreement and the Equity Documents) shall survive the termination of this Agreement and/or the termination of the Executive's employment to the extent necessary to effectuate the terms contained herein.

16. Waiver. No waiver of any provision hereof shall be effective unless made in writing and signed by the waiving party. The failure of any party to require the performance of any term or obligation of this Agreement, or the waiver by any party of any breach of this Agreement, shall not prevent any subsequent enforcement of such term or obligation or be deemed a waiver of any subsequent breach.

17. Notices. Any notices, requests, demands and other communications provided for by this Agreement shall be sufficient if in writing and delivered in person or sent by a nationally recognized overnight courier service or by registered or certified mail, postage prepaid, return receipt requested, to the Executive at the last address the Executive has filed in writing with the Company or, in the case of the Company, at its main offices, attention of the CEO. Notices, requests, demands and other communications provided for by this Agreement shall also be sufficient if sent by email to the Company email address of the Executive or, in the case of Company, the Company email address of the CEO, with confirmation of receipt.

18. Amendment. This Agreement may be amended or modified only by a written instrument signed by the Executive and by a duly authorized representative of the Company.

19. Effect on Other Plans and Agreements. An election by the Executive to resign for Good Reason under the provisions of this Agreement shall not be deemed a voluntary

termination of employment by the Executive for the purpose of interpreting the provisions of any of the Company's benefit plans, programs or policies. Nothing in this Agreement shall be construed to limit the rights of the Executive under the Company's benefit plans, programs or policies except as otherwise provided in Section 8 hereof, and except that the Executive shall have no rights to any severance benefits under any Company severance pay plan, offer letter or otherwise. Except for the Restrictive Covenants Agreement, in the event that the Executive is party to an agreement with the Company providing for payments or benefits under such plan or agreement and under this Agreement, the terms of this Agreement shall govern and the Executive may receive payment under this Agreement only and not both. Further, Section 5 and Section 6 of this Agreement are mutually exclusive and in no event shall the Executive be entitled to payments or benefits pursuant to both Section 5 and Section 6 of this Agreement.

20. Governing Law. This is a Massachusetts contract and shall be construed under and be governed in all respects by the laws of the Commonwealth of Massachusetts, without giving effect to the conflict of laws principles thereof. With respect to any disputes concerning federal law, such disputes shall be determined in accordance with the law as it would be interpreted and applied by the United States Court of Appeals for the First Circuit.

21. Counterparts. This Agreement may be executed in separate counterparts. When both counterparts are signed, they shall be treated together as one and the same document. PDF copies of signed counterparts shall be equally effective as originals.

[Signature page follows]

IN WITNESS WHEREOF, the parties have executed this Agreement effective on the Effective Date.

PRIME MEDICINE, INC.

/s/ Keith Gottesdiener, M.D.

By: Keith Gottesdiener, M.D.
Its: President and Chief Executive Officer

Date: 7/7/2022

EXECUTIVE

/s/ Jeremy Duffield, M.D., Ph.D

Jeremy Duffield, M.D., Ph.D

Date: 7/20/2022

Exhibit A

Milestone Bonuses

Exhibit B

Amendment to Employee Confidentiality, Assignment, Nonsolicitation and Noncompetition Agreement

AMENDED & RESTATED EMPLOYMENT AGREEMENT

This Amended and Restated Employment Agreement (this "Agreement") is made between Prime Medicine, Inc., a Delaware corporation (the "Company"), and Ann Lee, PhD (the "Executive") to amend and restate that certain employment agreement between the Company and the Executive dated as of April 15, 2022 (the "2022 Prior Agreement"). This Agreement amends and restates the 2022 Prior Agreement and is effective upon the execution of the parties (the "Effective Date"). Except with respect to the Restrictive Covenants Agreement and the Equity Documents (each as defined below) and subject to Section 11, this Agreement supersedes in all respects all prior agreements between the Executive and the Company regarding the subject matter herein, including without limitation (i) the employment agreement between the Executive and the Company dated as of September 21, 2021 (the "Prior Agreement"), and (ii) any other offer letter, employment agreement or severance agreement.

WHEREAS, the Company desires to continue to employ the Executive and the Executive desires to continue to be employed by the Company on the new terms and conditions contained herein.

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Employment.

(a) Term. The Company shall employ the Executive and the Executive shall be employed by the Company pursuant to this Agreement commencing as of the Effective Date and continuing until such employment is terminated in accordance with the provisions hereof (the "Term"). The Executive's employment with the Company shall continue to be "at will," meaning that the Executive's employment may be terminated by the Company or the Executive at any time for any or no reason, subject to the terms of this Agreement.

(b) Position and Duties. The Executive shall serve as the Chief Technical Officer of the Company and shall report to the Chief Executive Officer of the Company (the "CEO"). This is a full-time position, and the Executive shall not engage in any other employment, consulting or other business activities (whether full-time or part-time), except as expressly authorized in writing by the CEO; provided, however, that the Executive may continue to serve on the board of directors for Coya Therapeutics and JW Therapeutics so long as such activities do not materially interfere with the Executive's performance of her duties hereunder or create a conflict of interest with her obligations to the Company. Notwithstanding the foregoing, the Executive may engage in professional and educational organizations, religious, charitable and other community activities (as well as manage the Executive's personal investments) so long as any outside activities do not interfere or conflict with the Executive's obligations to the Company. Any compensation received by the Executive for outside board service or other activities shall belong solely to the Executive, and the Company shall have no right to such compensation.

(c) The Executive's primary work location will continue to be at the Company's office, which is presently located in Cambridge, Massachusetts, provided that the Executive may be required to travel for business, consistent with the Company's business needs.

2. Compensation and Related Matters.

(a) Base Salary. The Company will pay the Executive a base salary at the rate of $453,797 per year, payable in accordance with the Company's standard payroll schedule for its executive officers and subject to applicable deductions and withholdings. The Executive's base salary will be subject to periodic review and adjustments by the Board or the Compensation Committee of the Board (the "Compensation Committee"). The base salary in effect at any given time is referred to herein as the "Base Salary."

(b) Annual Bonus. The Executive will be eligible to receive an annual target performance bonus of 40% of the Executive's Base Salary. The annual target performance bonus in effect at any given time is referred to herein as "Target Bonus." The actual bonus amount is discretionary. To earn an annual bonus, the Executive must be employed by the Company as of the payment date of such bonus, except as otherwise provided herein; provided that if the Executive is terminated by the Company without Cause or the Executive resigns for Good Reason (as such terms are defined in Section 3), in either event on or after January 1 but before the date bonuses for the prior year are paid to the Company's other executives (the "Bonus Payment Date"), the bonus amount (if any) that the Executive would have been paid if the Executive had remained employed through the Bonus Payment Date shall be paid to the Executive on the Bonus Payment Date if the Executive enters into, does not revoke and complies with the Separation Agreement (as defined below). Any annual bonus will be paid no later than March 15th of the calendar year following the calendar year to which such bonus relates.

(c) Expenses. The Company will promptly reimburse the Executive for all reasonable business expenses incurred by the Executive in performing services hereunder, in accordance with the policies and procedures then in effect and established by the Company for its executives.

(d) Benefits/Paid Time Off. The Executive will be eligible, subject to the terms of the applicable plans and programs, to participate in the employee benefits and insurance programs and be eligible for paid time off generally made available to the Company's full-time executive employees. The Company reserves the right to modify, amend or cancel any of its benefits plans or programs at any time. The Executive will be entitled to indemnification by the Company in accordance with the Company's bylaws and, to the extent procured by the Company, any applicable directors and officers ("D&O") liability insurance policy.

(e) Equity. The equity awards held by the Executive shall continue to be governed by the terms and conditions of the Company's applicable equity incentive plan(s) and the applicable award agreement(s) (collectively, the "Equity Documents"); provided, however, and notwithstanding anything to the contrary in any applicable option agreement or other stock-based award agreement, in the event that the Executive's employment is terminated by the Company without Cause or by the Executive for Good Reason, in each case during the Change in

Control Period (as defined below), all of the then-outstanding and unvested portion of the Executive's stock options and other stock-based awards that (A) are subject solely to time-based vesting or (B) were granted to the Executive prior to the Effective Date and are subject to performance-based vesting (the "Performance-Based Awards") shall become fully vested and exercisable or nonforfeitable immediately as of the Date of Termination (as defined below), with any such Performance-Based Awards vesting at target. For the avoidance of doubt, (I) the forfeiture provisions upon a Change in Control described in the Plan (as defined below) shall not apply to the Executive's equity awards that are subject to acceleration pursuant to this subsection, and (II) any stock options or other stock-based awards that are subject to performance-based vesting and that are granted to the Executive after the Effective Date shall not be subject to acceleration pursuant to this subsection, and the vesting and any acceleration of vesting of such awards (if any) will be addressed in the applicable award agreements.

(f) Relocation. The Company will provide the Executive with the relocation benefit described in Exhibit A.

3. Termination. The Executive's employment hereunder may be terminated without any breach of this Agreement under the following circumstances:

(a) Death. The Executive's employment hereunder shall terminate upon death.

(b) Disability. The Company may terminate the Executive's employment if the Executive is disabled and unable to perform or expected to be unable to perform the essential functions of the Executive's then existing position or positions under this Agreement with or without reasonable accommodation for a period of 180 days (which need not be consecutive) in any 12-month period. If any question shall arise as to whether during any period the Executive is disabled so as to be unable to perform the essential functions of the Executive's then existing position or positions with or without reasonable accommodation, the Executive may, and at the request of the Company shall, submit to the Company a certification in reasonable detail by a physician selected by the Company to whom the Executive or the Executive's guardian has no reasonable objection as to whether the Executive is so disabled or how long such disability is expected to continue, and such certification shall for the purposes of this Agreement be conclusive of the issue. The Executive shall cooperate with any reasonable request of the physician in connection with such certification. If such question shall arise and the Executive shall fail to submit such certification, the Company's determination of such issue shall be binding on the Executive. Nothing in this Section 3(b) shall be construed to waive the Executive's rights, if any, under existing law including, without limitation, the Family and Medical Leave Act of 1993, 29 U.S.C. §2601 et seq. and the Americans with Disabilities Act, 42 U.S.C. §12101 et seq.

(c) Termination by the Company for Cause. The Company may terminate the Executive's employment hereunder for Cause. For purposes of this Agreement, "Cause" shall mean any of the following:

(i) the Executive's dishonest statements or acts with respect to the Company or any affiliate of the Company, or any current or prospective customers, suppliers, vendors or other third parties with which such entity does business that results in or is reasonably anticipated to result in material harm to the Company;

(ii) the Executive's commission of (A) a felony or (B) any misdemeanor involving moral turpitude, deceit, dishonesty or fraud;

(iii) the Executive's refusal to perform the Executive's assigned duties and responsibilities, which refusal to perform continues, in the reasonable judgment of the CEO, for 30 days after written notice given to the Executive by the CEO describing such refusal in reasonable detail;

(iv) the Executive's gross negligence, willful misconduct or insubordination with respect to the Company that results in or is reasonably anticipated to result in harm to the Company;

(v) the Executive's material violation of any material provision of any written employment policies or any agreement(s) between the Executive and the Company, including any agreement relating to noncompetition, nonsolicitation, nondisclosure and/or assignment of inventions; or

(vi) the Executive's failure to cooperate with a bona fide internal investigation or an investigation by regulatory or law enforcement authorities, after being instructed by the Company to cooperate, or the willful destruction or failure to preserve documents or other materials known to be relevant to such investigation or the inducement of others to fail to cooperate or to produce documents or other materials in connection with such investigation.

(d) Termination by the Company without Cause. The Company may terminate the Executive's employment hereunder at any time without Cause. Any termination by the Company of the Executive's employment under this Agreement which does not constitute a termination for Cause under Section 3(c) and does not result from the death or disability of the Executive under Section 3(a) or (b) shall be deemed a termination without Cause.

(e) Termination by the Executive. The Executive may terminate employment hereunder at any time for any reason, including but not limited to, Good Reason. For purposes of this Agreement, "Good Reason" shall mean that the Executive has complied with the Good

Reason Process (hereinafter defined) following the occurrence of any of the following events without the Executive's consent (each, a "Good Reason Condition"):

(i) a material diminution in the Executive's title, responsibilities, authority or duties, except that a suspension of the Executive's responsibilities, authority and/or duties for the Company during any portion of a bona fide internal investigation or an investigation by regulatory or law enforcement authorities shall not be a Good Reason Condition;

(ii) a material diminution in the Executive's Base Salary except for across-the-board salary reductions based on the Company's financial performance similarly affecting all or substantially all senior management employees of the Company;

(iii) a change of more than 50 miles in the geographic location at which the Executive is required to provide services to the Company; provided, that, for the avoidance of doubt, the Executive's relocation to Massachusetts shall not constitute a Good Reason Condition; or

(iv) a material breach of this Agreement or any equity award by the Company.

The "Good Reason Process" shall mean that:

(i) the Executive reasonably determines that a Good Reason Condition has occurred;

(ii) the Executive notifies the Company in writing of the occurrence of the Good Reason Condition within 30 days of the Executive's knowledge of such condition;

(iii) the Executive cooperates in good faith with the Company's efforts, for a period of not less than 30 days following such notice (the "Cure Period"), to remedy the Good Reason Condition;

(iv) notwithstanding such efforts, the Good Reason Condition continues to exist at the end of the Cure Period; and

(v) the Executive terminates employment within 30 days after the end of the Cure Period.

If the Company cures the Good Reason Condition during the Cure Period, Good Reason shall be deemed not to have occurred.

4. Matters related to Termination.

(a) Notice of Termination. Except for termination as specified in Section 3(a), any termination of the Executive's employment by the Company or any such termination by

the Executive shall be communicated by written Notice of Termination to the other party hereto. For purposes of this Agreement, a "Notice of Termination" shall mean a notice which shall indicate the specific termination provision in this Agreement relied upon.

(b) Date of Termination. "Date of Termination" shall mean: (i) if the Executive's employment is terminated by death, the date of death; (ii) if the Executive's employment is terminated on account of disability under Section 3(b) or by the Company for Cause under Section 3(c), the date on which Notice of Termination is given; (iii) if the Executive's employment is terminated by the Company without Cause under Section 3(d), the date on which a Notice of Termination is given or the date otherwise specified by the Company in the Notice of Termination; (iv) if the Executive's employment is terminated by the Executive under Section 3(e) other than for Good Reason, 30 days after the date on which a Notice of Termination is given, and (v) if the Executive's employment is terminated by the Executive under Section 3(e) for Good Reason, the date on which a Notice of Termination is given after the end of the Cure Period. Notwithstanding the foregoing, in the event that the Executive gives a Notice of Termination to the Company, the Company may unilaterally accelerate the Date of Termination and such acceleration shall not result in a termination by the Company for purposes of this Agreement.

(c) Accrued Obligations. If the Executive's employment with the Company is terminated for any reason, the Company shall pay or provide to the Executive (or to the Executive's authorized representative or estate) (i) any Base Salary earned through the Date of Termination; (ii) unpaid expense reimbursements (subject to, and in accordance with, Section 2(c) of this Agreement); and (iii) any vested benefits the Executive may have under any employee benefit plan of the Company through the Date of Termination, which vested benefits shall be paid and/or provided in accordance with the terms of such employee benefit plans. The payments and benefits due to the Executive under this Section 4(c) are collectively referred to herein as the "Accrued Obligations."

(d) Resignation of All Other Positions. To the extent applicable, the Executive shall be deemed to have resigned from all officer and board member positions that the Executive holds with the Company or any of its respective subsidiaries and affiliates upon the termination of the Executive's employment for any reason. The Executive shall execute any documents in reasonable form as may be requested to confirm or effectuate any such resignations.

5. Severance Pay and Benefits Upon Termination by the Company without Cause or by the Executive for Good Reason Outside the Change in Control Period. If the Executive's employment is terminated by the Company without Cause as provided in Section 3(d), or the Executive terminates employment for Good Reason as provided in Section 3(e), in each case outside of the Change in Control Period, then, in addition to the Accrued Obligations, and subject to (i) the Executive signing a separation agreement and release in a form and manner reasonably satisfactory to the Company, which shall include, without limitation, a general release of claims against the Company and all related persons and entities that shall not release the Executive's rights under this Agreement, a reaffirmation of the Executive's Continuing

Obligations (as defined below), and, in the Company's sole discretion, a one year post-employment noncompetition agreement, and shall provide that if the Executive breaches in any material respect the Continuing Obligations, all payments of the Severance Amount (as defined below) shall immediately cease (the "Separation Agreement"), and (ii) the Separation Agreement becoming irrevocable, all within 60 days after the Date of Termination (or such shorter period as set forth in the Separation Agreement), which shall include a seven (7) business day revocation period:

(a) the Company shall pay the Executive an amount equal to the sum of (i) nine (9) months of the Executive's then-current Base Salary plus (ii) 0.75 times the Executive's Target Bonus for the then-current year (the "Severance Amount"); and

(b) subject to the Executive's copayment of premium amounts at the applicable active employees' rate and the Executive's proper election to receive benefits under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"), the Company shall pay to the group health plan provider or the COBRA provider a monthly payment equal to the monthly employer contribution that the Company would have made to provide health insurance to the Executive if the Executive had remained employed by the Company until the earliest of (A) the nine (9) month anniversary of the Date of Termination; (B) the date that the Executive becomes eligible for group medical plan benefits under any other employer's group medical plan; or (C) the cessation of the Executive's health continuation rights under COBRA; provided, however, that if the Company determines that it cannot pay such amounts to the group health plan provider or the COBRA provider (if applicable) without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then the Company shall convert such payments to payroll payments directly to the Executive for the time period specified above. Such payments to the Executive shall be subject to tax-related deductions and withholdings and paid on the Company's regular payroll dates.

The amounts payable under Section 5, to the extent taxable, shall be paid out in substantially equal installments in accordance with the Company's payroll practice over nine (9) months commencing within 60 days after the Date of Termination; provided, however, that if the 60-day period begins in one calendar year and ends in a second calendar year, such payments, to the extent they qualify as "non-qualified deferred compensation" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended (the "Code"), shall begin to be paid in the second calendar year by the last day of such 60-day period; provided, further, that the initial payment shall include a catch-up payment to cover amounts retroactive to the day immediately following the Date of Termination. Each payment pursuant to this Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2). For the avoidance of doubt, the Executive shall not be obligated to seek other employment or take any other action by way of mitigation of the amounts payable to the Executive under this Section 5, subject to the terms of this Agreement.

6. Severance Pay and Benefits Upon Termination by the Company without Cause or by the Executive for Good Reason during the Change in Control Period. The provisions of this Section 6 shall apply in lieu of, and expressly supersede, the provisions of Section 5 if (i) the

Executive's employment is terminated either (a) by the Company without Cause as provided in Section 3(d), or (b) by the Executive for Good Reason as provided in Section 3(e), and (ii) the Date of Termination occurs during the Change in Control Period. These provisions shall terminate and be of no further force or effect after the Change in Control Period.

(a) If the Executive's employment is terminated by the Company without Cause as provided in Section 3(d) or the Executive terminates employment for Good Reason as provided in Section 3(e) and in each case the Date of Termination occurs during the Change in Control Period, then, in addition to the Accrued Obligations, and subject to the signing of the Separation Agreement by the Executive and the Separation Agreement becoming fully effective, all within the time frame set forth in the Separation Agreement but in no event more than 60 days after the Date of Termination:

(i) the Company shall pay the Executive a lump sum in cash in an amount equal to the sum of (A) 12 months of the Executive's then-current Base Salary (or the Executive's Base Salary in effect immediately prior to the Change in Control, if higher) plus (B) one times the Executive's Target Bonus for the then-current year (or the Executive's Target Bonus in effect immediately prior to the Change in Control, if higher) (the "Change in Control Payment"); and

(ii) subject to the Executive's copayment of premium amounts at the applicable active employees' rate and the Executive's proper election to receive benefits under COBRA, the Company shall pay to the group health plan provider or the COBRA provider a monthly payment equal to the monthly employer contribution that the Company would have made to provide health insurance to the Executive if the Executive had remained employed by the Company until the earliest of (A) the 12 month anniversary of the Date of Termination; (B) the date that the Executive becomes eligible for group medical plan benefits under any other employer's group medical plan; or (C) the cessation of the Executive's health continuation rights under COBRA; provided, however, that if the Company determines that it cannot pay such amounts to the group health plan provider or the COBRA provider (if applicable) without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then the Company shall convert such payments to payroll payments directly to the Executive for the time period specified above. Such payments to the Executive shall be subject to tax-related deductions and withholdings and paid on the Company's regular payroll dates.

The amounts payable under this Section 6(a), to the extent taxable, shall be paid or commence to be paid within 60 days after the Date of Termination; provided, however, that if the 60-day period begins in one calendar year and ends in a second calendar year, such payments to the extent they qualify as "non-qualified deferred compensation" within the meaning of Section 409A of the Code, shall be paid or commence to be paid in the second calendar year by the last day of such 60-day period. For the avoidance of doubt, the Executive shall not be obligated to seek other employment or take any other action by way of mitigation of the amounts payable to the Executive under this Section 6, subject to the terms of this Agreement.

(b) Additional Limitation.

(i) Anything in this Agreement to the contrary notwithstanding, in the event that the amount of any compensation, payment or distribution by the Company to or for the benefit of the Executive, whether paid or payable or distributed or distributable pursuant to the terms of this Agreement or otherwise, calculated in a manner consistent with Section 280G of the Code, and the applicable regulations thereunder (the "Aggregate Payments"), would be subject to the excise tax imposed by Section 4999 of the Code, then the Aggregate Payments shall be reduced (but not below zero) so that the sum of all of the Aggregate Payments shall be $1.00 less than the amount at which the Executive becomes subject to the excise tax imposed by Section 4999 of the Code; provided that such reduction shall only occur if it would result in the Executive receiving a higher After Tax Amount (as defined below) than the Executive would receive if the Aggregate Payments were not subject to such reduction. In such event, the Aggregate Payments shall be reduced in the following order, in each case, in reverse chronological order beginning with the Aggregate Payments that are to be paid the furthest in time from consummation of the transaction that is subject to Section 280G of the Code: (1) cash payments not subject to Section 409A of the Code; (2) cash payments subject to Section 409A of the Code; (3) equity-based payments and acceleration; and (4) non-cash forms of benefits; provided that in the case of all the foregoing Aggregate Payments all amounts or payments that are not subject to calculation under Treas. Reg. §1.280G-1, Q&A-24(b) or (c) shall be reduced before any amounts that are subject to calculation under Treas. Reg. §1.280G-1, Q&A-24(b) or (c).

(ii) For purposes of this Section 6(b), the "After Tax Amount" means the amount of the Aggregate Payments less all federal, state, and local income, excise and employment taxes imposed on the Executive as a result of the Executive's receipt of the Aggregate Payments. For purposes of determining the After Tax Amount, the Executive shall be deemed to pay federal income taxes at the highest marginal rate of federal income taxation applicable to individuals for the calendar year in which the determination is to be made, and state and local income taxes at the highest marginal rates of individual taxation in each applicable state and locality, net of the maximum reduction in federal income taxes which could be obtained from deduction of such state and local taxes.

(iii) The determination as to whether a reduction in the Aggregate Payments shall be made pursuant to Section 6(b)(i) shall be made by a nationally recognized accounting firm selected by the Company (the "Accounting Firm"), which shall provide detailed supporting calculations both to the Company and the Executive within 15 business days of the Date of Termination, if applicable, or at such earlier time as is reasonably requested by the Company or the Executive. Any determination by the Accounting Firm shall be binding upon the Company and the Executive.

(c) Definitions. For purposes of this Agreement:

(i) "Change in Control" shall mean a "Sale Event" as defined in the Company's 2022 Stock Option and Incentive Plan, as the same may be amended from time to time (the "Plan").

(ii) "Change in Control Period" shall mean the period beginning on the date of the consummation of the first event constituting a Change in Control (the "Closing Date") and ending on the 12 month anniversary of the Closing Date.

7. Section 409A.

(a) Anything in this Agreement to the contrary notwithstanding, if at the time of the Executive's separation from service within the meaning of Section 409A of the Code, the Company determines that the Executive is a "specified employee" within the meaning of Section 409A(a)(2)(B)(i) of the Code, then to the extent any payment or benefit that the Executive becomes entitled to under this Agreement or otherwise on account of the Executive's separation from service would be considered deferred compensation otherwise subject to the 20 percent additional tax imposed pursuant to Section 409A(a) of the Code as a result of the application of Section 409A(a)(2)(B)(i) of the Code, such payment shall not be payable and such benefit shall not be provided until the date that is the earlier of (A) six months and one day after the Executive's separation from service, or (B) the Executive's death. If any such delayed cash payment is otherwise payable on an installment basis, the first payment shall include a catch-up payment covering amounts that would otherwise have been paid during the six-month period but for the application of this provision, and the balance of the installments shall be payable in accordance with their original schedule.

(b) All in-kind benefits provided and expenses eligible for reimbursement under this Agreement shall be provided by the Company or incurred by the Executive during the time periods set forth in this Agreement. All reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred. The amount of in-kind benefits provided or reimbursable expenses incurred in one taxable year shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other taxable year (except for any lifetime or other aggregate limitation applicable to medical expenses). Such right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit.

(c) To the extent that any payment or benefit described in this Agreement constitutes "non-qualified deferred compensation" under Section 409A of the Code, and to the extent that such payment or benefit is payable upon the Executive's termination of employment, then such payments or benefits shall be payable only upon the Executive's "separation from service." The determination of whether and when a separation from service has occurred shall be made in accordance with the presumptions set forth in Treasury Regulation Section 1.409A-1(h).

(d) The parties intend that this Agreement will be administered in accordance with Section 409A of the Code. To the extent that any provision of this Agreement is ambiguous as to its compliance with Section 409A of the Code, the provision shall be read in such a manner so that all payments hereunder comply with or are exempt from Section 409A of the Code. Each payment pursuant to this Agreement or the Restrictive Covenants Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2). The parties agree that this Agreement may be amended, as reasonably requested by either party, and as may be necessary to fully comply with Section 409A of the Code and all related rules and regulations in order to preserve the payments and benefits provided hereunder without additional cost to either party.

(e) The Company makes no representation or warranty and shall have no liability to the Executive or any other person if any provisions of this Agreement are determined to constitute deferred compensation subject to Section 409A of the Code but do not satisfy an exemption from, or the conditions of, such Section.

8. Continuing Obligations.

(a) Restrictive Covenants Agreement. As a condition of employment, and in exchange for the benefits set forth in this Agreement, to which the Executive was not previously entitled, the Executive is required to enter into the Amendment to the Employee Confidentiality, Assignment and Nonsolicitation Agreement attached hereto as Exhibit B, which adds a post-employment noncompetition agreement to the Employee Confidentiality, Assignment and Nonsolicitation Agreement between the Executive and the Company dated as of September 21, 2021 (as amended, the "Restrictive Covenants Agreement"). For purposes of this Agreement, the obligations in this Section 8 and those that arise in the Restrictive Covenants Agreement and any other agreement relating to confidentiality, assignment of inventions, or other restrictive covenants shall collectively be referred to as the "Continuing Obligations." For the avoidance of doubt, all restrictive covenants obligations are supplemental to one another, and in the event of any conflict between restrictive covenants obligations, the most restrictive provision that is enforceable shall govern. In the event the Executive is entitled to both payments pursuant to the Restrictive Covenants Agreement and severance payments pursuant to Section 5 or Section 6 of this Agreement, then the severance payments pursuant to Section 5 or Section 6 of this Agreement received in any calendar year will be reduced by the amount the Executive is paid in the same such calendar year pursuant to the Restrictive Covenants Agreement.

(b) Third-Party Agreements and Rights. The Executive represents to the Company that the Executive's execution of this Agreement, the Executive's employment with the Company and the performance of the Executive's proposed duties for the Company will not violate any obligations the Executive may have to any previous employer or other party. In the Executive's work for the Company, the Executive will not disclose or make use of any information in violation of any agreements with or rights of any such previous employer or other party, and the Executive will not bring to the premises of the Company any copies or other tangible embodiments of non-public information belonging to or obtained from any such previous employment or other party.

(c) Litigation and Regulatory Cooperation. During and for 36 months after the Executive's employment, the Executive shall cooperate reasonably with the Company in (i) the defense or prosecution of any claims or actions now in existence or which may be brought in the future against or on behalf of the Company which relate to events or occurrences that transpired while the Executive was employed by the Company, and (ii) the investigation, whether internal or external, of any matters about which the Company believes the Executive may have knowledge or information. The Executive's reasonable cooperation in connection with such claims, actions or investigations shall include, but not be limited to, being available to meet with counsel to answer questions or to prepare for discovery or trial and to act as a witness on behalf of the Company at mutually convenient times. During and after the Executive's employment, the Executive also shall cooperate reasonably with the Company in connection with any investigation or review of any federal, state or local regulatory authority as any such investigation or review relates to events or occurrences that transpired while the Executive was employed by the Company. The Company shall reimburse the Executive for any reasonable out-of-pocket expenses incurred in connection with the Executive's performance of obligations pursuant to this Section 8(c).

(d) Relief. The Executive agrees that it would be difficult to measure any damages caused to the Company which might result from any breach by the Executive of the Continuing Obligations, and that in any event money damages would be an inadequate remedy for any such breach. Accordingly, the Executive agrees that if the Executive breaches, or proposes to breach, any portion of the Continuing Obligations, the Company shall be entitled, in addition to all other remedies that it may have, to an injunction or other appropriate equitable relief to restrain any such breach without showing or proving any actual damage to the Company.

9. Consent to Jurisdiction. The parties hereby consent to the jurisdiction of the state and federal courts of the Commonwealth of Massachusetts. Accordingly, with respect to any such court action, the Executive (a) submits to the exclusive personal jurisdiction of such courts; (b) consents to service of process; and (c) waives any other requirement (whether imposed by statute, rule of court, or otherwise) with respect to personal jurisdiction or service of process.

10. Waiver of Jury Trial. Each of the Executive and the Company irrevocably and unconditionally WAIVES ALL RIGHT TO TRIAL BY JURY IN ANY PROCEEDING (WHETHER BASED ON CONTRACT, TORT OR OTHERWISE) ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE EXECUTIVE'S EMPLOYMENT BY THE COMPANY OR ANY AFFILIATE OF THE COMPANY, INCLUDING WITHOUT LIMITATION THE EXECUTIVE'S OR THE COMPANY'S PERFORMANCE UNDER, OR THE ENFORCEMENT OF, THIS AGREEMENT.

11. Integration. This Agreement, together with the Restrictive Covenants Agreement, constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements between the parties concerning such subject matter, including the Prior Agreement, provided that the Equity Documents remain in full force and effect.

12. Withholding; Tax Effect. All forms of compensation referred to in this Agreement are subject to reduction to reflect applicable withholding and payroll taxes and other deductions required by law. The Executive hereby acknowledges that the Company does not have a duty to design its compensation policies in a manner that minimizes the Executive's tax liabilities, and the Executive will not make any claim against the Company or the Board related to tax liabilities arising from the Executive's compensation.

13. Assignment; Successors and Assigns. Neither the Executive nor the Company may make any assignment of this Agreement or any interest in it, by operation of law or otherwise, without the prior written consent of the other; provided, however, that the Company may assign its rights and obligations under this Agreement (including the Restrictive Covenants Agreement) without the Executive's consent to any affiliate or to any person or entity with whom the Company shall hereafter effect a reorganization or consolidation, into which the Company merges or to whom it transfers all or substantially all of its properties or assets; provided, further that if the Executive remains employed or becomes employed by the Company, the purchaser or any of their affiliates in connection with any such transaction, then the Executive shall not be entitled to any payments or benefits pursuant to Section 5 or Section 6 of this Agreement or any accelerated vesting pursuant to Section 2(e) of this Agreement solely as a result of such transaction (except that, for the avoidance of doubt, the Executive will be eligible for double trigger accelerated vesting as set forth herein). This Agreement shall inure to the benefit of and be binding upon the Executive and the Company, and each of the Executive's and the Company's respective successors, executors, administrators, heirs and permitted assigns. In the event of the Executive's death after the Executive's termination of employment but prior to the completion by the Company of all payments due to the Executive under this Agreement, the Company shall continue such payments to the Executive's beneficiary designated in writing to the Company prior to the Executive's death (or to the Executive's estate, if the Executive fails to make such designation).

14. Enforceability. If any portion or provision of this Agreement (including, without limitation, any portion or provision of any section of this Agreement) shall to any extent be declared illegal or unenforceable by a court of competent jurisdiction, then the remainder of this Agreement, or the application of such portion or provision in circumstances other than those as to which it is so declared illegal or unenforceable, shall not be affected thereby, and each portion and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

15. Survival. The provisions of this Agreement (and the Restrictive Covenants Agreement and the Equity Documents) shall survive the termination of this Agreement and/or the termination of the Executive's employment to the extent necessary to effectuate the terms contained herein.

16. Waiver. No waiver of any provision hereof shall be effective unless made in writing and signed by the waiving party. The failure of any party to require the performance of any term or obligation of this Agreement, or the waiver by any party of any breach of this

Agreement, shall not prevent any subsequent enforcement of such term or obligation or be deemed a waiver of any subsequent breach.

17. Notices. Any notices, requests, demands and other communications provided for by this Agreement shall be sufficient if in writing and delivered in person or sent by a nationally recognized overnight courier service or by registered or certified mail, postage prepaid, return receipt requested, to the Executive at the last address the Executive has filed in writing with the Company or, in the case of the Company, at its main offices, attention of the CEO. Notices, requests, demands and other communications provided for by this Agreement shall also be sufficient if sent by email to the Company email address of the Executive or, in the case of Company, the Company email address of the CEO, with confirmation of receipt.

18. Amendment. This Agreement may be amended or modified only by a written instrument signed by the Executive and by a duly authorized representative of the Company.

19. Effect on Other Plans and Agreements. An election by the Executive to resign for Good Reason under the provisions of this Agreement shall not be deemed a voluntary termination of employment by the Executive for the purpose of interpreting the provisions of any of the Company's benefit plans, programs or policies. Nothing in this Agreement shall be construed to limit the rights of the Executive under the Company's benefit plans, programs or policies except as otherwise provided in Section 8 hereof, and except that the Executive shall have no rights to any severance benefits under any Company severance pay plan, offer letter or otherwise. Except for the Restrictive Covenants Agreement, in the event that the Executive is party to an agreement with the Company providing for payments or benefits under such plan or agreement and under this Agreement, the terms of this Agreement shall govern and the Executive may receive payment under this Agreement only and not both. Further, Section 5 and Section 6 of this Agreement are mutually exclusive and in no event shall the Executive be entitled to payments or benefits pursuant to both Section 5 and Section 6 of this Agreement.

20. Governing Law. This is a Massachusetts contract and shall be construed under and be governed in all respects by the laws of the Commonwealth of Massachusetts, without giving effect to the conflict of laws principles thereof. With respect to any disputes concerning federal law, such disputes shall be determined in accordance with the law as it would be interpreted and applied by the United States Court of Appeals for the First Circuit.

21. Counterparts. This Agreement may be executed in separate counterparts. When both counterparts are signed, they shall be treated together as one and the same document. PDF copies of signed counterparts shall be equally effective as originals.

[Signature page follows]

IN WITNESS WHEREOF, the parties have executed this Agreement effective on the Effective Date.

PRIME MEDICINE, INC.

/s/ Keith Gottesdiener M.D.
By: Keith Gottesdiener, M.D.
Its: President and Chief Executive Officer

Date: 7/7/2022

EXECUTIVE

/s/ Ann lee, PhD
Ann Lee, PhD

Date: 7/11/2022

Exhibit A

Relocation Benefit

Exhibit B

Amendment to the Employee Confidentiality, Assignment and Nonsolicitation Agreement

AMENDED & RESTATED EMPLOYMENT AGREEMENT

This Amended and Restated Employment Agreement (this "Agreement") is made between Prime Medicine, Inc., a Delaware corporation (the "Company"), and Carman Alenson (the "Executive") to amend and restate that certain employment agreement between the Company and the Executive dated as of April 25, 2022 (the "2022 Prior Agreement"). This Agreement amends and restates the 2022 Prior Agreement and is effective upon the execution of the parties (the "Effective Date"). Except with respect to the Restrictive Covenants Agreement and the Equity Documents (each as defined below) and subject to Section 11, this Agreement supersedes in all respects all prior agreements between the Executive and the Company regarding the subject matter herein, including without limitation (i) the employment agreement between the Executive and the Company executed June 7, 2021 (the "Prior Agreement"), and (ii) any other offer letter, employment agreement or severance agreement.

WHEREAS, the Company desires to continue to employ the Executive and the Executive desires to continue to be employed by the Company on the new terms and conditions contained herein.

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Employment.

(a) Term. The Company shall employ the Executive and the Executive shall be employed by the Company pursuant to this Agreement commencing as of the Effective Date and continuing until such employment is terminated in accordance with the provisions hereof (the "Term"). The Executive's employment with the Company shall continue to be "at will," meaning that the Executive's employment may be terminated by the Company or the Executive at any time for any or no reason, subject to the terms of this Agreement.

(b) Position and Duties. The Executive shall serve as the Senior Vice President, Finance and Chief Accounting Officer of the Company and shall report to the Chief Executive Officer of the Company or another duly authorized executive. This is a full-time position, and the Executive shall not engage in any other employment, consulting or other business activities (whether full-time or part-time), except as expressly authorized in writing by the Company's Chief Executive Officer (the "CEO"). Notwithstanding the foregoing, the Executive may engage in professional and educational organizations, religious, charitable and other community activities (as well as manage the Executive's personal investments) so long as any outside activities do not interfere or conflict with the Executive's obligations to the Company. Any compensation received by the Executive for outside board service or other activities shall belong solely to the Executive, and the Company shall have no right to such compensation.

(c) The Executive's primary work location will continue to be at the Company's office, which is presently located in Cambridge, Massachusetts, provided that the Executive may be required to travel for business, consistent with the Company's business needs.

2. Compensation and Related Matters.

(a) Base Salary. The Company will pay the Executive a base salary at the rate of $380,000 per year, payable in accordance with the Company's standard payroll schedule for its executives and subject to applicable deductions and withholdings. The Executive's base salary will be subject to periodic review and adjustments by the Board or the Compensation Committee of the Board (the "Compensation Committee"). The base salary in effect at any given time is referred to herein as the "Base Salary."

(b) Annual Bonus. The Executive will be eligible to receive an annual target performance bonus of 35% of the Executive's Base Salary. The annual target performance bonus in effect at any given time is referred to herein as "Target Bonus." The actual bonus amount is discretionary. To earn an annual bonus, the Executive must be employed by the Company as of the payment date of such bonus, except as otherwise provided herein; provided that if the Executive is terminated by the Company without Cause or the Executive resigns for Good Reason (as such terms are defined in Section 3), in either event on or after January 1 but before the date bonuses for the prior year are paid to the Company's other executives (the "Bonus Payment Date"), the bonus amount (if any) that the Executive would have been paid if the Executive had remained employed through the Bonus Payment Date shall be paid to the Executive on the Bonus Payment Date if the Executive enters into, does not revoke and complies with the Separation Agreement (as defined below). Any annual bonus will be paid no later than March 15th of the calendar year following the calendar year to which such bonus relates.

(c) Expenses. The Company will promptly reimburse the Executive for all reasonable business expenses incurred by the Executive in performing services hereunder, in accordance with the policies and procedures then in effect and established by the Company for its executives.

(d) Benefits/Paid Time Off. The Executive will be eligible, subject to the terms of the applicable plans and programs, to participate in the employee benefits and insurance programs and be eligible for paid time off generally made available to the Company's full-time executive employees. The Company reserves the right to modify, amend or cancel any of its benefits plans or programs at any time.

(e) Equity. The equity awards held by the Executive shall continue to be governed by the terms and conditions of the Company's applicable equity incentive plan(s) and the applicable award agreement(s) (collectively, the "Equity Documents"); provided, however, and notwithstanding anything to the contrary in any applicable option agreement or other stock-based award agreement, in the event that the Executive's employment is terminated by the Company without Cause or by the Executive for Good Reason, in each case during the Change in Control Period (as defined below), all of the then-outstanding and unvested portion of the Executive's stock options and other stock-based awards that (A) are subject solely to time-based vesting or (B) were granted to the Executive prior to the Effective Date and are subject to performance-based vesting (the "Performance-Based Awards") shall become fully vested and exercisable or nonforfeitable immediately as of the Date of Termination (as defined below), with any such Performance-Based Awards vesting at target. For the avoidance of doubt, (I) the forfeiture provisions upon a Change in Control described in the Plan (as defined below) shall not

apply to the Executive's equity awards that are subject to acceleration pursuant to this subsection, and (II) any stock options or other stock-based awards that are subject to performance-based vesting and that are granted to the Executive after the Effective Date shall not be subject to acceleration pursuant to this subsection, and the vesting and any acceleration of vesting of such awards (if any) will be addressed in the applicable award agreements.

3. Termination. The Executive's employment hereunder may be terminated without any breach of this Agreement under the following circumstances:

(a) Death. The Executive's employment hereunder shall terminate upon death.

(b) Disability. The Company may terminate the Executive's employment if the Executive is disabled and unable to perform or expected to be unable to perform the essential functions of the Executive's then existing position or positions under this Agreement with or without reasonable accommodation for a period of 180 days (which need not be consecutive) in any 12-month period. If any question shall arise as to whether during any period the Executive is disabled so as to be unable to perform the essential functions of the Executive's then existing position or positions with or without reasonable accommodation, the Executive may, and at the request of the Company shall, submit to the Company a certification in reasonable detail by a physician selected by the Company to whom the Executive or the Executive's guardian has no reasonable objection as to whether the Executive is so disabled or how long such disability is expected to continue, and such certification shall for the purposes of this Agreement be conclusive of the issue. The Executive shall cooperate with any reasonable request of the physician in connection with such certification. If such question shall arise and the Executive shall fail to submit such certification, the Company's determination of such issue shall be binding on the Executive. Nothing in this Section 3(b) shall be construed to waive the Executive's rights, if any, under existing law including, without limitation, the Family and Medical Leave Act of 1993, 29 U.S.C. §2601 et seq. and the Americans with Disabilities Act, 42 U.S.C. §12101 et seq.

(c) Termination by the Company for Cause. The Company may terminate the Executive's employment hereunder for Cause. For purposes of this Agreement, "Cause" shall mean any of the following:

(i) the Executive's dishonest statements or acts with respect to the Company or any affiliate of the Company, or any current or prospective customers, suppliers, vendors or other third parties with which such entity does business that results in or is reasonably anticipated to result in material harm to the Company;

(ii) the Executive's commission of (A) a felony or (B) any misdemeanor involving moral turpitude, deceit, dishonesty or fraud;

(iii) the Executive's refusal to perform the Executive's assigned duties and responsibilities, which refusal to perform continues, in the reasonable judgment of the CEO, for 30 days after written notice given to the Executive by the CEO describing such refusal in reasonable detail;

(iv) the Executive's gross negligence, willful misconduct or insubordination with respect to the Company that results in or is reasonably anticipated to result in harm to the Company;

(v) the Executive's material violation of any material provision of any written employment policies or any agreement(s) between the Executive and the Company, including any agreement relating to noncompetition, nonsolicitation, nondisclosure and/or assignment of inventions; or

(vi) the Executive's failure to cooperate with a bona fide internal investigation or an investigation by regulatory or law enforcement authorities, after being instructed by the Company to cooperate, or the willful destruction or failure to preserve documents or other materials known to be relevant to such investigation or the inducement of others to fail to cooperate or to produce documents or other materials in connection with such investigation.

(d) Termination by the Company without Cause. The Company may terminate the Executive's employment hereunder at any time without Cause. Any termination by the Company of the Executive's employment under this Agreement which does not constitute a termination for Cause under Section 3(c) and does not result from the death or disability of the Executive under Section 3(a) or (b) shall be deemed a termination without Cause.

(e) Termination by the Executive. The Executive may terminate employment hereunder at any time for any reason, including but not limited to, Good Reason. For purposes of this Agreement, "Good Reason" shall mean that the Executive has complied with the Good Reason Process (hereinafter defined) following the occurrence of any of the following events without the Executive's consent (each, a "Good Reason Condition"):

(i) following a Change in Control, a material diminution in the Executive's responsibilities, authority or duties, except that a suspension of the Executive's responsibilities, authority and/or duties for the Company during any portion of a bona fide internal investigation or an investigation by regulatory or law enforcement authorities shall not be a Good Reason Condition;

(ii) a material diminution in the Executive's Base Salary except for across-the-board salary reductions based on the Company's financial performance similarly affecting all or substantially all senior management employees of the Company;

(iii) a change of more than 50 miles in the geographic location at which the Executive is required to provide services to the Company; or

(iv) a material breach of this Agreement or any equity award by the Company.

The "Good Reason Process" shall mean that:

(i) the Executive reasonably determines that a Good Reason Condition has occurred;

(ii) the Executive notifies the Company in writing of the occurrence of the Good Reason Condition within 30 days of the Executive's knowledge of such condition;

(iii) the Executive cooperates in good faith with the Company's efforts, for a period of not less than 30 days following such notice (the "Cure Period"), to remedy the Good Reason Condition;

(iv) notwithstanding such efforts, the Good Reason Condition continues to exist at the end of the Cure Period; and

(v) the Executive terminates employment within 30 days after the end of the Cure Period.

If the Company cures the Good Reason Condition during the Cure Period, Good Reason shall be deemed not to have occurred.

4. Matters related to Termination.

(a) Notice of Termination. Except for termination as specified in Section 3(a), any termination of the Executive's employment by the Company or any such termination by the Executive shall be communicated by written Notice of Termination to the other party hereto. For purposes of this Agreement, a "Notice of Termination" shall mean a notice which shall indicate the specific termination provision in this Agreement relied upon.

(b) Date of Termination. "Date of Termination" shall mean: (i) if the Executive's employment is terminated by death, the date of death; (ii) if the Executive's employment is terminated on account of disability under Section 3(b) or by the Company for Cause under Section 3(c), the date on which Notice of Termination is given; (iii) if the Executive's employment is terminated by the Company without Cause under Section 3(d), the date on which a Notice of Termination is given or the date otherwise specified by the Company in the Notice of Termination; (iv) if the Executive's employment is terminated by the Executive under Section 3(e) other than for Good Reason, 30 days after the date on which a Notice of Termination is given, and (v) if the Executive's employment is terminated by the Executive under Section 3(e) for Good Reason, the date on which a Notice of Termination is given after the end of the Cure Period. Notwithstanding the foregoing, in the event that the Executive gives a Notice of Termination to the Company, the Company may unilaterally accelerate the Date of Termination and such acceleration shall not result in a termination by the Company for purposes of this Agreement.

(c) Accrued Obligations. If the Executive's employment with the Company is terminated for any reason, the Company shall pay or provide to the Executive (or to the Executive's authorized representative or estate) (i) any Base Salary earned through the Date of Termination; (ii) unpaid expense reimbursements (subject to, and in accordance with, Section 2(c) of this Agreement); and (iii) any vested benefits the Executive may have under any employee benefit plan of the Company through the Date of Termination, which vested benefits shall be paid and/or provided in accordance with the terms of such employee benefit plans. The

payments and benefits due to the Executive under this Section 4(c) are collectively referred to herein as the "Accrued Obligations."

(d) Resignation of All Other Positions. To the extent applicable, the Executive shall be deemed to have resigned from all officer and board member positions that the Executive holds with the Company or any of its respective subsidiaries and affiliates upon the termination of the Executive's employment for any reason. The Executive shall execute any documents in reasonable form as may be requested to confirm or effectuate any such resignations.

5. Severance Pay and Benefits Upon Termination by the Company without Cause or by the Executive for Good Reason Outside the Change in Control Period. If the Executive's employment is terminated by the Company without Cause as provided in Section 3(d), or the Executive terminates employment for Good Reason as provided in Section 3(e), in each case outside of the Change in Control Period, then, in addition to the Accrued Obligations, and subject to (i) the Executive signing a separation agreement and release in a form and manner reasonably satisfactory to the Company, which shall include, without limitation, a general release of claims against the Company and all related persons and entities that shall not release the Executive's rights under this Agreement, a reaffirmation of the Executive's Continuing Obligations (as defined below), and, in the Company's sole discretion, a one year post-employment noncompetition agreement, and shall provide that if the Executive breaches in any material respect the Continuing Obligations, all payments of the Severance Amount (as defined below) shall immediately cease (the "Separation Agreement"), and (ii) the Separation Agreement becoming irrevocable, all within 60 days after the Date of Termination (or such shorter period as set forth in the Separation Agreement), which shall include a seven (7) business day revocation period:

(a) the Company shall pay the Executive an amount equal to the sum of (i) six (6) months of the Executive's then-current Base Salary plus (ii) 0.5 times the Executive's Target Bonus for the then-current year (the "Severance Amount"); and

(b) subject to the Executive's copayment of premium amounts at the applicable active employees' rate and the Executive's proper election to receive benefits under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"), the Company shall pay to the group health plan provider or the COBRA provider a monthly payment equal to the monthly employer contribution that the Company would have made to provide health insurance to the Executive if the Executive had remained employed by the Company until the earliest of (A) the six (6) month anniversary of the Date of Termination; (B) the date that the Executive becomes eligible for group medical plan benefits under any other employer's group medical plan; or (C) the cessation of the Executive's health continuation rights under COBRA; provided, however, that if the Company determines that it cannot pay such amounts to the group health plan provider or the COBRA provider (if applicable) without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then the Company shall convert such payments to payroll payments directly to the Executive for the time period specified above. Such payments to the Executive shall be subject to tax-related deductions and withholdings and paid on the Company's regular payroll dates.

The amounts payable under Section 5, to the extent taxable, shall be paid out in substantially equal installments in accordance with the Company's payroll practice over six (6) months commencing within 60 days after the Date of Termination; provided, however, that if the 60-day period begins in one calendar year and ends in a second calendar year, such payments, to the extent they qualify as "non-qualified deferred compensation" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended (the "Code"), shall begin to be paid in the second calendar year by the last day of such 60-day period; provided, further, that the initial payment shall include a catch-up payment to cover amounts retroactive to the day immediately following the Date of Termination. Each payment pursuant to this Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2). For the avoidance of doubt, the Executive shall not be obligated to seek other employment or take any other action by way of mitigation of the amounts payable to the Executive under this Section 5, subject to the terms of this Agreement.

6. Severance Pay and Benefits Upon Termination by the Company without Cause or by the Executive for Good Reason during the Change in Control Period. The provisions of this Section 6 shall apply in lieu of, and expressly supersede, the provisions of Section 5 if (i) the Executive's employment is terminated either (a) by the Company without Cause as provided in Section 3(d), or (b) by the Executive for Good Reason as provided in Section 3(e), and (ii) the Date of Termination occurs during the Change in Control Period. These provisions shall terminate and be of no further force or effect after the Change in Control Period.

(a) If the Executive's employment is terminated by the Company without Cause as provided in Section 3(d) or the Executive terminates employment for Good Reason as provided in Section 3(e) and in each case the Date of Termination occurs during the Change in Control Period, then, in addition to the Accrued Obligations, and subject to the signing of the Separation Agreement by the Executive and the Separation Agreement becoming fully effective, all within the time frame set forth in the Separation Agreement but in no event more than 60 days after the Date of Termination:

(i) the Company shall pay the Executive a lump sum in cash in an amount equal to the sum of (A) six (6) months of the Executive's then-current Base Salary (or the Executive's Base Salary in effect immediately prior to the Change in Control, if higher) plus (B) 0.5 times the Executive's Target Bonus for the then-current year (or the Executive's Target Bonus in effect immediately prior to the Change in Control, if higher) (the "Change in Control Payment"); and

(ii) subject to the Executive's copayment of premium amounts at the applicable active employees' rate and the Executive's proper election to receive benefits under COBRA, the Company shall pay to the group health plan provider or the COBRA provider a monthly payment equal to the monthly employer contribution that the Company would have made to provide health insurance to the Executive if the Executive had remained employed by the Company until the earliest of (A) the six (6) month anniversary of the Date of Termination; (B) the date that the Executive becomes eligible for group medical plan benefits under any other employer's group medical plan; or (C) the cessation of the Executive's health continuation rights under COBRA; provided,

however, that if the Company determines that it cannot pay such amounts to the group health plan provider or the COBRA provider (if applicable) without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then the Company shall convert such payments to payroll payments directly to the Executive for the time period specified above. Such payments to the Executive shall be subject to tax-related deductions and withholdings and paid on the Company's regular payroll dates.

The amounts payable under this Section 6(a), to the extent taxable, shall be paid or commence to be paid within 60 days after the Date of Termination; provided, however, that if the 60-day period begins in one calendar year and ends in a second calendar year, such payments to the extent they qualify as "non-qualified deferred compensation" within the meaning of Section 409A of the Code, shall be paid or commence to be paid in the second calendar year by the last day of such 60-day period. For the avoidance of doubt, the Executive shall not be obligated to seek other employment or take any other action by way of mitigation of the amounts payable to the Executive under this Section 6, subject to the terms of this Agreement.

(b) Additional Limitation.

(i) Anything in this Agreement to the contrary notwithstanding, in the event that the amount of any compensation, payment or distribution by the Company to or for the benefit of the Executive, whether paid or payable or distributed or distributable pursuant to the terms of this Agreement or otherwise, calculated in a manner consistent with Section 280G of the Code, and the applicable regulations thereunder (the "Aggregate Payments"), would be subject to the excise tax imposed by Section 4999 of the Code, then the Aggregate Payments shall be reduced (but not below zero) so that the sum of all of the Aggregate Payments shall be $1.00 less than the amount at which the Executive becomes subject to the excise tax imposed by Section 4999 of the Code; provided that such reduction shall only occur if it would result in the Executive receiving a higher After Tax Amount (as defined below) than the Executive would receive if the Aggregate Payments were not subject to such reduction. In such event, the Aggregate Payments shall be reduced in the following order, in each case, in reverse chronological order beginning with the Aggregate Payments that are to be paid the furthest in time from consummation of the transaction that is subject to Section 280G of the Code: (1) cash payments not subject to Section 409A of the Code; (2) cash payments subject to Section 409A of the Code; (3) equity-based payments and acceleration; and (4) non-cash forms of benefits; provided that in the case of all the foregoing Aggregate Payments all amounts or payments that are not subject to calculation under Treas. Reg. §1.280G-1, Q&A-24(b) or (c) shall be reduced before any amounts that are subject to calculation under Treas. Reg. §1.280G-1, Q&A-24(b) or (c).

(ii) For purposes of this Section 6(b), the "After Tax Amount" means the amount of the Aggregate Payments less all federal, state, and local income, excise and employment taxes imposed on the Executive as a result of the Executive's receipt of the Aggregate Payments. For purposes of determining the After Tax Amount, the Executive shall be deemed to pay federal income taxes at the highest marginal rate of federal

income taxation applicable to individuals for the calendar year in which the determination is to be made, and state and local income taxes at the highest marginal rates of individual taxation in each applicable state and locality, net of the maximum reduction in federal income taxes which could be obtained from deduction of such state and local taxes.

(iii) The determination as to whether a reduction in the Aggregate Payments shall be made pursuant to Section 6(b)(i) shall be made by a nationally recognized accounting firm selected by the Company (the "Accounting Firm"), which shall provide detailed supporting calculations both to the Company and the Executive within 15 business days of the Date of Termination, if applicable, or at such earlier time as is reasonably requested by the Company or the Executive. Any determination by the Accounting Firm shall be binding upon the Company and the Executive.

(c) Definitions. For purposes of this Agreement:

(i) "Change in Control" shall mean a "Sale Event" as defined in the Company's 2022 Stock Option and Incentive Plan, as the same may be amended from time to time (the "Plan").

(ii) "Change in Control Period" shall mean the period beginning on the date of the consummation of the first event constituting a Change in Control (the "Closing Date") and ending on the 12 month anniversary of the Closing Date.

7. Section 409A.

(a) Anything in this Agreement to the contrary notwithstanding, if at the time of the Executive's separation from service within the meaning of Section 409A of the Code, the Company determines that the Executive is a "specified employee" within the meaning of Section 409A(a)(2)(B)(i) of the Code, then to the extent any payment or benefit that the Executive becomes entitled to under this Agreement or otherwise on account of the Executive's separation from service would be considered deferred compensation otherwise subject to the 20 percent additional tax imposed pursuant to Section 409A(a) of the Code as a result of the application of Section 409A(a)(2)(B)(i) of the Code, such payment shall not be payable and such benefit shall not be provided until the date that is the earlier of (A) six months and one day after the Executive's separation from service, or (B) the Executive's death. If any such delayed cash payment is otherwise payable on an installment basis, the first payment shall include a catch-up payment covering amounts that would otherwise have been paid during the six-month period but for the application of this provision, and the balance of the installments shall be payable in accordance with their original schedule.

(b) All in-kind benefits provided and expenses eligible for reimbursement under this Agreement shall be provided by the Company or incurred by the Executive during the time periods set forth in this Agreement. All reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred. The amount of in-kind benefits provided or reimbursable expenses incurred in one taxable year shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other

taxable year (except for any lifetime or other aggregate limitation applicable to medical expenses). Such right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit.

(c) To the extent that any payment or benefit described in this Agreement constitutes "non-qualified deferred compensation" under Section 409A of the Code, and to the extent that such payment or benefit is payable upon the Executive's termination of employment, then such payments or benefits shall be payable only upon the Executive's "separation from service." The determination of whether and when a separation from service has occurred shall be made in accordance with the presumptions set forth in Treasury Regulation Section 1.409A-1(h).

(d) The parties intend that this Agreement will be administered in accordance with Section 409A of the Code. To the extent that any provision of this Agreement is ambiguous as to its compliance with Section 409A of the Code, the provision shall be read in such a manner so that all payments hereunder comply with or are exempt from Section 409A of the Code. Each payment pursuant to this Agreement or the Restrictive Covenants Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2). The parties agree that this Agreement may be amended, as reasonably requested by either party, and as may be necessary to fully comply with Section 409A of the Code and all related rules and regulations in order to preserve the payments and benefits provided hereunder without additional cost to either party.

(e) The Company makes no representation or warranty and shall have no liability to the Executive or any other person if any provisions of this Agreement are determined to constitute deferred compensation subject to Section 409A of the Code but do not satisfy an exemption from, or the conditions of, such Section.

8. Continuing Obligations.

(a) Restrictive Covenants Agreement. As a condition of employment, and in exchange for the benefits set forth in this Agreement, to which the Executive was not previously entitled, the Executive is required to enter into the Amendment to the Employee Confidentiality, Assignment and Nonsolicitation Agreement attached hereto as Exhibit A, which adds a post-employment noncompetition agreement to the Employee Confidentiality, Assignment and Nonsolicitation Agreement between the Executive and the Company dated as of June 7, 2021 (as amended, the "Restrictive Covenants Agreement"). For purposes of this Agreement, the obligations in this Section 8 and those that arise in the Restrictive Covenants Agreement and any other agreement relating to confidentiality, assignment of inventions, or other restrictive covenants shall collectively be referred to as the "Continuing Obligations." For the avoidance of doubt, all restrictive covenants obligations are supplemental to one another, and in the event of any conflict between restrictive covenants obligations, the most restrictive provision that is enforceable shall govern. In the event the Executive is entitled to both payments pursuant to the Restrictive Covenants Agreement and severance payments pursuant to Section 5 or Section 6 of this Agreement, then the severance payments pursuant to Section 5 or Section 6 of this Agreement received in any calendar year will be reduced by the amount the Executive is paid in the same such calendar year pursuant to the Restrictive Covenants Agreement.

(b) Third-Party Agreements and Rights. The Executive represents to the Company that the Executive's execution of this Agreement, the Executive's employment with the Company and the performance of the Executive's proposed duties for the Company will not violate any obligations the Executive may have to any previous employer or other party. In the Executive's work for the Company, the Executive will not disclose or make use of any information in violation of any agreements with or rights of any such previous employer or other party, and the Executive will not bring to the premises of the Company any copies or other tangible embodiments of non-public information belonging to or obtained from any such previous employment or other party.

(c) Litigation and Regulatory Cooperation. During and for 36 months after the Executive's employment, the Executive shall cooperate reasonably with the Company in (i) the defense or prosecution of any claims or actions now in existence or which may be brought in the future against or on behalf of the Company which relate to events or occurrences that transpired while the Executive was employed by the Company, and (ii) the investigation, whether internal or external, of any matters about which the Company believes the Executive may have knowledge or information. The Executive's reasonable cooperation in connection with such claims, actions or investigations shall include, but not be limited to, being available to meet with counsel to answer questions or to prepare for discovery or trial and to act as a witness on behalf of the Company at mutually convenient times. During and after the Executive's employment, the Executive also shall cooperate reasonably with the Company in connection with any investigation or review of any federal, state or local regulatory authority as any such investigation or review relates to events or occurrences that transpired while the Executive was employed by the Company. The Company shall reimburse the Executive for any reasonable out-of-pocket expenses incurred in connection with the Executive's performance of obligations pursuant to this Section 8(c).

(d) Relief. The Executive agrees that it would be difficult to measure any damages caused to the Company which might result from any breach by the Executive of the Continuing Obligations, and that in any event money damages would be an inadequate remedy for any such breach. Accordingly, the Executive agrees that if the Executive breaches, or proposes to breach, any portion of the Continuing Obligations, the Company shall be entitled, in addition to all other remedies that it may have, to an injunction or other appropriate equitable relief to restrain any such breach without showing or proving any actual damage to the Company.

9. Consent to Jurisdiction. The parties hereby consent to the jurisdiction of the state and federal courts of the Commonwealth of Massachusetts. Accordingly, with respect to any such court action, the Executive (a) submits to the exclusive personal jurisdiction of such courts; (b) consents to service of process; and (c) waives any other requirement (whether imposed by statute, rule of court, or otherwise) with respect to personal jurisdiction or service of process.

10. Waiver of Jury Trial. Each of the Executive and the Company irrevocably and unconditionally waives all right to trial by jury in any Proceeding (whether based on contract, tort or otherwise) arising out of or relating to this Agreement or THE EXECUTIVE's employment by the Company or any affiliate of the Company, INCLUDING WITHOUT

LIMITATION THE EXECUTIVE'S or the Company's performance under, or the enforcement of, this Agreement.

11. Integration. This Agreement, together with the Restrictive Covenants Agreement, constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements between the parties concerning such subject matter, including the Prior Agreement, provided that the Equity Documents remain in full force and effect.

12. Withholding; Tax Effect. All forms of compensation referred to in this Agreement are subject to reduction to reflect applicable withholding and payroll taxes and other deductions required by law. The Executive hereby acknowledges that the Company does not have a duty to design its compensation policies in a manner that minimizes the Executive's tax liabilities, and the Executive will not make any claim against the Company or the Board related to tax liabilities arising from the Executive's compensation.

13. Assignment; Successors and Assigns. Neither the Executive nor the Company may make any assignment of this Agreement or any interest in it, by operation of law or otherwise, without the prior written consent of the other; provided, however, that the Company may assign its rights and obligations under this Agreement (including the Restrictive Covenants Agreement) without the Executive's consent to any affiliate or to any person or entity with whom the Company shall hereafter effect a reorganization or consolidation, into which the Company merges or to whom it transfers all or substantially all of its properties or assets; provided, further that if the Executive remains employed or becomes employed by the Company, the purchaser or any of their affiliates in connection with any such transaction, then the Executive shall not be entitled to any payments or benefits pursuant to Section 5 or Section 6 of this Agreement or any accelerated vesting pursuant to Section 2(e) of this Agreement solely as a result of such transaction (except that, for the avoidance of doubt, the Executive will be eligible for double trigger accelerated vesting as set forth herein). This Agreement shall inure to the benefit of and be binding upon the Executive and the Company, and each of the Executive's and the Company's respective successors, executors, administrators, heirs and permitted assigns. In the event of the Executive's death after the Executive's termination of employment but prior to the completion by the Company of all payments due to the Executive under this Agreement, the Company shall continue such payments to the Executive's beneficiary designated in writing to the Company prior to the Executive's death (or to the Executive's estate, if the Executive fails to make such designation).

14. Enforceability. If any portion or provision of this Agreement (including, without limitation, any portion or provision of any section of this Agreement) shall to any extent be declared illegal or unenforceable by a court of competent jurisdiction, then the remainder of this Agreement, or the application of such portion or provision in circumstances other than those as to which it is so declared illegal or unenforceable, shall not be affected thereby, and each portion and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

15. Survival. The provisions of this Agreement (and the Restrictive Covenants Agreement and the Equity Documents) shall survive the termination of this Agreement and/or

the termination of the Executive's employment to the extent necessary to effectuate the terms contained herein.

16. Waiver. No waiver of any provision hereof shall be effective unless made in writing and signed by the waiving party. The failure of any party to require the performance of any term or obligation of this Agreement, or the waiver by any party of any breach of this Agreement, shall not prevent any subsequent enforcement of such term or obligation or be deemed a waiver of any subsequent breach.

17. Notices. Any notices, requests, demands and other communications provided for by this Agreement shall be sufficient if in writing and delivered in person or sent by a nationally recognized overnight courier service or by registered or certified mail, postage prepaid, return receipt requested, to the Executive at the last address the Executive has filed in writing with the Company or, in the case of the Company, at its main offices, attention of the CEO. Notices, requests, demands and other communications provided for by this Agreement shall also be sufficient if sent by email to the Company email address of the Executive or, in the case of Company, the Company email address of the CEO, with confirmation of receipt.

18. Amendment. This Agreement may be amended or modified only by a written instrument signed by the Executive and by a duly authorized representative of the Company.

19. Effect on Other Plans and Agreements. An election by the Executive to resign for Good Reason under the provisions of this Agreement shall not be deemed a voluntary termination of employment by the Executive for the purpose of interpreting the provisions of any of the Company's benefit plans, programs or policies. Nothing in this Agreement shall be construed to limit the rights of the Executive under the Company's benefit plans, programs or policies except as otherwise provided in Section 8 hereof, and except that the Executive shall have no rights to any severance benefits under any Company severance pay plan, offer letter or otherwise. Except for the Restrictive Covenants Agreement, in the event that the Executive is party to an agreement with the Company providing for payments or benefits under such plan or agreement and under this Agreement, the terms of this Agreement shall govern and the Executive may receive payment under this Agreement only and not both. Further, Section 5 and Section 6 of this Agreement are mutually exclusive and in no event shall the Executive be entitled to payments or benefits pursuant to both Section 5 and Section 6 of this Agreement.

20. Governing Law. This is a Massachusetts contract and shall be construed under and be governed in all respects by the laws of the Commonwealth of Massachusetts, without giving effect to the conflict of laws principles thereof. With respect to any disputes concerning federal law, such disputes shall be determined in accordance with the law as it would be interpreted and applied by the United States Court of Appeals for the First Circuit.

21. Counterparts. This Agreement may be executed in separate counterparts. When both counterparts are signed, they shall be treated together as one and the same document. PDF copies of signed counterparts shall be equally effective as originals.

[Signature page follows]

IN WITNESS WHEREOF, the parties have executed this Agreement effective on the Effective Date.

PRIME MEDICINE, INC.

/s/ Keith Gottesdiener

By: Keith Gottesdiener, M.D.
Its: President and Chief Executive Officer

Date: 7/7/2022

EXECUTIVE

/s/ Carman Alenson

Carman Alenson

Date: 7/7/2022

Exhibit A

Amendment to the Employee Confidentiality, Assignment and Nonsolicitation Agreement

EMPLOYMENT AGREEMENT

This Amended and Restated Employment Agreement (this "Agreement") is made between Prime Medicine, Inc., a Delaware corporation (the "Company"), and Meredith Goldwasser, ScD (the "Executive") to amend and restate that certain employment agreement between the Company and the Executive dated as of April 15, 2022 (the "2022 Prior Agreement"). This Agreement amends and restates the 2022 Prior Agreement and is effective upon the execution of the parties (the "Effective Date"). Except with respect to the Restrictive Covenants Agreement and the Equity Documents (each as defined below) and subject to Section 11, this Agreement supersedes in all respects all prior agreements between the Executive and the Company regarding the subject matter herein, including without limitation (i) the employment agreement between the Executive and the Company executed September 6, 2020 (the "Prior Agreement"), and (ii) any other offer letter, employment agreement or severance agreement.

WHEREAS, the Company desires to continue to employ the Executive and the Executive desires to continue to be employed by the Company on the new terms and conditions contained herein.

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Employment.

(a) Term. The Company shall employ the Executive and the Executive shall be employed by the Company pursuant to this Agreement commencing as of the Effective Date and continuing until such employment is terminated in accordance with the provisions hereof (the "Term"). The Executive's employment with the Company shall continue to be "at will," meaning that the Executive's employment may be terminated by the Company or the Executive at any time for any or no reason, subject to the terms of this Agreement.

(b) Position and Duties. The Executive shall serve as the Senior Vice President, Strategy and Corporate Operations of the Company and shall report to the Chief Executive Officer of the Company. This is a full-time position, and the Executive shall not engage in any other employment, consulting or other business activities (whether full-time or part-time), except as expressly authorized in writing by the Company's Chief Executive Officer (the "CEO"). Notwithstanding the foregoing, the Executive may engage in professional and educational organizations, religious, charitable and other community activities (as well as manage the Executive's personal investments) so long as any outside activities do not interfere or conflict with the Executive's obligations to the Company. Any compensation received by the Executive for outside board service or other activities shall belong solely to the Executive, and the Company shall have no right to such compensation.

(c) The Executive's primary work location will continue to be at the Company's office, which is presently located in Cambridge, Massachusetts, provided that the Executive may be required to travel for business, consistent with the Company's business needs.

2. Compensation and Related Matters.

(a) Base Salary. The Company will pay the Executive a base salary at the rate of $400,000 per year, payable in accordance with the Company's standard payroll schedule for its executives and subject to applicable deductions and withholdings. The Executive's base salary will be subject to periodic review and adjustments by the Board or the Compensation Committee of the Board (the "Compensation Committee"). The base salary in effect at any given time is referred to herein as the "Base Salary."

(b) Annual Bonus. The Executive will be eligible to receive an annual target performance bonus of 35% of the Executive's Base Salary. The annual target performance bonus in effect at any given time is referred to herein as "Target Bonus." The actual bonus amount is discretionary. To earn an annual bonus, the Executive must be employed by the Company as of the payment date of such bonus, except as otherwise provided herein; provided that if the Executive is terminated by the Company without Cause or the Executive resigns for Good Reason (as such terms are defined in Section 3), in either event on or after January 1 but before the date bonuses for the prior year are paid to the Company's other executives (the "Bonus Payment Date"), the bonus amount (if any) that the Executive would have been paid if the Executive had remained employed through the Bonus Payment Date shall be paid to the Executive on the Bonus Payment Date if the Executive enters into, does not revoke and complies with the Separation Agreement (as defined below). Any annual bonus will be paid no later than March 15th of the calendar year following the calendar year to which such bonus relates.

(c) Expenses. The Company will promptly reimburse the Executive for all reasonable business expenses incurred by the Executive in performing services hereunder, in accordance with the policies and procedures then in effect and established by the Company for its executives.

(d) Benefits/Paid Time Off. The Executive will be eligible, subject to the terms of the applicable plans and programs, to participate in the employee benefits and insurance programs and be eligible for paid time off generally made available to the Company's full-time executive employees. The Company reserves the right to modify, amend or cancel any of its benefits plans or programs at any time.

(e) Equity. The equity awards held by the Executive shall continue to be governed by the terms and conditions of the Company's applicable equity incentive plan(s) and the applicable award agreement(s) (collectively, the "Equity Documents"); provided, however, and notwithstanding anything to the contrary in any applicable option agreement or other stock-based award agreement, in the event that the Executive's employment is terminated by the Company without Cause or by the Executive for Good Reason, in each case during the Change in Control Period (as defined below), all of the then-outstanding and unvested portion of the Executive's stock options and other stock-based awards that (A) are subject solely to time-based

vesting or (B) were granted to the Executive prior to the Effective Date and are subject to performance-based vesting (the "Performance-Based Awards") shall become fully vested and exercisable or nonforfeitable immediately as of the Date of Termination (as defined below), with any such Performance-Based Awards vesting at target. For the avoidance of doubt, (I) the forfeiture provisions upon a Change in Control described in the Plan (as defined below) shall not apply to the Executive's equity awards that are subject to acceleration pursuant to this subsection, and (II) any stock options or other stock-based awards that are subject to performance-based vesting and that are granted to the Executive after the Effective Date shall not be subject to acceleration pursuant to this subsection, and the vesting and any acceleration of vesting of such awards (if any) will be addressed in the applicable award agreements.

3. Termination. The Executive's employment hereunder may be terminated without any breach of this Agreement under the following circumstances:

(a) Death. The Executive's employment hereunder shall terminate upon death.

(b) Disability. The Company may terminate the Executive's employment if the Executive is disabled and unable to perform or expected to be unable to perform the essential functions of the Executive's then existing position or positions under this Agreement with or without reasonable accommodation for a period of 180 days (which need not be consecutive) in any 12-month period. If any question shall arise as to whether during any period the Executive is disabled so as to be unable to perform the essential functions of the Executive's then existing position or positions with or without reasonable accommodation, the Executive may, and at the request of the Company shall, submit to the Company a certification in reasonable detail by a physician selected by the Company to whom the Executive or the Executive's guardian has no reasonable objection as to whether the Executive is so disabled or how long such disability is expected to continue, and such certification shall for the purposes of this Agreement be conclusive of the issue. The Executive shall cooperate with any reasonable request of the physician in connection with such certification. If such question shall arise and the Executive shall fail to submit such certification, the Company's determination of such issue shall be binding on the Executive. Nothing in this Section 3(b) shall be construed to waive the Executive's rights, if any, under existing law including, without limitation, the Family and Medical Leave Act of 1993, 29 U.S.C. §2601 et seq. and the Americans with Disabilities Act, 42 U.S.C. §12101 et seq.

(c) Termination by the Company for Cause. The Company may terminate the Executive's employment hereunder for Cause. For purposes of this Agreement, "Cause" shall mean any of the following:

(i) the Executive's dishonest statements or acts with respect to the Company or any affiliate of the Company, or any current or prospective customers, suppliers, vendors or other third parties with which such entity does business that results in or is reasonably anticipated to result in material harm to the Company;

(ii) the Executive's commission of (A) a felony or (B) any misdemeanor involving moral turpitude, deceit, dishonesty or fraud;

(iii) the Executive's refusal to perform the Executive's assigned duties and responsibilities, which refusal to perform continues, in the reasonable judgment of the CEO, for 30 days after written notice given to the Executive by the CEO describing such refusal in reasonable detail;

(iv) the Executive's gross negligence, willful misconduct or insubordination with respect to the Company that results in or is reasonably anticipated to result in harm to the Company;

(v) the Executive's material violation of any material provision of any written employment policies or any agreement(s) between the Executive and the Company, including any agreement relating to noncompetition, nonsolicitation, nondisclosure and/or assignment of inventions; or

(vi) the Executive's failure to cooperate with a bona fide internal investigation or an investigation by regulatory or law enforcement authorities, after being instructed by the Company to cooperate, or the willful destruction or failure to preserve documents or other materials known to be relevant to such investigation or the inducement of others to fail to cooperate or to produce documents or other materials in connection with such investigation.

(d) Termination by the Company without Cause. The Company may terminate the Executive's employment hereunder at any time without Cause. Any termination by the Company of the Executive's employment under this Agreement which does not constitute a termination for Cause under Section 3(c) and does not result from the death or disability of the Executive under Section 3(a) or (b) shall be deemed a termination without Cause.

(e) Termination by the Executive. The Executive may terminate employment hereunder at any time for any reason, including but not limited to, Good Reason. For purposes of this Agreement, "Good Reason" shall mean that the Executive has complied with the Good Reason Process (hereinafter defined) following the occurrence of any of the following events without the Executive's consent (each, a "Good Reason Condition"):

(i) following a Change in Control, a material diminution in the Executive's responsibilities, authority or duties, except that a suspension of the Executive's responsibilities, authority and/or duties for the Company during any portion of a bona fide internal investigation or an investigation by regulatory or law enforcement authorities shall not be a Good Reason Condition;

(ii) a material diminution in the Executive's Base Salary except for across-the-board salary reductions based on the Company's financial performance similarly affecting all or substantially all senior management employees of the Company;

(iii) a change of more than 50 miles in the geographic location at which the Executive is required to provide services to the Company; or

(iv) a material breach of this Agreement or any equity award by the Company.

The "Good Reason Process" shall mean that:

(i) the Executive reasonably determines that a Good Reason Condition has occurred;

(ii) the Executive notifies the Company in writing of the occurrence of the Good Reason Condition within 30 days of the Executive's knowledge of such condition;

(iii) the Executive cooperates in good faith with the Company's efforts, for a period of not less than 30 days following such notice (the "Cure Period"), to remedy the Good Reason Condition;

(iv) notwithstanding such efforts, the Good Reason Condition continues to exist at the end of the Cure Period; and

(v) the Executive terminates employment within 30 days after the end of the Cure Period.

If the Company cures the Good Reason Condition during the Cure Period, Good Reason shall be deemed not to have occurred.

4. Matters related to Termination.

(a) Notice of Termination. Except for termination as specified in Section 3(a), any termination of the Executive's employment by the Company or any such termination by the Executive shall be communicated by written Notice of Termination to the other party hereto. For purposes of this Agreement, a "Notice of Termination" shall mean a notice which shall indicate the specific termination provision in this Agreement relied upon.

(b) Date of Termination. "Date of Termination" shall mean: (i) if the Executive's employment is terminated by death, the date of death; (ii) if the Executive's employment is terminated on account of disability under Section 3(b) or by the Company for Cause under Section 3(c), the date on which Notice of Termination is given; (iii) if the Executive's employment is terminated by the Company without Cause under Section 3(d), the date on which a Notice of Termination is given or the date otherwise specified by the Company in the Notice of Termination; (iv) if the Executive's employment is terminated by the Executive under Section 3(e) other than for Good Reason, 30 days after the date on which a Notice of Termination is given, and (v) if the Executive's employment is terminated by the Executive under Section 3(e) for Good Reason, the date on which a Notice of Termination is given after the end of the Cure Period. Notwithstanding the foregoing, in the event that the Executive gives a Notice of Termination to the Company, the Company may unilaterally accelerate the Date of

Termination and such acceleration shall not result in a termination by the Company for purposes of this Agreement.

(c) Accrued Obligations. If the Executive's employment with the Company is terminated for any reason, the Company shall pay or provide to the Executive (or to the Executive's authorized representative or estate) (i) any Base Salary earned through the Date of Termination; (ii) unpaid expense reimbursements (subject to, and in accordance with, Section 2(c) of this Agreement); and (iii) any vested benefits the Executive may have under any employee benefit plan of the Company through the Date of Termination, which vested benefits shall be paid and/or provided in accordance with the terms of such employee benefit plans. The payments and benefits due to the Executive under this Section 4(c) are collectively referred to herein as the "Accrued Obligations."

(d) Resignation of All Other Positions. To the extent applicable, the Executive shall be deemed to have resigned from all officer and board member positions that the Executive holds with the Company or any of its respective subsidiaries and affiliates upon the termination of the Executive's employment for any reason. The Executive shall execute any documents in reasonable form as may be requested to confirm or effectuate any such resignations.

5. Severance Pay and Benefits Upon Termination by the Company without Cause or by the Executive for Good Reason Outside the Change in Control Period. If the Executive's employment is terminated by the Company without Cause as provided in Section 3(d), or the Executive terminates employment for Good Reason as provided in Section 3(e), in each case outside of the Change in Control Period, then, in addition to the Accrued Obligations, and subject to (i) the Executive signing a separation agreement and release in a form and manner reasonably satisfactory to the Company, which shall include, without limitation, a general release of claims against the Company and all related persons and entities that shall not release the Executive's rights under this Agreement, a reaffirmation of the Executive's Continuing Obligations (as defined below), and, in the Company's sole discretion, a one year post-employment noncompetition agreement, and shall provide that if the Executive breaches in any material respect the Continuing Obligations, all payments of the Severance Amount (as defined below) shall immediately cease (the "Separation Agreement"), and (ii) the Separation Agreement becoming irrevocable, all within 60 days after the Date of Termination (or such shorter period as set forth in the Separation Agreement), which shall include a seven (7) business day revocation period:

(a) the Company shall pay the Executive an amount equal to the sum of (i) six (6) months of the Executive's then-current Base Salary plus (ii) 0.5 times the Executive's Target Bonus for the then-current year (the "Severance Amount"); and

(b) subject to the Executive's copayment of premium amounts at the applicable active employees' rate and the Executive's proper election to receive benefits under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"), the Company shall pay to the group health plan provider or the COBRA provider a monthly payment equal to the monthly employer contribution that the Company would have made to provide health insurance to the Executive if the Executive had remained employed by the Company until

the earliest of (A) the six (6) month anniversary of the Date of Termination; (B) the date that the Executive becomes eligible for group medical plan benefits under any other employer's group medical plan; or (C) the cessation of the Executive's health continuation rights under COBRA; provided, however, that if the Company determines that it cannot pay such amounts to the group health plan provider or the COBRA provider (if applicable) without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then the Company shall convert such payments to payroll payments directly to the Executive for the time period specified above. Such payments to the Executive shall be subject to tax-related deductions and withholdings and paid on the Company's regular payroll dates.

The amounts payable under Section 5, to the extent taxable, shall be paid out in substantially equal installments in accordance with the Company's payroll practice over six (6) months commencing within 60 days after the Date of Termination; provided, however, that if the 60-day period begins in one calendar year and ends in a second calendar year, such payments, to the extent they qualify as "non-qualified deferred compensation" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended (the "Code"), shall begin to be paid in the second calendar year by the last day of such 60-day period; provided, further, that the initial payment shall include a catch-up payment to cover amounts retroactive to the day immediately following the Date of Termination. Each payment pursuant to this Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2). For the avoidance of doubt, the Executive shall not be obligated to seek other employment or take any other action by way of mitigation of the amounts payable to the Executive under this Section 5, subject to the terms of this Agreement.

6. Severance Pay and Benefits Upon Termination by the Company without Cause or by the Executive for Good Reason during the Change in Control Period. The provisions of this Section 6 shall apply in lieu of, and expressly supersede, the provisions of Section 5 if (i) the Executive's employment is terminated either (a) by the Company without Cause as provided in Section 3(d), or (b) by the Executive for Good Reason as provided in Section 3(e), and (ii) the Date of Termination occurs during the Change in Control Period. These provisions shall terminate and be of no further force or effect after the Change in Control Period.

(a) If the Executive's employment is terminated by the Company without Cause as provided in Section 3(d) or the Executive terminates employment for Good Reason as provided in Section 3(e) and in each case the Date of Termination occurs during the Change in Control Period, then, in addition to the Accrued Obligations, and subject to the signing of the Separation Agreement by the Executive and the Separation Agreement becoming fully effective, all within the time frame set forth in the Separation Agreement but in no event more than 60 days after the Date of Termination:

(i) the Company shall pay the Executive a lump sum in cash in an amount equal to the sum of (A) six (6) months of the Executive's then-current Base Salary (or the Executive's Base Salary in effect immediately prior to the Change in Control, if higher) plus (B) 0.5 times the Executive's Target Bonus for the then-current

year (or the Executive's Target Bonus in effect immediately prior to the Change in Control, if higher) (the "Change in Control Payment"); and

(ii) subject to the Executive's copayment of premium amounts at the applicable active employees' rate and the Executive's proper election to receive benefits under COBRA, the Company shall pay to the group health plan provider or the COBRA provider a monthly payment equal to the monthly employer contribution that the Company would have made to provide health insurance to the Executive if the Executive had remained employed by the Company until the earliest of (A) the six (6) month anniversary of the Date of Termination; (B) the date that the Executive becomes eligible for group medical plan benefits under any other employer's group medical plan; or (C) the cessation of the Executive's health continuation rights under COBRA; provided, however, that if the Company determines that it cannot pay such amounts to the group health plan provider or the COBRA provider (if applicable) without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then the Company shall convert such payments to payroll payments directly to the Executive for the time period specified above. Such payments to the Executive shall be subject to tax-related deductions and withholdings and paid on the Company's regular payroll dates.

The amounts payable under this Section 6(a), to the extent taxable, shall be paid or commence to be paid within 60 days after the Date of Termination; provided, however, that if the 60-day period begins in one calendar year and ends in a second calendar year, such payments to the extent they qualify as "non-qualified deferred compensation" within the meaning of Section 409A of the Code, shall be paid or commence to be paid in the second calendar year by the last day of such 60-day period. For the avoidance of doubt, the Executive shall not be obligated to seek other employment or take any other action by way of mitigation of the amounts payable to the Executive under this Section 6, subject to the terms of this Agreement.

(b) Additional Limitation.

(i) Anything in this Agreement to the contrary notwithstanding, in the event that the amount of any compensation, payment or distribution by the Company to or for the benefit of the Executive, whether paid or payable or distributed or distributable pursuant to the terms of this Agreement or otherwise, calculated in a manner consistent with Section 280G of the Code, and the applicable regulations thereunder (the "Aggregate Payments"), would be subject to the excise tax imposed by Section 4999 of the Code, then the Aggregate Payments shall be reduced (but not below zero) so that the sum of all of the Aggregate Payments shall be $1.00 less than the amount at which the Executive becomes subject to the excise tax imposed by Section 4999 of the Code; provided that such reduction shall only occur if it would result in the Executive receiving a higher After Tax Amount (as defined below) than the Executive would receive if the Aggregate Payments were not subject to such reduction. In such event, the Aggregate Payments shall be reduced in the following order, in each case, in reverse chronological order beginning with the Aggregate Payments that are to be paid the furthest in time from

consummation of the transaction that is subject to Section 280G of the Code: (1) cash payments not subject to Section 409A of the Code; (2) cash payments subject to Section 409A of the Code; (3) equity-based payments and acceleration; and (4) non-cash forms of benefits; provided that in the case of all the foregoing Aggregate Payments all amounts or payments that are not subject to calculation under Treas. Reg. §1.280G-1, Q&A-24(b) or (c) shall be reduced before any amounts that are subject to calculation under Treas. Reg. §1.280G-1, Q&A-24(b) or (c).

(ii) For purposes of this Section 6(b), the "After Tax Amount" means the amount of the Aggregate Payments less all federal, state, and local income, excise and employment taxes imposed on the Executive as a result of the Executive's receipt of the Aggregate Payments. For purposes of determining the After Tax Amount, the Executive shall be deemed to pay federal income taxes at the highest marginal rate of federal income taxation applicable to individuals for the calendar year in which the determination is to be made, and state and local income taxes at the highest marginal rates of individual taxation in each applicable state and locality, net of the maximum reduction in federal income taxes which could be obtained from deduction of such state and local taxes.

(iii) The determination as to whether a reduction in the Aggregate Payments shall be made pursuant to Section 6(b)(i) shall be made by a nationally recognized accounting firm selected by the Company (the "Accounting Firm"), which shall provide detailed supporting calculations both to the Company and the Executive within 15 business days of the Date of Termination, if applicable, or at such earlier time as is reasonably requested by the Company or the Executive. Any determination by the Accounting Firm shall be binding upon the Company and the Executive.

(c) Definitions. For purposes of this Agreement:

(i) "Change in Control" shall mean a "Sale Event" as defined in the Company's 2022 Stock Option and Incentive Plan, as the same may be amended from time to time (the "Plan").

(ii) "Change in Control Period" shall mean the period beginning on the date of the consummation of the first event constituting a Change in Control (the "Closing Date") and ending on the 12 month anniversary of the Closing Date.

7. Section 409A.

(a) Anything in this Agreement to the contrary notwithstanding, if at the time of the Executive's separation from service within the meaning of Section 409A of the Code, the Company determines that the Executive is a "specified employee" within the meaning of Section 409A(a)(2)(B)(i) of the Code, then to the extent any payment or benefit that the Executive becomes entitled to under this Agreement or otherwise on account of the Executive's separation from service would be considered deferred compensation otherwise subject to the 20 percent additional tax imposed pursuant to Section 409A(a) of the Code as a result of the application of Section 409A(a)(2)(B)(i) of the Code, such payment shall not be payable and such benefit shall

not be provided until the date that is the earlier of (A) six months and one day after the Executive's separation from service, or (B) the Executive's death. If any such delayed cash payment is otherwise payable on an installment basis, the first payment shall include a catch-up payment covering amounts that would otherwise have been paid during the six-month period but for the application of this provision, and the balance of the installments shall be payable in accordance with their original schedule.

(b) All in-kind benefits provided and expenses eligible for reimbursement under this Agreement shall be provided by the Company or incurred by the Executive during the time periods set forth in this Agreement. All reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred. The amount of in-kind benefits provided or reimbursable expenses incurred in one taxable year shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other taxable year (except for any lifetime or other aggregate limitation applicable to medical expenses). Such right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit.

(c) To the extent that any payment or benefit described in this Agreement constitutes "non-qualified deferred compensation" under Section 409A of the Code, and to the extent that such payment or benefit is payable upon the Executive's termination of employment, then such payments or benefits shall be payable only upon the Executive's "separation from service." The determination of whether and when a separation from service has occurred shall be made in accordance with the presumptions set forth in Treasury Regulation Section 1.409A-1(h).

(d) The parties intend that this Agreement will be administered in accordance with Section 409A of the Code. To the extent that any provision of this Agreement is ambiguous as to its compliance with Section 409A of the Code, the provision shall be read in such a manner so that all payments hereunder comply with or are exempt from Section 409A of the Code. Each payment pursuant to this Agreement or the Restrictive Covenants Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2). The parties agree that this Agreement may be amended, as reasonably requested by either party, and as may be necessary to fully comply with Section 409A of the Code and all related rules and regulations in order to preserve the payments and benefits provided hereunder without additional cost to either party.

(e) The Company makes no representation or warranty and shall have no liability to the Executive or any other person if any provisions of this Agreement are determined to constitute deferred compensation subject to Section 409A of the Code but do not satisfy an exemption from, or the conditions of, such Section.

8. Continuing Obligations.

(a) Restrictive Covenants Agreement. As a condition of employment, and in exchange for the benefits set forth in this Agreement, to which the Executive was not previously entitled, the Executive is required to enter into the Amendment to the Employee Confidentiality,

Assignment and Nonsolicitation Agreement attached hereto as Exhibit A, which adds a post-employment noncompetition agreement to the Employee Confidentiality, Assignment and Nonsolicitation Agreement between the Executive and the Company dated as of September 6, 2020 (as amended, the "Restrictive Covenants Agreement"). For purposes of this Agreement, the obligations in this Section 8 and those that arise in the Restrictive Covenants Agreement and any other agreement relating to confidentiality, assignment of inventions, or other restrictive covenants shall collectively be referred to as the "Continuing Obligations." For the avoidance of doubt, all restrictive covenants obligations are supplemental to one another, and in the event of any conflict between restrictive covenants obligations, the most restrictive provision that is enforceable shall govern. In the event the Executive is entitled to both payments pursuant to the Restrictive Covenants Agreement and severance payments pursuant to Section 5 or Section 6 of this Agreement, then the severance payments pursuant to Section 5 or Section 6 of this Agreement received in any calendar year will be reduced by the amount the Executive is paid in the same such calendar year pursuant to the Restrictive Covenants Agreement.

(b) Third-Party Agreements and Rights. The Executive represents to the Company that the Executive's execution of this Agreement, the Executive's employment with the Company and the performance of the Executive's proposed duties for the Company will not violate any obligations the Executive may have to any previous employer or other party. In the Executive's work for the Company, the Executive will not disclose or make use of any information in violation of any agreements with or rights of any such previous employer or other party, and the Executive will not bring to the premises of the Company any copies or other tangible embodiments of non-public information belonging to or obtained from any such previous employment or other party.

(c) Litigation and Regulatory Cooperation. During and for 36 months after the Executive's employment, the Executive shall cooperate reasonably with the Company in (i) the defense or prosecution of any claims or actions now in existence or which may be brought in the future against or on behalf of the Company which relate to events or occurrences that transpired while the Executive was employed by the Company, and (ii) the investigation, whether internal or external, of any matters about which the Company believes the Executive may have knowledge or information. The Executive's reasonable cooperation in connection with such claims, actions or investigations shall include, but not be limited to, being available to meet with counsel to answer questions or to prepare for discovery or trial and to act as a witness on behalf of the Company at mutually convenient times. During and after the Executive's employment, the Executive also shall cooperate reasonably with the Company in connection with any investigation or review of any federal, state or local regulatory authority as any such investigation or review relates to events or occurrences that transpired while the Executive was employed by the Company. The Company shall reimburse the Executive for any reasonable out-of-pocket expenses incurred in connection with the Executive's performance of obligations pursuant to this Section 8(c).

(d) Relief. The Executive agrees that it would be difficult to measure any damages caused to the Company which might result from any breach by the Executive of the Continuing Obligations, and that in any event money damages would be an inadequate remedy

for any such breach. Accordingly, the Executive agrees that if the Executive breaches, or proposes to breach, any portion of the Continuing Obligations, the Company shall be entitled, in addition to all other remedies that it may have, to an injunction or other appropriate equitable relief to restrain any such breach without showing or proving any actual damage to the Company.

9. Consent to Jurisdiction. The parties hereby consent to the jurisdiction of the state and federal courts of the Commonwealth of Massachusetts. Accordingly, with respect to any such court action, the Executive (a) submits to the exclusive personal jurisdiction of such courts; (b) consents to service of process; and (c) waives any other requirement (whether imposed by statute, rule of court, or otherwise) with respect to personal jurisdiction or service of process.

10. Waiver of Jury Trial. Each of the Executive and the Company irrevocably and unconditionally WAIVES ALL RIGHT TO TRIAL BY JURY IN ANY PROCEEDING (WHETHER BASED ON CONTRACT, TORT OR OTHERWISE) ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE EXECUTIVE'S EMPLOYMENT BY THE COMPANY OR ANY AFFILIATE OF THE COMPANY, INCLUDING WITHOUT LIMITATION THE EXECUTIVE'S OR THE COMPANY'S PERFORMANCE UNDER, OR THE ENFORCEMENT OF, THIS AGREEMENT.

11. Integration. This Agreement, together with the Restrictive Covenants Agreement, constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements between the parties concerning such subject matter, including the Prior Agreement, provided that the Equity Documents remain in full force and effect.

12. Withholding; Tax Effect. All forms of compensation referred to in this Agreement are subject to reduction to reflect applicable withholding and payroll taxes and other deductions required by law. The Executive hereby acknowledges that the Company does not have a duty to design its compensation policies in a manner that minimizes the Executive's tax liabilities, and the Executive will not make any claim against the Company or the Board related to tax liabilities arising from the Executive's compensation.

13. Assignment; Successors and Assigns. Neither the Executive nor the Company may make any assignment of this Agreement or any interest in it, by operation of law or otherwise, without the prior written consent of the other; provided, however, that the Company may assign its rights and obligations under this Agreement (including the Restrictive Covenants Agreement) without the Executive's consent to any affiliate or to any person or entity with whom the Company shall hereafter effect a reorganization or consolidation, into which the Company merges or to whom it transfers all or substantially all of its properties or assets; provided, further that if the Executive remains employed or becomes employed by the Company, the purchaser or any of their affiliates in connection with any such transaction, then the Executive shall not be entitled to any payments or benefits pursuant to Section 5 or Section 6 of this Agreement or any accelerated vesting pursuant to Section 2(e) of this Agreement solely as a result of such transaction (except that, for the avoidance of doubt, the Executive will be eligible for double trigger accelerated vesting as set forth herein). This Agreement shall inure to the benefit of and be binding upon the Executive and the Company, and each of the Executive's and the

Company's respective successors, executors, administrators, heirs and permitted assigns. In the event of the Executive's death after the Executive's termination of employment but prior to the completion by the Company of all payments due to the Executive under this Agreement, the Company shall continue such payments to the Executive's beneficiary designated in writing to the Company prior to the Executive's death (or to the Executive's estate, if the Executive fails to make such designation).

14. Enforceability. If any portion or provision of this Agreement (including, without limitation, any portion or provision of any section of this Agreement) shall to any extent be declared illegal or unenforceable by a court of competent jurisdiction, then the remainder of this Agreement, or the application of such portion or provision in circumstances other than those as to which it is so declared illegal or unenforceable, shall not be affected thereby, and each portion and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

15. Survival. The provisions of this Agreement (and the Restrictive Covenants Agreement and the Equity Documents) shall survive the termination of this Agreement and/or the termination of the Executive's employment to the extent necessary to effectuate the terms contained herein.

16. Waiver. No waiver of any provision hereof shall be effective unless made in writing and signed by the waiving party. The failure of any party to require the performance of any term or obligation of this Agreement, or the waiver by any party of any breach of this Agreement, shall not prevent any subsequent enforcement of such term or obligation or be deemed a waiver of any subsequent breach.

17. Notices. Any notices, requests, demands and other communications provided for by this Agreement shall be sufficient if in writing and delivered in person or sent by a nationally recognized overnight courier service or by registered or certified mail, postage prepaid, return receipt requested, to the Executive at the last address the Executive has filed in writing with the Company or, in the case of the Company, at its main offices, attention of the CEO. Notices, requests, demands and other communications provided for by this Agreement shall also be sufficient if sent by email to the Company email address of the Executive or, in the case of Company, the Company email address of the CEO, with confirmation of receipt.

18. Amendment. This Agreement may be amended or modified only by a written instrument signed by the Executive and by a duly authorized representative of the Company.

19. Effect on Other Plans and Agreements. An election by the Executive to resign for Good Reason under the provisions of this Agreement shall not be deemed a voluntary termination of employment by the Executive for the purpose of interpreting the provisions of any of the Company's benefit plans, programs or policies. Nothing in this Agreement shall be construed to limit the rights of the Executive under the Company's benefit plans, programs or policies except as otherwise provided in Section 8 hereof, and except that the Executive shall have no rights to any severance benefits under any Company severance pay plan, offer letter or otherwise. Except for the Restrictive Covenants Agreement, in the event that the Executive is

party to an agreement with the Company providing for payments or benefits under such plan or agreement and under this Agreement, the terms of this Agreement shall govern and the Executive may receive payment under this Agreement only and not both. Further, Section 5 and Section 6 of this Agreement are mutually exclusive and in no event shall the Executive be entitled to payments or benefits pursuant to both Section 5 and Section 6 of this Agreement.

20. Governing Law. This is a Massachusetts contract and shall be construed under and be governed in all respects by the laws of the Commonwealth of Massachusetts, without giving effect to the conflict of laws principles thereof. With respect to any disputes concerning federal law, such disputes shall be determined in accordance with the law as it would be interpreted and applied by the United States Court of Appeals for the First Circuit.

21. Counterparts. This Agreement may be executed in separate counterparts. When both counterparts are signed, they shall be treated together as one and the same document. PDF copies of signed counterparts shall be equally effective as originals.

[Signature page follows]

IN WITNESS WHEREOF, the parties have executed this Agreement effective on the Effective Date.

PRIME MEDICINE, INC.

/s/ Keith Gottesdiener, M.D.

By: Keith Gottesdiener, M.D.
Its: President and Chief Executive Officer

Date 7/7/2022

EXECUTIVE

/s/ Meredith Goldwasser, ScD

Meredith Goldwasser, ScD

Date: 7/7/2022

Exhibit A

Amendment to the Employee Confidentiality, Assignment and Nonsolicitation Agreement

Certain identified information has been excluded from this exhibit because it is both not material and is the type that the registrant treats as private or confidential. Information that was omitted has been noted in this document with a placeholder identified by the mark "[***]".

COLLABORATION AND LICENSE AGREEMENT

by and between

BEAM THERAPEUTICS INC.

and

PRIME MEDICINE, INC.

September 26, 2019

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SCHEDULES

COLLABORATION AND LICENSE AGREEMENT

This Collaboration and License Agreement (this "**Agreement**") is effective as of September 26, 2019 (the "**Effective Date**") and is entered into by and between Beam Therapeutics Inc., a corporation organized and existing under the laws of the State of Delaware ("**Beam**") and Prime Therapeutics Inc., a corporation organized and existing under the laws of the State of Delaware ("**Prime**", collectively with Beam, the "**Parties**" and each, a "**Party**").

RECITALS:

WHEREAS, Prime or its Affiliates owns or controls certain technology related to Prime Editing, including the use of such technology to identify therapeutic candidates for the treatment of sickle cell disease;

WHEREAS, Beam or its Affiliates owns or controls certain technology related to DNA base editing and RNA base editing platforms, including technology with respect to guide RNAs;

WHEREAS, Beam and Prime desire to enter into a collaboration to develop and commercialize Products (as hereinafter defined) upon the terms and conditions set forth herein;

WHEREAS, for purposes of such collaboration, Beam desires to obtain a license under certain intellectual property, including the Prime Licensed Technology and Prime CRISPR/Delivery Technology, upon the terms and conditions set forth herein, and Prime desires to grant such a license;

WHEREAS, for purposes of such collaboration, Prime desires to obtain a licenses under certain intellectual property, including Beam Licensed Technology and Beam CRISPR/Delivery Technology, upon the terms and conditions set forth herein, and Prime desires to obtain such licenses; and

WHEREAS, concurrently with execution of this Agreement, Beam and Prime are entering into (a) [***] and (b) those certain Stock Subscription Agreements pursuant to which each Party shall be entitled to receive shares of common stock issued by the other Party, subject to the conditions set forth in such Stock Subscription Agreements.

NOW, THEREFORE, in consideration of the foregoing premises and the mutual covenants herein contained, the receipt and sufficiency of which are hereby acknowledged, Beam and Prime hereby agree as follows:

Article 1 DEFINITIONS

Unless specifically set forth to the contrary in this Agreement, the following terms, whether used in the singular or plural, shall have the respective meanings set forth below or, if not listed below, the meaning designated in this Agreement.

1.1 "**AAA**" has the meaning given to such term in Section 14.9.

1.2 "**Act**" means, as applicable, the United States Federal Food, Drug and Cosmetic Act, 21 U.S.C. §§ 301 et seq., or the Public Health Research Act, 42 U.S.C. §§ 262 et seq., as such may be amended from time to time.

1.3 "**Action**" means (a) any claim, cause of action or suit (whether in contract or tort or otherwise), litigation (whether at law or in equity, whether civil or criminal), or arbitration brought against a Party by any Third Party and (b) any claim, action, cause of action or suit (whether in contract or tort or otherwise), litigation (whether at law or in equity, whether civil or criminal), controversy, assessment, arbitration, investigation, hearing, charge, complaint, demand, notice or proceeding of, to, from, by or before any Governmental Authority with respect to a Party.

1.4 "**Affiliate**" shall, with respect to a Person, mean any entity directly or indirectly controlled by, controlling, or under common control with, such Person, but only for so long as such control shall continue. For purposes of this definition, "control" (including, with correlative meanings, "controlled by", "controlling" and "under common control with") means (a) possession, direct or indirect, of the power to direct or cause direction of the management or policies of an entity (whether through ownership of securities or other ownership interests, by contract or otherwise), or (b) beneficial ownership of at least fifty percent (50%) (or the maximum ownership interest permitted by Applicable Law) of the voting securities or other ownership or general partnership interest (whether directly or pursuant to any option, warrant or other similar arrangement) or other comparable equity interests in an entity.

1.5 "**Agreement**" has the meaning given to such term in the preamble to this agreement.

1.6 "**Alliance Manager**" has the meaning given to such term in Section 3.7.1.

1.7 "**Applicable Law**" means the applicable laws, rules and regulations, including any rules, regulations, guidelines or other requirements of the Regulatory Authorities, that may be in effect from time to time in the Territory.

1.8 "**Asia Territory**" means [***].

1.9 "**Base Editor**" shall mean a macromolecule or macromolecular complex that is intended to [***] a nucleobase in a polynucleic acid sequence into another nucleobase (*e.g.*, a transition or transversion) in one location or two or more locations within a base editing window [***]. Notwithstanding the foregoing, a Base Editor shall exclude a macromolecule or macromolecular complex that is a Prime Editor.

1.10 "**Base Editor Product**" shall mean a product candidate or product comprising a Base Editor and a nucleic acid moiety that preferentially binds to a specified DNA or RNA sequence and targets the Base Editor to such sequence and is either (a) itself administered to a human or (b) used to modify *ex vivo* one or more organ(s), tissue(s), cells, or subcellular components(s) that is/are, in each case, then administered to a human. Notwithstanding the foregoing, a Base Editor Product shall exclude a product candidate or product comprising a Prime Editor.

1.11 "**Beam**" has the meaning given to such term in the preamble to this Agreement.

1.12 "**Beam Collaboration Enabled Product**" means, on a country-by-country basis, any Licensed Product (a) the making, using, selling, offering for sale, importing or exporting of such product in the country in question is Covered by at least one Valid Claim of any of the [***] and is not Covered by any Valid Claim of any of the Prime Licensed Patent Rights or Jointly-Owned Patent Rights, or (b) (i) the making, using, selling, offering for sale, importing or exporting of such product in the country in question is not Covered by any Valid Claim of any of the Prime Licensed Patent Rights, [***] or Jointly-Owned Patent Rights, and (ii) [***] any [***] but not any Prime Licensed Technology or Jointly-Owned Technology.

1.13 "**Beam Collaboration Know-How**" means all Collaboration Know-How Controlled by Beam or any of its Affiliates and conceived, developed, generated or reduced to practice during the Term solely by Beam or its Affiliates or other persons acting on behalf of (or under license or sublicense from) Beam, through [***].

1.14 "**Beam Collaboration Patent Rights**" means any Collaboration Patent Rights that (a) are Controlled by Beam or any of its Affiliates during the Term and (b) Cover Beam Collaboration Know-How.

1.15 "**Beam Collaboration Technology**" means Beam Collaboration Know-How and Beam Collaboration Patent Rights.

1.16 "**Beam Competitive Infringement**" has the meaning given to such term in Section 11.3.1.

1.17 "**Beam CRISPR/Delivery Know-How**" means all Know-How, patentable or otherwise, that:

1.17.1 (a) is Controlled by Beam or any of its Affiliates as of the Effective Date or during the Initial Term and (b) is (i) necessary or useful to Develop, Commercialize or Manufacture a DNA or RNA Targeting Protein or (ii) [***]; or

1.17.2 (a) is an enhancement, modification or improvement to the Know-How described in Section 1.17.1 and (b) is (i) Controlled by Beam or any of its Affiliates and (ii) conceived, developed, generated or reduced to practice, in each case ((i) and (ii)), during the Initial Term or in the [***] years thereafter;

provided that such Know-How is not generally known.

Beam CRISPR/Delivery Know-How shall exclude Beam (from Prime) Improvement Technology.

1.18 "**Beam CRISPR/Delivery Patent Rights**" means any Patent Rights that (a) as of the Effective Date or during the Term are Controlled by Beam or any of its Affiliates and (b) Cover (i) Beam CRISPR/Delivery Know-How or (ii) Know-How that would, but for the proviso in the definition of "Beam CRISPR/Delivery Know-How", constitute Beam CRISPR/Delivery Know-How. Beam CRISPR/Delivery Patent Rights include those Patent Rights listed on Schedule 1.18.

1.19 "**Beam CRISPR/Delivery Technology**" means Beam CRISPR/Delivery Know-How and Beam CRISPR/Delivery Patent Rights.

1.20 "**Beam Development and Commercialization Know-How**" means all Know-How, patentable or otherwise, which (a) is Controlled by Beam or any of its Affiliates as of the Effective Date or during the Term and (b) is necessary or useful for Prime to conduct any activities allocated to Prime under any Development Plan or Commercialization Plan.

1.21 "**Beam Development and Commercialization Patent Rights**" means any Patent Rights that (a) are Controlled by Beam or any of its Affiliates during the Term and (b) Cover Beam Development and Commercialization Know-How.

1.22 "**Beam Development and Commercialization Technology**" means Beam Development and Commercialization Know-How and Beam Development and Commercialization Patent Rights.

1.23 "**Beam Exclusively Licensed Patent Rights**" has the meaning given to such term in Section 11.2.2.

1.24 "**Beam Field**" means (a) the prevention, modification, improvement, amelioration or treatment of human disease (including cell-based therapies and the creation of one or more protective mutations) through administration of a Licensed Product containing or incorporating a Qualifying Prime Editing Agent (and not any Prime Editing Agent or other gene editing approach that is not a Qualifying Prime Editing Agent) (such field in clause (a), the "**Qualifying Prime Editing Agent Field**"); and (b) the prevention, modification, improvement, amelioration or treatment of sickle cell disease through administration of a Licensed Product containing or incorporating a Prime Editing Agent (including Licensed Products that contain or incorporate (i) at least one Prime Editing Agent and (ii) any other gene-editing approach (including other Prime Editing Agents)) (such field in clause (b), the "**Sickle Cell Field**") but, in each case ((a) and (b)), excluding the Prime Field. Each of clause (a) and clause (b) are referred to herein as the "**Subfields**".

1.25 "**Beam (from Prime) Improvement Know-How**" means any Prime Collaboration Know-How and Joint Collaboration Know-How, in each case, to the extent that such Know-How (a) constitutes an improvement, modification, or enhancement to any [***] and (b) is conceived, developed, generated or reduced to practice during the Initial Term. Beam (from Prime) Improvement Know-How excludes [***].

1.26 "**Beam (from Prime) Improvement Patent Rights**" means any Patent Rights that (a) are Controlled by Beam or any of its Affiliates during the Term and (b) Cover **Beam** (from Prime) Improvement Know-How.

1.27 "**Beam (from Prime) Improvement Technology**" means Beam (from Prime) Improvement Know-How and Beam (from Prime) Improvement Patent Rights.

1.28 "**Beam Indemnified Parties**" has the meaning given to such term in Section 12.1.

1.29 "**Beam In-License Agreement**" has the meaning given to such term in Section 8.5.5(a).

1.30 "**Beam Licensed Know-How**" means all Know-How, patentable or otherwise, that (a) (i) is Controlled by Beam or any of its Affiliates as of the Effective Date or during the Initial Term and (ii) is necessary or useful to Develop, Commercialize or Manufacture a Prime Editing Agent or Qualifying Prime Editing Agent, as applicable, in the Prime Field, or (b) (i) [***] (ii) is (x) Controlled by Beam or any of its Affiliates and (y) conceived, developed, generated or reduced to practice, in each case ((x) and (y)), during the Initial Term or in the [***] years thereafter and (iii) is necessary or useful to Develop, Commercialize or Manufacture a Prime Editing Agent or Qualifying Prime Editing Agent, as applicable, in the Prime Field, *provided*, in each case (a) and (b), that such Know-How is not generally known. For the avoidance of doubt, Beam Licensed Know-How may include Beam Collaboration Know-How or Beam (from Prime) Improvement Technology. Beam Licensed Know-How shall exclude Beam CRISPR/Delivery Technology.

1.31 "**Beam Licensed Patent Rights**" means any Patent Rights that (a) as of the Effective Date or during the Term are Controlled by Beam or any of its Affiliates and (b) Cover (i) Beam Licensed Know-How or (ii) Know-How that would, but for the proviso in the definition of "Beam Licensed Know-How", constitute Beam Licensed Know-How. Beam Licensed Patent Rights includes those Patent Rights listed on Schedule 1.31, which schedule will be updated within [***] of the Effective Date and periodically thereafter as necessary at the reasonable request of Prime.

1.32 "**Beam Licensed Technology**" means Beam Licensed Know-How and Beam Licensed Patent Rights.

1.33 "**Beam Protected Product Option**" has the meaning given to such term in Section 5.1.

1.34 "**Beam Protected Product Option Exercise Notice**" has the meaning given to such term in Section 5.1.

1.35 "**Beam Protected Product Option Fee**" the meaning given to such term in Section 8.2.

1.36 "**Beam Protected Product Option Period**" has the meaning given to such term in Section 5.1.

1.37 [***]

1.38 [***]

1.39 [***]

1.40 "**Beam Sublicense Payments**" has the meaning given to such term in Section 8.5.5(d).

1.41 "**Beam Third Party Agreement**" has the meaning given to such term in Section 10.3.4.

1.42 "**Beam-Broad Agreement**" **means the** License Agreement by and between Broad and Blink Therapeutics Inc., dated as of May 9, 2018, as may be amended from time to time.

1.43 "**Beam-Prosecuted Patent Rights**" has the meaning given to such term in Section 11.2.2.

1.44 "**Broad**" means The Broad Institute, Inc.

1.45 "**Business Day**" means a day other than a Saturday, Sunday, or a bank or other public holiday in New York, New York, United States.

1.46 "**Calendar Quarter**" means the respective periods of three (3) consecutive calendar months ending on March 31, June 30, September 30 and December 31; provided that the first Calendar Quarter of the Term shall begin on the Effective Date and end on the last day of the then current Calendar Quarter and the last Calendar Quarter of the Term shall begin on the first day of such Calendar Quarter and end on the last day of the Term.

1.47 "**Calendar Year**" means each successive period of twelve (12) months commencing on January 1 and ending on December 31; provided that the first Calendar Year of the Term shall begin on the Effective Date and end on December 31 of the then current Calendar Year and the last Calendar Year of the Term shall begin on the first day of such Calendar Year and end on the last day of the Term.

1.48 "**Challenged Patent Right**" has the meaning given to such term in Section 1.143.

1.49 "**Change of Control**" means, with respect to a Person, any of the following: (a) the sale or disposition of all or substantially all of the assets of such Person to a non-Affiliate of such Person, (b) the acquisition by a non-Affiliate of such Person, directly or indirectly, other than by an employee benefit plan (or related trust) sponsored or maintained by such Person or any of its Affiliates, of more than fifty percent (50%) of such Person's outstanding shares of voting capital stock or similar equity (e.g., capital stock entitled to vote generally for the election of directors), (c) the merger or consolidation of such Person with or into another corporation or entity, or (d) a liquidation or dissolution of such Person or any direct or indirect parent of such Person, excluding, in the case of (b) or (c) above, an acquisition or a merger or consolidation of a Person in which holders of shares of such Person's voting capital stock or similar equity immediately prior to the acquisition, merger or consolidation have more than fifty percent (50%) of the ownership of voting capital stock or similar equity of the acquiring non-Affiliate or the surviving corporation or entity in such merger or consolidation, as the case may be, immediately after the merger or consolidation. Notwithstanding the foregoing, a Change of Control will not be deemed to occur on account of a sale of assets, merger or other transaction effected exclusively for the purpose of changing the corporate domicile or legal form of such Person.

1.50 "**Clinical Trial**" means a Phase I Clinical Trial, Phase II Clinical Trial, Phase III Clinical Trial, or Phase IV Clinical Trial.

1.51 "**Clinical Trial Data**" means, with respect to a Licensed Product, (a) all pharmacokinetic, clinical, safety and other similar data that relate to the Development of such Licensed Product, including all data and information related to any Clinical Trials of such Licensed Product (including all final reports and case report forms) and (b) all clinical test designs and operating records related to any Clinical Trial for such Licensed Product.

1.52 "**Code**" has the meaning given to such term in Section 13.6.2.

1.53 "**Collaboration Beam In-License Agreement**" has the meaning given to such term in Section 8.5.5(a).

1.54 "**Collaboration In-License Agreement**" has the meaning given to such term in Section 8.5.5(a).

1.55 "**Collaboration Know-How**" means all Know-How, patentable or otherwise, conceived, developed, generated or reduced to practice during the Term solely by a Party or its Affiliates or other persons acting on behalf of such Party, either alone or jointly with the other Party or its Affiliates or other persons acting on behalf of (or under license or sublicense from) such Party, through the Development, Commercialization or Manufacture of Licensed Products or otherwise arising out of such Party's performance of its obligations under this Agreement or exercise of its rights hereunder.

1.56 "**Collaboration Marks**" has the meaning given to such term in Section 11.6.1.

1.57 "**Collaboration Prime In-License Agreement**" has the meaning given to such term in Section 8.5.4(b).

1.58 [***]

1.59 [***]

1.60 [***]

1.61 "**Collaboration Patent Rights**" means any Patent Rights that Cover Collaboration Know-How.

1.62 "**Collaboration Product**" means a Licensed Product for which Prime has exercised the Prime Opt-In Option in accordance with Section 5.2.

1.63 "**Collaboration Product Regulatory Documentation**" has the meaning given to such term in Section 6.2.

1.64 "**Collaboration Technology**" means the Prime Collaboration Technology, the Beam Collaboration Technology and the Joint Collaboration Technology.

1.65 "**Collaboration Territory**" means the United States, its territories and possessions.

1.66 "**Collaboration Territory Revenue**" shall mean, for any given time period with respect to a given Collaboration Product, Net Sales of such Collaboration Product in the Collaboration Territory during such time period less the sum of the Shared Commercialization Costs directly relating to the sale of such Collaboration Products in the Collaboration Territory in such time period. Collaboration Territory Revenue in any given time period shall be determined on an accrual basis from the Parties' books and records maintained in accordance with GAAP.

1.67 "**Commercialization Budget**" means, with respect to a Collaboration Product in the Collaboration Territory, the budget for Shared Commercialization Costs included in the Commercialization Plan for such Collaboration Product.

1.68 "**Commercialization Plan**" has the meaning given to such term in Section 7.4.1.

1.69 "**Commercialization Senior Officer**" means, with respect to a Party, any officer designated under Section 3.4.3 (or such officer's designee) that has the requisite decision-making authority and expertise within such Party to make decisions related to Commercialization under this Agreement.

1.70 "**Commercialize**" means to promote, market, distribute, sell and provide product support for a Product, and "**Commercializing**" and "**Commercialization**" shall have correlative meanings.

1.71 "**Commercially Reasonable Efforts**" means, [***].

1.72 "**Committee**" means the JSC, the JRC and any Subcommittee.

1.73 "**Confidential Information**" has the meaning given to such term in Section 9.1.

1.74 "**Control**", "**Controls**" or "**Controlled by**" means, with respect to any product, Patent Right or other tangible or intangible intellectual property right, the possession (whether by ownership or license, other than licenses granted pursuant to this Agreement) by a Party or its Affiliate of the ability to grant to the other Party, on the applicable terms set forth in this Agreement, access to, ownership of, or a license or sublicense under, such product, Patent Right, or other intellectual property without violating the terms of any agreement or other arrangement with any Third Party; provided, however, that in the case of a Change of Control of either Party, only those products, Patent Rights or other tangible or intangible intellectual property rights that are Controlled by Beam or any of its Affiliates, on the one hand, or Prime or any of its Affiliates, on the other hand, in each case prior to or as of such Change of Control of a Party (and any improvements, modifications of enhancements thereto conceived, developed, generated or reduced to practice by such Party within the earlier of (a) [***] years of such Change of Control and (b) [***] years following the Effective Date and Controlled by such Party) will be deemed Controlled by Beam or Prime, respectively, and no other product, Patent Right or other tangible or intangible intellectual property right Controlled by (i) such Party after the Change of Control (other than improvements, modifications or enhancements described in this proviso), (ii) a Future Acquirer of a Party or (iii) a Third Party that becomes an Affiliate of a Party due to a Change of Control of such Party following the Effective Date will be treated as "Controlled" by such Party or its Affiliate for purposes of this Agreement. Notwithstanding the foregoing, neither Party nor and its Affiliates shall be deemed to Control any Patent Rights or Know-How licensed to such Party pursuant to a Prime In-License Agreement or Beam In-License Agreement entered into after the Effective Date unless such Prime In-License Agreement or Beam In-License Agreement becomes a Collaboration In-License

Agreement in accordance with Section 8.5.4 or Section 8.5.5. Notwithstanding anything to the contrary in this Agreement, if a Party or its Affiliate possesses (whether by ownership or license, other than licenses granted pursuant to this Agreement) the ability to grant to the other Party access to, ownership of, or a license or sublicense under a product, Patent Right, or other intellectual property without violating the terms of any agreement or other arrangement with any Third Party, but such access, ownership, license or sublicense would be narrower in scope or rights than the applicable terms of this Agreement, then such Party or its Affiliate will nonetheless be deemed to "Control" such product, Patent Right or other tangible or intangible intellectual property right, *provided* that such access, ownership, license or sublicense under this Agreement with respect to such product, Patent Right or other tangible or intangible intellectual property right will be limited to the extent that such Party or its Affiliate has the ability to grant such access, ownership, license or sublicense without violating the terms of the applicable Third Party agreement or other arrangement.

1.75 "**Co-Promote**" means, with respect to a Collaboration Product for which Prime exercises its Co-Promote Option in accordance with Section 5.2.4, the joint promotion of such Collaboration Product by Beam and Prime through their respective sales forces under a single trademark in the Collaboration Territory, but shall not include any Manufacturing activities or Development activities or any other actions undertaken with Regulatory Authorities in order to obtain or maintain Marketing Authorizations. "**Co-Promotion**" and "**Co-Promoting**" shall have a correlative meaning.

1.76 "**Co-Promote Option**" has the meaning given to such term in Section 5.2.4.

1.77 "**Co-Promotion Agreement**" has the meaning given to such term in Section 7.6.

1.78 "**Cost of Goods Manufactured**" means, with respect to a Licensed Product, such Party's Fully Absorbed Standard Cost to produce such Licensed Product. The Parties agree that the following costs (plus or minus, as the case may be) will not be included in the calculation of Cost of Goods Manufactured: (a) the Party's costs for product inventory adjustments and losses and (b) any manufacturing cost variances allocable to such Licensed Products.

1.79 "**Cost Report**" has the meaning given to such term in Section 8.6.3(a).

1.80 "**Covered**" means, with respect to a given product, process, method or service, that a Valid Claim would (absent a license thereunder or ownership thereof) be infringed (whether directly infringed or indirectly by induced or contributory infringement) by the making, using, selling, offering for sale, importation or other exploitation of such product, process, method or service. With respect to a claim of a pending patent application, "infringed" refers to activity that would infringe or be covered by such Valid Claim if it were contained in an issued patent. Cognates of the word "Covered" shall have correlative meanings.

1.81 "**CPI**" means, with respect to personnel located in the U.S., the Consumer Price Index – All Urban Consumers published by the United States Department of Labor, Bureau of Statistics (or its successor equivalent index), and with respect to personnel located outside the U.S., (a) an equivalent index in a foreign country applicable to FTEs in such country,

accounting if possible for the area in such country where the personnel are located, or (b) other inflation measure or rate agreed to by the Parties.

1.82 "**CPI Adjustment**" means, with respect to any personnel, the percentage increase or decrease, if any, in the CPI applicable to such personnel for the twelve (12) months ending September 30 of the Calendar Year prior to the Calendar Year for which the adjustment is being made.

1.83 "**Detail**" means, with respect to a Collaboration Product for which Prime has exercised its Co-Promote Option in accordance with Section 5.2.4 in the Collaboration Territory, a face-to-face contact between a sales representative and a physician or other medical professional licensed to prescribe drugs, during which a primary position detail (as defined in the applicable Co-Promotion Agreement) or a secondary position detail (as defined in the applicable Co-Promotion Agreement) is made to such person, in each case as measured by each Party's internal recording of such activity in accordance with the applicable Co-Promotion Agreement; provided that such meeting is consistent with and in accordance with the requirements of Applicable Law and this Agreement. When used as a verb, "Detail" means to engage in a Detail.

1.84 "**Develop**" means to research, develop, analyze, test and conduct preclinical, clinical and all other regulatory trials for a Product, as well as any and all activities pertaining to manufacturing development, formulation development and lifecycle management, including new formulations and all other activities related to securing and maintaining Marketing Authorization for a Product. "**Developing**" and "**Development**" shall have correlative meanings.

1.85 "**Development Budget**" means, with respect to a Development Plan for a Collaboration Product, the budget for Development activities for such Collaboration Product in the Territory under such Development Plan in the Major Markets, as may be amended from time to time by the JSC. Each Development Budget shall be itemized by general Development activity and the Party expected to incur such expense.

1.86 "**Development Cost Report**" has the meaning given to such term in Section 8.6.3(a).

1.87 "**Development Plan**" has the meaning given to such term in Section 4.3.1(a).

1.88 "**Development Senior Officer**" means, with respect to a Party, any officer designated under Section 3.4.3 (or such officer's designee) that has the requisite decision-making authority and expertise within such Party to make decisions related to Development under this Agreement.

1.89 "**Disclosing Party**" has the meaning given to such term in Section 9.1.

1.90 "**Dispute**" has the meaning given to such term in Section 14.8.

1.91 "**DNA or RNA Targeting Protein**" means a macromolecule or macromolecular complex intended [***].

1.92 "**EMA**" means the European Medicines Agency and any successor Regulatory Authority having substantially the same function.

1.93 "**Employee-Initiated Solicitation**" has the meaning given to such term in Section 14.4.1.

1.94 "**European Union**" means the organization of member states of the European Union, as it may be constituted from time to time during the Term.

1.95 "**Excluded Field**" means [***].

1.96 "**Exclusively Licensed Patent Rights**" has the meaning given to such term in Section 11.2.2.

1.97 "**Existing Employer**" has the meaning given to such term in Section 14.4.1.

1.98 "**FDA**" means the United States Food and Drug Administration and any successor Regulatory Authority having substantially the same function.

1.99 "**Field**" means the Prime Field or Beam Field, as applicable.

1.100 "**First Commercial Sale**" means, with respect to a Royalty-Bearing Product in a country, the first sale for end use or consumption of such Licensed Product or Prime Product in such country after Marketing Authorization of such Royalty-Bearing Product in such country, excluding, however, any sale or other distribution for use in a Clinical Trial.

1.101 "**FTE**" means [***] hours of work devoted to or in support of Development or Commercialization activities under this Agreement that is carried out by one or more qualified employees, contract personnel or consultants of a Party, measured in accordance with such Party's normal time allocation practices.

1.102 "**FTE Cost**" means, for any period, the FTE Rate multiplied by the number of FTEs in such period.

1.103 "**FTE Rate**" means, (a) for the period during the Term through the end of the first full Calendar Year, a rate of [***] U.S. Dollars ($[***]) per FTE and (b) for each Calendar Year during the Term following the first full Calendar Year, a rate equal to the FTE Rate for the previous Calendar Year adjusted by the applicable CPI Adjustment.

1.104 "**Fully Absorbed Standard Costs**" means, [***].

1.105 "**Future Acquirer**" means, with respect to a Party, the non-Affiliate party to any Change of Control of such Party and such non-Affiliate Person's Affiliates immediately prior to the Change of Control.

1.106 "**GAAP**" means United States generally accepted accounting principles, consistently applied.

1.107 "**Governmental Authority**" means any United States federal, state or local, or any foreign, government or political subdivision thereof, or any multinational organization or authority, or any authority, agency or commission entitled to exercise any administrative, executive, judicial, legislative, police, regulatory or taxing authority or power, any court or tribunal (or any department, bureau or division thereof), or any governmental arbitrator or arbitral body.

1.108 "**IND**" means an investigational new drug application, clinical trial authorization, or similar application or submission for approval to conduct human clinical investigations filed with or submitted to a Regulatory Authority in conformance with the requirements of such Regulatory Authority.

1.109 "**Indemnified Party**" has the meaning given to such term in Section 12.4.1.

1.110 "**Indemnifying Party**" has the meaning given to such term in Section 12.4.1.

1.111 "**Indication**" means a separate and distinct disease or medical condition in humans that [***].

1.112 "**Initial Term**" means the time period commencing on the Effective Date and ending on the [***] anniversary thereof.

1.113 "**Initiate**" or "**Initiation**" means, with respect to a Clinical Trial, the administration of the first dose to a human subject in such Clinical Trial.

1.114 "**JCC**" has the meaning given to such term in Section 3.6.1

1.115 "**JDC**" has the meaning given to such term in Section 3.5.1.

1.116 "**Joint Collaboration Know-How**" means all Collaboration Know-How conceived, developed, generated or reduced to practice during the Term jointly by, on one hand, Prime, its Affiliates or persons acting on behalf of (or under license or sublicense from) Prime and, on the other hand, Beam, its Affiliates or persons acting on behalf of (or under license or sublicense from) Beam.

1.117 "**Joint Collaboration Patent Rights**" means any Patent Rights that Cover Joint Collaboration Know-How.

1.118 "**Joint Collaboration Technology**" means the Joint Collaboration Know-How and Joint Collaboration Patent Rights.

1.119 "**Jointly-Owned Know-How**" means all Joint Collaboration Know-How other than Prime (from Beam) Improvement Know-How and Beam (from Prime) Improvement Know-How. Jointly-Owned Know-How includes [***].

1.120 "**Jointly-Owned Patent Rights**" means any Patent Rights that Cover Jointly-Owned Know-How.

1.121 "**Jointly-Owned Technology**" means the Jointly-Owned Know-How and Jointly-Owned Patent Rights.

1.122 "**JRC**" has the meaning given to such term in Section 3.3.

1.123 "**JSC**" has the meaning given to such term in Section 3.4.

1.124 "**Know-How**" means any invention, discovery, development, data, information, process, method, technique, trade secret, composition of matter, formulation, article of manufacture or other know-how, and any physical embodiments of any of the foregoing.

1.125 "**Licensed Product**" means, on a country-by-country basis, any product or service both (a) that contains or incorporates a Prime Editing Agent (in the case of a product in the Sickle Cell Field) or Qualifying Prime Editing Agent (in the case of a product in the Qualifying Prime Editing Agent Field), as applicable, and (b) either (i) the making, using, selling, offering for sale, importing or exporting of such product in the country in question is Covered by at least one Valid Claim of any of the Prime Licensed Patent Rights, Prime CRISPR/Delivery Patent Rights, [***] or Jointly-Owned Patent Rights, or (ii) [***] any of the Prime Licensed Technology, Prime CRISPR/Delivery Technology, [***] or Jointly-Owned Technology. For clarity, each of the following is a Licensed Product: a Protected Product, an Opt-In Product, a Collaboration Product, an Orphan Product, and a Beam Collaboration Enabled Product.

1.126 "**Licensee**" has the meaning given to such term in Section 1.143.

1.127 "**Licensor**" has the meaning given to such term in Section 1.143.

1.128 "**Losses**" has the meaning given to such term in Section 12.1.

1.129 "**Major Market**" means each of the United States, the United Kingdom, Germany, France, Spain and Italy.

1.130 "**Manufacture**" or "**Manufacturing**" means, with respect to a Product, including components thereof, the receipt, handling and storage of materials, the manufacturing, processing, packaging and labeling (excluding the development of packaging and labeling components for Marketing Authorization), holding (including storage), quality assurance and quality control testing (including release) of such compound or product (other than quality assurance and quality control related to development of the manufacturing process, which activities shall be considered Development activities) and shipping of such Product (or components thereof).

1.131 "**Marketing Authorization**" means all approvals from the relevant Regulatory Authority necessary to market and sell a product in any country [***].

1.132 "**NDA**" means a New Drug Application, Biologics License Application, Worldwide Marketing Application, Marketing Authorization Application, filing pursuant to Section 510(k) of the Act, or similar application or submission for Marketing Authorization of a Licensed Product filed with a Regulatory Authority to obtain Marketing Authorization for a biological, pharmaceutical or diagnostic product in the applicable jurisdiction.

1.133 "**Net Sales**" means [***] by or on behalf of a Party, its Affiliates, and sublicensees and any Affiliates of such sublicensees (in each case, the "**Invoicing Entity**") [***] on sales or other transfers of Royalty-Bearing Products, less the following to the extent applicable with respect to such sales or other transfers and not previously deducted from the gross invoice price: [***] provided that:

1.133.1 in any transfers of Royalty-Bearing Products between an Invoicing Entity and an Affiliate of such Invoicing Entity not for the purpose of resale by such Affiliate and not for use in a Clinical Trial, charitable purposes, compassionate use or as free marketing samples provided in the customary course of the Invoicing Entity's business, Net Sales will be equal to the fair market value of the Royalty-Bearing Products so transferred, assuming an arm's length transaction made in the ordinary course of business;

1.133.2 in the event that (i) an Invoicing Entity receives non-cash consideration for any Royalty-Bearing Products, (ii) an Invoicing Entity sells Royalty-Bearing Product in a transaction not at arm's length with a non-Affiliate of an Invoicing Entity, or (iii) any Royalty-Bearing Product is sold by an Invoicing Entity at a discounted price that is substantially lower than the customary prices charged by Invoicing Entity, then Net Sales will be calculated based on the fair market value of such consideration or transaction, assuming an arm's length transaction made in the ordinary course of business, not to exceed the list price of the Royalty-Bearing Products in any event; and

1.133.3 with respect to any provision hereof requiring a calculation of fair market value, assuming an arm's length transaction made in the ordinary course of business, the Invoicing Entity may use the average price of the relevant Royalty-Bearing Product sold for cash during the relevant period in the relevant country.

Transfers of Royalty-Bearing Products by an Invoicing Entity to its Affiliate or a sublicensee for resale by such Affiliate or sublicensee will not be deemed Net Sales. Instead, if applicable, Net Sales will be determined based on the gross amount billed or invoiced by such Affiliate or sublicensee upon resale of such Royalty-Bearing Products to a Third Party purchaser. Transfers of Royalty-Bearing Products by an Invoicing Entity for use in Clinical Trials, for compassionate use, or use as free marketing samples will not be deemed Net Sales unless such Invoicing Entity bills or invoices for such Royalty-Bearing Products at a price above its Cost of Goods Manufactured, in which case, Net Sales will be determined based on the gross amount billed or invoiced by such Invoicing Entity upon transfer for such use.

Net Sales shall be determined from the Parties' books and records maintained in accordance with GAAP (to the extent reasonably practicable when determining amounts

at a product level) consistently applied. It is understood that any accruals of amounts reflected in Net Sales shall be periodically (but at least once a Calendar Quarter) trued up by the Parties consistent with their customary practices and in accordance with GAAP (to the extent reasonably practicable when determining amounts at a product level), and Net Sales shall be adjusted to reflect such trued-up amounts.

1.134 "**Non-Optioned Protected Product**" has the meaning given to such term in Section 1.187.

1.135 "**Opt-In Information Package**" means, with respect to a Opt-In Product, [***].

1.136 "**Opt-In Product**" shall have the meaning given to such term in Section 5.2.1.

1.137 "**Opt-Out Notice**" shall have the meaning given to such term in Section 5.2.5.

1.138 "**Opt-Out Right**" shall have the meaning given to such term in Section 5.2.5.

1.139 "**Orphan Product**" means any Licensed Product that [***].

1.140 "**Overhead Costs**" means costs incurred by a Party or for its account that are attributable to a Party's [***].

1.141 "**Party**" or "**Parties**" has the meaning given to such term in the preamble to this Agreement.

1.142 "**Party Materials**" has the meaning given to such term in Section 2.6.1.

1.143 "**Patent Challenge**" means [***], of the validity, patentability, scope, priority, construction, non-infringement, inventorship, ownership or enforceability of any Patent Right (a "**Challenged Patent Right**") licensed by a Party (the "**Licensor**") to the other Party (the "**Licensee**") under this Agreement or any claim thereof, or opposition or assistance in the opposition of the grant of any letters patent within the Challenged Patent Rights, [***], before the United States Patent and Trademark Office or other agency or tribunal in any jurisdiction, or in arbitration including by reexamination, *inter partes* review, opposition, interference, post-grant review, nullity proceeding, pre-issuance submission, third party submission, derivation proceeding or declaratory judgment action; provided, however, that the term Patent Challenge shall not include (a) the Licensee or any of its Affiliates or sublicensees being an essential party in any patent interference proceeding before the United States Patent and Trademark Office, which interference the Licensee or its applicable Affiliate or sublicensee acts in good faith to try to settle or (b) the Licensee or any of its Affiliates or sublicensees, due to its status as an exclusive licensee of patent rights other than the Challenged Patent Rights, being named by the Licensor of such patent rights as a real party in interest in such an interference, so long as the Licensee or its applicable Affiliate or sublicensee either abstains from participation in, or acts in good faith to settle, the interference. For clarity, a Patent Challenge shall not include arguments made by the Licensee that (x) distinguish the inventions claimed in Patent Rights owned or controlled by the Licensee from those claimed in the Challenged Patent Rights but (y) do not disparage the Challenged Patent Rights or raise any issue of Challenged Patent Rights' compliance with or sufficiency under applicable patent laws, regulations or administrative rules, in each case (i) in the ordinary course of ex parte prosecution of the Patent Rights owned or controlled by the Licensee or (ii) in *inter partes* proceedings before the United States Patent and Trademark Office or other agency or tribunal in any jurisdiction (excluding interferences or derivation proceedings), or in arbitration, wherein the Patent Rights owned or controlled by the Licensee have been challenged. For further clarity, unless in conflict with the definition of a "Patent Challenge" that exists as of the Effective Date under a Third Party Agreement applicable to the Challenged Patent Rights, a Patent Challenge shall not include any counterclaim made, filed or maintained by the Licensee or its applicable Affiliate or sublicensee as a defendant in any claim, demand, lawsuit, cause of action or other action made, filed or maintained by the Licensor or its Affiliate or designee asserting infringement of any Patent Right.

1.144 "**Patent Rights**" means (a) all patents and patent applications in any country or supranational jurisdiction in the Territory, (b) any substitutions, divisionals, continuations, continuations-in-part, provisional applications, reissues, renewals, registrations, confirmations, re-examinations, extensions, supplementary protection certificates and the like of any such patents or patent applications, (c) foreign counterparts of any of the foregoing, (d) all applications claiming priority to any of the foregoing, (e) any patents issuing on any patent application identified in clauses (a) through (d), (f) any application

to which any of the foregoing claim priority, and (g) any application that claims common priority with any of the foregoing.

1.145 "**Permitted Uses**" has the meaning given to such term in Section 2.6.2.

1.146 "**Person**" means an individual, Governmental Authority, government official, corporation, partnership, limited liability company, trust, business trust, association, joint stock company, joint venture, pool, syndicate, sole proprietorship, unincorporated organization, or any other form of entity not specifically listed herein.

1.147 "**Pharmacovigilance Agreement**" has the meaning given to such term in Section 3.12.

1.148 "**Phase I Clinical Trial**" means a human clinical trial in any country that would satisfy the requirements of 21 CFR 312.21(a).

1.149 "**Phase II Clinical Trial**" means a human clinical trial in any country that would satisfy the requirements of 21 CFR 312.21(b).

1.150 "**Phase III Clinical Trial**" means a human clinical trial in any country that would satisfy the requirements of 21 CFR 312.21(c).

1.151 "**Phase IV Clinical Trial**" means (i) any human clinical trial (other than a Phase I Clinical Trial, Phase II Clinical Trial or Phase III Clinical Trial) in any country which is conducted on a Licensed Product for an Indication in the Beam Field after Marketing Authorization of such Licensed Product has been obtained from an appropriate Regulatory Authority in such country for such Indication, and includes [***].

1.152 "**Post-Approval Shared Development Costs**" means, on a Collaboration Product-by-Collaboration Product basis, the sum of [***] provided that in no event will any expense included as a Shared Development Cost or Post-Approval Shared Regulatory Cost be an additional Post-Approval Development Cost hereunder.

1.153 "**Post-Approval Shared Regulatory Costs**" means, on an Collaboration Product-by-Collaboration Product basis, the sum of [***] provided that in no event will any expenses included as a Shared Development Cost or Post-Approval Shared Development Cost be a Post-Approval Shared Regulatory Cost hereunder.

1.154 "**Pricing Approval**" means, with respect to a product in any country where a Governmental Authority authorizes reimbursement for, or approves or determines pricing for, pharmaceutical products, (a) receipt (or, if required to make such authorization, approval or determination effective, publication) of such reimbursement authorization or pricing approval or determination (as the case may be) for such product in such country and (b) the earlier to occur of (i) Beam, its Affiliate or sublicensee indicating agreement with such price(s) in such country or (ii) Beam, its Affiliate or sublicensee commencing Commercialization activities for such Licensed Product in such country after Marketing Authorization (other than Pricing Approval).

1.155 "**Prime**" has the meaning given to such term in the preamble to this Agreement.

1.156 "**Prime Collaboration Know-How**" means all Collaboration Know-How Controlled by Prime or any of its Affiliates and conceived, developed, generated or reduced to practice during the Term solely by Prime or its Affiliates or other persons acting on behalf of (or under license or sublicense from) Prime, through the Development, Commercialization or Manufacture of Licensed Products or otherwise arising out of Prime's performance of its obligations under this Agreement or exercise of its rights hereunder.

1.157 "**Prime Collaboration Patent Rights**" means any Collaboration Patent Rights that (a) are Controlled by Prime or any of its Affiliates during the Term and (b) Cover Prime Collaboration Know-How.

1.158 "**Prime Collaboration Technology**" means Prime Collaboration Know-How and Prime Collaboration Patent Rights.

1.159 "**Prime Competitive Infringement**" has the meaning given to such term in Section 11.4.1.

1.160 "**Prime CRISPR/Delivery Know-How**" means all Know-How, patentable or otherwise, that:

1.160.1 (a) is Controlled by Prime or any of its Affiliates as of the Effective Date or during the Initial Term and (b) is (i) necessary or useful to Develop, Commercialize or Manufacture a DNA or RNA Targeting Protein, or (ii) [***]; or

1.160.2 (a) is an enhancement, modification or improvement to the Know-How described in Section 1.160.1 and (b) is (i) Controlled by Prime or any of its Affiliates and (ii) conceived, developed, generated or reduced to practice, in each case ((i) and (ii)), during the Initial Term or in the [***] years thereafter,

provided that, in each case, such Know-How is not generally known.

Prime CRISPR/Delivery Know-How shall exclude Prime (from Beam) Improvement Technology.

1.161 "**Prime CRISPR/Delivery Patent Rights**" means any Patent Rights that (a) as of the Effective Date or during the Term are Controlled by Prime or any of its Affiliates and (b) Cover (i) Prime CRISPR/Delivery Know-How or (ii) Know-How that would, but for the proviso in the definition of "Prime CRISPR/Delivery Know-How", constitute Prime CRISPR/Delivery Know-How.

1.162 "**Prime CRISPR/Delivery Technology**" means Prime CRISPR/Delivery Know-How and Prime CRISPR/Delivery Patent Rights.

1.163 "**Prime Editing Agent**" means a macromolecule or macromolecular complex that uses Prime Editing to make one or more mutations or other changes (including point mutations (transitions, transversions, etc.), insertions, deletions, duplications, indels, or combinations thereof) in the sequence of one or more deoxyribonucleic acid target(s) or ribonucleic acid target(s). For clarity, a Qualifying Prime Editing Agent is a Prime Editing Agent.

1.164 "**Prime Editor**" means a macromolecule or macromolecular complex that is intended to insert deoxyribonucleic acid (DNA) or ribonucleic acid (RNA) sequence into, delete DNA or RNA sequence from, or replace one or more bases of a target DNA or RNA sequence using a combination of (a) one or more natural or engineered [***] or any other [***] and (b) either (i) a nucleic acid binding protein that can be programmed to bind to a DNA sequence to be so changed, wherein the nucleic acid binding protein does not intentionally make double stranded DNA breaks or (ii) a nucleic acid binding protein that can be programmed to bind to an RNA sequence to be so changed. "Prime Editing" means the process of utilizing a Prime Editor to achieve such change(s) in a nucleic acid target. Notwithstanding the foregoing, [***]

1.165 "**Prime Exclusively Licensed Patent Rights**" has the meaning given to such term in Section 11.2.1.

1.166 "**Prime Field**" means the prevention, modification, improvement, amelioration or treatment of human disease (excluding sickle cell disease) (including cell-based therapies

and the creation of one or more protective mutations) through administration of a product or service containing or incorporating a Prime Editing Agent that is not a Qualifying Prime Editing Agent, but excluding (a) the Beam Field, (b) the administration of any product or service containing or incorporating a Base Editor and (c) the Excluded Field. For clarity, the Prime Field includes products or services that contain or incorporate (i) at least one Prime Editing Agent that is not a Qualifying Prime Editing Agent and (ii) any other gene-editing approach (including other Prime Editing Agents, which may include one or more Qualifying Prime Editing Agents), subject to the exclusions in the foregoing clauses (a) through (c).

1.167 "**Prime (from Beam) Improvement Know-How**" means any Beam Collaboration Know-How and Joint Collaboration Know-How, in each case, to the extent that such Know-How (a) constitutes an improvement, modification, or enhancement to [***] and (b) is conceived, developed, generated or reduced to practice during the Initial Term. For example, and not limitation, Beam Collaboration Know-How or Joint Collaboration Know-How that constitutes an improvement, modification or enhancement to (x) CRISPR or any DNA or RNA Targeting Protein shall not be deemed an improvement, modification or enhancement to the Prime Platform and (y) any [***] shall be deemed an improvement, modification or enhancement to the Prime Platform. Prime (from Beam) Improvement Know-How excludes [***]. Notwithstanding anything to the contrary herein, any Beam Collaboration Know-How or Joint Collaboration Know-How that (A) [***] and (B) is conceived, developed, generated or reduced to practice during the period starting on the Effective Date and ending on the expiration or earlier termination of [***] (but in no event ending after the [***] of the Effective Date) shall be deemed an improvement, modification or enhancement to the Prime Platform.

1.168 "**Prime (from Beam) Improvement Patent Rights**" means any Patent Rights that (a) are Controlled by Beam or any of its Affiliates during the Term and (b) Cover Prime (from Beam) Improvement Know-How.

1.169 "**Prime (from Beam) Improvement Technology**" means Prime (from Beam) Improvement Know-How and Prime (from Beam) Improvement Patent Rights.

1.170 "**Prime Indemnified Parties**" has the meaning given to such term in Section 12.2.

1.171 "**Prime In-License Agreement**" has the meaning given to such term in Section 8.5.4(a).

1.172 "**Prime Licensed Know-How**" means all Know-How, patentable or otherwise, that (a) (i) is Controlled by Prime or any of its Affiliates as of the Effective Date or during the Initial Term and (ii) is necessary or useful to Develop, Commercialize or Manufacture a Prime Editing Agent or Qualifying Prime Editing Agent, as applicable, in the Beam Field, or (b) (i) is an enhancement, modification or improvement to the [***] (ii) is (x) Controlled by Prime or any of its Affiliates and (y) conceived, developed,

generated or reduced to practice, in each case ((x) and (y)), during the Initial Term or in the [***] years thereafter and (iii) is necessary or useful to Develop, Commercialize or Manufacture a Prime Editing Agent or Qualifying Prime Editing Agent, as applicable, in the Beam Field, *provided*, in each case (a) and (b), that such Know-How is not generally known. For the avoidance of doubt, Prime Licensed Know-How may include Prime Collaboration Know-How or Prime (from Beam) Improvement Technology. Prime Licensed Know-How shall exclude Prime CRISPR/Delivery Technology.

1.173 "**Prime Licensed Patent Rights**" means any Patent Rights that (a) as of the Effective Date or during the Term are Controlled by Prime or any of its Affiliates and (b) Cover (i) Prime Licensed Know-How or (ii) Know-How that would, but for the proviso in the definition of "Prime Licensed Know-How", constitute Prime Licensed Know-How. Prime Licensed Patent Rights includes those Patent Rights listed on Schedule 1.173, which schedule will be updated periodically thereafter as necessary at the reasonable request of Beam.

1.174 "**Prime Licensed Technology**" means Prime Licensed Know-How and Prime Licensed Patent Rights.

1.175 "**Prime Opt-In Option**" has the meaning given to such term in Section 5.2.1.

1.176 "**Prime Opt-In Option Period**" has the meaning given to such term in Section 5.2.2

1.177 "**Prime Platform**" means Prime (and any of its Affiliates') owned or exclusively in-licensed technology platform to the extent directed towards Prime Editors and Prime Editing Agents (which, for clarity, will include RNA applications of the foregoing notwithstanding the status of the technology platform), including the invention, making, discovery, development, identification, research, development, manufacture and commercialization thereof. For clarity, Prime Platform includes, without limitation, any Patent Rights exclusively licensed to Prime under the Prime-Broad Agreement to the extent relating to Prime Editors or Prime Editing Agents.

1.178 "**Prime Product**" means, on a country-by-country basis, any product or service that either (a) the making, using, selling, offering for sale, importing or exporting of such product in the country in question is Covered by at least one Valid Claim of any of the Beam Licensed Patent Rights or Beam CRISPR/Delivery Patent Rights or (b) [***] any of the Beam Licensed Technology or Beam CRISPR/Delivery Technology**.**

1.179 "**Prime Sublicense Payments**" has the meaning given to such term in Section 8.5.4(c).

1.180 "**Prime Third Party Agreement**" has the meaning given to such term in Section 10.2.4.

1.181 "**Prime Third Party Rights**" has the meaning given to such term in Section 8.5.4(a).

1.182 "**Prime Third Party Royalties**" means, with respect to a Licensed Product and a country, [***].

1.183 "**Prime-Broad Agreement**" means that certain License Agreement by and between Broad and Prime, dated as of September 26, 2019, as such agreement may be amended from time to time in accordance with its terms.

1.184 "**Prime-Prosecuted Patent Rights**" has the meaning given to such term in Section 11.2.1.

1.185 "**Product**" means, as applicable, any Prime Product or Licensed Product.

1.186 [***]

1.187 "**Protected Product**" means a Licensed Product for which (a) Beam exercises a Beam Protected Product Option in accordance with Section 5.1 and pays the Beam Protected Product Option Fee in accordance with Section 8.2, or (b) Prime does not exercise the Prime Opt-In Option prior to the expiration of the Prime Opt-In Option Period for such Licensed Product in accordance with Section 5.2 (such Licensed Product in the foregoing (b), a "**Non-Optioned Protected Product**").

1.188 "**Qualifying Prime Editing Agent**" means a macromolecule or macromolecular complex that uses Prime Editing to make one or more transition point mutations (that is, C to T, T to C, A to G, or G to A) in the sequence of one or more deoxyribonucleic acid targets, without intentionally making any non-transition mutations or other changes (including insertions, deletions, duplications, indels, transversions, or combinations thereof). Any compound that satisfies the criteria described above but also effects one or more Restricted Mutations shall also be considered a Qualifying Prime Editing Agent.

1.189 "**Qualifying Prime Editing Agent Field**" has the meaning given to such term in Section 1.23.

1.190 "**Receiving Party**" has the meaning given to such term in Section 9.1.

1.191 "**Reconciliation Report**" has the meaning given to such term in Section 8.6.3(d).

1.192 "**Regulatory Authority**" means any applicable Governmental Authority that holds responsibility for development and commercialization of, and the granting of approvals for the manufacturing or marketing (including Marketing Authorizations) of a biological or pharmaceutical product, as applicable in the Territory, including in the United States, the FDA, and in the European Union, the EMA.

1.193 "**Regulatory Controlling Party**" has the meaning given to such term in Section 6.3.

1.194 "**Restricted Mutation**" means any DNA or RNA base change that does not result in a material change in the protein-coding sequence or expression, trafficking, targeting, or other function of any gene or corresponding RNA or protein.

1.195 "**Royalty Term**" means on a country-by-country and Royalty-Bearing Product-by-Royalty-Bearing Product basis, the period during which royalties shall be paid on the sum of Net Sales of such Royalty-Bearing Product in such country, from the First Commercial Sale of such Royalty-Bearing Product until the latest of: (a) the expiration date of the last to expire Valid Claim (i) with respect to a Licensed Product, within the Prime Licensed Patent Rights, Jointly-Owned Patent Rights or [***] Covering the applicable Licensed Product (or if the last such Valid Claim with respect to such Licensed Product in such country is a pending Valid Claim, the date such pending Valid Claim ceases to be a Valid Claim; provided, however, that subsequent issuance of such Valid Claim shall again extend the Royalty Term from the date of such issuance to the expiration date of such Valid Claim), or (ii) with respect to a Prime Product, within the Beam Licensed Patent Rights or Beam CRISPR/Delivery Patent Rights Covering the applicable Prime Product (or if the last such Valid Claim with respect to such Prime Product in such country is a pending Valid Claim, the date such pending Valid Claim ceases to be a Valid Claim; provided, however, that subsequent issuance of such Valid Claim shall again extend the Royalty Term from the date of such issuance to the expiration date of such Valid Claim); (b) the period of regulatory exclusivity associated with such Royalty-Bearing Product in such country; or (c) ten (10) years after the First Commercial Sale of such Royalty-Bearing Product in such country.

1.196 "**Royalty-Bearing Product**" means, as applicable, any (a) Prime Product, (b) Protected Product, or (c) Collaboration Product outside the Collaboration Territory.

1.197 "**Safety Issue**" means, with respect to a Licensed Product, (a) a Regulatory Authority or safety data review board for a Clinical Trial of such Licensed Product has required termination or suspension of a Clinical Trial of such Licensed Product on the basis of a safety concern, (b) if a Party reasonably believes in good faith that termination or suspension of a Clinical Trial or further pre-clinical Development of such Licensed Product is warranted because of an adverse balance between risk and benefit to the study subjects or as demonstrated by in vivo pre-clinical data, as the case may be, or (c) if a Party reasonably believes in good faith that the continued Commercialization of such marketed Licensed Product poses an adverse balance between risk and benefit to patients.

1.198 "**Sales and Marketing Expenses**" means the sum of [***].

1.199 "**Senior Officers**" has the meaning given to such term in Section 3.4.

1.200 "**Shared Commercialization Costs**" means, with respect to a Collaboration Product, the sum of the following: [***].

1.201 "**Shared Costs**" means any Shared Commercialization Costs or Shared Development Costs.

1.202 "**Shared Development Costs**" means, with respect to a Collaboration Product, the sum of [***].

1.203 "**Shared Distribution Costs**" means the sum of [***].

1.204 "**Sickle Cell Field**" has the meaning given to such term in Section 1.23.

1.205 "**Soliciting Employee**" has the meaning given to such term in Section 14.4.1.

1.206 "**Subcommittees**" means the JDC, JCC or any other committee or subcommittee (other than the JSC or the JRC) formed in accordance with this Agreement.

1.207 "**Subfields**" has the meaning given to such term in Section 1.23.

1.208 "**Technology Transfer Plan**" has the meaning given to such term in Section 2.5.

1.209 "**Term**" has the meaning given to such term in Section 13.1.

1.210 "**Terminated Collaboration Product**" has the meaning given to such term in Section 13.6.1(d).

1.211 "**Terminated Collaboration Product Transition Agreement**" has the meaning given to such term in Section 13.6.1(d).

1.212 "**Terminated Product**" has the meaning given to such term in Section 13.6.1.

1.213 "**Territory**" means all of the countries in the world, and their territories and possessions.

1.214 "**Third Party**" means a Person other than Beam, Prime or their respective Affiliates.

1.215 "**Third Party Agreements**" means (a) any agreement entered into after the Effective Date between a Third Party and a Party or its Affiliate pursuant to which such Party or its Affiliate gains rights to use such Third Party's intellectual property in the Development, Manufacture or Commercialization of a Product under this Agreement (including any

Prime In-License Agreement entered into by Prime in accordance with Section 8.5.4 or any Beam In-License Agreement entered into by Beam in accordance with Section 8.5.5), and (b) with respect to Beam, any agreement set forth on Schedule 1.215(i) and, with respect to Prime, any agreement set forth on Schedule 1.215(ii), in each case ((a) and (b)), as such agreement may be amended from time to time in accordance with its terms and this Agreement (any such Third Party described in clause (a), and any Third Party that is a party to any agreement set forth in Schedule 1.215(i) or Schedule 1.215(ii), a "Third Party Partner").

1.216 "**Third Party Milestone Payments**" has the meaning given to such term in Section 8.5.4(c).

1.217 "**Third Party Partner**" has the meaning given to such term in Section 1.215.

1.218 "**Third Party Payments**" means compensation paid to any Third Party by a Party or by both Parties (or their respective Affiliates) under any Third Party Agreement.

1.219 "**Valid Claim**" means, with respect to any Patent Rights, (a) a claim of an issued and unexpired patent within such Patent Rights that has not been (i) held permanently revoked, unenforceable, unpatentable or invalid by a decision of a court or governmental body of competent jurisdiction, unappealable or unappealed within the time allowed for appeal, (ii) rendered unenforceable through disclaimer, or (iii) permanently lost through an interference or opposition proceeding without any right of appeal or review, or not appealed or put in for review within the applicable statutory or regulatory period; or (b) a pending claim of a pending patent application within such Patent Rights that has not been (i) abandoned or finally rejected without the possibility of appeal or refiling or (ii) pending more than [***] years from the date of the first substantive office action on such pending patent application, provided such patent application is not pending more than [***] years from its earliest priority date. A pending claim that ceases to be a Valid Claim due to the foregoing time limit shall, if it later issues, qualify again as a Valid Claim, provided that it meets the requirements of clauses (a)(i)-(iii) of the foregoing definition.

Article 2 LICENSES

2.1 License Grants; Retained Rights.

2.1.1 Licenses to Beam.

(a) **Prime Licensed Technology in Beam Field**. Subject to the terms and conditions of this Agreement (including Section 2.4.1), Prime hereby grants, and shall cause its Affiliates to grant, to Beam an exclusive (even as to Prime and its Affiliates) license under the Prime Licensed Technology and Prime's interest in the Jointly-Owned Technology, with a right to grant and authorize the further grant through multiple tiers of sublicenses in accordance with this Agreement (including Section 2.2), solely to Develop, make, have made, use, offer for sale, sell, import and Commercialize Licensed Products only in the Beam Field in the Territory.

(b) **Prime CRISPR/Delivery Technology in Beam Field**. Subject to the terms and conditions of this Agreement (including Section 2.4.1), Prime hereby grants, and shall cause its Affiliates to grant, to Beam a non-exclusive license under the Prime CRISPR/Delivery Technology, with a right to grant and authorize the further grant through multiple tiers of sublicenses in accordance with this Agreement (including Section 2.2), solely to Develop, make, have made, use, offer for sale, sell, import and Commercialize Licensed Products only in the Beam Field in the Territory.

(c) **Prime (from Beam) Improvement Technology**. Subject to the terms and conditions of this Agreement, Prime hereby grants, and shall cause its Affiliates to grant, to Beam:

(i) except to the extent exclusively licensed in Section 2.1.1(a) or Section 2.1.1(c)(ii), [***] under any Prime (from Beam) Improvement Technology, with a right to grant and authorize the further grant through multiple tiers of sublicenses, [***]; and

(ii) [***] under any Prime (from Beam) Improvement Technology and Prime's interest in the [***], with a right to grant and authorize the further grant through multiple tiers of sublicenses, [***].

2.1.2 Licenses to Prime.

(a) **Beam Licensed Technology in Prime Field**. Subject to the terms and conditions of this Agreement (including Section 2.4.2), Beam hereby grants, and shall cause its Affiliates to grant, to Prime a non-exclusive license under the Beam Licensed Technology, with a right to grant and authorize the further grant through multiple tiers of sublicenses in accordance with this Agreement (including Section 2.2), solely to Develop, make, have made, use, offer for sale, sell, import and Commercialize Prime Products only in the Prime Field in the Territory.

(b) **Beam CRISPR/Delivery Technology in Prime Field**. Subject to the terms and conditions of this Agreement (including Section 2.4.2), Beam hereby grants, and shall cause its Affiliates to grant, to Prime a non-

exclusive license under the Beam CRISPR/Delivery Technology, with a right to grant and authorize the further grant through multiple tiers of sublicenses in accordance with this Agreement (including Section 2.2), solely to Develop, make, have made, use, offer for sale, sell, import and Commercialize Prime Products only in the Prime Field in the Territory.

(c) **Beam (from Prime) Improvement Technology**. Subject to the terms and conditions of this Agreement, Beam hereby grants, and shall cause its Affiliates to grant, to Prime:

(i) except to the extent non-exclusively licensed under Section 2.1.2(a) or exclusively licensed under Section 2.1.2(c)(ii), a [***] Beam (from Prime) Improvement Technology, with a right to grant and authorize the further grant through multiple tiers of sublicenses, [***] and

(ii) [***] any Beam (from Prime) Improvement Technology and Beam's interest in the [***], with a right to grant and authorize the further grant through multiple tiers of sublicenses, to [***]

(d) **Development License for Collaboration Products**. Subject to the terms and conditions of this Agreement, on a Collaboration Product-by-Collaboration Product basis, effective upon Prime's exercise of the Prime Opt-In Option with respect to a Collaboration Product, Beam hereby grants, and Beam shall cause its Affiliates to grant, to Prime a co-exclusive license under the Beam Development and Commercialization Technology and Beam's interest in the Jointly-Owned Technology, with a right to grant and authorize the further grant through multiple tiers of sublicenses in accordance with this Agreement (including Section 2.2), solely to conduct the activities allocated to Prime under a Development Plan; provided such license shall terminate with respect to any Collaboration Product if Prime exercises its Opt-Out Right with respect to such Collaboration Product in accordance with Section 5.2.5. For clarity, nothing in this Section 2.1.2(d) shall prohibit Beam from granting any license to any Third Party under the Beam Development and Commercialization Technology in a manner consistent with the terms of this Agreement.

(e) **Commercialization and Co-Promotion License for Collaboration Products**. Subject to the terms and conditions of this Agreement, on a Collaboration Product-by-Collaboration Product basis, effective upon Prime's exercise of the Co-Promote Option with respect to a Collaboration Product, Beam hereby grants, and shall cause its Affiliates to grant, to Prime a co-exclusive license under the Beam Development and Commercialization Technology and Beam's interest in the Jointly-Owned Technology, with a right to grant and authorize the further grant of sublicenses as permitted under this Agreement (including under Section 2.2 and with respect to the Commercialization Plan) or the Co-Promotion Agreement, solely to conduct the activities allocated to Prime under a Commercialization Plan and to Co-Promote such Collaboration Product in the Beam Field in the Collaboration Territory in accordance with the terms of this Agreement and the Co-Promotion Agreement; provided such license shall terminate with respect to any such Collaboration Product if Prime exercises its Opt-Out Right with respect to such Collaboration Product in accordance with Section 5.2.5. For clarity, nothing in this Section 2.1.2(e) shall prohibit Beam from granting any license to any Third Party under the Beam Development and Commercialization Technology in a manner consistent with the terms of this Agreement.

(f) **Excluded Field**. Notwithstanding anything to the contrary in this Section 2.1.2, if any Beam Licensed Technology, Beam CRISPR/Delivery Technology, Beam (from Prime) Improvement Technology or [***] is or becomes Controlled by Beam or its Affiliates in the Excluded Field (or any subfield thereof) during the Term, (i) upon Beam first becoming aware, Beam will promptly (and in any event within [***]) notify Prime thereof and (ii) the Excluded Field with respect to such Beam Licensed Technology, Beam CRISPR/Delivery Technology, Beam (from Prime) Improvement Technology or [***] shall automatically be narrowed so that it shall thereafter no longer include such portion of the Excluded Field in which Beam Controls such Beam Licensed Technology, Beam CRISPR/Delivery Technology, Beam (from Prime) Improvement Technology or [***], as appropriate and consistent with the foregoing.

2.2 Sublicenses.

2.2.1 In no event shall any sublicense granted pursuant to Section 2.1 diminish, reduce or eliminate any of the obligations of the sublicensing Party under this Agreement. Any sublicense granted pursuant to Section 2.1 shall be subject and subordinate to, and consistent with, the terms and conditions of this Agreement and shall require each such sublicensee to comply with all applicable terms of this Agreement, including the prohibition of further sublicensing by the sublicensee

except where such sublicense is in compliance with the provisions of this Agreement.

2.2.2 Each Party may freely grant sublicenses under the rights granted to it under Section 2.1 to any of its Affiliates and Third Parties for the purposes set forth therein without the prior written consent of the other Party; provided that, [***]. The sublicensing Party shall provide the other Party with a fully-executed copy of any agreement (which the sublicensing Party may redact as necessary to protect confidential or commercially sensitive information) reflecting any such sublicense promptly after the execution thereof. If a Party grants a sublicense, the terms and conditions of this Agreement and the Third Party Agreements that are applicable to sublicensees shall apply to such sublicensee to the same extent as they apply to such Party. Further, the sublicensing Party assumes full responsibility, and shall remain primarily liable, for causing the performance of all obligations of each Affiliate and sublicensee of such sublicensing Party to which it grants a sublicense, and will itself pay and account to the other Party for all payments due under this Agreement by reason of operation of any such sublicense.

2.2.3 [***]

2.3 Other IP.

2.3.1 Subject to the terms and conditions of this Agreement, effective upon the date in which the Parties enter into a Co-Promotion Agreement with respect to a Collaboration Product in accordance with Section 7.6, (a) Prime hereby grants to Beam the non-exclusive right, free of charge, to use the Prime name and logo solely for the purpose of Co-Promoting such Collaboration Product in accordance with the terms of this Agreement and the Co-Promotion Agreement, and (b) Beam hereby grants to Prime the non-exclusive right, free of charge, to use the Beam name and logo in the Collaboration Territory solely for the purpose of Co-Promoting the Collaboration Products in accordance with the terms of this Agreement and the Co-Promotion Agreement, provided that, in each case ((a)-(b)), such rights shall be exercised, and each such Collaboration Product bearing such names or logos shall be manufactured, in accordance with the quality standards established by the JSC. Prime or its Affiliate shall remain the owner of the Prime name and logo and the trademarks and the goodwill pertaining thereto. Beam or its Affiliate shall remain the owner of the Beam name and logo and the trademarks and the goodwill pertaining thereto. Notwithstanding any provision of this Agreement or any Co-Promotion Agreement to the contrary, the quality standards established by the JSC may not conflict with or otherwise contravene any quality standards or restrictions on use set forth in the Co-Promotion Agreement.

2.3.2 Subject to the terms and conditions of this Agreement, effective upon Prime's exercise of its Co-Promote Option with respect to a Collaboration Product in accordance with Section 5.2.4, Beam hereby grants to Prime a co-exclusive license, free of charge, to use the Collaboration Marks solely in connection with Co-Promoting such Collaboration Product in the Collaboration Territory in accordance with the terms of this Agreement and the Co-Promotion Agreement. For clarity, either Party may grant Third Party (sub)licenses of the Collaboration Marks to the extent that such Party is permitted to grant Third Party (sub)licenses of its rights with respect to the Collaboration Products in the Collaboration Territory generally.

2.3.3 Subject to the terms and conditions of this Agreement, effective upon Prime's exercise of its Co-Promote Option with respect to a Collaboration Product in accordance with Section 5.2.4, each Party hereby grants to the other Party an exclusive (except as to such Party and its Affiliates) license, free of charge, to use the copyrighted material created for use in connection with the marketing of such Collaboration Product in the Collaboration Territory solely for use in connection with Co-Promoting such Collaboration Product in the Collaboration Territory in accordance with the terms of this Agreement and the Co-Promotion Agreement.

2.4 Third Party Agreements.

2.4.1 **Prime Third Party Agreements**. Notwithstanding anything to the contrary in this Agreement, Beam acknowledges and agrees that the rights, licenses, and sublicenses granted by Prime to Beam in this Agreement (including any right to

sublicense) are subject to the terms of Third Party Agreements set forth on Schedule 1.215(ii), any Collaboration Prime In-License Agreements entered into during the Term, and the rights granted to Third Parties thereunder, the scope of the licenses granted to Prime thereunder and the rights retained by such Third Parties and any other Third Parties (including Governmental Authorities) set forth therein, including Sections [***] of the Prime-Broad Agreement. Without limiting the above in any way, at Prime's request, Beam shall, and shall use Commercially Reasonable Efforts to cause its Affiliates and all sublicensees to, take such reasonable actions, as may be required to assist Prime in complying with its obligations under Third Party Agreements, solely to the extent applicable to Beam's rights or obligations under this Agreement. Without limiting any of the foregoing, Beam agrees to be bound by the terms and conditions of the provisions set forth in Schedule 2.4.1, as applicable, with respect to sublicenses granted by Prime to Beam under Section 2.1.1 under such Third Party Agreements. If Prime receives written notice of termination from a Third Party Partner of Prime as a result of a material breach of any Third Party Agreement to which such Third Party Partner is a party, and such material breach is directly due to a failure by Beam or a sublicensee of Beam to assist Prime in complying with Prime's obligations under such Third Party Agreement, to the extent applicable to Beam's rights or obligations under this Agreement, then such failure to assist Prime will be deemed to be a material breach of this Agreement by Beam, and the terms of Section 13.4 (including Beam's right to cure within the applicable cure periods) shall apply.

2.4.2 **Beam Third Party Agreements**. Notwithstanding anything to the contrary in this Agreement, Prime acknowledges and agrees that the rights, licenses, and sublicenses granted by Beam to Prime in this Agreement (including any right to sublicense) are subject to the terms of Third Party Agreements set forth on Schedule 1.215(i), any Collaboration Beam In-License Agreements entered into during the Term, and the rights granted to Third Parties thereunder, the scope of the licenses granted to Beam thereunder and the rights retained by such Third Parties and any other Third Parties (including Governmental Authorities) set forth therein, including Sections [***] of the Beam-Broad Agreement. Without limiting the above in any way, at Beam's request, Prime shall, and shall use Commercially Reasonable Efforts to cause its Affiliates and all sublicensees to, take such reasonable actions, as may be required to assist Beam in complying with its obligations under such Third Party Agreements, solely to the extent applicable to Prime's rights or obligations under this Agreement. Without limiting any of the foregoing, Prime agrees to be bound by the terms and conditions of the provisions set forth on Schedule 2.4.2, as applicable, with respect to sublicenses granted by Beam to Prime under Section 2.1.2 under such Third Party Agreements. If Beam receives written notice of termination from a Third Party Partner of Beam as a result of a material breach of any Third Party Agreement to which such Third Party Partner is a party, and such material breach is directly due to a failure by Prime or a sublicensee of Prime to assist Beam in

complying with Beam's obligations under such Third Party Agreement, to the extent applicable to Prime's rights or obligations under this Agreement, then such failure to assist Beam will be deemed to be a material breach of this Agreement by Prime, and the terms of Section 13.4 (including Prime's right to cure within the applicable cure periods) shall apply.

2.4.3 [***]

2.5 Exchange of Information. Promptly after the Effective Date, the Parties shall agree to a plan (including a timeline) in which each Party shall disclose to the other Party on an ongoing basis during the Term in English and in writing or in an electronic format all Beam Licensed Technology, Beam CRISPR/Delivery Technology, Beam Development and Commercialization Technology, Prime Licensed Technology, Prime CRISPR/Delivery Technology, and all Collaboration Technology (including, for clarity, Prime (from Beam) Improvement Technology and Beam (from Prime) Improvement Technology) respectively, to the extent not previously disclosed (as may be amended from time to time in accordance with this Agreement, the "**Technology Transfer Plan**"). The Technology Transfer Plan can be amended from time to time by mutual written agreement by the Parties. Without limiting the foregoing, during the Initial Term and for [***] years thereafter each Party shall (a) disclose to the other Party (including by providing hard and electronic copies thereof) all Know-How licensed to such other Party pursuant to Section 2.1 on an on-going basis and (b) make its personnel reasonably available to respond to the other Party's reasonable inquiries with respect thereto. Notwithstanding the foregoing, nothing in this Section 2.5 or the Technology Transfer Plan shall limit each Party's disclosure obligations under Beam (from Prime) Improvement Technology and Prime (from Beam) Improvement Technology pursuant to Section 11.1.

2.6 Transfer of Materials.

2.6.1 **Transfer**. A Party may agree under this Agreement (including the applicable Development Plan or Commercialization Plan) to provide the other Party certain Know-How that are tangible biological materials (the "**Party Materials**"). Except as expressly set forth in this Agreement, the Party Materials are provided by the providing Party on an "as-is" basis without any representation or warranty of any type, express or implied, including any representation or warranty of

merchantability, non-infringement, title or fitness for a particular purpose, each of which is hereby expressly disclaimed by the providing Party.

2.6.2 **Permitted Use of Party Materials**. The Party receiving Party Materials from the other Party will use such Party Materials solely as contemplated in a Development Plan, Commercialization Plan or otherwise within the scope of the licenses granted to such receiving Party under this Agreement (collectively, "**Permitted Uses**"). Without limiting the generality of the foregoing, except for Permitted Uses, the receiving Party of any Party Materials will not (a) make or attempt to make any analogues, progeny or derivatives of, or modifications to, such Party Materials or attempt to reverse engineer, characterize or in any way try to ascertain the identity, chemical structure, sequence, mechanism of action or composition of such Party Materials, or (b) use such Party Materials for such receiving Party's own benefit or for the benefit of any of its Affiliates or any Third Party (other than any permitted subcontractor or sublicensee) without the prior written consent of the supplying Party. Further, the Party receiving Party Materials will not administer any such Party Materials to any human and will comply with all Applicable Laws applicable to the handling and use of such Party Materials.

2.6.3 [***]

2.6.4 **Title to Party Materials; Return**. All right, title and interest in and to the Party Materials provided by a Party under this Agreement will remain the sole and exclusive property of such providing Party notwithstanding the transfer to and use by the other Party of the same. At the end of the activities under this Agreement that relate to any Party Materials (including any termination of this Agreement in whole or in part), any Party who has received relevant Party Materials will either destroy or return to the providing Party, at such providing Party's sole discretion, all of such Party Materials that are unused.

2.7 **No Implied Licenses**. Except as expressly set forth in this Agreement, neither Party shall, by virtue of this Agreement, acquire any license or other intellectual property interest, by implication or otherwise, in (a) any information disclosed to it under this Agreement, (b) any patents or patent applications Controlled or owned by the other Party or its Affiliates, (c) any trademarks (whether registered or protected by common law), trademark applications, or any goodwill associated with the foregoing Controlled or owned by the

other Party or its Affiliates, or (d) any other intellectual property rights, however denominated, throughout the world, Controlled or owned by the other Party or its Affiliates.

Article 3 MANAGEMENT; EXCHANGE OF INFORMATION

3.1 **Collaboration Overview**. The Parties desire and intend to collaborate with respect to the Development and Commercialization of Licensed Products in the Beam Field in the Territory, as and to the extent set forth in this Agreement.

3.2 **Limits on Committee Authority**. Each Party shall retain the rights, powers and discretion granted to it under this Agreement and no such rights, powers, or discretion shall be delegated to or vested in the JSC or any Subcommittee unless such delegation or vesting of rights is expressly provided for in this Agreement or the Parties expressly so agree in writing. Notwithstanding anything to the contrary in this Agreement, in no circumstances shall the JSC or any Subcommittee have any power to amend, modify or waive compliance with this Agreement.

3.3 **Joint Research Committee**. Within [***] of the Effective Date, the Parties shall establish a joint research committee (the "**JRC**") to act as a forum to review, discuss and oversee activities under this Agreement during the Initial Term and to facilitate communications between the Parties regarding the Development of Licensed Products. The JRC will operate as a discussion forum between the Parties and will have no decision-making authority.

3.3.1 **Composition of the JRC**. The JRC shall be comprised of [***] of Beam and [***] of Prime. Each Party may change one or more of its representatives to the JRC from time to time in its sole discretion, effective upon notice to the other Party of such change. Within [***] of the Effective Date, the Parties shall each appoint their initial representative to the JRC unless otherwise agreed by the Parties in writing. These representatives shall have appropriate technical credentials, experience and knowledge, and ongoing familiarity with the Licensed Products.

3.3.2 **Specific Responsibilities**. In addition to its overall responsibility for acting as a forum to review, discuss and oversee activities under this Agreement during the Initial Term and to facilitate communications between the Parties regarding the Development of Licensed Products, the JRC shall, subject to the terms of this Agreement, in particular:

(a) review and discuss all material activities undertaken by each Party hereunder, including the exchange and review of data and information generated hereunder;

(b) oversee the progress of any Technology Transfer Plan;

(c) discuss the progress toward Beam's preparation of an IND for any Licensed Product; and

(d) otherwise encourage and facilitate cooperation and communication between the Parties with respect to activities under this Agreement.

3.3.3 **Discontinuation of the JRC**. Unless otherwise agreed to by the Parties, the JRC shall automatically discontinue upon the expiration of the Initial Term hereunder, provided, however, that upon or prior to the expiration of the Initial Term, the Parties will discuss whether to extend the term of the JRC for up to an additional [***] following the expiration of the Initial Term.

3.4 **Joint Steering Committee**. Within [***] following Prime's first exercise of a Prime Opt-In Option in accordance with Section 5.2 (or at any other time mutually agreed by the Parties) with respect to the first Collaboration Product, the Parties shall establish a joint steering committee (the "**JSC**") to facilitate communications between the Parties and oversee, review and manage the Development and Commercialization of Collaboration Products as set forth herein. In addition, one (1) Development Senior Officer and one (1) Commercialization Senior Officer (together, the "**Senior Officers**") shall be designated by each Party by written notice to the other Party within [***] following Prime's first exercise of a Prime Opt-In Option in accordance with Section 5.2, and each Senior Officer of a Party may be changed by advance written notice by such Party to the other Party.

3.4.1 **Composition of the JSC**. The JSC shall be comprised of [***] of Beam and [***] of Prime. Each Party may change one or more of its representatives to the JSC from time to time in its sole discretion, effective upon notice to the other Party of such change. Within [***] following Prime's first exercise of a Prime Opt-In Option in accordance with Section 5.2, the Parties shall each appoint their initial representative to the JSC unless otherwise agreed by the Parties. These representatives shall have appropriate technical credentials, experience and knowledge, and ongoing familiarity with the Collaboration Products and shall be duly authorized under their respective company's internal governance procedures to make the decisions or carry out the activities given to them under this Agreement.

3.4.2 **Specific Responsibilities**. In addition to its overall responsibility for monitoring and providing a forum to discuss and coordinate the Parties' activities under this Agreement, the JSC shall, subject to the terms of this Agreement, in particular:

(a) oversee the activities of Beam and Prime with respect to each Development Plan for Collaboration Products (including the Development Budget in any Development Plan for a Collaboration Product) and the Commercialization of Collaboration Product(s) in the Collaboration Territory;

(b) review and decide whether to approve any proposed Development Plan for any Collaboration Product (including the Development Budget in any Development Plan for a Collaboration Product) and any proposed amendments thereto;

(c) formulate the regulatory strategy for each Collaboration Product, in accordance with Section 6.2;

(d) review and decide whether to approve each proposed Commercialization Plan for any Collaboration Product (including the Commercialization Budget in any Commercialization Plan) and any proposed amendments thereto;

(e) with respect to each Collaboration Product, approve pricing of such Collaboration Product and supply thereof within the Collaboration Territory;

(f) review and decide whether to approve the designation of any costs or expenses as Post-Approval Shared Development Costs or Post-Approval Shared Regulatory Costs;

(g) receive and discuss reports from Subcommittees and provide guidance thereto;

(h) attempt to resolve issues presented to it by, and disputes within, any Subcommittee;

(i) approve strategies for obtaining, maintaining, defending and enforcing trademark protection for any Collaboration Product within the Collaboration Territory in accordance with the terms and conditions of Section 11.6.1(a);

(j) approve all trademarks selected to be used to identify any Collaboration Product and all trademarks, logos, taglines, trade dress, packaging configuration, domain names or indicia of origin for use in connection with the sale or marketing of any Collaboration Product, in each case, in the Collaboration Territory in accordance with the terms and conditions of Section 11.6.1(a);

(k) review and decide whether to approve any other recommendations and submissions from the JDC and JCC;

(l) establish such additional Subcommittees as it deems necessary to achieve the objectives and intent of this Agreement; and

(m) have any other responsibility expressly designated for the JSC under this Agreement.

3.4.3 **Decision-Making**. Decisions of the JSC shall be made unanimously by the representatives. The JSC will use good faith efforts, in compliance with this Section 3.4.3, to promptly resolve any such matter for which it has authority. In the event that the JSC cannot or does not, after good faith efforts, reach agreement on any issue within [***] after it has met and attempted to reach

such agreement, then, the Parties shall refer such issue to the Alliance Managers. The Alliance Managers shall work with the JSC and use good faith commercially reasonable efforts to reach mutually acceptable resolutions on all such disputed matters. If the Alliance Managers are unable to assist the JSC in resolving such dispute [***] after the dispute is first referred to the Alliance Managers, either Party may elect to submit such issue to the Parties' executive officers as follows: (i) for a Development-related issue, the issue shall be referred for resolution to the Development Senior Officers, or (ii) for a Commercialization-related issue, the issue shall be referred for resolution to the Commercialization Senior Officers. In the event that the Senior Officers cannot resolve the issue within [***] or such other longer time frame as the Senior Officers may otherwise agree upon, after the issue is referred to them in accordance with this Section 3.4.3, then, the resolution or course of conduct shall be determined by [***], with the following exceptions related to each Collaboration Product, all of which shall require mutual agreement by the Parties:

[***]

3.5 Joint Development Committee.

3.5.1 **Composition of the Joint Development Committee**. Within [***] after the Parties agree upon a Development Plan for the first Opt-In Product that becomes a Collaboration Product in accordance with Section 5.2.2, the Parties shall establish a committee to oversee Development of each Collaboration Product and to coordinate the Development and regulatory activities of the Parties with respect to each such Collaboration Product (the "**JDC**"). Each Party shall initially appoint [***] to the JDC, with each representative having knowledge and expertise in the development of products similar to the Collaboration Products or in obtaining and maintaining Marketing Authorizations of such products, having sufficient seniority within the applicable Party to make decisions arising within the scope of the JDC's responsibilities and being duly authorized under their respective company's internal governance procedures to make the decisions or carry out the activities given to them under this Agreement. The Parties may agree to increase the number of representatives from each Party on the JDC; provided, however, that the JDC shall at all times be comprised of an equal number of representatives from each Party.

3.5.2 **Specific Responsibilities of the JDC**. In addition to its general responsibilities, the JDC shall, subject to the terms of this Agreement, in particular:

(a) discuss, prepare and approve for submission to the JSC any Development Plan, and any amendments to a Development Plan (including the Development Budget under such Development Plan);

(b) with respect to each Collaboration Products review and update quarterly financial forecasts for Development, including regulatory activities, to ensure actual and anticipated expenditure is within the approved Development Budget for the relevant Calendar Year, and make recommendations to the JSC for approval regarding any variances before such additional expenditure is incurred;

(c) create, approve for submission to the JSC, and implement the overall strategy for Development and the design and objectives of all Clinical Trials and pre-clinical studies conducted under each Development Plan;

(d) advise the JSC on whether and when to Initiate or discontinue, and the conduct of, any Clinical Trial and any non-clinical study under each Development Plan;

(e) facilitate the flow of information between the Parties with respect to Development and Marketing Authorizations of each Collaboration Product in the Territory;

(f) discuss and approve for submission to the JSC the overall regulatory and filing strategy for obtaining Marketing Authorization for Collaboration Products in the Territory and for maintaining such Marketing Authorization including post-approval commitments and life cycle management;

(g) advise the JSC on the submission of the NDAs for each Collaboration Product;

(h) review, coordinate and approve for submission to the JSC the scientific presentation and publication strategy relating to each Collaboration Product in the Territory; and

(i) perform such other functions as may be appropriate to further the purposes of this Agreement, as directed by the JSC or as specified in this Agreement.

3.5.3 **Decision-Making**. The JDC shall act by unanimous consent. The representatives from each Party will have, collectively, one (1) vote on behalf of that Party. If the JDC cannot reach unanimous consent on an issue that comes before the JDC and over which the JDC has oversight, then such matter shall be raised to the JSC for resolution in accordance with Section 3.4.3.

3.6 Joint Commercialization Committee.

3.6.1 **Composition**. The Parties shall establish a committee to oversee Commercialization of each Collaboration Product in the Collaboration Territory and the Co-Promotion of each Collaboration Product for which Prime has exercised its Co-Promote Option on any Collaboration Product (the "**JCC**") at such time as may be determined by the JSC, but in no event later than [***] after the Initiation of the first Phase III Clinical Trial for a Collaboration Product. Each Party shall initially appoint [***] representatives to the JCC, with each representative having knowledge and expertise in the commercialization of products similar to the Collaboration Products, having sufficient seniority within the applicable Party to make decisions arising within the scope of the JCC's responsibilities and being duly authorized under their respective company's internal governance procedures to make the decisions or carry out the activities given to them under this Agreement. The Parties may agree to change the number of representatives from each Party on the JCC; provided, however, that the JCC shall at all times be comprised of an equal number of representatives from each Party.

3.6.2 **Specific Responsibilities of the JCC**. In addition to its general responsibilities, the JCC shall in particular:

(a) discuss, prepare and approve for submission to the JSC all Commercialization Plans (including the Commercialization Budget), including any amendments thereto;

(b) review and update revenue forecasts and review the Commercialization Budget for each Collaboration Product in the Collaboration Territory at least on a quarterly basis to ensure actual and anticipated expenditure is within the approved Commercialization Budget for the relevant Calendar Year, and make recommendations to the JCC for approval regarding any variances before such additional expenditure is incurred;

(c) review and discuss the Commercialization activities (including Co-Promotion, if applicable) of Prime and Beam with respect to each Collaboration Product in the Collaboration Territory;

(d) prepare forecasts of relevant Collaboration Product for planning of inventory levels of such Collaboration Product;

(e) subject to the terms and conditions of Section 11.6.1, discuss and approve for submission to the JSC the appropriate timing for selection of trademarks, and discuss, review and approve for submission to the JSC all proposed trademarks cleared by the Parties selected to be used to identify each Collaboration Product in the Collaboration Territory and all proposed trademarks, logos, taglines, trade dress, packaging configuration, domain names or indicia of origin, in each case, cleared by the Parties for use in connection with the sale or marketing of Collaboration Products in the Collaboration Territory;

(f) review, discuss, coordinate and approve for submission to the JSC, in the Collaboration Territory, the Parties' medical affairs activities with respect to any Collaboration Product for which Prime has exercised its Co-Promote Option with respect thereto; and

(g) perform such other functions as appropriate to further the purposes of this Agreement, as directed by the JSC or as specified in this Agreement.

3.6.3 **Decision-Making**. The JCC shall act by unanimous consent. The representatives from each Party will have, collectively, one (1) vote on behalf of that Party. If the JCC cannot reach unanimous consent on an issue that comes before the JCC and over which the JCC has oversight, then such matter shall be raised to the JSC for resolution in accordance with Section 3.4.3.

3.7 Alliance Managers.

3.7.1 **Appointment**. Each Party shall appoint an employee who shall oversee interactions between the Parties for all matters related to this Agreement and any related agreements between the Parties or their Affiliates (each an "**Alliance Manager**"). Such persons shall endeavor to assure clear and responsive communication between the Parties and the effective exchange of information, and may serve as a single point of contact for any matters arising under this Agreement. The Alliance Managers shall have the right to attend all JSC, JRC and Subcommittee meetings as non-voting participants and may bring to the

attention to the JSC, JRC or any Subcommittee any matters or issues either of them reasonably believes should be discussed, and shall have such other responsibilities as the Parties may mutually agree in writing. Each Party may designate different Alliance Managers by notice in writing to the other Party.

3.7.2 **Responsibilities of the Alliance Managers**. Without limiting the generality of the foregoing, each Alliance Manager shall:

(a) identify and bring disputes and issues that may result in disputes (including without limitation any asserted occurrence of a material breach by a Party) to the attention of the JSC in a timely manner, and function as the point of first referral in all matters of conflict resolution;

(b) provide a single point of communication for seeking consensus both internally within the Parties' respective organizations and between the Parties;

(c) plan and coordinate cooperative efforts, internal communications and external communications between the Parties with respect to this Agreement; and

(d) take responsibility for ensuring that meetings and the production of meeting agendas and minutes occur as set forth in this Agreement, and that relevant action items resulting from such meetings are appropriately carried out or otherwise addressed.

3.8 **Committee Size and Composition; Observers**. The JSC, JRC and any Subcommittee may change its size from time to time by mutual, unanimous consent of its members, provided that the JSC, JRC and each Subcommittee shall consist at all times of an equal number of representatives of each of Beam and Prime. Each Party may replace one or more of its JSC, JRC or Subcommittee representatives at any time upon written notice to the other Party. The JSC, JRC or any Subcommittee may invite non-members to participate in the discussions and meetings of such Committee, provided that such participants are involved in activities related to the business of such Committee, shall have no voting authority at such Committee and will be bound under written confidentiality and non-use obligations with respect to information disclosed at such meeting that are consistent with this Agreement.

3.9 **Chairpersons**. Each Committee shall be chaired by a representative of Beam. The role of the chairperson shall be to convene and preside at meetings of the Committee, as applicable, to prepare and circulate agendas and to ensure the preparation of minutes, but the chairperson shall have no additional powers or rights beyond those held by the other representatives of the Committee, as applicable.

3.10 **Committee Meetings**. Each Committee shall meet at least one (1) time per Calendar Quarter for the time period where such Committee exists at a time mutually agreed by the Parties, spaced at regular intervals unless the Parties mutually agree to a different frequency. Each Committee may meet in person, or at the request of either Party, by videoconference,

teleconference or other similar communications equipment. In-person Committee meetings will be held at locations alternately selected (as within a Committee) by Beam and by Prime. Either Party may also call a special meeting of a Committee (by videoconference or teleconference) by at least [***] prior written notice to the other Party in the event such requesting Party reasonably believes that a significant matter must be addressed prior to the next scheduled meeting, and such requesting Party shall provide such Committee no later than [***] prior to the special meeting with materials reasonably adequate to enable an informed decision on the relevant matter; provided that for time sensitive matters, a Party may call a special meeting of such Committee and provide relevant materials with less than [***] notice if the Parties agree that an issue warrants an expedited meeting. No later than [***] prior to any meeting of a Committee (other than a special meeting as described above), the Alliance Managers shall prepare and circulate an agenda for such meeting to all members of such Committee; provided, however, that either Party shall be free to propose additional topics to be included on such agenda, either prior to or, if representatives of each Party are present at a meeting, during the course of such meeting. Each Party will bear the expense of its respective Committee members' participation in Committee meetings. The Alliance Managers shall be responsible for keeping reasonably detailed written minutes of such Committee's meetings that reflect all decisions made at such meetings. The Alliance Managers shall send meeting minutes to each member of such Committee for review and approval within [***] after each meeting of such Committee. Minutes will be deemed approved unless one or more members of the relevant Committee objects to the accuracy of such minutes within [***] of receipt.

3.11 **Discontinuation.** The activities to be performed by each Committee will solely relate to governance under this Agreement, and are not intended to be or involve the delivery of services. Except as set forth in this Article 3, each Committee will continue to exist until the Parties agree to disband such Committee or are disbanded in accordance with the termination consequences in Section 13.6.

3.12 **Safety Reporting**. The Parties shall cooperate with regard to the reporting and handling of safety information involving Licensed Products and Prime Products in accordance with Applicable Laws on pharmacovigilance and clinical safety. The Parties shall agree upon a pharmacovigilance agreement (the "**Pharmacovigilance Agreement**") for exchanging adverse event and other safety information relating to any Licensed Product or Prime Product prior to either Party's initiation of any clinical activities for any such Licensed Product or Prime Product in the Territory. The Pharmacovigilance Agreement shall ensure that adverse event and other safety information is exchanged according to a schedule that will permit each Party to comply with Applicable Laws, including any local regulatory requirements. Beam shall own and maintain the global safety database for all Licensed Products, and Prime shall own and maintain the global safety database for all Prime Products.

3.13 **Records**.

3.13.1 **Records**. Each Party shall maintain records, in sufficient detail and in good scientific manner appropriate for patent and regulatory purposes under Applicable Law, which shall fully and properly reflect all work done and results achieved by such Party under this Agreement.

3.13.2 [***]

3.14 **Compliance with Law and Ethical Business Practices**.

3.14.1 In conducting its activities under this Agreement, each Party shall comply in all material respects with Applicable Law and accepted pharmaceutical industry business practices, including, without limitation, the Federal Food, Drug, and Cosmetic Act (21 U.S.C. § 301, et seq.), the Anti-Kickback Statute (42 U.S.C. § 1320a-7b), Civil Monetary Penalty Statute (42 U.S.C. § 1320a-7a), the False Claims Act (31 U.S.C. § 3729 et seq.), comparable state statutes, the regulations promulgated under all such statutes, and the regulations issued by the FDA. Each Party shall promptly notify the other Party in writing of any material deviations from Applicable Law with respect to activities under this Agreement of which it becomes aware.

3.14.2 Each Party hereby certifies that it has not and will not employ or otherwise use in any capacity the services of any person or entity debarred under Section 21 U.S.C. § 335a in performing any activities under this Agreement. Each Party shall notify the other Party, in writing, immediately if any such debarment occurs or comes to its attention, and shall, with respect to any person or entity so debarred, promptly remove such person or entity from performing any further activities under this Agreement.

3.14.3 No Party shall, or shall be required to, undertake any activity under or in connection with this Agreement which violates any Applicable Law.

3.15 **Information Sharing Regarding Licensed Products and Prime Platform.** Prior to the filing of an IND for a Licensed Product, the Parties shall discuss [***]. While in existence, such discussions shall be facilitated through the JRC in accordance with Section 3.3.

3.16 [***]

Article 4 RESEARCH AND DEVELOPMENT

4.1 General Obligations.

4.1.1 On a Collaboration Product-by-Collaboration Product basis, each Party shall use Commercially Reasonable Efforts to conduct the activities for which it is responsible under any Development Plan with respect to the applicable Collaboration Product; provided that such obligations with respect to Prime will cease upon any exercise by Prime of its Opt-Out Right with respect to such Collaboration Product. All Development activities of the Parties relating to the Development of Licensed Product(s) in the Beam Field in the Territory will be performed in accordance with this Agreement, and, with respect to Collaboration Products, the applicable Development Plan. In addition, Beam shall use Commercially Reasonable Efforts to Develop and seek Marketing Authorization for at least one Licensed Product that is not a Collaboration Product in each Subfield of the Beam Field in each of the United States and one other Major Market.

4.1.2 Each Party may perform its obligations under this Agreement through Third Party subcontractors; provided that, [***]. Any efforts of Beam or its Affiliates and sublicensees shall be deemed to be the efforts of Beam for purposes of satisfying the diligence requirements of this Agreement.

4.2 Development Activities Prior to IND Filing. On a Licensed Product-by-Licensed Product basis, prior to the filing of an IND for such Licensed Product, Beam will have sole control over, bear all costs and expenses of, and have sole discretion and decision-making authority with respect to the Development of such Licensed Product throughout the Territory in the Beam Field.

4.3 Development Activities Following IND Filing.

4.3.1 Development Plan; Subsequent Development Updates.

(a) **Development Plan for Collaboration Products**. Subject to Section 4.3.1(b), with respect to any Opt-In Product that becomes a Collaboration Product in accordance with Article 5, there shall be a "**Development Plan**" for such Collaboration Product that includes all Development activities anticipated to be conducted for such Collaboration Product in the Beam Field following the filing of an IND of such Collaboration Product through Marketing Authorization of such Collaboration Product in the Major Markets, along with a corresponding Development Budget. As part of the Opt-In Information Package, Beam shall submit to Prime [***]. If Prime exercises its Prime Opt-In Option with respect to such Opt-In Product and such Opt-In Product becomes a Collaboration Product, then, unless the Parties agree otherwise, [***]. A Development Plan may only be amended as recommended by the JDC and approved by the JSC in accordance with this Agreement (including Section 3.4.3), and each such amendment shall be consistent with Beam's diligence obligations under the last sentence of Section 4.1.1. A Development Plan shall be effective from the date on which it is approved by the JSC and shall terminate on the later of (i) the date that First Commercial Sale of such Collaboration Product has occurred in each Major Market and (ii) when all activities under such Development Plan have been completed. [***]

(b) **Development of Protected Products**. For any Licensed Product that becomes a Protected Product in accordance with Section 5.1, there shall be no Development Plan for such Protected Product, but Beam shall provide a written update to Prime every [***] (beginning [***] after Prime's failure to exercise the Prime Opt-In Option for any such Licensed Product or, with respect to any Licensed Product for which Beam exercises its Beam Protected Product Option for such Licensed Product [***] after the date in which Beam exercises such Beam Protected Product Option, as the case may be) on the Development of such Protected Product until the date on which the First Commercial Sale of such Protected Product has occurred in each Major Market or until Development activities for such Protected Product have ended, whichever occurs earlier. Such update shall consist of (i) any material events related to the Development of such Protected Product, (ii) the status of such Protected Product's Development, including a written summary of material Development activities conducted for such Protected Product in the past [***] and the Development activities expected to be conducted for such Protected Product in the next year and (iii) the estimated timing of commercial launch of such Protected Product in each Major Market. Upon request by Prime not more than [***] in any [***] period, the Parties shall meet, either in-person or via videoconference or teleconference, to discuss such status update and Beam shall consider in good faith the implementation of any reasonable comment by Prime with respect to the Development of such Protected Product. Beam shall ensure that any Third Party, including

a sublicensee, that undertakes Development activities with respect to a Licensed Product permits disclosure of all relevant information to Prime in the reports described in this Section 4.3.1(b).

4.3.2 **Amendments to the Development Plan**. On an annual basis, the JDC shall evaluate whether any amendment to the then-current Development Plans, and, subject to this Agreement, the corresponding Development Budget if applicable, are appropriate to reflect any changes, re-prioritization of studies within, reallocation of resources with respect to, or additions to the then-current Development Plans. In the event that such amendment is deemed necessary, the JDC shall submit such amendment for approval of the JSC no later than [***] of the preceding Calendar Year. Each such amended Development Plan shall contain the information required in Section 4.3.1. In addition, the JDC may prepare amendments to the Development Plan and any Development Budget (if applicable) for the JSC's approval from time to time during a Calendar Year in order to reflect changes in such plan and budget allocations for such Calendar Year, in each case, in accordance with the foregoing. Once approved by the JSC, the amended annual Development Plan (including the Development Budget, if any) shall become effective for the applicable period on the date approved by the JSC (or such other date as the JSC shall specify). Any JSC-approved amended Development Plan (including, as applicable, any amended Development Budget) for a Collaboration Product shall supersede the previous Development Plan and Development Budget for such Collaboration Product.

4.3.3 **Discontinued Development; Inconsistency**. If the JSC determines to discontinue Developing a Collaboration Product upon recommendation by the JDC and otherwise in accordance with this Agreement, then any Development Plan (and the associated Development Budget) solely related to such Collaboration Product shall terminate upon such decision, and the termination consequences set forth in Section 13.6 shall apply. In the event of any inconsistency between the applicable Development Plan and this Agreement, the terms of this Agreement shall prevail.

4.4 Development Costs. Except with respect to Shared Costs for Collaboration Products as described in Section 8.6.1, as between the Parties, Beam shall be solely responsible for all costs and expenses incurred by or on behalf of Beam or any of its Affiliates (including both internal FTE-based costs and payments owed to Third Parties) prior to the filing of an IND with respect to a given Licensed Product and for the Development of all Protected Products.

Article 5 BEAM PROTECTED PRODUCT OPTION; PRIME OPT-IN OPTION

5.1 Beam Protected Product Option. On a Licensed Product-by-Licensed Product basis, subject to the terms and conditions set forth in this Section 5.1, Beam will have the option to assume the sole control over, bear all costs and expenses of, and have sole discretion and decision-making authority with respect to the Development and Commercialization of a given Licensed Product in the Beam Field throughout the Territory (each such option, a "**Beam Protected Product Option**"). Beam may exercise a Beam Protected Product Option for a Licensed Product by delivering written notice of such exercise to Prime (such notice, a "**Beam Protected Product Option Exercise Notice**") at any time during the period commencing [***] and ending upon [***] (the "**Beam Protected Product Option Period**"). Following Beam's delivery of a Beam Protected Product Option Exercise Notice to Prime, Beam will pay to Prime the applicable Beam Protected Product Option Fee in accordance with Section 8.2. Beam may exercise a Beam Protected Product Option for up to [***] Licensed Products during the Term in accordance with this Section 5.1. Following Beam's timely payment of the appropriate Beam Protected Product Option Fee for a given Beam Protected Product Option in accordance with Section 8.2, the Licensed Product that is the subject of the applicable Beam Protected Product Option Exercise Notice will be a "Protected Product" for purposes of this Agreement. For clarity, [***].

5.2 Prime Opt-In Option.

5.2.1 Grant of Prime Opt-In Option. On a Licensed Product-by-Licensed Product basis, if, with respect to a given Licensed Product, (a) Beam does not exercise a Beam Protected Product Option for such Licensed Product prior to the expiration of the Beam Protected Product Option Period for such Licensed Product, or (b) prior to Beam's exercise of a Beam Protected Product Option for such Licensed Product, Beam has already exercised the maximum number of Beam Protected Product Options permitted under this Agreement pursuant to Section 5.1 (such a Licensed Product, an "**Opt-In Product**"), then, in each case ((a) and (b)), Beam hereby grants to Prime the option with respect to such Opt-In Product to share the Shared Development Costs and Shared Commercialization Costs [***] to such Opt-In Product in the Collaboration Territory, jointly Commercialize such Opt-In Product in the Collaboration Territory at its further election as set forth below and share the profits and expenses of Commercializing such Opt-In Product in the Collaboration Territory, in each case, on the terms set

forth in this Agreement (such option with respect to such an Opt-In Product, the "**Prime Opt-In Option**").

5.2.2 **Prime Opt-In Option Period**. On a Opt-In Product-by-Opt-In Product basis, (a) in the case of clause (a) of Section 5.2.1, within [***] following the expiration of the Beam Protected Product Option Period for an Opt-In Product, or (b) in the case of clause (b) of Section 5.2.1, within [***] following [***], in each case ((a)-(b)), Beam will deliver to Prime the Opt-In Information Package. Prime will have [***] from receipt of the Opt-In Information Package to determine whether it is interested in participating in future Development and Commercialization of such Opt-In Product on the terms and conditions set forth in this Agreement for Collaboration Products (such period, the "**Prime Opt-In Option Period**"). Prime may exercise the Prime Opt-In Option with respect to such Opt-In Product at any time during the Prime Opt-In Option Period by written notice to Beam, and upon Beam's receipt of such written notice, such Opt-In Product will be a "Collaboration Product" for the purposes of this Agreement.

5.2.3 **Election Not to Opt-In**. If Prime does not exercise the Prime Opt-In Option for an Opt-In Product prior to the expiration of the Prime Opt-In Option Period in accordance with Section 5.2.2, then such Opt-In Product shall not be a Collaboration Product under this Agreement, the Prime Opt-In Option for such Opt-In Product shall thereupon terminate, and such Opt-In Product shall be a Non-Optioned Protected Product for the purposes of this Agreement. For clarity, [***].

5.2.4 **Co-Promote Option.** With respect to any Collaboration Product, Prime will also have an option to Co-Promote such Collaboration Product in the Collaboration Territory ("**Co-Promote Option**"). If Prime desires to exercise its Co-Promote Option with respect to a Collaboration Product, it shall inform Beam in writing no later than [***] and the Parties shall enter into a Co-Promotion Agreement in accordance with Section 7.6. The scope of Prime's co-detailing activities will be set forth in the Co-Promotion Agreement.

5.2.5 **Prime Opt-Out Right**. On a Collaboration Product-by-Collaboration Product basis, at any time during the Term with respect to such Collaboration Product, Prime has the right, at its sole discretion, to opt-out of further Development and Commercialization (including Co-Promotion) of such Collaboration Product no less than [***] prior written notice to Beam, which notice shall identify the applicable Collaboration Product (the "**Opt-Out Notice**" and such right, an "**Opt-Out Right**"). If Prime delivers to Beam an Opt-Out Notice in accordance with this Section 5.2.5, then the following will automatically occur (without any further action by the Parties) upon the effective date of the exercise of the Opt-Out Right, which shall occur on the date specified in the Opt-Out Notice but not less than [***] from the date of delivery of the Opt-Out Notice: (a) Prime's obligation to pay any portion of Shared Costs and to conduct any Co-Promotion activities will cease, provided, however, [***]; (b) upon the effective date specified in such Opt-Out Notice, such Collaboration Product will convert to a Non-Optioned Protected Product; (c) upon the effective date specified in such Opt-Out Notice, the licenses granted by Beam to Prime set forth in Section 2.1.2(d), Section 2.1.2(e) and Section 2.3 with respect to such

Collaboration Product will terminate; and (d) following the later of (i) the effective date specified in such Opt-Out Notice and (ii) the date on which a First Commercial Sale of such Collaboration Product has occurred in any Major Market, Beam shall reimburse Prime for any Shared Costs actually paid by or on behalf of Prime or any of its Affiliates with respect to such Collaboration Product in accordance with Section 8.9, such amount to be paid by Beam to Prime in equal annual installments over a [***] period, which each such installment payment becoming payable within [***] after the end of each of the [***] successive Calendar Years beginning with the Calendar Year in which the later of the events described in clause (i) or clause (ii) has occurred.

Article 6 REGULATORY RESPONSIBILITY

6.1 **Protected Products**. Beam or its designee shall have sole responsibility and discretion in formulating the regulatory strategy for any Protected Product in the Beam Field in the Territory. Subject to Section 6.3, Beam or its designee shall (a) be responsible for leading all interactions with Regulatory Authorities (e.g., meetings, telephone calls, etc.) in the Territory relating to any Protected Product in the Beam Field, (b) be responsible for preparing all submissions, documents or other correspondence submitted to applicable Regulatory Authorities for Protected Products in the Beam Field in the Territory and (c) own all such documentation, INDs, NDAs and Marketing Authorizations with respect to all Protected Products in the Beam Field.

6.2 **Collaboration Products**. Beam shall keep Prime informed as to material developments related to interactions by it, its Affiliates or sublicensees with Regulatory Authorities with respect to all Collaboration Products. The regulatory strategy for each Collaboration Product in the Beam Field shall be formulated by the JSC. In the event that Beam exercises its final decision-making authority to determine the regulatory strategy for a Collaboration Product at the JSC under this Agreement, Beam shall consider in good faith Prime's reasonable comments to such regulatory strategy for such Collaboration Product in the Collaboration Territory. With respect to any material communication with a Regulatory

Authority in a Major Market related to any Collaboration Product, Beam shall allow Prime a reasonable opportunity to review and comment on Beam's proposed response to such material communication in advance of the transmission of such response, and Beam shall reasonably consider all comments timely provided by Prime in connection therewith. Beam shall provide Prime with reasonable advance notice of all meetings with the Governmental Authorities in the Territory pertaining to each Collaboration Product, or with as much advance notice as practicable under the circumstances and Prime may have [***]. Beam shall be responsible for leading all interactions with Regulatory Authorities (e.g., meetings, telephone calls, etc.) in the Territory relating to Collaboration Products in the Beam Field. As between the Parties, Beam shall be responsible for preparing all submissions, documents or other correspondence submitted to applicable Regulatory Authorities for Collaboration Products in the Beam Field in the Territory (collectively, the "**Collaboration Product Regulatory Documentation**"), and Beam or its designee(s) shall own all Collaboration Product Regulatory Documentation, INDs, NDAs and Marketing Authorizations with respect to all Collaboration Products in the Beam Field. Beam or its designee(s) shall also be responsible for all maintenance of all INDs and all NDAs related to Collaboration Products in the Beam Field. Beam shall provide Prime with written notice of each of the following events with regard to each Collaboration Product within a reasonable period of time following the occurrence thereof (but in any event no later than [***] thereafter), to the extent notice was not previously provided: (a) the submission of any filings or applications for Marketing Authorization (other than INDs) of such Collaboration Products in each Major Market to any Regulatory Authority; and (b) receipt or denial of Marketing Authorization for any such filings or applications for such Collaboration Products in each Major Market; provided, however, that Beam shall inform Prime of such event prior to public disclosure of such event by Beam. In addition, Beam shall provide Prime with a copy of all proposed material regulatory filings for any Collaboration Product for Prime's review and comment sufficiently in advance of Beam's filing or submission thereof, and Beam shall reasonably consider all comments timely provided by Prime in connection therewith.

6.3 Shared Regulatory Information.

6.3.1 Shared Regulatory Products. [***]

6.3.2 **Additional Information**. In addition to the foregoing Section 6.3.1, for the period of time from the Effective Date until the [***] anniversary thereof, each Party shall (a) subject to confidentiality obligations to Third Parties, provide the other Party with material submissions, documents and other correspondence submitted to applicable Regulatory Authorities with respect to products Controlled by such Party, any of its Affiliates, licensees or sublicensees that (i) the making, using, selling, offering for sale, importing or exporting of which is covered by or (ii) uses, practice or incorporates, in each case ((i)-(ii)), the Patent Rights or Know-How licensed by such Party to the other Party hereunder; provided, however, that such Party may redact such submissions, documents and

other correspondence for any data or information that it considers to be of a highly sensitive nature to the extent it does not relate to the Patent Rights or Know-How licensed by such Party to the other Party hereunder and (b) at the request of the other Party, discuss material developments related to interactions by such Party, its Affiliates, licensees or sublicensees with Regulatory Authorities with respect to such products.

6.4 **Safety Issues**. In accordance with the Pharmacovigilance Agreement, each Party shall promptly notify (but in any event within [***]) the other Party upon becoming aware of any actual or potential Safety Issue or serious adverse event with respect to one or more Licensed Products, Prime Products, or any other products developed or commercialized by such Party that contain or incorporate a Prime Editing Agent or Qualifying Prime Editing Agent.

6.5 **Costs of Regulatory Affairs.** The Parties shall share the Shared Development Costs associated with applying for Marketing Authorization with respect to Collaboration Products in the Beam Field in the Collaboration Territory, and related regulatory affairs activities in the Collaboration Territory as set forth in this Article 6. Beam shall be responsible for all costs and expenses incurred in connection with applying for Marketing Authorization with respect to Protected Products in the Beam Field in the Territory and Collaboration Products in the Beam Field outside the Collaboration Territory, and related regulatory affairs activities as set forth in this Article 6.

Article 7 COMMERCIALIZATION AND MANUFACTURING

7.1 **Commercialization Efforts**. Beam shall use Commercially Reasonable Efforts to Commercialize Licensed Products, and, to the extent Prime exercises its Co-Promote Option with respect to a given Collaboration Product in accordance with Section 5.2.4, Beam and Prime shall use Commercially Reasonable Efforts to Commercialize such Collaboration Product, in each case, in the Beam Field in the Major Markets in which Marketing Authorization has been obtained, as further described in this Article 7. Notwithstanding the foregoing, Prime shall only conduct those Commercialization activities with respect to such Collaboration Product in the Beam Field in the Collaboration Territory that are allocated to Prime under the applicable Commercialization Plan and the applicable Co-Promotion Agreement, and Beam shall be responsible for all Commercialization activities with respect to such Collaboration Product in the Beam Field outside the Collaboration Territory.

7.2 **Commercialization of Protected Products**. Beam will have sole control over, will bear all costs and expenses of, and will have sole discretion and decision-making authority with respect to, the Commercialization of all Protected Products in the Beam Field.

7.3 **Commercialization of Collaboration Products; Commercialization Reports and Records**. All Commercialization activities of the Parties with respect to Collaboration Products in the Beam Field in the Collaboration Territory will be performed under the direction of the JCC and the JSC in accordance with the then-current applicable Commercialization Plan. In the event of any inconsistency between a Commercialization Plan or a Commercialization

Budget and this Agreement, the terms of this Agreement shall prevail unless otherwise expressly set forth in the relevant Commercialization Plan or Commercialization Budget. Beam will keep the JCC informed of Commercialization activities of Beam with respect to Collaboration Products in the Beam Field outside the Collaboration Territory, and Beam will deliver to Prime a written report summarizing its material Commercialization activities (a) with respect to Protected Products, on [***], and (b) with respect to Collaboration Products outside the Collaboration Territory, on [***], such reports to be sufficient in content to keep the JCC reasonably informed regarding the progress and results of Commercialization activities for Collaboration Products in the Collaboration Territory, including an annual review of results versus goals in the Commercialization Plans, and to allow Prime to evaluate whether Beam has satisfied its diligence obligations with respect to such Licensed Products in accordance with Section 7.1. Beam shall ensure that any Third Party, including a sublicensee, that undertakes Commercialization activities with respect to a Protected Product or Collaboration Product permits disclosure of all relevant information to Prime in the reports described in this Section 7.3. Each Party shall maintain records and otherwise establish procedures to ensure compliance with all Applicable Laws and professional requirements that apply to the Commercialization of the Licensed Products.

7.4 Commercialization Plan.

7.4.1 Within [***] after [***] in the Beam Field in the Territory, Beam shall prepare and submit to the JCC for its approval an initial high-level Commercialization plan for the Collaboration Products in the Beam Field in the Collaboration Territory (such plan, if and when approved by the JSC and as may be amended from time to time in accordance with this Agreement, the "**Commercialization Plan**").

7.4.2 Each Commercialization Plan shall contain, as applicable: [***]

7.5 **Commercialization Reports**. Each Party shall keep the JCC fully informed regarding the progress and results of Commercialization activities for Collaboration Products in the Collaboration Territory conducted by such Party, including a [***] review of activities undertaken versus the Commercialization Plan for such Collaboration Products.

7.6 **Co-Promotion**. If Prime elects its Co-Promote Option with respect to a Collaboration Product in accordance with Section 5.2.4, then the Parties shall enter into an agreement that sets forth the terms of the Parties' Co-Promotion of such Collaboration Product in the Beam Field in the Collaboration Territory within [***] following Prime's exercise of its Co-Promote Option with respect to such Collaboration Product in accordance with Section 5.2.4, such terms to be consistent with the high-level terms and principles set forth in this Section 7.6 and with the Commercialization Plan in effect at such term and the terms of this Agreement (each such agreement, a "**Co-Promotion Agreement**"). The Parties shall Co-Promote each Collaboration Product for which Prime elects its Co-Promote Option in accordance with Section 5.2.4 in the Collaboration Territory pursuant to the terms and conditions of this Agreement and the applicable Co-Promotion Agreement, [***]. Any Co-Promotion Agreement entered into by the Parties pursuant to this Section 7.6 will set forth the terms under which Prime will engage in the Co-Promotion of such Collaboration Product with Beam to primary care physicians, specialists, and other agreed target customers or stakeholders in the Collaboration Territory. Each Party will provide [***] percent ([***]%) of the promotional effort required to promote any such Collaboration Product in the Collaboration Territory at launch and throughout Commercialization under this Agreement and the allocation of the promotional effort between the Parties will be made on an equitable basis as to both the quality and quantity of the activities to be undertaken, including the identity of target prescribers and the nature of the Details. Costs incurred by the Parties for Co-Promotion activities under any Co-Promotion Agreement shall be Shared Commercialization Costs unless otherwise mutually agreed by the Parties and expressly set forth in the Co-Promotion Agreement.

7.7 **Manufacturing**. Beam shall have sole authority over and control of the Manufacture of Licensed Products for use in the Beam Field, itself or through one or more Affiliates or Third Parties selected by Beam. Beam shall conduct all Manufacturing activities for all Licensed Products in compliance with all Applicable Laws, and in accordance with professional and ethical standards customary in the biotechnology or pharmaceutical industry. Beam shall update the JSC as to any material matters with respect to the Manufacturing of Collaboration Products. As between the Parties, Beam shall be responsible for [***] of all costs and expenses incurred for Manufacturing allocable to Protected Products in the Territory and Collaboration Products outside the Collaboration Territory, and all costs incurred for Manufacturing activities allocable to Collaboration Products in the Collaboration Territory shall be Shared Development Costs or Shared Commercialization Costs, as applicable, in the Collaboration Territory.

Article 8 PAYMENTS AND CONSIDERATION; EQUITY PURCHASE

8.1 Equity Issuance. Simultaneous with the execution of this Agreement and [***], the Parties are entering into those certain Stock Subscription Agreements on the date hereof, pursuant to which each Party shall be entitled to receive shares of common stock issued by the other Party on the terms and subject to the conditions set forth in such Stock Subscription Agreements.

8.2 Beam Protected Product Option Fee. On a Licensed Product-by-Licensed Product basis for each Licensed Product for which Beam provides to Prime a Beam Protected Product Option Exercise Notice in accordance with Section 5.1, Beam shall pay to Prime a payment of [***] ([***] a "**Beam Protected Product Option Fee**") within [***] after Beam's receipt of a correct, undisputed invoice from Prime for [***] for a Protected Product, which invoice Prime may not provide to Beam until receipt by Prime of a Beam Protected Product Option Exercise Notice for such Protected Product in accordance with Section 5.1. Each Beam Protected Product Option Fee shall be non-refundable, non-creditable and not subject to set-off. Following Beam's timely payment of the appropriate Beam Protected Product Option Fee for a given Beam Protected Product Option in accordance with Section 8.2, the Licensed Product that is the subject of the applicable Beam Protected Product Option Exercise Notice will be a "Protected Product" for purposes of this Agreement. [***]

8.3 Development Milestone Payments.

8.3.1 Development Milestone Payments for Protected Products. On a Protected Product-by-Protected Product basis, in further consideration for the licenses granted herein by Prime to Beam, upon the terms and conditions contained herein, Beam shall pay to Prime the milestone payment set forth in the table below for each Protected Product that achieves the corresponding milestone event:

Milestone Event	For any Protected Product that is an Orphan Product	For any Protected Product that is not an Orphan Product
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]

8.3.2 **Development Milestone Payments for Collaboration Products**. On a Collaboration Product-by-Collaboration Product basis, in further consideration for the licenses granted herein by Prime to Beam, upon the terms and conditions contained herein, Beam shall pay to Prime the milestone payment set forth in the table below for each Collaboration Product that achieves the corresponding milestone event outside of the Collaboration Territory:

Milestone Event	For any Collaboration Product that is an Orphan Product	For any Collaboration Product that is not an Orphan Product
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]

8.3.3 **Notice; Payment; Skipped Milestones**. Each milestone payment in this Section 8.3 shall be deemed earned upon achievement of the corresponding milestone event, and Beam shall notify Prime in writing within [***] following the achievement of each milestone event set forth in this Section 8.3, and shall make the appropriate milestone payment within [***] after the achievement of such milestone. All milestone payments payable under this Section 8.3 are payable only once under this Agreement for each Protected Product or Collaboration Product (as applicable) to achieve the corresponding milestone event. If a milestone set forth in the tables in Section 8.3.1 or Section 8.3.2 is skipped (*e.g.*, [***]), such skipped milestone will be deemed to have been achieved upon the achievement by such Protected Product or Collaboration Product, as applicable, of the next successive milestone event. Payment for any such skipped milestone shall be due

and paid concurrently with the payment for the achievement of the subsequent milestone event. Each milestone payment made under this Section 8.3 shall be non-refundable, non-creditable and not subject to set-off.

8.4 Net Sales Milestones.

8.4.1 Net Sales Milestones for Protected Products. On a Protected Product-by-Protected Product basis, in further consideration for the licenses granted herein by Prime to Beam, upon the terms and conditions contained herein, Beam will pay to Prime the following one-time payments when aggregate Net Sales of a Protected Product in a Calendar Year in the Territory first reach the respective thresholds indicated below:

Calendar Year Territory-Wide Net Sales for a Protected Product	Net Sales Milestone
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]

8.4.2 Net Sales Milestones for Collaboration Products. On a Collaboration Product-by-Collaboration Product basis, in further consideration for the licenses granted herein by Prime to Beam, upon the terms and conditions contained herein, Beam will pay to Prime the following one-time payments when aggregate Net Sales of such Collaboration Product outside the Collaboration Territory first reach the respective thresholds indicated below:

Calendar Year Net Sales for a Collaboration Product Outside the Collaboration Territory	Net Sales Milestone
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]

8.4.3 Notice; Payment; Skipped Milestones. Each milestone payment in this Section 8.4 shall be deemed earned upon achievement of the corresponding milestone event, and Beam will make any Net Sales threshold milestone payment

payable with respect to a Calendar Year within [***] after the end of the applicable Calendar Year. The Net Sales threshold milestone payments payable under this Section 8.4 are payable only once on the first achievement by each Protected Product or Collaboration Product (as applicable) of the corresponding sales threshold. No amounts shall be due under this Agreement for subsequent or repeated achievements of any milestone by the same Protected Product or Collaboration Product (as applicable). If more than one Net Sales threshold milestone is achieved in the same Calendar Year, Beam will pay to Prime all Net Sales threshold milestone payments achieved in such Calendar Year in accordance with this Section 8.4.3. Each milestone payment made under this Section 8.4 shall be non-refundable, non-creditable and not subject to set-off.

8.5 Royalties.

8.5.1 Royalties to Prime.

(a) **Protected Products**.

(i) **Protected Products that are Orphan Products**. Subject to the provisions of Sections 8.5.2 through 8.5.7, Beam will pay to Prime royalties on a tiered marginal royalty rate basis as set forth below based on the annual aggregate Territory-wide Net Sales resulting from the sale of each Protected Product that is an Orphan Product, on a Protected Product-by-Protected Product basis, during each Calendar Year of the applicable Royalty Term for each such Protected Product.

Net Sales of a Protected Product that is an Orphan Product	Marginal Royalty Rate (% of Calendar Year Net Sales for such Protected Product that is an Orphan Product in the Territory)
[***]	[***]
[***]	[***]
[***]	[***]

Each marginal royalty rate set forth in the table above will apply only to that portion of the Net Sales of a given Protected Product in the Territory during a given Calendar Year that falls within the indicated range. By way of example and without limitation of this Section 8.5.1(a)(i), [***].

(ii) **Protected Products that are not Orphan Products**. Subject to the provisions of Sections 8.5.2 through 8.5.7, Beam will pay to Prime royalties on a tiered marginal royalty rate basis as set forth below based on the annual aggregate Territory-wide Net Sales resulting from the sale of each Protected Product that is not an Orphan Product, on a Protected Product-by-Protected Product basis, during each Calendar Year of the applicable Royalty Term for each such Protected Product.

Net Sales of a Protected Product that is not an Orphan Product	**Marginal Royalty Rate (% of Calendar Year Net Sales for such Protected Product that is not an Orphan Product in the Territory)**
[***]	[***]
[***]	[***]
[***]	[***]

Each marginal royalty rate set forth in the table above will apply only to that portion of the Net Sales of a given Protected Product in the Territory during a given Calendar Year that falls within the indicated range. By way of example and without limitation of this Section 8.5.1(a)(ii), [***].

(b) **Collaboration Products outside of the Collaboration Territory**.

(i) **Collaboration Products that are Orphan Products**. Subject to the provisions of Sections 8.5.2 through 8.5.7, Beam will pay to

Prime royalties on a tiered marginal royalty rate basis as set forth below based on the annual aggregate Net Sales outside of the Collaboration Territory resulting from the sale of each Collaboration Product that is an Orphan Product, on a Collaboration Product-by-Collaboration Product basis, during each Calendar Year of the applicable Royalty Term for each such Collaboration Product.

Net Sales of a Collaboration Product that is an Orphan Product (excluding Calendar Year Net Sales of such Collaboration Product in the Collaboration Territory)	**Marginal Royalty Rate (% of Calendar Year Net Sales for such Collaboration Product that is an Orphan Product outside the Collaboration Territory)**
[***]	[***]
[***]	[***]
[***]	[***]

Each marginal royalty rate set forth in the table above will apply only to that portion of the Net Sales of a given Collaboration Product in the applicable countries outside the Collaboration Territory during a given Calendar Year that falls within the indicated range. By way of example and without limitation of this Section 8.5.1(b)(i), [***].

(ii) **Collaboration Products that are not Orphan Products**. Subject to the provisions of Sections 8.5.2 through 8.5.7, Beam will pay to Prime royalties on a tiered marginal royalty rate basis as set forth below based on the annual aggregate Net Sales outside of the Collaboration Territory resulting from the sale of each Collaboration Product that is **not** an Orphan Product, on a Collaboration Product-by-Collaboration Product basis, during each Calendar Year of the applicable Royalty Term for each such Collaboration Product.

Net Sales of a Collaboration Product that is not an Orphan Product (excluding Calendar Year Net Sales of such Collaboration Product in the Collaboration Territory)	Marginal Royalty Rate (% of Calendar Year Net Sales for such Collaboration Product that is not an Orphan Product outside the Collaboration Territory)
[***]	[***]
[***]	[***]
[***]	[***]

Each marginal royalty rate set forth in the table above will apply only to that portion of the Net Sales of a given Collaboration Product in the applicable countries outside the Collaboration Territory during a given Calendar Year that falls within the indicated range. By way of example and without limitation of this Section 8.5.1(b)(ii), [***].

8.5.2 **Royalties to Beam**. Subject to the provisions of Sections 8.5.2-8.5.7, Prime will pay to Beam a running royalty of [***] percent ([***]%) on the Territory-wide Net Sales resulting from the sale of each Prime Product, on a Prime Product-by-Prime Product and country-by-country basis, during each Calendar Year of the applicable Royalty Term for each such Prime Product.

8.5.3 **[***]**

[***]

8.5.4 Prime In-License Agreements.

(a) **Prime Third Party Rights**. Notwithstanding any provision in this Agreement to the contrary, during the Initial Term, [***]. Upon Beam's written notice identifying any such necessary or useful Patent Rights or Know-How held by a Third Party in the Beam Field, or promptly upon Prime otherwise becoming aware of any such Patent Rights or Know-How held by a Third Party ("**Prime Third Party Rights**"), [***] (each, a "**Prime In-License Agreement**"). Subject to Section 8.5.4(f), [***]. Subject to Section 8.5.4(c), Section 8.5.4(d) and Section 8.5.7, Prime will be responsible for (i) all obligations (including any royalty or other obligations that relate to the Prime Platform, Prime Licensed Technology, or Prime CRISPR/Delivery Technology) under any Prime Third Party Agreement or that Prime enters into during the Term, including any agreements entered into pursuant to this Section 8.5.4 for Prime Third Party Rights, and (ii) all payments to

inventors (other than inventors that are representatives of Beam) of Prime Licensed Know-How, including payments under inventorship compensation laws.

(b) **Collaboration Prime In-License Agreement**. With respect to a Prime In-License Agreement under which Patent Rights or Know-How can be sublicensed to Beam under this Agreement, Prime will disclose to Beam the terms of such Prime In-License Agreement (including by providing a copy of such Prime In-License Agreement to Beam), subject to applicable confidentiality obligations and reasonable redaction of provisions that do not relate to the potential use of Patent Rights and Know-How in-licensed under such Prime In-License Agreement for the performance by the Parties of such existing or future activities under this Agreement. If a Prime In-License Agreement is brought to the attention of Beam pursuant to this Section 8.5.4, the Parties will discuss in good faith whether the Know-How or Patent Rights licensed to Prime under such Prime In-License Agreement should be sublicensed to Beam hereunder, provided that Beam shall have the right to determine, in its sole discretion, whether such Prime In-License Agreement should be sublicensed to Beam. If Beam notifies Prime in writing that a Prime In-License Agreement should be sublicensed to Beam hereunder, then (i) such Prime In-License Agreement will be a "**Collaboration Prime In-License Agreement**" hereunder, (ii) the Patent Rights and Know-How in-licensed under such Collaboration Prime In-License Agreement will be "Controlled" by Prime or its Affiliates for purposes of this Agreement and will be included in the Prime Licensed Technology or Prime CRISPR/Delivery Technology, as applicable, and (iii) subject to Section 8.5.4(c), Section 8.5.4(d) and Section 8.5.7, Prime will be solely responsible for all obligations thereunder (including any royalty or other payment obligations to the applicable Third Party). If Beam does not so notify Prime, then (A) such Prime In-License Agreement will not be a Collaboration Prime In-License Agreement hereunder and (B) the Patent Rights and Know-How in-licensed under such Prime In-License Agreement will not be "Controlled" by Prime or its Affiliates for purposes of this Agreement and will be excluded from the Prime Licensed Technology or Prime CRISPR/Delivery Technology, as applicable.

(c) **Milestone Payments and Sublicense Payments under Prime Third Party Agreements and Collaboration Prime In-License Agreements related to Prime Licensed Technology**. Promptly following the end of each Calendar Quarter in which Prime makes a Third Party Payment under any Prime Third Party Agreement (including, for clarity, the Prime-Broad Agreement) or Collaboration Prime In-License Agreement, where such Third Party Payment is in the form of a milestone payment and attributable to Beam's exercise of its licenses or rights to Prime Licensed Technology under any such Prime Third Party Agreement or Collaboration Prime In-License Agreement (other than with respect to a

Collaboration Product in the Collaboration Territory) ("**Third Party Milestone Payment**"), Prime shall provide written notice (along with an invoice) to Beam of such payment. On a Calendar Quarter-by-Calendar Quarter basis, Beam will reimburse Prime for [***] percent ([***]%) of any such Third Party Milestone Payment [***]. In the event that Prime owes and pays any additional Third Party Payment due to a payment made by Beam to Prime in the preceding sentence being deemed sublicense income (or the same concept with a different name) under the applicable Third Party Agreement (such additional Third Party Payment, a "**Prime Sublicense Payment**"), Beam will, within [***] of invoice from Prime, reimburse Prime in the amount of such Prime Sublicense Payment so that Prime is not required to pay any Prime Sublicense Payments from Prime's own unreimbursed funds. Notwithstanding the foregoing, if Prime makes any Third Party Payment under any Prime Third Party Agreement or Collaboration Prime In-License Agreement attributable to Beam's exercise of its licenses or rights to Prime Licensed Technology under such Prime Third Party Agreement or Collaboration Prime In-License Agreement and such payment applies solely with respect to a Collaboration Product in the Collaboration Territory, then such amount shall be shared by the Parties as Shared Costs and not reimbursed by Beam under this Section 8.5.4(c).

(d) **Payments under Collaboration Prime In-License Agreements related to Prime CRISPR/Delivery Technology**. Promptly following the end of each Calendar Quarter in which Prime makes a Third Party Payment under any Collaboration Prime In-License Agreement, Prime shall provide written notice (along with an invoice) to Beam of any such Third Party Payment made by Beam under any Collaboration Prime In-License Agreement attributable to Beam's exercise of its licenses or rights to Prime CRISPR/Delivery Technology under any such Collaboration Prime In-License Agreement and Beam will reimburse Prime for [***] percent ([***]%) of any such amounts within [***] of receipt by Prime of an invoice from Beam for such amounts. Notwithstanding the foregoing, if Prime makes any Third Party Payment under any Collaboration Prime In-License Agreement attributable to Beam's exercise of its licenses or rights to Prime CRISPR/Delivery Technology under such Collaboration Prime In-License Agreement and to the extent such payment is attributable to a Collaboration Product in the Collaboration Territory, then such amount shall be shared by the

Parties as Shared Costs and not reimbursed by Beam under this Section 8.5.4(d).

(e) [***]

(f) **Other Products and Activities**. Notwithstanding the foregoing, each Party hereby agrees that any Third Party Agreement entered into by such Party or any of its Affiliates in accordance with this Section 8.5.4 or any amendment each Party makes to its Third Party Agreements, in each case, shall not disadvantage any activities or products under this Agreement relative to other products and activities covered by any licenses granted thereunder in the other Party's Field.

(g) **Reductions.** With respect to any Third Party Payments under Prime Third Party Agreements or Collaboration Prime In-License Agreements and any Prime Third Party Royalty Rate, Prime shall use reasonable efforts to avail itself of all applicable reductions to such payments and costs, if any, that are available under the relevant Prime Third Party Agreement or Collaboration Prime In-License Agreement prior to invoicing Beam for such payment or cost. In the event Beam notifies Prime of reductions to such payments or costs that are available to Prime under a Prime Third Party Agreement or Collaboration Prime In-License Agreement, Prime shall use commercially reasonable efforts to avail itself of such applicable reductions.

8.5.5 Beam In-License Agreements.

(a) **Beam In-License Agreement**. Notwithstanding any provision in this Agreement to the contrary, during the Initial Term, [***] (each, a "**Beam In-License Agreement**"). [***].

Subject to Section 8.5.5(c), Section 8.5.5(d) and Section 8.5.7, Beam will be responsible for (i) all obligations (including any royalty or other obligations that relate to the Beam Licensed Technology or Beam CRISPR/Delivery Technology) under Beam Third Party Agreement or that Beam enters into during the Term, including any agreements entered into pursuant to this Section 8.5.5, and (ii) all payments to inventors (other than inventors that are representatives of Prime) of Beam Licensed Know-How, including payments under inventorship compensation laws.

(b) **Collaboration Beam In-License Agreement**. With respect to a Beam In-License Agreement under which Patent Rights or Know-How can be sublicensed to Prime under this Agreement, Beam will disclose to Prime the terms of such Beam In-License Agreement (including by providing a copy of such Beam In-License Agreement to Prime), subject to applicable confidentiality obligations and reasonable redaction of provisions that do not relate to the potential use of Patent Rights and Know-How in-licensed under such Beam In-License Agreement for the performance by the Parties of such existing or future activities under this Agreement. If a Beam In-License Agreement is brought to the attention of Prime pursuant to this Section 8.5.5, the Parties will discuss in good faith whether the Know-How or Patent Rights licensed to Beam under such Beam In-License Agreement should be sublicensed to Prime hereunder, provided that Prime shall have the right to determine, in its sole discretion, whether such Beam In-License Agreement should be sublicensed to Prime. If Prime notifies Beam in writing that a Beam In-License Agreement should be sublicensed to Prime hereunder, then (i) such Beam In-License Agreement will be a "**Collaboration Beam In-License Agreement**" (together with any Collaboration Prime In-License Agreement, a "**Collaboration In-License Agreement**") hereunder, (ii) the Patent Rights and Know-How in-licensed under such Collaboration Beam In-License Agreement will be "Controlled" by Beam or its Affiliates for purposes of this Agreement and will be included in the Beam Licensed Technology or Beam CRISPR/Delivery Technology, as applicable, and (iii) subject to Section 8.5.5(c), Section 8.5.5(d) and Section 8.5.7, Beam will be solely responsible for all obligations thereunder (including any royalty or other payment obligations to the applicable Third Party).

If Prime does not so notify Beam, then (A) such Beam In-License Agreement will not be a Collaboration Beam In-License Agreement hereunder and (B) the Patent Rights and Know-How in-licensed under such Beam In-License Agreement will not be "Controlled" by Beam or its Affiliates for purposes of this Agreement and will be excluded from the Beam Licensed Technology or Beam CRISPR/Delivery Technology, as applicable. Notwithstanding anything to the contrary in this Agreement, if, [***].

(c) **Payments under Collaboration Beam In-License Agreements and Beam Third Party Agreements**. Promptly following the end of each Calendar Quarter in which Beam makes a Third Party Payment under any Collaboration Beam In-License Agreement or under any Beam Third Party Agreement, in each case, in accordance with Section 8.5.5(a), Beam shall provide written notice (along with an invoice) to Prime of any such Third Party Payment made by Beam under any Collaboration Beam In-License Agreement or Beam Third Party Agreement attributable to Prime's exercise of its licenses or rights under any such Collaboration Beam In-License Agreement or Beam Third Party Agreement and Prime will reimburse Beam for [***] percent ([***]%) of any such amounts within [***] of receipt by Prime of an invoice from Beam for such amounts.

(d) **Sublicense Payments under Beam Third Party Agreements and Collaboration Beam In-License Agreements related to Beam Licensed Technology**. In the event that Beam owes and pays any additional Third Party Payment due to a payment made by Prime to Beam under Section 8.5.5(c) being deemed sublicense income (or the same concept with a different name) under the applicable Third Party Agreement (such additional Third Party Payment, a "**Beam Sublicense Payment**"), Prime will, within [***] of invoice from Beam, reimburse Beam in the amount of such Beam Sublicense Payment so that Beam is not required to pay any Beam Sublicense Payments from Beam's own unreimbursed funds.

(e) **Other Products and Activities**. Notwithstanding the foregoing, Beam hereby agrees that any Third Party Agreement or Beam In-License Agreement entered into by Beam or any of its Affiliates in accordance with this Section 8.5.5, or any amendment Beam or any of its Affiliates makes to its Third Party Agreements, in each case, shall not disadvantage any activities or products under this Agreement relative to other products and activities covered by any licenses granted thereunder by Beam.

(f) **Reductions**. With respect to any Third Party Payments under Beam Third Party Agreements or Collaboration Beam In-License Agreements, Beam shall use reasonable efforts to avail itself of all applicable reductions to such payments and costs, if any, that are available under the relevant Beam Third Party Agreement or Collaboration Beam In-License Agreement prior to invoicing Prime for such payment or cost. In the event Prime notifies Beam of reductions to such payments or costs that are available to Beam under a Beam Third Party Agreement or Collaboration Beam In-License Agreement, Beam shall use commercially reasonable efforts to avail itself of such applicable reductions.

8.5.6 **Third Party Financial Obligations**. Subject to Section 8.5.7, on a Royalty-Bearing Product-by-Royalty-Bearing Product basis, if a Party [***] make payments to a Third Party for a license under or the use of Patent Rights held by such Third Party that [***] then such Party may offset [***] percent ([***]%) of any [***] actually paid by such Party to such Third Party under such Third Party license with respect to such Patent Rights related to [***] of such Royalty-Bearing Product against the running royalty payments that are due to the other Party with respect to Net Sales of such Royalty-Bearing Product in such country under Section 8.5.1(a) or Section 8.5.1(b), as applicable; provided that, [***]. Further, subject to Section 8.5.7, [***].

8.5.7 **Minimum Royalties**. Notwithstanding the foregoing:

(a) in no event shall the running royalty payments to Prime with respect to any Licensed Products [***] be either less than or reduced to be less than, [***];

(b) [***]; and

(c) in no event shall the running royalty payments to Beam with respect to any Prime Product be reduced, [***] by more than [***] percent ([***]%).

8.5.8 **Royalty Reports**.

(a) With respect to each Royalty-Bearing Product, following the First Commercial Sale of such Royalty-Bearing Product and continuing for the remainder of the Royalty Term for such Royalty-Bearing Product, within [***] after the end of each Calendar Quarter, Beam will deliver a report to Prime specifying on a Royalty-Bearing Product-by-Royalty-Bearing Product and country-by-country basis: (a) Net Sales in the relevant Calendar Quarter; (b) to the extent such Net Sales include sales not denoted in U.S. Dollars, a summary of the then-current exchange rate methodology then in use by such Party, and (c) royalties payable on such

Net Sales. Royalties shown to have accrued during the Calendar Quarter covered by each report shall be due and payable on the date such report is due.

(b) With respect to each Prime Product, following the First Commercial Sale of such Prime Product and continuing for the remainder of the Royalty Term for such Prime Product, within [***] after the end of each Calendar Quarter, Prime will deliver a report to Beam specifying on a Prime Product-by-Prime Product and country-by-country basis: (i) Net Sales in the relevant Calendar Quarter; (ii) to the extent such Net Sales include sales not denoted in U.S. Dollars, a summary of the then-current exchange rate methodology then in use by such Party, and (iii) royalties payable on such Net Sales. Royalties shown to have accrued during the Calendar Quarter covered by each report shall be due and payable on the date such report is due.

8.6 Revenue and Cost Sharing in the Collaboration Territory; Reconciliation Payments.

8.6.1 **General**. The terms and conditions of this Section 8.5.8 shall govern each Party's rights and obligations with respect to Shared Development Costs, Shared Commercialization Costs and Collaboration Territory Revenue, in each case relating to a Collaboration Product following Prime's exercise of its Prime Opt-In Option with respect to such Collaboration Product. In the event of a conflict between Section 8.6.1(a) or 8.6.1(b), on one hand, and, on the other hand, any Schedules to this Agreement, the terms of Section 8.6.1(a) or 8.6.1(b) shall take precedence, govern and control.

(a) The Parties shall share all Shared Development Costs with respect to such Collaboration Product incurred pursuant to this Agreement on the basis of [***]. For clarity, in no event shall Prime be responsible for any costs or expenses incurred by or on behalf of Beam or its Affiliates for any activity that is solely for the purposes of Developing a Collaboration Product outside of the Collaboration Territory. Notwithstanding the foregoing, expenses charged by either Party as Shared Development Costs for an activity under a Development Plan shall not exceed [***] percent ([***]%) of the amount included for the total itemized expenditure in the relevant then-current Development Budget for such activity, and any expenses in excess of such [***] percent ([***]%) threshold shall be borne by the incurring Party except if the cause of the excess expenditures is outside the incurring Party's reasonable control, in which case the incurring Party shall, upon learning of the likelihood of the excess expenditure, promptly revise the Development

Budget and submit it in writing, with an explanation of the variance and the reasons therefor, to the JDC. If the JDC recommends approval of the revised budget (the consent of each Party's representatives on the JDC not to be unreasonably withheld, delayed or conditioned) then such revised Development Budget shall be incorporated into the respective Development Plan.

(b) The Parties shall share all Shared Commercialization Costs with respect to such Collaboration Product incurred pursuant to this Agreement through the sharing of Collaboration Territory Revenue for such Collaboration Product in the Collaboration Territory on the basis of [***]. Expenses charged by either Party as Shared Commercialization Costs for an activity under a Commercialization Plan shall not exceed [***] percent ([***]%) of the amount included for the total itemized expenditure in the relevant then-current Commercialization Budget for such activity and any expenses in excess of such [***]% threshold shall be borne by the incurring Party except if the cause of the excess expenditures is outside the incurring Party's reasonable control, in which case the incurring Party shall, upon learning of the likelihood of the excess expenditure, promptly revise the Commercialization Budget and submit it in writing, with an explanation of the variance and the reasons therefor, to the JCC. If the JCC recommends approval of the revised budget (the consent of each Party's representatives on the JCC not to be unreasonably withheld, delayed or conditioned) then such revised Commercialization Budget shall be incorporated into the respective Commercialization Plan.

8.6.2 [***]

8.6.3 **Calculation and Payment**.

(a) Following any exercise by Prime of the Prime Opt-In Option with respect to a Collaboration Product, within [***] after the end of each Calendar Quarter during the Term, each Party shall provide the other Party and the JCC and JDC, as applicable, with (i) a detailed, activity-

based statement of its Shared Development Costs incurred in such Calendar Quarter, including, without limitation, an itemized breakdown of the calculation of FTE Costs included in the Shared Development Costs (each, a "**Development Cost Report**"), (ii) a detailed, activity-based statement of its Shared Commercialization Costs, which shall include a breakdown of the sub-categories of Shared Commercialization Costs (each statement, together with the corresponding Development Cost Report, the "**Cost Reports**"), in each case to the extent incurred in such Calendar Quarter (or a good faith estimate of any portions thereof where actuals are not known as of such time) and directly allocable to the Development or Commercialization of such Collaboration Product, as well as details of any adjustments to be made to the amounts submitted in the previous Calendar Quarter in previous Cost Reports, in a format to be agreed upon by the JCC and JDC, as applicable. It is the intention of the Parties to interpret each of Shared Development Costs and Shared Commercialization Costs in accordance with GAAP. Where costs included in the calculations in the Cost Report are determined based on either Party's system of cost or project accounting, each Party agrees to provide reasonable supporting documentation to ensure that each Party's methodologies are reasonable and consistently applied, upon the request of the other Party. For reconciliation, billing and reporting hereunder, any costs included in the Costs Report incurred in a currency other than U.S. dollars will be translated into U.S. dollars in accordance with Section 8.7 below.

(b) Concurrently with the Cost Reports, Beam shall provide Prime and the JCC with a report setting forth Beam's itemized Net Sales for such Collaboration Product in the Collaboration Territory during such Calendar Quarter.

(c) Within [***] after the end of each Calendar Quarter, each Party will provide the other Party and the JSC with a written, non-binding, preliminary report that will set forth, in a format to be mutually agreed by the Parties promptly following Prime's first exercise of a Prime Opt-In Option with respect to a Collaboration Product, such Party's good faith estimate of: (i) the amounts and information that will be set forward in such Party's Cost Reports for such Calendar Quarter; and (ii) in the case of Beam, the aggregate Net Sales of Collaboration Products in the Collaboration Territory and Collaboration Territory Revenue for such Calendar Quarter.

(d) In addition to the preliminary reports to be provided by each Party in accordance with Section 8.6.3(c) above, within [***] after the end of each Calendar Quarter, Beam shall provide Prime and the JSC with a written report (the "**Reconciliation Report**") setting forth, in a format to be mutually agreed by the Parties promptly following Prime's first exercise of a Prime Opt-In Option with respect to a Collaboration Product,

the calculations of (i) the aggregate Shared Development Costs for such Calendar Quarter and each Party's share of such Shared Development Costs, (ii) the aggregate Shared Commercialization Costs for such Calendar Quarter, if any, and each Party's share of such Shared Commercialization Costs, (iii) the aggregate Net Sales of Collaboration Products in the Collaboration Territory and Collaboration Territory Revenue for such Calendar Quarter, if any, and (iv) the net payment due from one Party to the other Party in accordance with the sharing percentages set forth in Section 8.6.1. Any net payment owed from one Party to the other Party shall be paid within [***] following receipt of an invoice from such owed Party; provided that if a Party disputes an amount provided in such Reconciliation Report then such disputed amount shall be reviewed by the JDC (with respect to Shared Development Costs) or JCC (with respect to Shared Commercialization Costs or Net Sales), as applicable, and any net payment owed with respect to the undisputed amounts shall be paid within such [***] (and the disputed amount, if determined to be owed, shall be paid within [***] of resolution of the dispute); provided, further, that such dispute shall not be subject to the final decision-making authority of a Committee, but shall be resolved in accordance with Section 14.8. If requested by Beam or Prime, any invoices or other supporting documentation for any payments to a Third Party shall be promptly provided, unless such invoices or other supporting documentation have been previously provided to an auditor designated by such requesting Party in accordance with Section 8.8.1.

8.7 Currency Exchange. All payments to be made by a Party under this Agreement shall be made in US dollars, by wire transfer, pursuant to the instructions of the Party receiving payment, as designated from time to time. To the extent Shared Development Costs or Shared Commercialization Costs are incurred in a currency other than US dollars, the applicable expense shall be converted into US dollars on a monthly basis using as a rate of exchange the average actual foreign currency exchange rate for the month in which the expense is incurred. Likewise, to the extent Licensed Products or Collaboration Products are sold in a currency other than US dollars, the amount received shall be converted into US dollars on a monthly basis using as a rate of exchange the average actual foreign currency exchange rate for the month in which the expense is incurred. All currency conversions shall be based on the OANDA foreign currency exchange rate (www.OANDA.com) or an equivalent resource as agreed by the Parties.

8.8 Record-Keeping and Audit.

8.8.1 Each Party and its Affiliates shall maintain complete and accurate books and records of account, in accordance with GAAP, of all transactions and other business activities under this Agreement, sufficient to confirm the accuracy of all reports furnished by a Party to the other Party under this Agreement, and all payments by a Party to the other Party under this Agreement. During the Term and for [***] after final payment has been made under this Agreement,

upon reasonable written notice to a Party, but no more often than once per Calendar Year, such Party shall permit an independent certified public accountant of national standing designated by the other Party to audit such books and records of account of such Party in order to confirm the accuracy and completeness of all such reports and all such payments. The accounting firm shall disclose to the Party requesting the audit only whether the audited reports are correct or incorrect and the specific details concerning any discrepancies. No other information shall be provided to the Party requesting the audit.

8.8.2 The Party requesting an audit shall bear all costs and expenses incurred in connection with any such audit; provided, however, that if any such audit correctly identifies any underpayments by the audited Party hereunder or overpayments by the auditing Party that are the fault of the audited Party hereunder in excess of [***] percent ([***]%) of the amount actually payable by such Party to the Party requesting the audit hereunder, whichever is greater, then, in addition to paying the full amount of such underpayment or overpayment, the audited Party shall reimburse the other Party for all reasonable out-of-pocket costs and expenses incurred by such Party in connection with that audit.

8.8.3 Neither Party shall be required to maintain books and records for more than [***] following the end of the Calendar Year in which they were generated.

8.8.4 The Party requesting an audit shall treat all financial information subject to review under this Section 8.8 in accordance with the confidentiality and non-use provisions of this Agreement, and shall cause its accounting firm to enter into an acceptable confidentiality agreement with the audited Party obligating it to retain all such information in confidence pursuant to such confidentiality agreement.

8.9 Other Amounts Payable. With respect to any amounts owed under this Agreement by a Party to the other Party for which no other invoicing and payment procedure is specified in this Agreement, the payee Party shall provide an invoice, together with reasonable supporting documentation, to the paying Party for such amounts owed. The paying Party shall pay any undisputed amounts within [***] after receipt of the invoice, and shall pay any disputed amounts owed by the paying Party within [***] of resolution of the dispute.

8.10 Income Tax Withholding.

8.10.1 **VAT**. It is understood and agreed between the Parties that any payments made under this Agreement are exclusive of any value added or similar tax (VAT), which shall be added thereon as applicable. Where value added tax or similar tax is properly added to a payment made under this Agreement, the Party making the payment will pay the amount of value added tax or similar tax only on receipt of a valid tax invoice issued in accordance with the Applicable Laws of the country in which the value added tax or similar tax is chargeable.

8.10.2 **Withholding Taxes**. Subject to Section 8.10.4, in the event any payments made pursuant to this Agreement become subject to withholding taxes under the laws or regulation of any jurisdiction, the Party making such payment shall deduct and withhold the amount of such taxes for the account of the payee to the extent required by Applicable Laws or regulations and such amounts payable to the payee shall be reduced by the amount of taxes deducted and withheld. Any such withholding taxes required under Applicable Laws or regulations to be paid or withheld shall be an expense of, and borne solely by, the payee.

8.10.3 **Tax Cooperation**. To the extent that the Party making a payment is required to deduct and withhold taxes on any payments under this Agreement, the Party making such payment shall pay the amounts of such taxes to the proper Governmental Authority in a timely manner and promptly transmit to the payee an official tax certificate or other evidence of such withholding sufficient to enable the payee to claim such payments of taxes. The payee shall provide any tax forms to the Party making such payment that may be reasonably necessary in order for such Party not to withhold tax or to withhold tax at a reduced rate under an applicable bilateral income tax treaty. The payee shall use reasonable efforts to provide any such tax forms to the Party making the payment at least [***] prior to the due date for any payments for which the payee desires that the Party making the payment apply a reduced withholding rate. Each Party shall provide the other with reasonable assistance to enable the recovery, as permitted by Applicable Law, of withholding taxes, VAT, or similar obligations resulting from payments made under this Agreement, such recovery to be for the benefit of the Party bearing such withholding tax or VAT.

8.10.4 Notwithstanding anything in this Agreement to the contrary, if an action (including but not limited to any assignment or sublicense of its rights or obligations under this Agreement, or any failure to comply with Applicable Laws or filing or record retention requirements) by a Party leads to the imposition of withholding tax liability on the other Party that would not have been imposed in the absence of such action or in an increase in such liability above the liability that would have been imposed in the absence of such action, such Party shall indemnify and hold harmless the other Party from any such additional or increased withholding tax liability (except to the extent that the other Party can reclaim it, provided that such other Party will be reimbursed for any reasonable out of pocket costs incurred in the reclaim).

8.11 **Late Payments.** Any payments by a Party that are not being disputed in good faith by such Party and not paid on or before the date such payments are due under this Agreement will bear interest at the lower of (a) [***] percent ([***]%) per [***] and (b) the maximum rate allowed by law. Interest will accrue beginning on the first day following the due date for payment and will be compounded quarterly. Payment of such interest by the relevant Party shall not limit, in any way, the other Party's right to exercise any other remedies it may have as a consequence of any payment due but unpaid hereunder.

Article 9 CONFIDENTIALITY AND PUBLICATION

9.1 **Confidentiality; Exceptions**. Except to the extent expressly authorized by this Agreement or otherwise agreed in writing by the Parties, the Parties agree that the receiving Party (the "**Receiving Party**") shall keep confidential and shall not publish or otherwise disclose or use for any purpose other than as provided for in this Agreement any confidential and proprietary information and materials, patentable or otherwise, in any form (written, oral, photographic, electronic, magnetic, or otherwise) which is disclosed to it by the other Party (the "**Disclosing Party**") or otherwise received or accessed by a Receiving Party in the course of performing its obligations or exercising its rights under this Agreement, including trade secrets, Know-How, inventions or discoveries, proprietary information, formulae, processes, techniques and information relating to a Party's past, present and future Commercialization, financial, and Development activities of any product or potential product or useful technology of the Disclosing Party and the pricing thereof (collectively, "**Confidential Information**"), except to the extent that it can be established by the Receiving Party that such Confidential Information:

9.1.1 was in the lawful knowledge and possession of the Receiving Party prior to the time it was disclosed to, or learned by, the Receiving Party, or was otherwise developed independently by the Receiving Party, as evidenced by written records kept in the ordinary course of business, or other documentary proof of actual use by the Receiving Party;

9.1.2 was generally available to the public or otherwise part of the public domain at the time of its disclosure to the Receiving Party;

9.1.3 became generally available to the public or otherwise part of the public domain after its disclosure and other than through any act or omission of the Receiving Party in breach of this Agreement; or

9.1.4 was disclosed to the Receiving Party, other than under an obligation of confidentiality, by a Third Party who had no obligation to the Disclosing Party not to disclose such information to others.

9.2 **Authorized Disclosure**. Except as expressly provided otherwise in this Agreement, a Receiving Party may use and disclose Confidential Information of the Disclosing Party as follows: (a) under appropriate confidentiality provisions similar to those in this Agreement, in connection with the performance of its obligations or exercise of rights granted or reserved in this Agreement (including the rights to Develop, Manufacture and Commercialize Licensed Products); or (b) to the extent such disclosure is reasonably necessary in filing or prosecuting patent, copyright and trademark applications in accordance with this Agreement, prosecuting or defending litigation, complying with applicable governmental regulations, seeking and obtaining regulatory approval, conducting non-clinical activities or clinical trials, preparing and submitting INDs to Regulatory Authorities, or is otherwise required by Applicable Law or the rules of a recognized stock exchange or automated quotation system applicable to such Party, including the United States Securities and Exchange Commission or equivalent foreign

agency or regulatory body; provided, however, that if a Receiving Party is required by Applicable Law to make any such disclosure of a Disclosing Party's Confidential Information it will, except where impracticable, give reasonable advance notice to the Disclosing Party of such disclosure requirement and, if requested by the Disclosing Party, cooperate with the Disclosing Party to secure confidential treatment of such Confidential Information required to be disclosed; or (c) in communication with existing or bona fide prospective investors, underwriters, lenders or other financing sources, consultants, advisors, licensees or collaborators the employees, officers, directors, agents, consultants and advisors of any such Third Party or others on a need to know basis and under obligations of confidentiality and non-use substantially equivalent to those of this Agreement (except for the term of such obligations, which shall be customary for the particular disclosure) or (d) to the extent mutually agreed to in writing by the Parties.

9.3 Publications.

9.3.1 **Beam Publications**. Except for disclosures permitted pursuant to Section 9.2, if Beam, its Affiliates, or its employee(s) wishes to make a publication or public presentation which may reasonably contain Prime Confidential Information or Prime intellectual property (including Prime Licensed Technology, Prime CRISPR/Delivery Technology and Prime (from Beam) Improvement Technology), Beam shall deliver to Prime a copy of the proposed written publication or an outline of any proposed oral disclosure at least [***] prior to submission for publication or presentation. Prime shall have the right (a) to require removal from the publication or presentation of Prime's Confidential Information or (b) to request a reasonable delay in publication or presentation in order to protect patentable information for which Prime has the right to file a patent application under this Agreement. If Prime requests a delay to file such a patent application, then Beam shall delay submission or presentation for a period of [***] to enable patent applications protecting Prime's rights in such information to be filed in accordance with Section 11.2. Upon expiration of such [***], Beam shall be free to proceed with the publication or presentation. If Prime requests modifications to the publication or presentation to remove its Confidential Information, then Beam shall edit such publication or presentation to prevent disclosure of Prime's Confidential Information prior to submission of the publication or presentation. Notwithstanding the foregoing, the Parties agree that (i) study information and results must be posted to clinicaltrials.gov in accordance with statutory deadlines and (ii) such study results required to be posted pursuant to clause (i) of this Section 9.3.1 will, following such posting, no longer constitute Confidential Information of either Party. Except for disclosures permitted pursuant to Section 9.2, Prime may not make a publication or public presentation related to any Collaboration Product without Beam's prior written consent, which may be withheld in its discretion.

9.3.2 **Prime Publications**. Except for disclosures permitted pursuant to Section 9.2, if Prime, its Affiliates, or its employee(s) wishes to make a publication or public presentation which may reasonably contain Beam Confidential Information or Beam intellectual property (including Beam Licensed Technology, Beam

CRISPR/Delivery Technology and Beam (from Prime) Improvement Technology), Prime shall deliver to Beam a copy of the proposed written publication or an outline of any proposed oral disclosure at least [***] prior to submission for publication or presentation. Beam shall have the right (a) to require removal from the publication or presentation of Beam's Confidential Information or (b) to request a reasonable delay in publication or presentation in order to protect patentable information for which Beam has the right to file a patent application under this Agreement. If Beam requests a delay to file such a patent application, then Prime shall delay submission or presentation for a period of [***] to enable patent applications protecting Beam's rights in such information to be filed in accordance with Section 11.2. Upon expiration of such [***], Prime shall be free to proceed with the publication or presentation. If Beam requests modifications to the publication or presentation to remove its Confidential Information, then Prime shall edit such publication or presentation to prevent disclosure of Beam's Confidential Information prior to submission of the publication or presentation. Notwithstanding the foregoing, the Parties agree that (i) study information and results must be posted to clinicaltrials.gov in accordance with statutory deadlines and (ii) such study results required to be posted pursuant to clause (i) of this Section 9.3.2 will, following such posting, no longer constitute Confidential Information of either Party.

9.4 **Press Releases; Disclosure of Agreement**. The Parties shall reasonably cooperate and mutually agree on an initial press release to be made by each Party regarding the execution of this Agreement. Neither Party shall issue or cause the publication of any other press release or public announcement regarding the terms of this Agreement without the express prior approval of the other Party other than as required by Applicable Law or the rules of any stock exchange, including the United States Securities and Exchange Commission or equivalent foreign agency or regulatory body (subject to Section **9.4.1)**, provided that if any such publication, press release or public announcement is required by Applicable Law, the Party obligated to make such publication, press release or public announcement shall, if practicable, notify the other Party in advance thereof and reasonably consider any timely comments from such other Party, including any reasonable request to limit such publication, press release or public announcement. Notwithstanding anything to the contrary in this Agreement, each Party may disclose this Agreement, as well as redacted versions of any Third Party Agreements provided to such Party, on a reasonable need-to-know basis to actual and bona fide potential investors, underwriters, lenders or other financing sources, acquirers, sublicensees and collaborators the employees, officers, directors, agents, consultants and advisors of any such Third Party under obligations of confidentiality and non-use substantially equivalent to those of this Agreement, including, in the case of the applicable Third Party Agreements, confidentiality obligations imposed under such Third Party Agreements.

9.4.1 In the event a Party is, in the opinion of its counsel, required by Applicable Law or the rules of a stock exchange on which its securities are listed (or to which an application for listing has been submitted) to make a public disclosure of this Agreement, such Party shall prepare a draft confidential treatment request and proposed redacted version of this Agreement to request confidential treatment for

the redacted portions of this Agreement, and the other Party agrees to promptly (and in any event, within [***] after receipt of such confidential treatment request and proposed redactions) give its input in a reasonable manner in order to allow the Party seeking disclosure to file its request within the timelines proscribed by Applicable Laws. The Party seeking such disclosure shall reasonably consider any comments thereto provided by the other Party within such [***] period, and shall use reasonable efforts to obtain confidential treatment of this Agreement, as represented by the redacted version revised by the other Party, from the applicable Governmental Authority.

9.5 Use of Names. Neither Party shall use the name, symbol, trademark, trade name or logo of the other Party or its Affiliates in any press release, publication or other form of public disclosure without the prior written consent of the other Party in each, except for those disclosures for which consent has already been obtained, including as authorized in Section 2.3.

9.6 Remedies. Each Party shall be entitled to seek, in addition to any other right or remedy it may have, at Applicable Law or in equity, a temporary injunction, without the posting of any bond or other security, enjoining or restraining the other Party from any violation or threatened violation of this Article 9.

Article 10 REPRESENTATIONS, WARRANTIES AND COVENANTS

10.1 Representations and Warranties of Each Party. Each Party represents and warrants to the other Party that as of the Effective Date:

10.1.1 it has the full right, power and authority to enter into this Agreement and to perform its obligations hereunder;

10.1.2 this Agreement has been duly executed by it and is legally binding upon it, enforceable in accordance with its terms, and does not conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound, nor violate any material Applicable Law or regulation of any court, governmental body or administrative or other agency having jurisdiction over it; and

10.1.3 it is licensed, registered, or qualified under Applicable Law, regulations, policies, and administrative requirements to do business.

10.2 Prime Representations, Warranties and Covenants. Prime represents and warrants to Beam as of the Effective Date and, with respect to Sections 10.2.6, 10.2.7, 10.2.8 and 10.2.10, covenants during the Term that:

10.2.1 Prime is the sole and exclusive owner of, or has Control via a license to, the Prime Licensed Patent Rights;

10.2.2 Prime has not granted any right or license to any Third Party relating to any of the Prime Licensed Patent Rights that conflicts or interferes with any of the rights or licenses granted hereunder with respect to the Prime Licensed Patent Rights;

10.2.3 the Third Party Agreements set forth on Schedule 1.215(ii) are all of the agreements or arrangements between Third Parties and Prime or its Affiliates under which Prime or its Affiliates are granted rights to any Prime Licensed Technology or pursuant to which Beam would be subject to any obligations (including payment obligations) based upon the rights granted by Prime to Beam under this Agreement or the Development or Commercialization of a Licensed Product under this Agreement;

10.2.4 Prime has provided to Beam true and correct partially-redacted copies of all Third Party Agreements set forth on Schedule 1.215(ii) in their current form (including any amendments thereto, each, a "**Prime Third Party Agreement**"), which Prime Third Party Agreements are in full force and effect, and the redacted provisions do not materially relate to Beam's rights or obligations under this Agreement, including [***];

10.2.5 [***];

10.2.6 [***];

10.2.7 [***];

10.2.8 [***];

10.2.9 there are no claims, judgments or settlements against or owed by Prime and, to the knowledge of Prime, no pending or threatened claims or litigation in each case relating to the Prime Licensed Technology; and

10.2.10 Prime will not, and will cause its Affiliates not to incur or permit to exist, with respect to any Prime Licensed Technology, any lien, encumbrance, charge, security interest, mortgage, liability, assignment, grant of license or other binding obligation that is or would be inconsistent with or would diminish, derogate from or otherwise conflict with the licenses and other rights granted to Beam under this Agreement.

10.3 **Beam Representations, Warranties and Covenants**. Beam represents and warrants to Prime as of the Effective Date and, with respect to Sections 10.3.6, 10.3.7 and 10.3.8 covenants during the Term that:

10.3.1 Beam is the sole and exclusive owner of, or has Control via a license to, the Beam Licensed Patent Rights and Beam CRISPR/Delivery Patent Rights;

10.3.2 Beam has not granted any right or license to any Third Party relating to any of the Beam CRISPR/Delivery Patent Rights that conflicts or interferes with any of the rights or licenses granted hereunder with respect to the Beam Licensed Patent Rights and Beam CRISPR/Delivery Patent Rights;

10.3.3 to Beam's knowledge, the Third Party Agreements set forth on Schedule 1.215(i) are all of the agreements or arrangements between Third Parties and Beam or its Affiliates under which Beam or its Affiliates are granted rights to any Beam Licensed Patent Rights and Beam CRISPR/Delivery Technology or pursuant to which Prime would be subject to any obligations (including payment obligations) based upon the rights granted by Beam to Prime under this Agreement or the development or commercialization of a Prime Product and, without limiting the foregoing, to Beam's knowledge, [***];

10.3.4 Beam has provided to Prime true and correct partially-redacted copies of all Third Party Agreements set forth on Schedule 1.215(i) in their current form (including any amendments thereto, each, a "**Beam Third Party Agreement**"), which Beam Third Party Agreements are in full force and effect, and the redacted provisions do not materially relate to Prime's rights or obligations under this Agreement, including [***];

10.3.5 [***];

10.3.6 [***];

10.3.7 [***];

10.3.8 [***];

10.3.9 there are no claims, judgments or settlements against or owed by Beam and, to the knowledge of Beam, no pending or threatened claims or litigation in each case relating to the Beam Licensed Patent Rights and Beam CRISPR/Delivery Technology; and

10.3.10 Beam will not, and will cause its Affiliates not to incur or permit to exist, with respect to any Beam Licensed Patent Rights and Beam CRISPR/Delivery Technology, any lien, encumbrance, charge, security interest, mortgage, liability, assignment, grant of license or other binding obligation that is or would be inconsistent with or would diminish, derogate from or otherwise conflict with the licenses and other rights granted to Prime under this Agreement.

10.4 Disclaimer. THE FOREGOING REPRESENTATIONS AND WARRANTIES OF EACH PARTY ARE IN LIEU OF ANY OTHER REPRESENTATIONS AND WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR ANY IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH ARE HEREBY SPECIFICALLY EXCLUDED AND DISCLAIMED.

Article 11 INTELLECTUAL PROPERTY

11.1 Ownership of Intellectual Property.

11.1.1 General.

(a) **Background Technology**. As between the Parties, and except with respect to any Collaboration Technology, which is addressed in Section 11.1.1(b), (a) Prime shall retain all right, title and interest in and to any Patent Rights, Know-How, and other intellectual property rights Controlled by Prime or any of its Affiliates during the Term, and (b) Beam shall retain all right, title and interest in and to any Patent Rights, Know-How, and other intellectual property rights Controlled by Beam or any of its Affiliates during the Term.

(b) **Collaboration Technology**. Except as expressly set forth in Sections 11.1.2 through Section 11.1.4, (a) each Party will own and retain all right, title, and interest in, to and under (i) any and all Know-How invented, conceived, developed, generated or reduced to practice solely by or on behalf of such Party or its Affiliates in connection with the performance of such Party's activities under this Agreement and (ii) any and all Patent Rights claiming any such Know-How described in clause (a)(i) of this Section 11.1.1, and (b) the Parties will jointly own any and all (i) Know-How invented, conceived, developed, generated or reduced to practice jointly by or behalf of the Parties or their Affiliates in connection with the performance of the Parties' activities under this Agreement and (ii) Patent Rights claiming any such Know-How described in clause (b)(i) of this Section 11.1.1. Inventorship (whether patentable or not) shall be determined in accordance with United States patent laws.

11.1.2 Assignment by Beam.

(a) **Assignment**. As between the Parties, Prime shall own and retain all rights, title, and interests in, to and under all Prime (from Beam)

Improvement Technology. Beam shall promptly disclose to Prime in writing the creation or conception of any Prime (from Beam) Improvement Technology by or on behalf of Beam or any of its Affiliates or its sublicensees. Beam, for itself and on behalf of any of its Affiliates, will and hereby does assign (and to the extent such assignment can only be made in the future hereby agrees to assign) to Prime all of its rights, title, and interests in, to and under any Prime (from Beam) Improvement Technology, and Prime hereby accepts such assignment.

(b) **Covenants in Support of Assignment**. Beam will take (and cause its Affiliates and sublicensees, and their respective employees, agents, and contractors to take) such further actions reasonably requested by Prime to evidence such assignment and to assist Prime in obtaining Patent Rights and other intellectual property protection for inventions within the Prime (from Beam) Improvement Know-How including executing further assignments, consents, releases, and other commercially reasonable documentation and providing good faith testimony by affidavit, declaration, in-person, or other proper means in support of any effort by Prime to establish, perfect, defend, or enforce its rights in any Prime (from Beam) Improvement Technology through prosecution of governmental filings, regulatory proceedings, litigation, and other means, including through the filing, prosecution, maintenance, and enforcement of the Prime (from Beam) Improvement Technology. Beam will obligate its Affiliates, sublicensees, and subcontractors to assign all Prime (from Beam) Improvement Technology to Beam (or directly to Prime) so that Beam can comply with its obligations under this Section 11.1.2(b), and Beam will promptly obtain such assignment. Without limitation, Beam will cooperate with Prime if Prime applies for U.S. or foreign patent protection for inventions within the Prime (from Beam) Improvement Technology and will obtain the cooperation of the individual inventors of any such Prime (from Beam) Improvement Technology. If Beam is unable to assign any Prime (from Beam) Improvement Technology to Prime as set forth in Section 11.1.2(a), then Beam hereby grants and agrees to grant to Prime a royalty-free, fully paid-up, worldwide, exclusive, perpetual, irrevocable license (with the right to grant sublicenses through multiple tiers) under such Prime (from Beam) Improvement Technology for any and all purposes.

11.1.3 Assignment by Prime.

(a) **Assignment**. As between the Parties, Beam shall own and retain all right, title, and interests in, to and under all Beam (from Prime) Improvement Technology. Prime shall promptly disclose to Beam in writing the creation or conception of any Beam (from Prime) Improvement Technology by or on behalf of Prime or any of its Affiliates or its sublicensees. Prime, for itself and on behalf of any of its Affiliates, will and hereby does assign (and to the extent such assignment can only be

made in the future hereby agrees to assign) to Beam all of its rights, title, and interests in, to and under any Beam (from Prime) Improvement Technology, and Beam hereby accepts such assignment.

(b) **Covenants in Support of Assignment**. Prime will take (and cause its Affiliates and sublicensees, and their respective employees, agents, and contractors to take) such further actions reasonably requested by Beam to evidence such assignment and to assist Beam in obtaining Patent Rights and other intellectual property protection for inventions within the Beam (from Prime) Improvement Know-How including executing further assignments, consents, releases, and other commercially reasonable documentation and providing good faith testimony by affidavit, declaration, in-person, or other proper means in support of any effort by Beam to establish, perfect, defend, or enforce its rights in any Beam (from Prime) Improvement Technology through prosecution of governmental filings, regulatory proceedings, litigation, and other means, including through the filing, prosecution, maintenance, and enforcement of the Beam (from Prime) Improvement Technology. Prime will obligate its Affiliates, sublicensees, and subcontractors to assign all Beam (from Prime) Improvement Technology to Prime (or directly to Beam) so that Prime can comply with its obligations under this Section 11.1.3(b), and Prime will promptly obtain such assignment. Without limitation, Prime will cooperate with Beam if Beam applies for U.S. or foreign patent protection for inventions within the Beam (from Prime) Improvement Technology and will obtain the cooperation of the individual inventors of any such Beam (from Prime) Improvement Technology. If Prime is unable to assign any Beam (from Prime) Improvement Technology to Beam as set forth in Section 11.1.3(a), then Prime hereby grants and agrees to grant to Beam a royalty-free, fully paid-up, worldwide, exclusive, perpetual, irrevocable license (with the right to grant sublicenses through multiple tiers) under such Beam (from Prime) Improvement Technology for any and all purposes.

11.1.4 Jointly-Owned Intellectual Property. Subject to the terms and conditions set forth in this Agreement, including the licenses granted in Section 2.1, the Parties will each own an equal, undivided interest in any and all Jointly-Owned Technology (including any and all Patent Rights, Know-How and other intellectual property rights with respect thereto), and each Party is entitled to practice or otherwise exploit the Jointly-Owned Technology for all purposes on a worldwide basis and to license such Jointly-Owned Technology through multiple tiers without consent of the other Party (where consent is required by Applicable Law, such consent is deemed hereby granted) and without a duty of accounting to the other Party. Each Party will grant and hereby does grant to the other Party all further permissions, consents, and waivers with respect to, and all licenses under, the Jointly-Owned Technology, throughout the world, necessary to provide the other Party with full rights of use and exploitation of the Jointly-Owned Technology, including confirmation that no such accounting is required.

Without limitation, each Party will cooperate with the other Party if the Parties determine to apply for U.S. or foreign patent protection for any Jointly-Owned Technology and will obtain the cooperation of the individual inventors of any such Jointly-Owned Technology.

11.2 Filing, Prosecution and Maintenance of Patent Rights.

11.2.1 **Prime-Prosecuted Rights**. Subject to Section 11.2.3, as between the Parties, Prime shall have the exclusive right to file, prosecute and maintain the Prime Licensed Patent Rights, Prime CRISPR/Delivery Patent Rights, Prime Collaboration Patent Rights, Prime (from Beam) Improvement Patent Rights (collectively, the "**Prime-Prosecuted Patent Rights**") on a worldwide basis and to be responsible for any related interference, re-issuance, re-examination, *inter partes* review, opposition proceeding, or other action challenging any such patent in any patent office of competent jurisdiction, in each case, at Prime's sole cost and expense. Subject to Prime's obligations under any Third Party Agreements, Prime shall keep Beam reasonably informed as to any material developments with respect to the preparation, filing, prosecution, and maintenance of any Prime-Prosecuted Patent Right under which Prime grants to Beam an exclusive license pursuant to Section 2.1.1 (collectively, the "**Prime Exclusively Licensed Patent Rights**"), in each case, solely in, and if applicable to, the field of the applicable exclusive license (e.g., the Beam Field with respect to the license granted pursuant to Section 2.1.1(a)). Prime shall give Beam the opportunity to provide comments on and make requests of Prime concerning the prosecution and maintenance of the Prime Exclusively Licensed Patent Rights solely in, and if applicable to, the field of the exclusive license, and Prime shall consider such comments and requests in good faith; provided, however, that final decision-making authority with respect to the prosecution and maintenance of such Patent Rights shall vest in Prime.

11.2.2 **Beam-Prosecuted Rights**. Subject to Section 11.2.3, as between the Parties, Beam shall have the exclusive right to file, prosecute and maintain the Beam CRISPR/Delivery Patent Rights, Beam Development and Commercialization Patent Rights, Beam Collaboration Patent Rights, Beam (from Prime) Improvement Patent Rights (collectively, the "**Beam-Prosecuted Patent Rights**") on a worldwide basis and to be responsible for any related interference, re-issuance, re-examination, *inter partes* review, opposition proceeding, or other action challenging any such patent in any patent office of competent jurisdiction, in each case, at Beam's sole cost and expense. Subject to Beam's obligations under any Third Party Agreements, Beam shall keep Prime reasonably informed as to any material developments with respect to the preparation, filing, prosecution, and maintenance of any Beam-Prosecuted Patent Right under which Beam grants to Prime an exclusive license pursuant to Section 2.1.2 (collectively, the "**Beam Exclusively Licensed Patent Rights**" and together with the Prime Exclusively Licensed Patent Rights, the "**Exclusively Licensed Patent Rights**"), in each case, solely in, and if applicable to, the field of the applicable exclusive license. Beam shall give Prime the opportunity to provide comments on and

make requests of Beam concerning the prosecution and maintenance of the Beam Exclusively Licensed Patent Rights solely in, and if applicable to, the field of the exclusive license, and Beam shall consider such comments and requests in good faith; provided, however, that final decision-making authority with respect to the prosecution and maintenance of such Patent Rights shall vest in Beam.

11.2.3 **Back-Up Rights**. During the Term, if either Party in a country decides not to file an Exclusively Licensed Patent Right for which it controls the prosecution and maintenance of in accordance with Section 11.2.1 or Section 11.2.2, or intends to allow such Patent Right to lapse or become abandoned without having first filed a substitute (except where such substitute filing would contravene Article 4 of the Paris Convention), it shall notify and consult with the other Party of such decision or intention at least [***] prior to the date upon which the subject matter of such Patent Right shall become unpatentable or such Patent Right shall lapse or become abandoned, and, if after such consultation between the Parties, such Party still intends not to prosecute and maintain such Patent Right, the non-controlling Party shall thereupon have the right (but not the obligation) to assume the prosecution and maintenance thereof at its expense with counsel of its choice. When the non-controlling Party assumes the responsibilities for the prosecution and maintenance of an Exclusively Licensed Patent Right under this Section 11.2.3, the controlling Party shall promptly transfer to the non-controlling Party the patent prosecution files for such Patent Rights and provide reasonable assistance in the transfer of the prosecution responsibilities.

11.2.4 **Jointly-Owned Patent Rights**. With respect to any Jointly-Owned Patent Right, [***].

11.2.5 **Cooperation**. Each Party shall provide the other Party all reasonable assistance and cooperation in the prosecution and maintenance efforts under this Section 11.2, including providing any necessary powers of attorney and executing any other required documents or instruments for such prosecution.

11.3 Enforcement and Defense of Prime-Prosecuted Patent Rights.

11.3.1 Each Party shall give to the other Party notice of any infringement of any Prime-Prosecuted Patent Rights in the Beam Field that may come to such Party's attention and which such infringement is by a Third Party that is developing or commercializing a product that [***]

(a "**Beam Competitive Infringement**"). Subject to Prime's rights under any applicable Third Party Agreement, Beam shall have the first right to initiate and prosecute legal action related to a Beam Competitive Infringement at its own expense and in its own name and, if requested by Beam in the name of Prime, including to control the defense of any declaratory judgment action relating to such Patent Rights arising out of such legal action. In the event that any Third Party Agreement of Prime does not permit Beam to fully exercise its rights under this Section 11.3.1 to initiate and prosecute a legal action in connection with a Beam Competitive Infringement, then Prime will take any action reasonably requested by Beam on Beam's behalf and at Beam's expense to exercise its rights under any such Third Party Agreement to provide Beam with substantially similar rights provided to Beam under this Section 11.3.1. If Beam does not initiate any such legal action within [***] of receiving or providing notice of such Beam Competitive Infringement, then Prime shall have the right to initiate and prosecute legal action related to such Beam Competitive Infringement at its own expense and in its own name and, if requested by Prime in the name of Beam, including to control the defense of any declaratory judgment action relating to such Patent Rights arising out of such legal action.

11.3.2 For any action to terminate any Beam Competitive Infringement, in the event that a Party is unable to initiate or prosecute such action solely in its own name, the other Party will join such action voluntarily and will execute and cause its Affiliates to execute all documents necessary for Prime to initiate litigation to prosecute and maintain such action. Each Party shall have the right to be represented by counsel of its own choice, at its own expense in any such action. In connection with any action related to a Beam Competitive Infringement, Beam and Prime will cooperate fully and will provide each other with any information or assistance that either may reasonably request. The Party initiating any such action shall keep the other Party informed of developments in any action or proceeding related to a Beam Competitive Infringement, including, to the extent permissible by Applicable Law, consultation on and approval of any settlement, the status of any settlement negotiations and the terms of any offer related thereto.

11.3.3 Any recovery obtained by either Party in connection with or as a result of any action related to a Beam Competitive Infringement contemplated by this Section 11.3, whether by settlement or otherwise, shall be shared in order as follows:

(a) The Party initiating such action shall first recoup all of its costs and expenses incurred in connection with the action;

(b) The other Party shall then, to the extent possible, recover its costs and expenses incurred in connection with the action;

(c) then such amount of any recovery remaining shall be allocated as follows: [***] percent ([***]%) of such amount of any recovery remaining shall

be retained by or paid to the Party initiating such action, and [***] percent ([***]%) of such amount of any recovery remaining shall be retained by or paid to the other Party; provided, however, that to the extent any such amount is awarded as imputed net sales of Licensed Products, then such amount shall be paid to Beam and treated as Net Sales with respect to the applicable periods and territories for which such recovery was calculated, for purposes of calculating royalties payable to Prime pursuant to Section 8.5 or Prime's share of Collaboration Territory Revenue pursuant to Section 8.5.8.

11.4 Enforcement and Defense of Beam-Prosecuted Patent Rights.

11.4.1 Each Party shall give the other Party notice of any infringement of any Beam-Prosecuted Patent Right that may come to such Party's attention and which infringement is by a Third Party that is developing or commercializing a product that [***] (a "**Prime Competitive Infringement**"). Subject to Beam's rights under any applicable Third Party Agreement, Prime shall have the first right to initiate and prosecute legal action related to a Prime Competitive Infringement at its own expense and in its own name and, if requested by Prime in the name of Beam, including to control the defense of any declaratory judgment action relating to such Patent Rights arising out of such legal action. In the event that any Third Party Agreement of Beam does not permit Prime to fully exercise its rights under this Section 11.4.1 to initiate and prosecute a legal action in connection with a Prime Competitive Infringement, then Beam will take any action reasonably requested by Prime on Prime's behalf and at Prime's expense to exercise its rights under any such Third Party Agreement to provide Prime with substantially similar rights provided to Prime under this Section 11.4.1. If Prime does not initiate any such legal action within [***] of receiving or providing notice of such Prime Competitive Infringement, then Beam shall have the right to initiate and prosecute legal action related to such Prime Competitive Infringement at its own expense and in its own name and, if requested by Beam in the name of Prime, including to control the defense of any declaratory judgment action relating to such Patent Rights arising out of such legal action.

11.4.2 For any action to terminate any Prime Competitive Infringement, in the event that a Party is unable to initiate or prosecute such action solely in its own name, the other Party will join such action voluntarily and will execute and cause its Affiliates to execute all documents necessary for such Party to initiate litigation to prosecute and maintain such action. Each Party shall have the right to be represented by counsel of its own choice, at its own expense in any such action. In connection with any action related to a Prime Competitive Infringement, Beam and Prime will cooperate fully and will provide each other with any information or assistance that either may reasonably request. The Party initiating any such

action shall keep the other Party informed of developments in any action or proceeding related to a Prime Competitive Infringement, including, to the extent permissible by Applicable Law, consultation on and approval of any settlement, the status of any settlement negotiations and the terms of any offer related thereto.

11.4.3 Any recovery obtained by either Party in connection with or as a result of any action related to a Prime Competitive Infringement contemplated by this Section 11.4, whether by settlement or otherwise, shall be shared in order as follows:

(a) The Party initiating such action shall first recoup all of its costs and expenses incurred in connection with the action;

(b) The other Party shall then, to the extent possible, recover its costs and expenses incurred in connection with the action;

(c) then such amount of any recovery remaining shall be allocated as follows: [***] percent ([***]%) of such amount of any recovery remaining shall be retained by or paid to the Party initiating such action, and [***] percent ([***]%) of such amount of any recovery remaining shall be retained by or paid to the other Party.

11.5 **Patent Term Restoration**. The Parties agree to cooperate and to take reasonable actions to maximize the protections available under the safe harbor provisions of 35 U.S.C. 103(c) for US patents and patent applications. The Parties shall cooperate with each other, including without limitation to provide necessary information and assistance as the other Party may reasonably request, in obtaining patent term restoration or supplemental protection certificates or their equivalents in any country in the Territory where applicable to Prime Licensed Patent Rights, Prime CRISPR/Delivery Patent Rights, Beam Licensed Patent Rights, Beam CRISPR/Delivery Patent Rights or Jointly-Owned Patent Rights.

11.6 **Trademarks and Corporate Logos**.

11.6.1 **In the Collaboration Territory**.

(a) Beam shall be responsible for developing a list of potential trademarks to be used to identify the Collaboration Products in the Beam Field in the Collaboration Territory. From Beam's initial list, the JSC shall ultimately be responsible for the selection of the actual trademarks used to identify the Collaboration Products in the Beam Field in the Collaboration Territory, and all trademarks, logos, taglines, trade dress, domain names or indicia of origin for use in connection with the sale or marketing of Collaboration Products in the Beam Field in the Collaboration Territory (the "**Collaboration Marks**"). Beam shall be responsible for any associated creation, searching, clearance, filing, registration, and maintenance of the Collaboration Marks, and all expenses associated therewith shall be treated as Shared Commercialization Costs to the extent included in the Commercialization Budget for the applicable

Collaboration Product. Beam shall keep Prime reasonably advised of the status of the actual and prospective trademarks filings and shall provide advance copies of any substantive papers related to the filing, prosecution and maintenance of such filings. All uses of the proposed major promotional activities using Collaboration Marks and, upon request of the JSC, other representative samples of proposed use of the Collaboration Marks, shall be reviewed by the JSC prior to first public display and shall comply with all Applicable Laws (including, without limitation, those Applicable Laws and regulations particularly applying to the proper use and designation of trademarks in the applicable countries of the Collaboration Territory). Beam shall own all Collaboration Marks (including associated goodwill) and copyrights created in connection with the marketing of the Collaboration Products in the Beam Field in the Collaboration Territory.

(b) With respect to those Collaboration Products for which Prime exercises its Co-Promote Option in the Collaboration Territory in accordance with Section 5.2.4, each Party shall provide to the other notice of any infringement or challenge to the Collaboration Marks. Beam and Prime shall thereafter consult and cooperate fully to determine a course of action, including but not limited to the commencement of legal action by either or both Beam and Prime. However, Beam, upon notice to Prime, shall have the first right to initiate and prosecute such legal action at its own expense and in the name of Beam and, if requested by Beam, in the name of Prime or to control the defense of any challenge relating to the Collaboration Marks. Beam shall promptly inform Prime if it elects not to exercise such first right and Prime shall, at its own expense, thereafter have the right to either initiate and prosecute such action or defend such action in the name of Prime and if requested by Prime in the name of Beam. Any recovery obtained by either or both Beam and Prime in connection with or as a result of any action contemplated by this Section 11.6, whether by settlement or otherwise, shall be shared in order as follows: (i) the Party which initiated and prosecuted the action shall recoup all of its costs and expenses incurred in connection with the action; (ii) the other Party shall then, to the extent possible, recover its costs and expenses incurred in connection with the action; and (iii) the amount of any recovery remaining shall then be allocated equally between the Parties. In connection with any action, Beam and Prime will cooperate fully and will provide each other with any information or assistance that either may reasonably request. Each Party shall keep the other informed of developments in any action or proceeding, including, to the extent permissible by Applicable Law, consultation on and approval of any settlement, the status of any settlement negotiations and the terms of any offer related thereto. Each Party shall have the right to be represented by counsel of its own choice, at its expense.

11.6.2 **Use of Trademarks of the Other Party**. Neither Party shall, without the other Party's prior written consent, use any trademarks or house marks of the other Party (including the other Party's corporate name, and, in the case of Prime, any Collaboration Marks), or marks confusingly similar thereto, including in connection with such Party's marketing or promotion of Licensed Products under this Agreement, except as expressly permitted pursuant to Section 2.3 or as may be expressly agreed to by the Parties and except to the extent required to comply with Applicable Laws.

Article 12 INDEMNIFICATION

12.1 **General Indemnification by Prime**. Prime shall indemnify and hold harmless Beam, its Affiliates and their respective directors, officers, employees and agents (collectively, the "**Beam Indemnified Parties**"), from, against and in respect of any and all liabilities, losses, costs (including costs of investigation and defense), damages, fines, penalties, government orders, taxes, expenses or amounts paid in settlement (in each case, including reasonable attorneys' and experts fees and expenses), in each case to the extent resulting from any Action brought by a Third Party (collectively, "**Losses**"), to the extent such Losses are incurred or suffered by the Beam Indemnified Parties or any of them as a result of, arising out of or directly or indirectly relating to: (a) any [***] any representation or warranty made by Prime in this Agreement, or any [***] any covenant or agreement of Prime in or pursuant to this Agreement or (b) the [***] by or of Prime, its Affiliates and their respective directors, officers, employees and agents or any of them, in each case, in connection with the performance of activities under this Agreement, or (c) the Development, Manufacture or Commercialization of any Prime Product by Prime or its Affiliates or licensees except, in each case ((a)-(c)), with respect to any matter for which Beam is obligated to provided indemnification under Section 12.2.

12.2 **General Indemnification by Beam**. Beam shall indemnify and hold harmless Prime, its Affiliates and their respective directors, officers, employees and agents (collectively, the "**Prime Indemnified Parties**"), from, against and in respect of any and all Losses to the extent such Losses are incurred or suffered by the Prime Indemnified Parties or any of them as a result of, arising out of or directly or indirectly relating to: (a) any [***] any representation or warranty made by Beam in this Agreement, or any [***] of any covenant or agreement of Beam or Beam parent in or pursuant to this Agreement; (b) the [***] by or of Beam, its Affiliates and their respective directors, officers, employees and agents or any of them in each case, in connection with the performance of activities under this Agreement, or (c) the Development, Manufacture or Commercialization of any Licensed Product by Beam or its Affiliates or licensees (except by or on behalf of Prime, its Affiliates, licensees or sublicensees), except, in each case ((a)-(c)), with respect to any matter for which Prime is obligated to provided indemnification under Section 12.1.

12.3 **Products Liability Claims**. Notwithstanding anything express or implied to the contrary herein, including Sections 12.1 and 12.2 hereof, in the event that there is a Third Party products liability claim for death, bodily injury or property damage suffered by such Third

Party from or in connection with any Collaboration Product in the Beam Field in the Collaboration Territory, then the liability, claims, damage, loss, or expense (including reasonable attorneys' fees) related to such claim against either Party shall be shared equally (50/50) by the Parties; provided that in the event such death, bodily injury or property damage giving rise to a Third Party product liability claim is proximately caused by the negligence or willful misconduct, violation of Applicable Law or breach of the terms and conditions of this Agreement by a Party, its Affiliates or their respective directors, officers, employees or agents, this Section 12.3 shall not apply and Sections 12.1 and 12.2 will apply to the extent relevant. The Parties shall follow the procedures set forth in Section 12.4 and, solely for purposes of determining the procedure for the defense of such claim, Beam shall be deemed to be the Indemnifying Party under Section 12.4.

12.4 Claims for Indemnification.

12.4.1 A Person entitled to indemnification under this Article 12 (an "**Indemnified Party**") shall give prompt written notification to the Party from whom indemnification is sought (the "**Indemnifying Party**") of the commencement of any Third Party Action for which indemnification may be sought or, if earlier, upon the assertion of any such Action by a Third Party (it being understood and agreed, however, that the failure by an Indemnified Party to give notice of a Third Party Action as provided in this Section 12.4.1 shall not relieve the Indemnifying Party of its indemnification obligation under this Agreement except and only to the extent that such Indemnifying Party is actually prejudiced as a result of such failure to give notice).

12.4.2 Within [***] after delivery of such notification, the Indemnifying Party may, upon written notice thereof to the Indemnified Party, assume control of the defense of such Action using counsel reasonably satisfactory to the Indemnified Party. If the Indemnifying Party does not assume control of such defense, the Indemnified Party shall control such defense.

12.4.3 The Party not controlling such defense may participate therein at its own expense; provided that if the Indemnifying Party assumes control of such defense and the Indemnified Party reasonably concludes, based on advice from counsel, that the Indemnifying Party and the Indemnified Party have conflicting interests with respect to such action, suit, proceeding or claim, the Indemnifying Party shall be responsible for the reasonable fees and expenses of counsel to the Indemnified Party solely in connection therewith; provided further, however, that in no event shall the Indemnifying Party be responsible for the fees and expenses of more than one counsel in any one jurisdiction for all Indemnified Parties.

12.4.4 The Party controlling such defense shall keep the other Party advised of the status of such action, suit, proceeding or claim and the defense thereof and shall consider recommendations made by the other Party with respect thereto.

12.4.5 The Indemnified Party shall not agree to any settlement of such action, suit, proceeding or claim without the prior written consent of the Indemnifying Party,

which shall not be unreasonably withheld, conditioned or delayed. The Indemnifying Party shall not agree to any settlement of such action, suit, proceeding or claim or consent to any judgment in respect thereof that does not include a complete and unconditional release of the Indemnified Party from all liability with respect thereto or that imposes any liability or obligation on the Indemnified Party without the prior written consent of the Indemnified Party.

12.5 **Disclaimer of Liability**. IN NO EVENT SHALL ANY PARTY OR ANY OF ITS RESPECTIVE AFFILIATES BE LIABLE UNDER THIS AGREEMENT FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES SUFFERED BY BEAM, PRIME OR ANY OF THEIR RESPECTIVE AFFILIATES IN CONNECTION WITH THIS AGREEMENT WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, INCLUDING LOSS OF PROFITS OR REVENUE; PROVIDED THAT THIS SECTION SHALL NOT RELIEVE EITHER PARTY FROM ITS INDEMNIFICATION OBLIGATIONS UNDER THIS AGREEMENT OR FROM ITS LIABILITY FOR ANY DAMAGES BASED UPON SUCH PARTY'S BREACH OF ITS OBLIGATIONS UNDER ARTICLE 9, GROSS NEGLIGENCE, WILLFUL MISCONDUCT OR BREACH OF APPLICABLE LAW.

Article 13 TERM AND TERMINATION

13.1 **Term**. The term of this Agreement (the "**Term**") will commence on the Effective Date and continue, unless this Agreement is terminated earlier in accordance with this Article 13, until the later of (a) on a Royalty-Bearing Product-by-Royalty-Bearing Product and country-by-country basis, until the expiration of the Royalty Term for such Royalty-Bearing Product in such country and (b) on a Collaboration Product-by-Collaboration Product basis, the date on which neither Party is Developing or Commercializing such Collaboration Product in the Collaboration Territory. Following expiration of the Royalty Term for any Royalty-Bearing Product in a given country, no further royalties will be payable in respect of sales of such Royalty-Bearing Product, as applicable, in such country and, thereafter the license granted to Beam under Section 2.1.1 or the license granted to Prime under Section 2.1.2, as applicable, with respect to such Royalty-Bearing Product in such country will automatically become fully paid-up, perpetual, irrevocable and royalty-free.

13.2 **At-Will Termination by Beam**. Following the expiration of the Initial Term, notwithstanding anything contained herein to the contrary, Beam may terminate this Agreement in its entirety, or on a Licensed Product-by-Licensed Product or Subfield-by-Subfield basis, upon ninety (90) days' prior written notice to Prime at its sole discretion.

13.3 **[***]**

13.4 **Termination for Cause**. This Agreement may be terminated at any time during the Term (in its entirety or, if such material breach only relates to a given Product, with respect to such Product):

13.4.1 upon written notice by either Party if the other Party is in breach of its material obligations under this Agreement (in its entirety or, if such material breach only relates to a given Product, with respect to such Product) and has not cured such breach within ninety (90) days after notice requesting cure of the breach; provided, however, in the event of a good faith dispute with respect to the existence of a material breach, the ninety (90) day cure period shall be tolled until such time as the dispute is resolved pursuant to Section 14.8; or

13.4.2 by either Party upon the filing or institution of bankruptcy, reorganization, liquidation or receivership proceedings, or upon an assignment of a substantial portion of the assets for the benefit of creditors by the other Party; provided, however, that in the case of any involuntary bankruptcy proceeding such right to terminate shall only become effective if the Party consents to the involuntary bankruptcy or such proceeding is not dismissed within ninety (90) days after the filing thereof.

13.5 **Termination for Patent Challenge**. If the applicable Licensee or any of its Affiliates or sublicensees directly or indirectly brings, assumes or participates in, or knowingly, willfully or recklessly assists in bringing a Patent Challenge, then (a) in the event Beam is the applicable Licensor, Beam may terminate this Agreement in its entirety immediately upon written notice to Prime, and (b) in the event Prime is the applicable Licensor, Prime may terminate this Agreement in its entirety immediately upon written notice to Beam. For the avoidance of doubt, any participation by the Licensee, any of its Affiliates or sublicensees or its or their employees in any claim, challenge or proceeding that the Licensee, such Affiliates or sublicensees or such employees are required to participate in pursuant to a subpoena or court order or participates in a proceeding that is initiated by a patent office and not at the instigation of the Licensee, such Affiliates or sublicensees or such employees shall not constitute a Patent Challenge under this Section 13.5 and shall not give rise to Licensor's right to terminate any license hereunder. Notwithstanding anything to the contrary in this Agreement but only to the extent permitted by and consistent with the relevant Third Party Agreement (if any) under which the Challenged Patent Right is sublicensed to the Licensee, the Licensor shall not be entitled to exercise its termination rights pursuant to this Section 13.5 based upon any Patent Challenge by a sublicensee of the Licensee, if such Patent Challenge has been withdrawn or the Licensee has terminated such sublicense within [***] of the date on which the Licensor notifies the Licensee of its intent to exercise its termination rights pursuant to this Section 13.5.

13.6 **Effects of Termination**.

13.6.1 **General**. Any Product with respect to which this Agreement is terminated in the form and formulation in existence as of the effective date of termination will be referred to herein as a "**Terminated Product**" (and if this Agreement is

terminated in its entirety, then all Products will be Terminated Products). In the event of termination of this Agreement in its entirety or in part with respect to one or more Products, upon the effective date of such termination of this Agreement:

(a) no later than [***] after the effective date of such termination, each Party shall return or cause to be returned to the other Party all Confidential Information related to the Terminated Product(s), or all Confidential Information if this Agreement is terminated in its entirety, in the tangible form received from the other Party and all copies thereof; provided, however, that (i) each Party may retain one copy of such Confidential Information received from the other Party in its confidential files for record purposes, (ii) each Party may retain any Confidential Information of the other Party to the extent (and only to the extent) such Confidential Information continues to be licensed to such Party pursuant to surviving licenses and (iii) in the event of the termination of this Agreement in its entirety, all Confidential Information received from the other Party will be returned to such Party;

(b) with respect to the rights and licenses granted hereunder (except as otherwise set forth in Section 13.7):

(i) [***];

(ii) [***];

(iii) [***];
(iv) [***]; and
(v) [***].

For clarity, except as otherwise provided in this Section 13.6.1, all rights and licenses with respect to all Products that are not Terminated Products shall survive such termination. By way of illustration, if this Agreement is terminated with respect to one or more Prime Products pursuant to Section 13.4, then all rights and licenses with respect to Licensed Products shall survive such termination.

(c) Each Party's royalty, milestone and other payment obligations under Article 8 shall remain with respect to any Terminated Product;

(d) In the event of termination with respect to a Collaboration Product (such product, a "**Terminated Collaboration Product**") [***] the Parties shall enter into good faith negotiations [***] regarding the transition by Beam of assets and rights existing as of the effective date of the termination of this Agreement (and, with respect to any in-licensed assets or rights, to the extent Beam has the right to transfer such assets and rights and subject to the terms of the applicable license between Beam and the relevant Third Party) that are specifically and solely related to the Terminated Collaboration Product and the provisions of assistance by each Party to the other Party as necessary to enable the continued development and commercialization of the Terminated Collaboration Product as such Terminated Collaboration Product exists as of the effective date of termination of this Agreement (each a "**Terminated Collaboration Product Transition Agreement**"). Each Terminated Collaboration Product Transition Agreement shall include commercially reasonable compensation to Beam in connection with its transition of such assets and rights, and its provision of assistance, in each case, as set forth in the immediately preceding sentence and may address, among other things, the following matters, in each case solely in respect of the Terminated Collaboration Product [***];

(e) if this Agreement is terminated in its entirety, the JSC, JRC or any Subcommittee shall be dissolved, if it exists; and

(f) except for the surviving provisions set forth in Section 13.7 and as otherwise set forth in this Section 13.6.1, the rights and obligations of the Parties hereunder shall terminate.

13.6.2 Termination for Bankruptcy. If this Agreement is terminated by either Party pursuant to Section 13.4.2, all licenses and rights to licenses granted under or pursuant to this Agreement by the non-terminating Party to the terminating Party are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the United States Bankruptcy Code (the "**Code**"), licenses of rights to "intellectual property" as defined under Section 101(35A) of the Code. The Parties agree that the terminating Party, as a licensee of such rights under this Agreement, shall retain and may fully exercise all of its rights and elections under the Code, and that upon commencement of a bankruptcy proceeding by or against the non-terminating Party under the Code, the terminating party shall be entitled to a complete duplicate of or complete access to, any such intellectual property and all embodiments of such intellectual property. Such intellectual property and all embodiments thereof shall be promptly delivered to the terminating Party (a) upon any such commencement of a bankruptcy proceeding upon written request therefor by the terminating Party, unless the non-terminating Party elects to continue to perform all of its obligations under this Agreement or (b) if not delivered under clause (a) above, upon the rejection of this Agreement by or on behalf of the non-terminating Party upon written request therefor by the terminating Party. The foregoing provisions of Section 13.6.2 are without prejudice to any rights that either Party may have arising under the Code or other Applicable Law.

13.7 Effect of Termination; Survival. Termination of this Agreement shall not relieve the Parties of any obligation accruing upon or prior to such termination. Any termination of this Agreement shall be without prejudice to the rights of either Party against the other accrued or accruing under this Agreement upon or prior to termination, including without limitation (a) obligations to pay any license fees, milestones or other fees that accrue under this Agreement upon or prior to termination and (b) the obligation to share Shared Costs incurred prior to such termination in accordance with this Agreement, and to share the Collaboration Territory Revenue from Collaboration Products sold prior to such termination, in the case of both clause (a) and (b) above, in accordance with the provisions of Article 8. The provisions of Article 9 shall survive the termination of this Agreement and shall continue in effect for [***] following such termination. In addition, [***] shall survive any termination of this Agreement.

Article 14 MISCELLANEOUS

14.1 **Use of Affiliates**. Either Party shall have the right to exercise its rights and perform its obligations under this Agreement either itself or through any of its Affiliates. In addition, in each case where a Party's Affiliate has an obligation pursuant to this Agreement or performs an obligation pursuant to this Agreement, (a) such Party shall cause and compel such Affiliate to perform such obligation and comply with the terms of this Agreement and (b) any breach of the terms or conditions of this Agreement by such Affiliate shall be deemed a breach by such Party of such terms or conditions, for which such Party is liable.

14.2 **Interpretation**. Except where the context expressly requires otherwise, (a) the use of any gender herein shall be deemed to encompass references to either or both genders, and the use of the singular shall be deemed to include the plural (and vice versa), (b) the words

"include", "includes" and "including" shall be deemed to be followed by the phrase "without limitation", (c) the word "will" shall be construed to have the same meaning and effect as the word "shall", (d) any definition of or reference to any agreement, instrument or other document herein shall be construed as referring to such agreement, instrument or other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein), (e) any reference herein to any person shall be construed to include the person's successors and assigns, (f) the words "herein", "hereof" and "hereunder", and words of similar import, shall be construed to refer to this Agreement in its entirety and not to any particular provision hereof, (g) all references herein to Sections or Schedules shall be construed to refer to Sections or Schedules of this Agreement, and references to this Agreement include all Schedules hereto, (h) the word "notice" means notice in writing (whether or not specifically stated) and shall include notices, consents, approvals and other written communications contemplated under this Agreement, (i) provisions that require that a Party, the Parties or any committee hereunder "agree," "consent" or "approve" or the like shall require that such agreement, consent or approval be specific and in writing, whether by written agreement, letter, approved minutes or otherwise (but excluding e-mail and instant messaging), (j) references to any specific law, rule or regulation, or article, section or other division thereof, shall be deemed to include the then-current amendments thereto or any replacement or successor law, rule or regulation thereof, and (k) the term "or" shall be interpreted in the inclusive sense commonly associated with the term "and/or."

14.3 **Force Majeure**. Neither Party shall be held liable to the other Party nor be deemed to have defaulted under or breached this Agreement for failure or delay in performing any obligation under this Agreement to the extent such failure or delay is caused by or results from causes beyond the reasonable control of the affected Party or any of its Affiliates, potentially including embargoes, war, acts of war (whether war be declared or not), acts of terrorism, insurrections, riots, civil commotions, strikes, lockouts or other labor disturbances, fire, floods, or other acts of God, or acts, omissions or delays in acting by any Governmental Authority or the other Party. The affected Party shall notify the other Party of such force majeure circumstances as soon as reasonably practical, and shall promptly undertake all reasonable efforts necessary to resume performance.

14.4 **[***]**

[***]

14.5 **Assignment**. Except as provided in this Section 14.5, this Agreement may not be assigned or otherwise transferred by either Party without the consent of the other Party; provided, however, that (a) Beam or Prime may, without such consent, assign this Agreement and its rights and obligations hereunder to an Affiliate, in whole or in part and (b) any Party may assign this Agreement and its rights and obligations hereunder, in whole or in part, in connection with the transfer or sale of all or substantially all of its assets related to the subject matter of this Agreement, or in the event of its merger or consolidation or change in control or similar transaction. Any attempted assignment not in accordance with this Section 14.5 shall be void and unenforceable. Any permitted assignee shall assume all assigned obligations of its assignor under this Agreement.

14.6 **Severability**. If any one or more of the provisions contained in this Agreement is held invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby, unless the absence of the invalidated provision(s) adversely affects the substantive rights of the Parties. The Parties shall in such an instance use their best efforts to replace the invalid, illegal or unenforceable provision(s) with valid, legal and enforceable provision(s) which, insofar as practical, implement the purposes of this Agreement.

14.7 **Notices**. All notices which are required or permitted pursuant to this Agreement shall be in writing and sufficient if delivered personally, sent by facsimile (and promptly confirmed by personal delivery, registered or certified mail or overnight courier), sent by nationally-recognized overnight courier or sent by registered or certified mail, postage prepaid, return receipt requested, addressed as follows:

If to Beam:	Beam Therapeutics Inc. 26 Landsdowne Street Cambridge, MA 02139 Email: [***] Attn: [***]
With a copy to:	Ropes & Gray LLP Prudential Tower 800 Boylston Street Boston, MA 02199 Telephone: [***] Facsimile: [***] E-mail: [***] Attn: [***]
If to Prime:	[***] [***] [***] E-mail: [***] Attn: [***]
With a copy to:	Goodwin Procter LLP 100 Northern Avenue Boston, Massachusetts 02210 E-mail: [***] Attn: [***]

or to such other address(es) as the Party to whom notice is to be given may have furnished to the other Party in writing in accordance herewith. Any such notice shall be deemed to have been given: (a) when delivered if personally delivered or sent by facsimile on a Business Day (or if delivered or sent on a non-Business Day, then on the next Business Day); (b) on the Business Day after dispatch if sent by nationally-recognized overnight courier; or (c) on the fifth (5^{th}) Business Day following the date of mailing, if sent by mail.

14.8 **Dispute Resolution**. If any dispute between the Parties arises out of or relates to this Agreement, other than a dispute within the JSC to be resolved as set forth in Section 3.4.3, (a "**Dispute**"), either Party by written notice to the other Party may have such issue referred for resolution to the Senior Officers. The Senior Officers shall meet promptly to discuss the matter submitted and to determine a resolution. If the Senior Officers are unable to resolve the Dispute within **[***]** after it is referred to them, then the Parties may pursue all other rights and remedies available to them under this Agreement, including the right to terminate this Agreement, and the matter shall, upon written notice of either Party to the other Party, be resolved by final, binding arbitration in accordance with Section 14.9.

14.9 **Governing Law and Arbitration**. This Agreement will be governed by, and construed in accordance with, the substantive laws of the Commonwealth of Massachusetts and the

patent laws of the United States, in each case without giving effect to any choice or conflict of law provision. Any arbitration of a Dispute shall be conducted by the American Arbitration Association ("**AAA**") under its rules of arbitration then in effect, except as modified in this Agreement. The arbitration shall be conducted in the English language, by a single arbitrator. If the Parties are unable to agree on an arbitrator, the arbitrator shall be selected in accordance with the AAA rules, or if the AAA rules do not provide for such selection, by the chief executive of AAA. At either Party's election, the arbitrator shall engage an independent expert with experience in the subject matter of the Dispute to advise the arbitrator, but final decision making authority shall remain in the arbitrator. The arbitrator shall determine what discovery will be permitted, consistent with the goal of reasonably controlling the cost and time that the Parties must expend for discovery, provided that the arbitrator shall permit such discovery as he or she deems necessary to permit an equitable resolution of the Dispute. The Parties and the arbitrator shall use reasonable efforts to complete any such arbitration within **[***]**. The Parties agree that the decision of the arbitrator shall be the binding remedy between them regarding the Dispute presented to the arbitrator, and judgment upon the award rendered by the arbitrator may be entered in any court of competent jurisdiction. Unless otherwise agreed by the Parties, the arbitration proceedings shall be conducted in Boston, Massachusetts. The Parties shall share equally the cost of the arbitration filing and hearing fees, the cost of an independent expert retained by the arbitrator and the cost of the arbitrator and administrative fees of AAA. Each Party shall bear its own costs and attorneys' and witnesses' fees and associated costs and expenses. Each Party agrees not to commence any legal proceedings based upon or arising out of this Agreement in a court of law, except that a Party may seek a temporary restraining order or a preliminary injunction from any court of competent jurisdiction in order to prevent immediate and irreparable injury, loss or damage on a provisional basis, pending the selection of the arbitrator or pending the arbitrator's determination of the merits of any Dispute pursuant to this Section 14.9.

14.10 **Entire Agreement; Amendments**. This Agreement, together with the Schedules hereto, contains the entire understanding of the Parties with respect to the subject matter hereof. Any other express or implied agreements and understandings, negotiations, writings and commitments, either oral or written, in respect to the subject matter hereof are superseded by the terms of this Agreement. The Schedules to this Agreement are incorporated herein by reference and shall be deemed a part of this Agreement. This Agreement may be amended, or any term hereof modified, only by a written instrument duly executed by authorized representatives of each of the Parties.

14.11 **Headings**. The captions to the several Articles, Sections and subsections hereof are not a part of this Agreement, but are merely for convenience to assist in locating and reading the several Articles and Sections hereof.

14.12 **Independent Contractors**. It is expressly agreed that Prime and Beam shall be independent contractors and that the relationship between the Parties shall not constitute a partnership, joint venture or agency, provided, in the event Prime exercises any Prime Opt-In Option, the Parties shall confer and determine by mutual written agreement whether the Parties have entered into a partnership solely for U.S. income tax purposes. Neither Prime nor Beam shall have the authority to make any statements, representations or commitments of

any kind, or to take any action, which shall be binding on the other Party, without the prior written consent of the other Party.

14.13 **Waiver**. The waiver by either Party of any right hereunder, or of any failure of the other Party to perform, or of any breach by the other Party, shall not be deemed a waiver of any other right hereunder or of any other breach by or failure of such other Party whether of a similar nature or otherwise.

14.14 **Cumulative Remedies**. Except as expressly set forth in this Agreement, no remedy referred to in this Agreement is intended to be exclusive, but each shall be cumulative and in addition to any other remedy referred to in this Agreement or otherwise available under Applicable Law.

14.15 **Waiver of Rule of Construction**. Each Party has had the opportunity to consult with counsel in connection with the review, drafting and negotiation of this Agreement. Accordingly, the rule of construction that any ambiguity in this Agreement shall be construed against the drafting Party shall not apply.

14.16 **Business Day Requirements**. In the event that any notice or other action or omission is required to be taken by a Party under this Agreement on a day that is not a Business Day then such notice or other action or omission shall be deemed to be required to be taken on the next occurring Business Day.

14.17 **Counterparts**. This Agreement may be signed in any number of counterparts (facsimile and electronic transmission included), each of which shall be deemed an original, but all of which shall constitute one and the same instrument. After facsimile or electronic transmission, the parties agree to execute and exchange documents with original signatures upon written request by either Party. Counterpart signatures delivered via facsimile or e-mail in PDF or similar electronic format shall have the same binding effect as original signatures.

[Signature page follows]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

PRIME MEDICINE, INC.		**BEAM THERAPEUTICS INC.**	
BY:	/s/ Stephen Knight	BY:	/s/ John Evans
NAME:	Stephen Knight	NAME:	John Evans
TITLE:	President	TITLE:	Chief Executive Officer

Schedule 1.18

Beam CRISPR/Delivery Patent Rights

[***]

Schedule 1.31

Beam Licensed Patent Rights

[***]

Schedule 1.173

Prime Licensed Patent Rights

[***]

Schedule 1.215

Third Party Agreements

[***]

Schedule 2.4.1

Prime Third Party Agreement Provisions

[***]

Schedule 2.4.2

Beam Third Party Agreement Provisions

[***]

Certain identified information has been excluded from this exhibit because it is both not material and is the type that the registrant treats as private or confidential. Information that was omitted has been noted in this document with a placeholder identified by the mark "[***]".

LICENSE AGREEMENT

by and between

THE BROAD INSTITUTE, INC.

and

PRIME MEDICINE, INC.

September 26, 2019

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Exhibits:

LICENSE AGREEMENT

This License Agreement (this "**Agreement**") is entered into as of this 26th day of September, 2019 (the "**Effective Date**"), by and between Prime Medicine, Inc., a corporation existing under the laws of Delaware, having a place of business at [***] ("**Licensee**"), and The Broad Institute, Inc., a non-profit corporation existing under the laws of Massachusetts, having a place of business at 415 Main Street, Cambridge, MA 02142 ("**Broad**").

WHEREAS, the technology claimed in the Patent Rights (as defined below) was discovered and developed by researchers at Broad and the Institutions (as defined below);

WHEREAS, one or more of such researchers at the Institutions is an employee of the Howard Hughes Medical Institute ("**HHMI**") and HHMI has assigned to Harvard (as defined below) its rights in those Patent Rights on which an HHMI employee is an inventor, subject to certain rights retained by HHMI as specifically described below;

WHEREAS, Broad, the Massachusetts Institute of Technology ("**MIT**", a not-for-profit Massachusetts corporation with a principal place of business at 77 Massachusetts Avenue, Cambridge, Massachusetts 02139) and/or the President and Fellows of Harvard College ("**Harvard**", an educational and charitable corporation existing under the laws and the constitution of the Commonwealth of Massachusetts, having a place of business at Smith Campus Center, Suite 727, 1350 Massachusetts Avenue, Cambridge, Massachusetts 02138) are co-owners of certain of the Patent Rights set forth on Exhibit 1.111.

WHEREAS, pursuant to that certain Operating Agreement by and among Broad, MIT and Harvard, dated July 1, 2009, MIT and Harvard have authorized Broad to act as their sole and exclusive agent for the purposes of licensing their interest in the co-owned Patent Rights, and MIT and Harvard have authorized Broad to enter into this Agreement on their behalf with respect to such Patent Rights.

WHEREAS, the research was sponsored in part by the federal government of the United States of America and as a consequence this license is subject to overriding obligations to the federal government of the United States of America under 35 U.S.C. §§ 200-212 and applicable regulations;

WHEREAS, Licensee wishes to obtain a license under the Patent Rights;

WHEREAS, Broad and the Institutions desire to have products based on the inventions described in the Patent Rights developed and commercialized to benefit the public;

WHEREAS, such products may be applicable to the improvement of the health of individuals throughout the world; and

WHEREAS, Licensee has represented to Broad, in order to induce Broad to enter into this Agreement, that Licensee shall commit itself to commercially reasonable efforts to develop, obtain Regulatory Approval (as defined below) for and commercialize such products, and thereafter make them available to the public.

NOW, THEREFORE, the Parties hereto, intending to be legally bound, hereby agree as follows:

1. Definitions.

As used in this Agreement, the terms with initial letters capitalized, whether used in the singular or plural form, shall have the meanings set forth in this Article 1 (Definitions) or, if not listed below, the meaning designated in places throughout this Agreement.

1.1 **"Abandoned Patent Rights"** shall have the meaning set forth in Section 6.4.1 (Abandonment by Licensee).

1.2 **"Abbreviated Licensee Showing"** means, with respect to a Proposed Broad Target and the associated Proposed Broad Target Notice Date, that Licensee has:

1.2.1 within [***] of the Proposed Broad Target Notice Date (i) delivered to Broad a plan for a human therapeutic in the Field [***] directed to such Proposed Broad Target, [***], and (ii) provided Broad with evidence that Licensee, or its applicable Affiliate or Sublicensee, has commenced research, development and commercialization of such [***] under such plan;

1.2.2 (i) within [***] of the Proposed Broad Target Notice Date, indicated in writing to Broad that Licensee, either directly or through an Affiliate or Sublicensee, has a good faith interest in pursuing research, development and commercialization within the Field of a human therapeutic [***] directed to such Proposed Broad Target, and (ii) within [***] of the Proposed Broad Target Notice Date, (A) delivered to Broad a plan for a human therapeutic in the Field [***] directed to such Proposed Broad Target, [***], and (B) provided Broad with evidence that Licensee, or its applicable Affiliate or Sublicensee, has commenced research, development and commercialization of such [***] under such plan; or

1.2.3 (i) within [***] of the Proposed Broad Target Notice Date, indicated in writing to Broad that Licensee, directly or through any of its Affiliates or Sublicensees, has a good faith interest in entering into a collaboration agreement to research, develop and commercialize within the Field a human therapeutic [***] directed to such Proposed Broad Target with a Third Party (such Third Party, a "**Collaboration Partner**"), and (ii) within [***] of the Proposed Broad Target Notice Date,

(A) entered into a collaboration agreement with a Collaboration Partner to research, develop and commercialize within the Field a human therapeutic that is a [***] and is directed to such Proposed Broad Target pursuant to a plan, [***], and (B) provided Broad with evidence that Licensee, or its applicable Affiliate, Sublicensee or Collaboration Partner, has commenced research and development of such [***] under such plan.

1.3 **"Achieved Milestone"** shall have the meaning set forth in Section 4.4.1.1 (Development Milestone Payments for Schedule 1 Products) or Section 4.4.2.1 (Development Milestone Payments for Schedule 2 Products), as applicable.

1.4 **"Acquirer"** shall have the meaning set forth in Section 4.9 (Assumption of Obligations).

1.5 **"Additional National Stage Filings"** shall have the meaning set forth in Section 6.1.4 (Control).

1.6 **"Additional Securities"** means shares of capital stock, convertible securities or warrants, options, or other rights to subscribe for, purchase or acquire from Licensee any capital stock of Licensee; provided that, "other rights to subscribe for, purchase or acquire" shall not include (i) preemptive or other rights to participate in new offerings of securities by Licensee after the Effective Date, (ii) obligations under a purchase agreement for preferred stock of Licensee to acquire additional shares of such preferred stock on the same terms as those purchased at an initial closing upon the passage of time or meeting (or waiver) of specified Licensee performance conditions or (iii) anti-dilution provisions that have not been triggered.

1.7 **"Affiliate"** means, with respect to a Person, organization or entity, any Person, organization or entity controlling, controlled by or under common control with, such Person, organization or entity. For purposes of this definition only, "control" of another Person, organization or entity will mean the possession, directly or indirectly, of the power to direct or cause the direction of the activities, management or policies of such Person, organization or entity, whether through the ownership of voting securities, by contract or otherwise. Without limiting the foregoing, control will be presumed to exist when a Person, organization or entity (a) owns or directly controls more than fifty percent (50%) of the outstanding voting stock or other ownership interest of the other organization or entity or (b) possesses, directly or indirectly, the power to elect or appoint more than fifty percent (50%) of the members of the governing body of the other organization or entity. The Parties acknowledge that in the case of certain entities organized under the laws of certain countries outside of the United States, the maximum percentage ownership permitted by law for a foreign investor may be less than fifty percent (50%), and that in such cases such lower percentage will be substituted in the preceding sentence.

Notwithstanding the foregoing definition, until the earlier of the consummation of a Change of Control of Licensee or [***] after the closing of the Initial Public Offering of securities of Licensee, (a) the Licensee's investors shall not be considered to be Affiliates of the Licensee for purposes of this Agreement and (b) portfolio companies owned in whole or in part by one or more of the Licensee's investors that have no legal connection to nor contract with the Licensee, and would not otherwise be Affiliates of Licensee but for being owned in whole or in part by one or more of the Licensee's investors, shall not be considered to be Affiliates of the Licensee for purposes of this Agreement. A portfolio company owned in whole or in part by the Licensee's investors or any of them that is not an Affiliate of the Licensee under the foregoing sentence and enters into a Sublicense agreement with Licensee shall not become an Affiliate of Licensee solely as a result of entering into such Sublicense agreement. A portfolio company that was not an Affiliate under the foregoing in this paragraph prior to [***] after the closing of the Initial Public Offering of securities of Licensee shall not become deemed an Affiliate of Licensee merely by the passage of time (i.e., they shall retain after such time-point their previous non-Affiliate-of-Licensee status for purposes of this Agreement, unless and until a new control relationship is formed (after such point in time) between Licensee and the applicable portfolio company).

1.8 **"Ag Product"** means any product comprising a plant, plant tissue, plant cell, plant part or plant seed, including any organism in the microbiome used in association with such plant, plant tissue, plant cell, plant part or plant seed, that is used for agricultural purposes.

1.9 **"Agreement"** shall have the meaning set forth in the preamble.

1.10 **"Anti-Dilution Shares"** shall have the meaning set forth in Section 4.2.2 (Anti-Dilution Issuances).

1.11 **"Applicable Law"** means (a) with respect to a given jurisdiction, all applicable laws, rules and regulations (including any rules, regulations, guidelines or other requirements of any Regulatory Authorities) that may be in effect from time to time in such jurisdiction, and (b) with respect to any jurisdiction that does not have laws, rules or regulations that govern genetically modified organisms, all applicable laws, rules and regulations (including any rules, regulations, guidelines or other requirements of any Regulatory Authorities) of the United States federal government that may be in effect from time to time to the extent applicable to genetically modified organisms.

1.12 **"Bankruptcy Event"** means, with respect to any Person, any of the following:

1.12.1 such Person shall commence a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law now or hereafter in effect or seeking the appointment of a trustee, receiver, liquidator, custodian or other similar official of it or any substantial part of its property, or shall consent to any such relief or to the appointment of, or taking possession by, any such official in an involuntary case or other proceeding commenced against it, or shall make a general assignment for the benefit of creditors, or shall take any corporate action to authorize any of the foregoing;

1.12.2 an involuntary case or other proceeding shall be commenced against such Person seeking liquidation, reorganization or other relief with respect to it or its debts under any bankruptcy, insolvency or other similar law now or hereafter in effect or seeking the appointment of a trustee, receiver, liquidator, custodian or other similar official of it or any substantial part of its property, and such involuntary case or other proceeding shall remain undismissed and unstayed for a period of [***]; or an order for relief shall be entered against such Person under the United States federal bankruptcy laws as now or hereafter in effect; or

1.12.3 a receiver or trustee shall be appointed with respect to such Person or all or substantially all of the assets of such Person.

1.13 **"Bona Fide Proposal"** means a bona fide proposal for the research, development and commercialization of a [***] Proposed Product. A Bona Fide Proposal shall include, at a minimum, [***].

1.14 **"Broad"** shall have the meaning set forth in the preamble.

1.15 **"Broad Confidential Information"** shall have the meaning set forth in Section 11.1.1.1 (Definitions).

1.16 **"Broad Designee"** shall have the meaning set forth in Section 4.2.1 (Initial Issuance).

1.17 **"Calendar Quarter"** means each of the periods of three (3) consecutive calendar months ending on March 31, June 30, September 30 and December 31 during the Term.

1.18 **"Calendar Year"** means any twelve (12) month period commencing on January 1.

1.19 **"Cap Table"** shall have the meaning set forth in Section 4.2.4.1 (Representations and Warranties).

1.20 **"Challenging Party"** shall have the meaning set forth in Section 4.6.1 (Patent Challenge).

1.21 **"Change of Control"** means, with respect to Licensee, (a) a merger or consolidation of Licensee with a third party which results in the voting securities of Licensee

outstanding immediately prior thereto ceasing to represent at least fifty percent (50%) of the combined voting power of the surviving entity immediately after such merger or consolidation, (b) a transaction or series of related transactions in which a third party, together with its Affiliates, becomes the owner or beneficial owner of more than fifty percent (50%) of the combined voting power of Licensee's outstanding securities other than through issuances by Licensee of securities of Licensee in a bona fide financing transaction or series of related bona fide financing transactions, or (c) the sale, lease or other transfer to a third party of all or substantially all of Licensee's assets or business to which this Agreement relates.

1.22 **"Change of Control Multiplier"** shall have the meaning set forth in Section 4.4.3 (Change of Control Multiplier).

1.23 **"Claims"** shall have the meaning set forth in Section 9.1.1 (Indemnity).

1.24 **"Clinical Study"** means a Phase 1 Clinical Study, Phase 2 Clinical Study, Phase 3 Clinical Study, or such other study in humans that is conducted in accordance with good clinical practices and is designed to generate data in support or maintenance of an NDA or other similar application for Regulatory Approval (appropriate to the type of product candidate or product).

1.25 **"Collaboration Partner"** shall have the meaning set forth in Section 1.2 ("Abbreviated Licensee Showing").

1.26 **"Collaboration Period"** shall have the meaning set forth in Section 2.7.13.5 (Limited-Time Preclusion of [***]).

1.27 **"Combination Product"** shall have the meaning set forth in Section 4.5.7 (Combination Products).

1.28 **"Commercial License Negotiation Period"** shall have the meaning set forth in Section 2.7.15.2(b) (Right to Negotiate Commercial License).

1.29 **"Commercial License Notice"** shall have the meaning set forth in Section 2.7.15.2(b) (Right to Negotiate Commercial License).

1.30 **"Commercial License Response"** shall have the meaning set forth in Section 2.7.15.2(b) (Right to Negotiate Commercial License).

1.31 **"Commercial Partner"** shall have the meaning set forth in Section 2.7.15.3(a) (Right of First Offer).

1.32 [***]

1.33 **"Competitor"** means any entity (a) listed in Exhibit 1.33 and (b) that, subject to Section 2.7.4 (Exceptions), is an Affiliate of and controlled by, as that term is used in the definition of Affiliate, (and not merely under common control with) an entity described under the foregoing clause (a). An entity that is a Competitor under the foregoing clause (b) shall only be deemed a Competitor for so long as such control exists. During the term, Licensee shall have the right to add up to [***] additional entities to Exhibit 1.33 upon prior written notice to Broad if (a) such entities are competitors in Prime Editing technology generally and such entity's business is substantially dependent upon a Prime Editing technology platform that such competitor owns or controls, and (b) with respect to such Prime Editing technology platform, such entity holds a blocking patent position with respect to such technology's use for a particular class of Prime Editors (generally, and not merely with respect to a particular [***]). Such notice must include an explanation, to Broad's reasonable satisfaction, as to how a proposed competitor meets the requirements set forth in the foregoing (a) and (b). After Licensee has added such [***] additional entities, Licensee may propose that [***] or more additional entities that meet the requirements set forth in the foregoing (a) and (b) be added to Exhibit 1.33, and such entity(ies) shall only be added to Exhibit 1.33 by mutual agreement of the Parties.

1.34 **"Confidential Information"** shall have the meaning set forth in Section 11.1.1.3 (Definitions).

1.35 **"Contract Year"** means any twelve (12) month period commencing on the Effective Date or an anniversary of the Effective Date.

1.36 **"Covered"** means, with respect to a given product, process, method or service, that a Valid Claim would (absent a license thereunder or ownership thereof) be infringed (whether directly infringed or indirectly by induced or contributory infringement) by the making, using, selling, offering for sale, importation or other exploitation of such product, process, method or service. With respect to a claim of a pending patent application, "infringed" refers to activity that would infringe or be covered by such Valid Claim if it were contained in an issued patent. Cognates of the word "Covered" shall have correlative meanings.

1.37 **"Cross Licenses"** shall have the meaning set forth in Section 1.105 ("Non-Royalty Sublicense Income").

1.38 **"Current Development Demonstration"** means a demonstration by Licensee of the research, development or commercialization of a Royalty-Bearing Product in the Field [***] by Licensee or through any of its Affiliates or Sublicensees. Such demonstration shall require Licensee to [***].

1.39 **"Developing Country"** means any country identified as a low-income or lower-middle-income economy in the World Bank "Country and Lending Groups" classification.

1.40 **"Development Milestones"** means the development and regulatory milestones set forth in Exhibit 3.1 hereto.

1.41 **"Development Plan"** means the plan attached hereto as Exhibit 3.2.1 as such plan may be adjusted from time to time pursuant to this Agreement.

1.42 **"Direct License"** shall have the meaning set forth in Section 10.3.1 (Termination Rights).

1.43 **"Dispute"** shall have the meaning set forth in Section 11.8 (Dispute Resolution).

1.44 **[***]**

1.45 **"Effective Date"** shall have the meaning set forth in the preamble.

1.46 **"Enabled Product"** means any product that (a) was made, discovered, developed or determined to have utility (i) through the use of any of the Patent Rights, provided that the research or discovery program in which such Patent Rights are used has commenced within [***] following the Effective Date, or (ii) through the use of Transferred Materials and (b) is not a Licensed Product.

1.47 **"EU"** means the European Union.

1.48 **"EU Major Market Countries"** means the United Kingdom (for clarity, regardless of whether it is a member of the EU), Germany, Italy, France and Spain.

1.49 **"Executive Officers"** shall have the meaning set forth in Section 11.8 (Dispute Resolution).

1.50 **"Exempted Issuances"** means: shares of common stock issued or issuable, and options, warrants or other rights to purchase common stock sold, issued or issuable, by Licensee (i) to a corporation, partnership or other entity (other than a corporation, partnership or other entity that is an Affiliate (which definition for purposes of this Section 1.50 ("Exempted Issuances") shall be deemed to exclude the second paragraph of Section 1.7 ("Affiliate")) of Licensee) or to the shareholders of such corporation, partnership or other entity pursuant to the acquisition of such corporation, partnership or other entity by Licensee by merger, purchase of substantially all of the assets or similar transaction (but excluding any shares, options, warrants or other rights issued or issuable as incentive compensation); and (ii) to an academic institution, inventor, biopharmaceutical company, or intellectual property holding company (in each case, other than a corporation, partnership or other entity that is an Affiliate (which definition for purposes of this Section 1.50 ("Exempted Issuances") shall be deemed to exclude the second paragraph of Section 1.7 ("Affiliate")) of Licensee) in consideration of such Person's entering into a sponsored research, collaboration, technology or intellectual property license, development, OEM, marketing or other similar agreement with Licensee, including any such agreement entered into in settlement of litigation (but excluding any shares, options, warrants or other rights issued or issuable as incentive compensation); provided, however, that shares issued or issuable to an investor in Licensee in connection with any transaction contemplated under clause (i) or (ii) (other than shares issued to such investor as a shareholder of an entity as contemplated under clause (i)) shall not be Exempted Issuances.

1.51 **"Expanded Field"** shall have the meaning set forth in Section 2.5 (Licensed Field Expansion Option).

1.52 **"Explanation"** shall have the meaning set forth in Section 3.5.1 (Notice/Explanation/Plan).

1.53 **"FDA"** means the United States Food and Drug Administration.

1.54 **"Field"** means the prevention or treatment of human diseases by (i) editing (including modifying or converting) of DNA or (ii) targeting of DNA, either, in the case of clause (i) or (ii), (a) ex vivo for subsequent administration to a human of an organ, tissue, cells or sub-cellular component so edited or targeted, (b) in vivo, by administering a product or product candidate to a human or (c) by Xeno-Transplantation (subject to Section 3.6 (Xeno-Transplantation)); provided that, (I) the Field does not include the prevention or treatment of human disease using a small or large molecule that was identified or discovered using technology Covered by the Patent Rights but that is not itself a Prime Editor; (II) the Field does not include stimulation of biased inheritance of particular genes or traits within a population of plants or animals or other organisms; (III) the Field does not include Ag Products or products in the field of Livestock Applications; and (IV) the Field does not include any products, including without limitation any Ag Product or any product in the field of Livestock Applications, that provide nutritional benefits, unless such products (aa) are regulated by a Regulatory Authority as a drug or biologic pursuant to Section 505 of the United States Federal Food, Drug, and Cosmetic Act of 1938, as amended, Section 351 of the United States Public Health Service Act of 1944, as amended, or any successor laws, or equivalent laws or regulations in jurisdictions outside the United States and (bb) are otherwise included in this definition of Field. For the avoidance of doubt, the Field does not include, and no rights are granted hereunder with respect

to, diagnostic or prognostic products or purposes, including diagnostics and prognostics for human diseases or conditions.

1.55 **"Financing Threshold"** means an aggregate total investment of [***] in cash since the date of incorporation or formation of Licensee, in one or a series of related or unrelated transactions, in each case, in exchange for Licensee's capital stock.

1.56 **"First Commercial Sale"** means the date of the first sale by Licensee, its Affiliate or a Sublicensee of a Royalty-Bearing Product to a third party following receipt of any required Regulatory Approval in the country in which such Royalty-Bearing Product is sold, excluding, however, any sale or other distribution for use in a Clinical Study, charitable purposes, compassionate use or similar limited purposes.

1.57 **"First Offer Notice"** shall have the meaning set forth in Section 2.7.15.3(a) (Right of First Offer).

1.58 **"First Offer Response"** shall have the meaning set forth in Section 2.7.15.3(a) (Right of First Offer).

1.59 "**Founder Stock Restriction Agreement**" shall have the meaning set forth in Section 4.2.1 (Initial Issuance).

1.60 **"FSFD"** means, with respect to a Clinical Study, the first dose of the first subject dosed in such Clinical Study.

1.61 **"Fully-Diluted Basis"** means, as of a specified date, the number of shares of common stock of Licensee then-outstanding plus the number of shares of common stock of Licensee issuable upon exercise or conversion of then-outstanding convertible securities or warrants, options, or other rights to subscribe for, purchase or acquire from Licensee any capital stock of Licensee (which shall be determined without regard to whether such securities or rights are then vested, exercisable or convertible) plus, without duplication, the number of shares reserved and available for future grant under any then-existing equity incentive plan of Licensee; provided that, for clarity, "other rights to subscribe for, purchase or acquire" shall not include (i) preemptive or other rights to participate in new offerings of securities by Licensee, (ii) obligations under a purchase agreement for preferred stock of Licensee to acquire additional shares of such preferred stock on the same terms as those purchased at an initial closing upon the passage of time or meeting (or waiver) of specified Licensee performance conditions or a specified approval of Licensee's Board of Directors or certain stockholders or (iii) anti-dilution provisions that have not been triggered.

1.62 **"[***]"** shall have the meaning set forth in Section 2.7.13.2 ([***]).

1.63 **"[***] Inquiry"** shall have the meaning set forth in Section 2.7.13.4 ([***] Inquiry).

1.64 **"[***] Inquiry Date"** shall have the meaning set forth in Section 2.7.13.4 ([***] Inquiry).

1.65 **"[***] Non-Performance Notice"** shall have the meaning set forth in Section 2.7.13.4 ([***] Inquiry).

1.66 **"[***] Notice"** shall have the meaning set forth in Section 2.7.13.4 ([***] Inquiry).

1.67 **"[***] Selection Notice"** shall have the meaning set forth in Section 2.7.13.2 ([***]).

1.68 [***]

1.69 **"Generic/Biosimilar Product"** means, with respect to a Royalty-Bearing Product in a particular country, any pharmaceutical, biopharmaceutical (including gene therapies and cell therapies), or biologic product that: (a) (i) contains the same active pharmaceutical ingredient(s) as such Royalty-Bearing Product, and is approved by the Regulatory Authority in such country with the same or substantially the same labeling as such Royalty-Bearing Product for at least one indication in the Field or (ii) is approved by the Regulatory Authority in such country or jurisdiction as a substitutable generic or substitutable biosimilar for such Royalty-Bearing Product for an indication in the Field or otherwise is approved in a manner that relied on or incorporated data submitted by Licensee, its Affiliates or Sublicensees, in connection with the regulatory filings for such Royalty-Bearing Product, including through an ANDA or 505(b)(2) NDA, or any enabling legislation thereof, or any similar procedure provided for biosimilars or that may be applicable to gene therapy products in each case now or in the future; and (b) is sold in such country or jurisdiction by a third party that is not a Sublicensee or an Affiliate of Licensee, or a distributor of any of them. Any product or component thereof (including any Royalty-Bearing Product or component thereof) licensed, marketed, sold, manufactured or produced by Licensee or its Affiliates or Sublicensees, or any distributor of any of them, will *not* constitute a Generic/Biosimilar Product (but the identical product marketed by another third party is a Generic/Biosimilar Product if it falls within the definition thereof as set forth herein).

1.70 **"Harvard"** shall have the meaning set forth in the Recitals.

1.71 **"HHMI"** means the Howard Hughes Medical Institute.

1.72 **"HHMI Claims"** shall have the meaning set forth in Section 9.1.4 (HHMI Indemnification).

1.73 **"HHMI Indemnitees"** shall have the meaning set forth in Section 9.1.4 (HHMI Indemnification).

1.74 **"HHMI License**" shall have the meaning set forth in Section 2.2.6 (Reservation of Rights; Certain Restrictions).

1.75 **"HHMI Research Personnel"** means Dr. David R. Liu.

1.76 **"Human Germline Modification"** means human germline modification, including intentionally modifying the DNA of human embryos or human reproductive cells.

1.77 **"IND"** means an FDA Investigational New Drug application, or equivalent application or submission for approval to conduct human clinical investigations filed with or submitted to a Regulatory Authority in conformance with the requirements of such Regulatory Authority.

1.78 **"Indemnitees"** shall have the meaning set forth in Section 9.1.1 (Indemnity).

1.79 **"Indemnitor"** shall have the meaning set forth in Section 9.1.2 (Procedures).

1.80 **"Ineligible Sublicensees"** shall have the meaning set forth in Section 10.3.1 (Termination of Rights).

1.81 **"Infringement"** shall have the meaning set forth in Section 7.2 (Suit by Licensee).

1.82 [***]

1.83 **"Initial Public Offering"** or **"IPO"** means a firm-commitment underwritten public offering of equity securities by Licensee (or an Acquirer) or its (or their) Affiliate pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "**Securities Act**").

1.84 [***]

1.85 **"Initiation of GLP Toxicology"** means the first dose in a non-human animal of a Royalty-Bearing Product in toxicology testing conducted in accordance with Good Laboratory Practices under the guidelines of 21 U.S. CFR.§ 58.1 et seq. (or its successor regulation) with the intention of using the results of toxicology testing in support of the filing of an IND for which other IND-enabling activities have been completed or are underway at the time of determination of "achievement of Initiation of GLP Toxicology".

1.86 **"Institution"** means each of Broad, Harvard and MIT individually, and "Institutions" means Broad, Harvard and MIT collectively.

1.87 **"Institution Names"** shall have the meaning set forth in Section 11.5 (Use of Name).

1.88 **"Licensed Product"** means on a country-by-country basis, any product candidate or product the making, using, selling, offering for sale, importing or exporting of which in the country in question is Covered by at least one Valid Claim of the Patent Rights.

1.89 **"Licensee"** shall have the meaning set forth in the preamble.

1.90 **"Licensee Confidential Information"** shall have the meaning set forth in Section 11.1.1.2 (Definitions).

1.91 **"Licensee Patents"** shall have the meaning set forth in Section 1.110 ("Patent Challenge").

1.92 **"List of Countries"** shall have the meaning set forth in Section 6.1.4 (Control).

1.93 **"Litigation Expenses"** shall have the meaning set forth in Section 7.2.2 (Suit by Licensee).

1.94 **"Livestock Applications"** means (a) the modification or alteration of livestock, or of any products, cells or materials derived from livestock, or the use or provision of any processes, methods or services using livestock, or the use of any products, cells or materials derived from livestock, for the purposes of (i) affecting the fitness of such livestock, including affecting their ability to survive or reproduce, (ii) creating, expressing, transmitting, conferring, improving, or imparting a trait of interest in such livestock, or (iii) bioproduction or bioprocessing, or (b) the use, production, alteration or modification of exotic animals, or of any products, cells, tissues or materials derived from exotic animals (including biomaterials derived from such exotic animals) in or for consumer goods or products. For the purposes of this definition, (A) "livestock" means (1) cattle, sheep, goats, buffalo, llamas, camels, swine, poultry and fowl (including egg-producing poultry and fowl), dogs, cats and equine animals, (2) animals used for food or in the production of food, (3) animals ordinarily raised or used on the farm or for home use, consumption, or profit, and (4) fish used for food, and (B) "exotic animals" means snakes, alligators, elephants, camels and other exotic animals but specifically excludes all rodents. Notwithstanding anything in this definition or elsewhere in this Agreement to the contrary, Livestock Applications does not include (i) the use of any animal or animal cell in preclinical research or (ii) the treatment of animal disease.

1.95 **"Loss of Market Exclusivity"** means, on a Royalty-Bearing Product-by-Royalty-Bearing Product, country-by-country, and Calendar Year-by-Calendar Year basis, that the following has occurred:

(a) the Net Sales of such Royalty-Bearing Product in such country in such Calendar Year are less than [***] percent ([***]%) of the average Net Sales of Royalty-Bearing Products in the [***] Calendar Quarters preceding the first marketing or sale of a Generic/Biosimilar Product to such Royalty-Bearing Product in such country;

(b) the decline in such Net Sales is attributable in material part to the marketing or sale in such country of a Generic/Biosimilar Product with respect to such Royalty-Bearing Product by a third party that is not a Sublicensee or a distributor of any of Licensee or its Affiliates or Sublicensees for the applicable Royalty-Bearing Product; and

(c) Such Generic/Biosimilar Product is being marketed and sold by such third party in the Calendar Year for which a determination of Loss of Market Exclusivity is being made.

1.96 **"Maintenance Fees"** shall have the meaning set forth in Section 4.3 (Annual License Maintenance Fees).

1.97 **"[***]"** has the meaning set forth in Section 2.7.12 ([***]).

1.98 **"[***] License"** has the meaning set forth in Section 2.7.11 ([***] License).

1.99 **"Milestone Deadline"** shall have the meaning set forth in Section 3.5.1 (Notice/Explanation/Plan).

1.100 **"Milestone Event"** means any milestone event indicated in Section 4.4.1.1 (Development Milestone Payments for Schedule 1 Products), Section 4.4.1.2 (Sales Milestone Payments for Schedule 1 Products), Section 4.4.2.1 (Development Milestone Payments for Schedule 2 Products) or Section 4.4.2.2 (Sales Milestone Payments for Schedule 2 Products).

1.101 **"MIT"** shall have the meaning set forth in the Recitals.

1.102 **"Multi-Product Negotiation"** means, with respect to a [***] Proposed Product, a negotiation between Licensee and a Third Party involving [***] or more products that target [***] of which [***] such product targets the [***] as such [***] Proposed Product.

1.103 **"NDA"** means a New Drug Application filed with the FDA or an equivalent application to any Regulatory Authority (including a Biologics License Application, or BLA, or its foreign equivalent) requesting Regulatory Approval for a new product.

1.104 **"Net Sales"** means the gross amount billed or invoiced by or on behalf of Licensee, its Affiliates, and Sublicensees and any Affiliates of such Sublicensees (in each case, the "**Invoicing Entity**") or if not billed or invoiced the gross amount received by the Invoicing Entity, on sales, uses, leases or other transfers of Royalty-Bearing Products, less the following to the extent applicable with respect to such sales, leases or other transfers and not previously deducted from the gross invoice price: (a) customary trade, quantity or cash discounts to the extent actually allowed and taken (including discounts in the form of inventory management fees and chargebacks); (b) amounts actually repaid or credited by reason of rejection or return of any previously sold, leased or otherwise transferred Royalty-Bearing Products; (c) customer freight or insurance charges that are paid by or on behalf of the Invoicing Entity; (d) to the extent separately stated on purchase orders, invoices or other documents of sale, any sales, value added or similar taxes, custom duties or other similar governmental charges levied directly on the production, sale, transportation, delivery or use of a Royalty-Bearing Product that are paid by or on behalf of the Invoicing Entity, but not including any tax levied with respect to income; (e) rebates granted or given; and (f) a reasonable allowance for uncollectible accounts; provided that:

1.104.1 in any transfers of Royalty-Bearing Products between an Invoicing Entity and an Affiliate of such Invoicing Entity not for the purpose of resale by such Affiliate and not for use in a Clinical Study, charitable purposes, compassionate use or as free marketing samples provided in the customary course of the Invoicing Entity's business, Net Sales will be equal to the fair market value of the Royalty-Bearing Products so transferred, assuming an arm's length transaction made in the ordinary course of business;

1.104.2 in the event that (i) an Invoicing Entity receives non-cash consideration for any Royalty-Bearing Products, (ii) an Invoicing Entity sells Royalty-Bearing Product in a transaction not at arm's length with a non-Affiliate of an Invoicing Entity, or (iii) any Royalty-Bearing Product is sold by an Invoicing Entity at a discounted price that is substantially lower than the customary prices charged by Invoicing Entity, then Net Sales will be calculated based on the fair market value of such consideration or transaction, assuming an arm's length transaction made in the ordinary course of business, not to exceed the list price of the Royalty-Bearing Products in any event; and

1.104.3 with respect to any provision hereof requiring a calculation of fair market value, assuming an arm's length transaction made in the ordinary course of business, the Invoicing Entity may use the average price of the relevant Royalty-Bearing Product sold for cash during the relevant period in the relevant country.

Transfers of Royalty-Bearing Products by an Invoicing Entity to its Affiliate or a Sublicensee for resale by such Affiliate or Sublicensee or use in Clinical Studies, for compassionate use, or use as free marketing samples, will not be deemed Net Sales. Instead, if applicable, Net Sales will be determined based on the gross amount billed or invoiced by such Affiliate or Sublicensee upon resale of such Royalty-Bearing Products to a third party purchaser. Transfers of Royalty-Bearing Products by an Invoicing Entity for use in Clinical Studies, for compassionate use, or use as free marketing samples will not be deemed Net Sales unless such Invoicing Entity bills or invoices for such Royalty-Bearing Products, in which case, Net Sales will be determined based on the gross amount billed or invoiced by such Invoicing Entity upon transfer for such use.

In the event that Licensee enters into a Sublicense pursuant to which running royalties based on the net sales of a Royalty-Bearing Product are payable to Licensee and Licensee is unable to incorporate into such Sublicense the Net Sales definition hereunder, then Licensee may submit a request to Broad that the definition of net sales agreed upon in such Sublicense be deemed to apply to any amounts billed or invoiced by such Sublicensee under such Sublicense with respect to such Royalty-Bearing Products. In addition to such proposal, Licensee shall demonstrate to Broad's satisfaction, in Broad's sole discretion, that Broad would receive an amount of running royalties under such Sublicense applying such net sales definition equal to or greater than the amount of running royalties that Broad would otherwise receive under the definition of Net Sales hereunder. If Licensee makes such demonstration to Broad's satisfaction, then the net sales definition under such Sublicense shall be deemed to apply to royalty payments on Royalty-Bearing Products owed by Licensee to Broad with respect to such Sublicensee.

1.105 **"Non-Royalty Sublicense Income"** means all consideration received by Licensee or its Affiliates for a Sublicense such as license or distribution fees, milestone or option payments, or license maintenance fees, including any consideration received by Licensee under a Sublicense. Non-Royalty Sublicense Income specifically excludes the following:

1.105.1 payments to Licensee or an Affiliate by a Sublicensee under a Sublicense under the Patent Rights for the purpose of funding the costs of bona fide research and development or manufacture of Royalty-Bearing Products by the Licensee or its Affiliates to be conducted on or following the Effective Date of this Agreement and the effective date of such

Sublicense, as specifically allocated in a research and development plan or manufacturing or commercial plan, as applicable, between Licensee or its Affiliate and the Sublicensee or as specifically described as such in the Sublicense;

1.105.2 if (i) Licensee enters into a Sublicense prior to the [***] anniversary of the Effective Date and (ii) no bona fide research, development or manufacturing costs of Royalty-Bearing Products under such Sublicense are specifically allocated as contemplated in Section 1.105.1 ("Non-Royalty Sublicense Income"), then Licensee may elect to exclude up to [***] percent ([***]%) of the upfront payment (or any series of payments that are intended to serve as an upfront (and not as an event-based milestone) and are only conditioned upon the passage of time and the Sublicense remaining in effect) received by Licensee or its Affiliates under such Sublicense from Non-Royalty Sublicense Income for the purpose of funding the costs of bona fide research, development or manufacturing by the Licensee or its Affiliates on or following the effective date of such Sublicense of Royalty-Bearing Products which are the subject of such Sublicense, provided that in such event (A) Licensee has until the [***] anniversary of the effective date of such Sublicense to use any such amounts excluded from the upfront payment for the research, development and manufacture of Royalty-Bearing Products under such Sublicense, (B) Licensee shall provide to Broad (x) promptly following the execution of such Sublicense, a proposed budget for its future research, development and manufacturing expenses for Royalty-Bearing Products under such Sublicense (as amended from time to time in accordance with this Agreement, the "**Proposed Budget**") and (y) within [***] following each anniversary of the effective date of such Sublicense until the [***] anniversary of such Sublicense, a written report with a reasonably detailed accounting of all such research, development and manufacturing expenses for Royalty-Bearing Products under the Sublicense since the later of the effective date of such Sublicense and the last such report, and (C) if the amount excluded from Non-Royalty Sublicense Income exceeds Licensee's or its Affiliates' cumulative research, development and manufacturing expenses for Royalty-Bearing Products under such Sublicense as of the earlier of (x) the [***] anniversary of the effective date of such Sublicense and (y) the [***] date of the Proposed Budget, then the difference between the two (2) amounts shall be deemed Non-Royalty Sublicense Income as of such date, provided that if such difference is greater than [***] percent ([***]%) of such cumulative research, development and manufacturing expenses, then the difference shall be deemed Non-Royalty Sublicense Income as of the effective date of the applicable Sublicense and the late payment provisions of Section 5.4 (Late Payments) shall apply, and provided further that, prior to the [***] anniversary of the effective date of any Sublicense, Licensee may amend the Proposed Budget for such Sublicense by written notice to Broad, except that any extension of the term of the Proposed Budget past the [***] anniversary of the effective date of such Sublicense will not lengthen the period of time in which Licensee must, for the purposes of this Section 1.105.2 ("Non-Royalty Sublicense Income") use any amounts excluded from the upfront payment for the research, development and manufacture of Royalty-Bearing Products under such Sublicense.

1.105.3 reimbursement for patent expenses as specifically allocated or specifically described as such in the Sublicense (including prosecution and enforcement expenses) paid to third parties at out-of-pocket cost to Licensee;

1.105.4 reimbursement of commercialization expenses, as specifically allocated or as specifically described as such in the Sublicense, of Licensee under a co-promotion arrangement at Licensee's cost (determined in accordance with U.S. generally accepted accounting principles consistently applied);

1.105.5 reimbursement of license, option, or other fees or payments as specifically allocated or as specifically described as such in the Sublicense paid to (a) third parties or (b) Broad pursuant to this Agreement, in each case ((a)-(b)), at out-of-pocket cost to Licensee;

1.105.6 proceeds from equity investments to the extent at fair market value, principal amount of loans to the extent not forgiven, and royalties on Net Sales of Royalty-Bearing Products; and

1.105.7 a percentage of any profit share for any product, to the extent such percentage does not exceed Licensee's and its Affiliates' percentage share contribution of the research, development and commercialization costs of such product following the effective date of the Sublicense (taking into consideration the geography for which the profit share is applicable and including share contributions by Licensee or its Affiliates in kind or through a reduction of future payments owed to Licensee or its Affiliates), and provided that for net sales on which such profit share is based running royalties are paid to Broad to the extent required in accordance with the terms of this Agreement.

To avoid doubt as to the calculation of Non-Royalty Sublicense Income, "equity investments to the extent at fair market value" means that only a premium over the fair market value of the security received for the equity investment (such fair market value being determined by reference to the price paid by a non-Sublicensee Third Party for the equivalent Licensee security (equal to such price wherever available) or by a reasonable methodology where such non-Sublicensee Third Party price is not available) would be included in Non-Royalty Sublicense Income, and if a loan is partially forgiven, then only the forgiven portion of the loan would be included in the Non-Royalty Sublicense Income.

In the event that non-cash consideration is received as Non-Royalty Sublicense Income, Non-Royalty Sublicense Income shall be calculated based on the fair market value of such non-cash consideration at the time of the transaction assuming an arm's length transaction made in the ordinary course of business. For clarity, a license of intellectual property rights that are necessary for Licensee to make, have made, use, have used, sell, offer for sale, have sold, export and import Royalty-Bearing Products, and other routine contractual covenants that do not involve the payment of any monetary consideration and are customary in the type of deal that the Sublicense is included in (including covenants providing for the research, development, supply, and commercialization responsibilities of the Sublicensee, confidentiality provisions, licenses or other rights or forbearances with respect to improvements and other technologies and intellectual property, retention of co-promotion rights or options to obtain co-promotion rights to the Royalty-Bearing Product(s) covered by such Sublicense, and indemnification) shall not be deemed non-cash consideration. For purposes of this Section 1.105.7 ("Non-Royalty Sublicense Income"), "all consideration received by Licensee or its Affiliates for a Sublicense" shall include all consideration received by Licensee or any of its Affiliates for any option, license, sublicense,

standstill, covenant not to sue or other right granted under any other rights owned or controlled (for example, by virtue of a license granted by a third party) by Licensee or its Affiliate, or other agreement or arrangement entered into by Licensee or its Affiliate, in connection with a Sublicense. All rights relevant to making, using, selling, offering to sell or importing particular Royalty-Bearing Products to which a Sublicense relates shall be included in or deemed to be granted in connection with the Sublicense under which the rights granted to Licensee hereunder are sublicensed with respect to such Royalty-Bearing Products.

In addition, to the extent that Licensee enters into a cross-license with a Third Party to achieve freedom-to-operate for Royalty-Bearing Products while providing the Third Party with freedom-to-operate with respect to all or some portion of the Patent Rights ("**Cross Licenses**"), the non-economic value of the licenses to Licensee as part of such Cross License, and the other routine contractual covenants by other parties to such Cross License, shall not be deemed to give rise to Non-Royalty Sublicense Income for purposes of this Agreement. For clarity, any financial consideration that Licensee receives under such a Cross License shall be treated as Non-Royalty Sublicense Income under this Agreement.

1.106 **"Other Active Component"** shall have the meaning set forth in Section 4.5.7 (Combination Products).

1.107 **"Other IP"** shall have the meaning set forth in Section 7.2 (Suit by Licensee).

1.108 [***]

1.109 **"Party"** means Broad or Licensee and "**Parties**" means both of them.

1.110 **"Patent Challenge"** means any direct, or indirect through the actions of another acting on Licensee's, its Affiliate's, or a Sublicensee's behalf or upon its or their instruction, dispute or challenge, or any knowing, willful, or reckless assistance in the dispute or challenge by another, of the validity, patentability, scope, priority, construction, non-infringement, inventorship, ownership or enforceability of any Patent Right or any claim thereof, or opposition or assistance in the opposition of the grant of any letters patent within the Patent Rights, in any legal or administrative proceedings in a court of law, before the United States Patent and Trademark Office or other similar agency or tribunal in any jurisdiction, or in arbitration including, without limitation, by reexamination, *inter partes* review, opposition, interference, post-grant review, nullity proceeding, preissuance submission, third party submission, derivation proceeding or declaratory judgment action. For clarity, a Patent Challenge shall not include (1) arguments made by Licensee that (a) distinguish the inventions claimed in patents or patent applications owned or controlled by Licensee ("**Licensee Patents**") from those claimed in the Patent Rights but (b) do not disparage the Patent Rights or challenge the validity, scope, or enforceability of the Patent Rights' claims (excluding any claims that have been abandoned, lapsed, expired, or are otherwise no longer in force) under applicable patent laws, regulations or administrative rules, in each case (i) in the ordinary course of ex parte prosecution of the Licensee Patents or (ii) in *inter partes* proceedings before the United States Patent and Trademark Office or other agency or tribunal in any jurisdiction (excluding interferences or derivation proceedings), or in arbitration, wherein the Licensee Patents have been challenged; (2)

arguments or assertions as to whether the Patent Rights Cover a given product, to the extent arising in a Suit brought by Broad; (3) Licensee payments of patent costs to another licensor or assignor of Licensee Patents as required by the agreement under which the Licensee obtained rights to such patent rights, even if the licensor or assignor is engaging in behavior or presenting arguments that would themselves be considered a Patent Challenge if done by the Licensee; nor (4) Licensee being named as an essential party, real party in interest or other status similar to either of the foregoing, in an interference between Patent Rights and Licensee Patents or other adversarial proceeding similar to an interference.

1.111 **"Patent Rights"** means, in each case to the extent owned or controlled by Broad: (a) the patents and patent applications listed in Exhibit 1.111 (including the PCT or original direct national filing in any country, in each case, claiming priority to such application(s) listed in Exhibit 1.111 that are filed on such application(s)); (b) provisional applications not listed in Exhibit 1.111 but to which a nonprovisional application identified in (a) claims priority; (c) any patent or patent application that is a continuation or divisional (excluding continuation-in-part patents or patent applications except to the extent described in (e) below), or that is a reissue, renewal, reexamination, substitution or extension of any patent application identified in (a); (d) any patents issuing on any patent application identified in (a) or (c), including any reissues, renewals, reexaminations, substitutions or extensions thereof; (e) any claim of a continuation-in-part application or resulting patent (including any reissues, renewals, reexaminations, substitutions or extensions thereof) that is entitled to the priority date of, and is directed specifically to subject matter specifically described in, at least one of the patents or patent applications identified in (a); (f) any foreign counterpart (including PCTs) of any patent or patent application identified in (a) or (c) or of the claims identified in (e); and (g) any supplementary protection certificates, pediatric exclusivity periods, and other patent term extensions and exclusivity periods and the like of or based on any patents and patent applications identified in any of (a) through (f). For the avoidance of doubt, the Parties agree to amend this Agreement to add to Exhibit 1.111 such patents and applications identified in (b); provided, however, that any patent or patent application not so added to Exhibit 1.111 shall still be considered a Patent Right hereunder if it falls within (b).

1.112 **"Person"** means an individual, sole proprietorship, partnership, limited partnership, limited liability partnership, corporation, limited liability company, business trust, joint stock company, trust, unincorporated association, joint venture or other similar entity or organization, including a government or political subdivision, department or agency of a government.

1.113 **"Phase 1 Clinical Study"** means a clinical study in any country involving the initial introduction of an investigational new drug into humans, typically designed to determine the metabolism and pharmacologic actions of the drug in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness. In the United States, "Phase 1 Clinical Study" means a human clinical study that satisfies the requirements of 21 C.F.R. § 312.21(a).

1.114 **"Phase 2 Clinical Study"** means a human clinical study in any country conducted to evaluate the effectiveness of a drug for a particular indication or indications in patients with the disease or condition under study and, possibly, to determine the common

short-term side effects and risks associated with the drug. In the United States, "Phase 2 Clinical Study" means a human clinical study that satisfies the requirements of 21 C.F.R. § 312.21 (b).

1.115 **"Phase 3 Clinical Study"** means a human clinical study in any country, whether controlled or uncontrolled, that is performed after preliminary evidence suggesting effectiveness of the drug under evaluation has been obtained, and intended to gather the additional information about effectiveness and safety that is needed to evaluate the overall benefit-risk relationship of the drug and to provide an adequate basis for physician labeling. In the United States, "Phase 3 Clinical Study" means a human clinical study that satisfies the requirements of 21 C.F.R. § 312.21 (c).

1.116 **"Plan"** shall have the meaning set forth in Section 3.5.1 (Notice/Explanation/Plan).

1.117 [***]

1.118 **"[***]"** shall have the meaning set forth in Section 2.7.13.1 ([***]).

1.119 **"Prime Editor"** means a macromolecule or macromolecular complex that is intended to insert deoxyribonucleic acid (DNA) sequence into, delete DNA sequence from, or replace one or more bases of a target DNA sequence using a combination of (a) one or more natural or engineered [***], or any other [***], and (b) a nucleic acid binding protein that can be programmed to bind to a DNA sequence to be so changed, wherein the nucleic acid binding protein does not intentionally make double stranded DNA breaks. "**Prime Editing**" means the process of utilizing a Prime Editor to achieve such change(s) in a nucleic acid target. Notwithstanding the foregoing, [***].

1.120 **"Prime Editor Product"** means a product candidate or product, the primary mechanism of action of which is Prime Editing, comprising a Prime Editor and a nucleic acid moiety that preferentially binds to a specified DNA sequence, targets the Prime Editor to such sequence, contains a template sequence for introducing such alteration into DNA and is either (a) itself administered to a human or (b) used to modify *ex vivo* one or more organ(s), tissue(s), cells, or subcellular component(s) that is/are, in each case, then administered to a human.

1.121 **"Process"** shall have the meaning set forth in Section 2.7.14 (Processing of Proposed Notices).

1.122 **"Proposed Broad Target"** shall have the meaning set forth in Section 2.7.15.1 (Selection of Proposed Broad Targets).

1.123 **"Proposed Broad Target Notice"** shall have the meaning set forth in Section 2.7.15.1 (Selection of Proposed Broad Targets).

1.124 **"Proposed Broad Target Notice Date"** shall have the meaning set forth in Section 2.7.15.1 (Selection of Proposed Broad Targets).

1.125 **"Proposed Budget"** shall have the meaning set forth in Section 1.105.2 ("Non-Royalty Sublicense Income").

1.126 **"Proposed** [***] **Notice"** shall have the meaning set forth in Section 2.7.13.2 ([***]).

1.127 **"Proposed Notice"** shall have the meaning set forth in Section 2.7.14 (Processing of Proposed Notices).

1.128 **"Proposed Product Development Period"** shall have the meaning set forth in Section 2.7.5.2 (Proposed Product Development Period).

1.129 **"Proposed Product Extension Period"** shall have the meaning set forth in Section 2.7.14 (Processing of Proposed Notices).

1.130 **"Proposed Product Notice"** shall have the meaning set forth in Section 2.7.3 (Notice of [***] Proposed Product).

1.131 **"Proposed Product Notice Date"** shall have the meaning set forth in Section 2.7.3 (Notice of [***] Proposed Product).

1.132 **"Proposing Party"** shall have the meaning set forth in Section 2.7.3 (Notice of [***] Proposed Product).

1.133 **"Prosecution"** shall have the meaning set forth in Section 6.1 (Control).

1.134 **"Record Retention Period"** shall have the meaning set forth in Section 5.3 (Records).

1.135 **"Regulatory Approval"** means, with respect to a particular product or service, receipt of all regulatory clearances or approvals (which in the case of the EU may be through the centralized procedure) required in the jurisdiction in question for the sale of the applicable product or service in such jurisdiction, including receipt of pricing approval, if any, legally required for such sale.

1.136 **"Regulatory Authority"** means, in a particular country or jurisdiction, any applicable government regulatory authority involved in granting approvals for the clinical testing, manufacturing and marketing of a Royalty-Bearing Product in such country or jurisdiction, including, in the United States, the FDA.

1.137 **"Related Product"** means with respect to a Royalty-Bearing Product (the "reference Royalty-Bearing Product"), a Royalty-Bearing Product targeting (a) [***] and (b) (i) [***] or (ii) [***], in each case of clause (a), (b)(i) and (b)(ii) as the reference Royalty-Bearing Product.

1.138 [***]

1.139 **"Research Agreement Discussion Period"** shall have the meaning set forth in Section 2.7.15.3(a) (Right of First Offer).

1.140 **"Reserved Broad Target"** shall have the meaning set forth in Section 2.7.15.2 (Reservation of Reserved Broad Targets).

1.141 **"Reserved Broad Target Third Party License"** shall have the meaning set forth in Section 2.7.15.2(b) (Right to Negotiate Commercial License).

1.142 **"Restored Licenses"** shall have the meaning set forth in Section 3.5.7 (Failure to Meet Development Milestone; Opportunity to Cure).

1.143 **"Restored Product"** shall have the meaning set forth in Section 3.5.7 (Failure to Meet Development Milestone; Opportunity to Cure).

1.144 **"Retained Product"** shall have the meaning set forth in Section 3.5.6.3(a) (Unmet Deadline).

1.145 **"Retained Product List"** shall have the meaning set forth in Section 3.5.6.3(a) (Unmet Deadline).

1.146 **"RNA Development Plan"** means [***].

1.147 **"RNA Option"** shall have the meaning set forth in Section 2.5 (Licensed Field Expansion Option).

1.148 **"Royalty Term"** shall have the meaning set forth in Section 4.5.3 (Royalty Term).

1.149 **"Royalty-Bearing Product"** means any Licensed Product or Enabled Product.

1.150 **"Schedule 1 Product"** means a Licensed Product or an Enabled Product, in each case, for the prevention or treatment of any human disease, for which the [***].

1.151 **"Schedule 2 Product"** means a Licensed Product or an Enabled Product, in each case, for the prevention or treatment of any human disease, for which the [***].

1.152 **"Securities Act"** shall have the meaning set forth in Section 1.82 ("Initial Public Offering" or "IPO").

1.153 [***]

1.154 [***]

1.155 **"Selection Date"** shall have the meaning set forth in Section 2.7.13.1 ([***]).

1.156 **"Shares"** shall have the meaning set forth in Section 4.2.1 (Initial Issuance).

1.157 **"Single Schedule 1 Product"** means all Schedule 1 Products that contain the same active ingredient and no other active ingredient, or contain the same combination of active ingredients and no other active ingredient, without regard to formulation or dosage.

1.158 **"Single Schedule 2 Product"** means all Schedule 2 Products that contain the same active ingredient and no other active ingredient, or contain the same combination of active ingredients and no other active ingredient, without regard to formulation or dosage.

1.159 **"Skipped Milestone"** shall have the meaning set forth in Section 4.4.1.1 (Development Milestone Payments for Schedule 1 Products) or Section 4.4.2.1 (Development Milestone Payments for Schedule 2 Products), as applicable.

1.160 **"Start Date"** means the period commencing on the Effective Date and ending on the second (2nd) anniversary thereof.

1.161 **"Sublicense"** means: (a) any right (including any sublicense or covenant not to sue) granted by Licensee or any Sublicensee to any third party, under or with respect to or permitting any use or exploitation of any of the Patent Rights or otherwise permitting the development, manufacture, marketing, distribution, use or sale of Royalty-Bearing Products; (b) any option or other right granted by Licensee or any Sublicensee to any third party to negotiate for or receive any of the rights described under clause (a); or (c) any standstill or

similar obligation undertaken by Licensee or any Sublicensee toward any third party not to grant any of the rights described in clause (a) or (b) to any other third party; in each case regardless of whether such grant of rights, option, standstill, or similar undertaking is referred to or is described as a sublicense. Excluded from this definition of "Sublicense" are any (i) assignments of this Agreement in compliance with Section 11.15 (Assignment and Successors) or (ii) agreements for a Change of Control of Licensee that do not otherwise qualify as a Sublicense under the foregoing clauses (a)-(c).

1.162 **"Sublicensee"** means any Person or entity granted a Sublicense.

1.163 **"Subscription Agreement"** means a Subscription Agreement in the form attached hereto as Exhibit 4.2.

1.164 **"Suit"** shall have the meaning set forth in Section 11.9 (Governing Law and Jurisdiction).

1.165 **"[***]"** shall have the meaning set forth in Section 2.7.13 ([***]).

1.166 **"[***]"** shall have the meaning set forth in Section 2.7.13 ([***]).

1.167 **"Term"** means the term of this Agreement as set forth in Section 10.1 (Term).

1.168 **"Territory"** means worldwide.

1.169 **"Third Party"** or **"third party"** means [***]

1.170 **"**[***] **Proposed Product"** means an actual or potential Licensed Product for use in the Field [***].

1.171 **"Transferred Materials"** means any protocols, data, materials or other information that are (a) necessary or useful to the practice of the Patent Rights; (b) in existence as of the Effective Date and (c) provided by or on behalf of Broad to Licensee or its Affiliates under a future agreement between Licensee (or its Affiliate) and Broad (or its Affiliate) pursuant to which such protocols, data, materials or other information is specifically intended to be deemed "Transferred Materials" under this Agreement.

1.172 **"United States"** means the United States of America.

1.173 **"Valid Claim"** means: (a) a claim of an issued and unexpired patent within the Patent Rights that has not been (i) held permanently revoked, unenforceable, unpatentable or invalid by a decision of a court or governmental body of competent jurisdiction, unappealable or unappealed within the time allowed for appeal, (ii) rendered unenforceable through disclaimer, or (iii) permanently lost through an interference or opposition proceeding without any right of appeal or review, or not appealed or put in for review within the applicable statutory or regulatory period; or (b) a pending claim of a pending patent application within the Patent Rights

that has not been (i) abandoned or finally rejected without the possibility of appeal or refiling or (ii) pending more than [***] from the date of the first substantive office action on such pending patent application, provided such patent application is not pending more than [***] from its earliest priority date. A pending claim that ceases to be a Valid Claim due to the foregoing time limit shall, if it later issues, qualify again as a Valid Claim, provided that it meets the requirements of clauses (a)(i)-(iii) of the foregoing definition.

1.174 **"Xeno-Transplantation"** means the prevention or treatment of human disease through transplantation into a human of any cells, tissue or organ obtained from a non-human animal, portion of such an organ, tissue or cell, including any organ, portion thereof, tissue, cell, or organelle thereof that is genetically engineered (or descends from a genetically engineered line) and/or contains human genetic sequence(s) in addition to or in lieu of exclusively non-human genetic sequence(s), and including any genetically human organ grown in whole or in part in a non-human animal.

1.175 **"Xeno-Transplantation Milestone"** shall have the meaning set forth in Section 3.6.

2. License.

2.1 License Grants.

2.1.1 Subject to the terms and conditions set forth in this Agreement, Broad hereby grants to Licensee (a) an exclusive, royalty-bearing license, sublicensable solely in accordance with Section 2.4 (Sublicenses) below, under the Institutions' interests in the Patent Rights solely to offer for sale, sell, have sold, and import Licensed Products solely for use within the Field in the Territory; provided that with respect to applications relating to (i) delivery or (ii) targeting of DNA, the foregoing license shall be solely with respect to Licensed Products that are Prime Editor Products solely for use within the Field in the Territory; provided further that the foregoing license set forth in clause (a) hereto shall exclude applications relating to the production or processing of small or large molecules, including for the prevention or treatment of human disease, (b) a non-exclusive, royalty-bearing license, sublicensable solely in accordance with Section 2.4 (Sublicenses) below, under the Institutions' interests in the Patent Rights solely to make, have made, offer for sale, sell, have sold, and import Licensed Products solely for use within the Field in the Territory, including, for the avoidance of doubt, for the production or processing of small or large molecules for the prevention or treatment of human disease; provided that the foregoing non-exclusive license under Section 2.1.1(b) (License Grants) shall not apply to any exclusive rights granted under Section 2.1.1(a) (License Grants), and (c) a non-exclusive, royalty-bearing license, sublicensable solely in accordance with Section 2.4 (Sublicenses) below, under the Institutions' interests in the Patent Rights solely to make, have made, offer for sale, sell, have sold, and import Enabled Products (and other products that would be Enabled Products hereunder but for the expiry of the [***] period set forth in the definition thereof) solely for the prevention or treatment of human diseases in the Territory.

2.1.2 Subject to the terms and conditions set forth in this Agreement, Broad hereby grants to Licensee a non-exclusive, worldwide, royalty-bearing license, sublicensable (through a single tier) solely in accordance with Section 2.4 (Sublicenses) below, under the

Institutions' interest in the Patent Rights solely for internal research purposes; provided that, notwithstanding the foregoing, the license granted under this Section 2.1.2 (License Grants) excludes (a) Human Germline Modification (b) the stimulation of biased inheritance of particular genes or traits within a population of plants or animals and (c) the modification of the tobacco plan (including any plant part, plant cell, plant tissue or plant seed), except for modifications that (i) are related to the use of the tobacco plant as a manufacturing system or as a model system for research purposes but (ii) are not related to any use or application in the cultivation, growth, manufacture, exportation or production of any tobacco product. Notwithstanding the foregoing, in the event that Licensee has granted both a Sublicense of its rights under Section 2.1.1 (License Grants) and an internal research Sublicense under this Section 2.1.2 (License Grants), then such internal research Sublicense shall be sublicenseable through the same number of tiers as the Sublicense granted by Licensee pursuant to Section 2.1.1 (License Grants).

2.2 Reservation of Rights; Certain Restrictions. Notwithstanding anything herein to the contrary:

2.2.1 The Institutions retain the right for themselves and for other not-for-profit research organizations and government agencies to make, use, perform and practice the subject matter described or claimed in the Patent Rights for research, teaching, educational and scholarly purposes (including, but not limited to, the right to enter into projects permitted under 15 U.S.C. 3710a (the CRADA statute) or other sponsored research projects or collaborations whether or not such collaborations are formal or informal), in all fields in all territories at any time without restriction; provided, however, that sponsored research funded by a commercial entity shall be considered research for purposes of this Section 2.2.1 (Reservation of Rights; Certain Restrictions);

2.2.2 The Institutions and the United States federal government retain rights in the Patent Rights pursuant to 35 U.S.C. §§ 200-212 and 37 C.F.R. § 401 et seq., and any right granted in this Agreement greater than that permitted under 35 U.S.C. §§ 200-212 or 37 C.F.R. § 401 et seq. shall be subject to modification as may be required to conform to the provisions of those statutes and regulations. Licensee acknowledges that the United States federal government retains a royalty-free, non-exclusive, non-transferable license to practice any government-funded invention claimed in any Patent Right as set forth in 35 U.S.C. §§ 200-211 and the regulations promulgated thereunder, as amended, or any successor statutes or regulations.

2.2.3 In addition to the reservation of rights under Section 2.2.1 (Reservation of Rights; Certain Restrictions), the Institutions reserve the right for themselves and for any Third Party (including non-profit and for-profit entities), to research, develop, make, have made, use, offer for sale, sell, have sold, import or otherwise exploit the Patent Rights and Royalty-Bearing Products as research products or research tools, or for research purposes in the Field;

2.2.4 Licensee agrees that any Royalty-Bearing Products used or sold in the United States that are subject to 35 U.S.C. §§ 201-211 and the regulations promulgated thereunder, as amended, or any successor statutes or regulations thereto shall, to the extent required by law, be manufactured substantially in the United States;

2.2.5 Broad retains the rights, for itself, and for the Institutions, where applicable, set forth in Section 2.7 (Inclusive Innovation Model), Section 3.5.1 (Notice/Explanation/Plan), Section 6.1.4 (Control), and Section 6.4 (Abandonment); and

2.2.6 Licensee acknowledges that it has been informed that the Patent Rights were developed, at least in part, by employees of HHMI and that HHMI has a fully paid-up, non-exclusive, irrevocable, worldwide license to exercise any intellectual property rights with respect to any such Patent Rights for research purposes, with the right to sublicense to non-profit and governmental entities but with no other rights to assign or sublicense (the "**HHMI License**"). All licenses granted under this Agreement are explicitly made subject to the HHMI License.

2.3 Affiliates. The licenses granted to Licensee under Section 2.1 (License Grants) include the right to have some or all of Licensee's rights or obligations under this Agreement exercised or performed by one or more of Licensee's Affiliates, solely on Licensee's behalf; provided, however, that:

2.3.1 Licensee shall notify Broad in writing in advance of any delegation to an Affiliate to exercise or perform any of Licensee's rights or obligations under this Agreement, and shall use reasonable efforts to so notify Broad within [***] in advance of any such delegation;

2.3.2 prior to any Affiliate exercising or performing any of Licensee's rights or obligations under this Agreement, such Affiliate shall agree in writing with Licensee to be bound by the terms and conditions of this Agreement as if it were Licensee hereunder, including specific written agreement (a) to indemnify, defend and hold Indemnitees and HHMI Indemnitees harmless, and carry insurance, under the same terms as Article 9 (Indemnification and Insurance) of this Agreement, and (b) that the Institutions and HHMI are express third party beneficiaries of such writing; provided that nothing in this Section 2.3.2 (Affiliates) is intended to increase the payments (or the number of payments) to Broad under this Agreement (for non-limiting examples, an Affiliate agreeing to the terms and conditions of this Agreement as if it were Licensee hereunder shall not increase the number of times the milestone tables in Article 4 (Consideration for Grant of License) can be run);

2.3.3 no such Affiliate shall be entitled to grant, directly or indirectly, to any third party any right of whatever nature under, or with respect to, or permitting any use or exploitation of, any of the Patent Rights, including any right to develop, manufacture, market or sell Royalty-Bearing Products;

2.3.4 prior to any Affiliate exercising or performing any of Licensee's rights or obligations under this Agreement, such Affiliate shall agree in writing that it shall not practice the license under the Patent Rights for any uses prohibited by Section 2.9 (Additional Limitations on Exercise of License Rights) (except to the extent that the Licensee would have the right to do so after notice from Broad of a permitted application of such use);

2.3.5 any act or omission taken or made by an Affiliate of Licensee under this Agreement will be deemed an act or omission by Licensee hereunder, and Licensee shall be responsible for each of its Affiliates complying with all obligations of Licensee under this

Agreement (including without limitation all restrictions placed on Licensee herein), to the extent applicable to such Affiliate; and

2.3.6 any assumption of rights or obligations by Affiliates of Licensee under this Agreement shall not relieve Licensee of any of its obligations under this Agreement.

2.4 Sublicenses.

2.4.1 Sublicense Grant. Licensee will be entitled to grant Sublicenses to third parties under the licenses granted pursuant to Section 2.1 (License Grants) subject to the terms of this Section 2.4 (Sublicenses). Any such Sublicense shall be on terms and conditions in compliance with and not inconsistent with the terms of this Agreement. Notwithstanding any Sublicense, Licensee shall remain primarily liable to Broad and HHMI for all of Licensee's duties and obligations contained in this Agreement and any act or omission of a Sublicensee which would be a breach of this Agreement if performed by Licensee shall be deemed to be a breach by Licensee of this Agreement.

2.4.2 Sublicense Agreements. Licensee shall grant sublicenses pursuant to written agreements, which will be subject and subordinate to the terms and conditions of this Agreement. Such Sublicense agreements will contain, among other things, the following:

2.4.2.1 all provisions necessary to ensure Licensee's ability to perform its obligations under this Agreement;

2.4.2.2 a provision requiring the Sublicensee to comply with all terms and conditions of the Agreement applicable to Sublicensees under this Agreement, including Articles 2 (License) and 9 (Indemnification and Insurance) and Sections 4.6 (Patent Challenge), 5.3 (Records), 5.3.2 (Audit of Sublicensees), 6.5 (Marking), 8.1 (Compliance with Law), 10.3.1 (Termination of Rights), 10.3.2 (Accruing Obligations), 11.1 (Confidentiality), 11.3 (Preference for United States Industry) and 11.5 (Use of Names);

2.4.2.3 a section requiring Sublicensee to indemnify, defend and hold Indemnitees and HHMI Indemnitees harmless, and carry insurance, under the same terms set forth in Article 9 (Indemnification and Insurance) of this Agreement (which obligation to indemnify, defend, and hold harmless, to avoid doubt, may be limited to the activities under the Sublicense (*e.g.*, the Sublicensee shall not be required to indemnify for activities arising under other unrelated Sublicenses to unrelated Third Parties)), which also will state that the Indemnitees and HHMI Indemnitees are intended third party beneficiaries of such Sublicense agreement for the purpose of enforcing such indemnification;

2.4.2.4 a statement that Broad is an intended third party beneficiary of such Sublicense to the extent such Sublicense relates to the sublicense of Patent Rights, solely for the purpose of enforcing all patent challenge, intellectual property ownership, indemnification and insurance and compliance with law provisions of such Sublicense, in each case applicable to the Patent Rights (or the practice thereof) and, with respect to such indemnification and insurance provisions, Royalty-Bearing Products; and enforcing

the right to terminate such Sublicense for breach of the patent challenge, indemnification (solely with respect to such Sublicensee's obligation to indemnify Broad) and insurance provisions of such Sublicense with respect to the Patent Rights (or the practice thereof) and, with respect to such indemnification and insurance provisions, Royalty-Bearing Products; and a statement that (a) HHMI and each other Institution are intended third party beneficiaries of such Sublicense for the purpose of enforcing HHMI's and such Institution's rights, including indemnification and insurance provisions that relate to the Patent Rights (or the practice thereof) or Royalty-Bearing Products under such Sublicense, and (b) (1) that the rights of Broad or any Institution may be enforced by any Institution and the rights of HHMI may be enforced by HHMI in any court of competent jurisdiction and, without limiting the generality of the foregoing, Sublicensee consents to jurisdiction in Massachusetts courts, and (2) notwithstanding the governing law selected for such Sublicense, the Sublicensee agrees that, in the event of any difference in interpretation or result as between the laws of the jurisdiction of such Sublicense and the laws of Massachusetts, the laws of Massachusetts shall control in any action in which Broad or any Institution or HHMI is enforcing its rights under such Sublicense;

2.4.2.5 a provision stating that in the event Sublicensee or its Affiliate directly or indirectly brings, assumes, or participates in, or knowingly, willfully or recklessly assists in bringing, a Patent Challenge then Licensee shall be entitled to terminate the Sublicense;

2.4.2.6 a provision clarifying that, subject to Section 10.3.1 (Termination of Rights), in the event of termination of the licenses set forth in Section 2.1 (License Grants) (in whole or in part (*e.g.*, as to one license or the other, or termination in a particular country)), any existing Sublicense agreement shall terminate to the extent of such terminated license;

2.4.2.7 a provision prohibiting the Sublicensee from sublicensing its rights under such Sublicense agreement through more than [***] additional tiers, provided that such further Sublicense also shall comply with the terms of this Section 2.4 (Sublicenses);

2.4.2.8 a provision requiring the Sublicensee to notify Licensee of the achievement of each milestone described in Section 4.4.1.1 (Development Milestone Payments for Schedule 1 Products), Section 4.4.1.2 (Sales Milestone Payments for Schedule 1 Products), Section 4.4.2.1 (Development Milestone Payments for Schedule 2 Products) or Section 4.4.2.2 (Sales Milestone Payments for Schedule 2 Products) in accordance with the timeframes set forth in the applicable section;

2.4.2.9 a provision requiring the Sublicensee to agree that it shall not use the Patent Rights for Human Germline Modification; and

2.4.2.10 a provision prohibiting the Sublicensee from assigning the Sublicense agreement without the prior written consent of Broad, except that Sublicensee may assign the Sublicense agreement to (a) its Affiliate or (b) a successor in connection with the merger, consolidation or sale, lease or other transfer of all or substantially all of

its assets or that portion of its business to which the Sublicense agreement relates; provided, however, that any permitted assignee agrees in writing to be bound by the terms of such Sublicense agreement.

2.4.3 Delivery of Sublicense Agreement. Licensee shall furnish Broad with a fully executed copy of any Sublicense agreement promptly after its execution, provided that Licensee shall have no obligation to provide Broad with a copy of a Sublicense agreement between Licensee or a Sublicensee, on the one hand, and an Affiliate of Licensee or such Sublicensee or a contract research organization or contract manufacturing organization (solely for the provision of services under such Sublicense), on behalf of Licensee or such Sublicensee under this Agreement, on the other hand. All Sublicenses shall be the Confidential Information of Licensee. Broad shall keep all such copies in its confidential files and shall use them solely for the purpose of monitoring Licensee's and Sublicensees' compliance with their obligations hereunder and enforcing Broad's rights under this Agreement; provided, however, that Broad may share a copy of each Sublicense with HHMI for use solely for the purpose of enforcing HHMI's rights under this Agreement and such Sublicense. Licensee shall be entitled to redact proprietary non-public information of Licensee or the applicable Sublicensee or research plans under the Sublicense to the extent not reasonably required for Broad to monitor Licensee's and Sublicensee's compliance with their obligations under the applicable Sublicense and this Agreement and for Broad to enforce its rights under this Agreement. Licensee shall not redact any information reasonably necessary for Broad to evaluate and confirm compliance of such Sublicense with the terms and conditions of this Agreement.

2.4.4 Termination for Breach by Sublicensee. Any act or omission of a Sublicensee which would be a breach of this Agreement if performed by Licensee shall be deemed to be a breach by Licensee of this Agreement. Without limiting any other rights or remedies available to Broad, it is understood that if (a) Licensee cures such breach in accordance with Section 10.2.2 (Termination for Default) or (b) Licensee uses commercially reasonable efforts to cure such breach in accordance with Section 10.2.2 (Termination for Default) and terminates the applicable Sublicense, then Broad shall not be entitled to terminate this Agreement for the breach by the Sublicensee even if it resulted in a material breach of this Agreement.

2.5 Licensed Field Expansion Option. During the Term, Broad hereby grants Licensee the option to expand the terms of the license under the Patent Rights granted to Licensee under Section 2.1 (License Grants) to include both DNA and RNA for no additional consideration (the "**RNA Option**"). Upon Licensee's exercise of its RNA Option, the Parties shall amend and restate this Agreement, including by deleting the word "DNA" in the definition of "Field" in Section 1.54 ("Field") and replacing it with the phrase "DNA or RNA" (such expanded definition of "Field," the "**Expanded Field**"), and making such other amendments for the limited purpose of reflecting such Expanded Field (including to the definitions of "Prime Editor" in Section 1.119, "Prime Editor Product" in Section 1.120, "[***]" in Section 1.44 and to [***]). To exercise its RNA Option, Licensee shall (a) provide written notice to Broad, (b) simultaneously with such notice, submit to Broad an RNA Development Plan [***].

During the Term, if Broad reasonably intends to grant rights to a Third Party under the Patent Rights within the Expanded Field, which such rights would be within the scope of the exclusive licenses granted to Licensee under Section 2.1.1(a) (License Grants), if such licenses were in the Expanded Field (excluding, for the avoidance of doubt, a grant of rights pursuant to Section 2.2 (Reservation of Rights; Certain Restrictions)), then before granting such rights in the Expanded Field to such Third Party, Broad shall provide Licensee with [***] prior written notice to allow Licensee to exercise its RNA Option under this Section 2.5 (Licensed Field Expansion Option). If Licensee exercises its RNA Option within such [***] period, Broad shall not grant such rights under the Patent Rights within the Expanded Field to any Third Party. Following Licensee's exercise of its RNA Option and the subsequent amendment and restatement of the Agreement to reflect the Expanded Field pursuant to this Section 2.5 (Licensed Field Expansion Option), Licensee shall be obligated [***]. For the avoidance of doubt, the exercise of Licensee's RNA Option shall not require Licensee to incur any additional obligations outside of the terms of this Agreement, except as set forth in this Section 2.5 (Licensed Field Expansion Option) (including Licensee's obligations under the RNA Development Plan).

2.6 Transferred Materials. At the request of Licensee, Broad may transfer to Licensee or its respective designee the Transferred Materials, which Transferred Materials shall solely be used by Licensee for the purposes of researching and developing Licensed Products in the Field in accordance with the terms and conditions of this Agreement. Such transfer of the Transferred Materials shall be documented and subject to a mutually-agreed material transfer agreement, to be negotiated in good faith by Broad and Licensee, which agreement shall be subject to the approval of HHMI.

2.7 Inclusive Innovation Model.

2.7.1 General. If a Third Party inquires with Broad for a license under the Patent Rights with respect to products for use in the Field, in each case while this Agreement is in effect, Broad may refer such Third Party to Licensee to seek a potential Sublicense.

2.7.2 Start Date. Notwithstanding anything to the contrary in this Agreement, Sections 2.7.3 (Proposed Product Notice) through 2.7.13 ([***]) shall apply only from and after the second (2nd) anniversary of the Effective Date ("**Start Date**"). Prior to Start Date, Broad shall have no right to invoke such Sections. For the avoidance of doubt, Sections 2.7.3 (Proposed Product Notice) through 2.7.13 ([***]) do not apply to or limit (a) Broad's right to grant to any Third Party (i) any exclusive or non-exclusive licenses under the Patent Rights outside the Field or (ii) non-exclusive rights under the Patent Rights to the extent not exclusively licensed to Licensee under Section 2.1 (License Grants) or (b) any rights reserved by Broad or the Institutions under Section 2.2 (Reservation of Rights; Certain Restrictions).

2.7.3 Proposed Product Notice. If after the Start Date a Third Party that is not a Competitor (a "**Proposing Party**") makes a Bona Fide Proposal to Broad for developing what Broad reasonably believes is a [***] Proposed Product that is a product Covered by the Patent Rights, and Broad is interested in having such [***] Proposed Product developed and commercialized, Broad may notify Licensee of the Third Party's Bona Fide Proposal and shall include in such notification the identity of the Proposing Party and the identity of the applicable [***] to which the [***] Proposed Product is directed (such notice, the "**Proposed Product Notice**," and the effective date of such notice in accordance with Section 11.7, the "**Proposed Product Notice Date**"). [***]

2.7.4 Exceptions. If the Proposing Party's proposal does not meet the definition of Bona Fide Proposal or the proposed product is not a [***] Proposed Product, each as determined in Broad's reasonable discretion, or the Third Party is a Competitor or becomes a Competitor during the Proposed Product Development Period, then Sections 2.7.5 ([***] Proposed Product Options) through 2.7.13 ([***]) shall not apply (and without limiting the generality of the foregoing Broad shall have no right to grant a [***] License to such Third Party with respect to such [***] Proposed Product nor to require that Licensee grant a Sublicense or provide a development plan and development milestones in relation thereto). Notwithstanding the foregoing, if Licensee reasonably believes such Third Party is a Competitor under Section 1.33(b) ("Competitor"), then, promptly after the Proposed Product Notice Date, Licensee shall notify Broad and such notice shall include an explanation, to Broad's reasonable satisfaction, as to how such Third Party is an Affiliate controlled by (and not merely under common control with) an entity described under Section 1.33(a) ("Competitor"). If Licensee provides such notice to Broad's reasonable satisfaction, then Sections 2.7.5 ([***] Proposed Product Options) through 2.7.13 ([***]) shall not apply. For clarity, if a Third Party becomes a Competitor after the Proposed Product Development Period for a given [***] Proposed Product, Broad's right to grant or have granted a [***] License, and any [***] License already granted by Broad, to such Third Party with respect to such [***] Proposed Product will not be affected, provided that, going forward, if such

Third Party remains a Competitor, then such Third Party will be ineligible to be considered a Proposing Party under Section 2.7.3 (Proposed Product Notice).

2.7.5 [***] Proposed Product Options.

2.7.5.1 Notice to Broad. Within [***] of the Proposed Product Notice Date, Licensee may either (a) provide a Current Development Demonstration to Broad in accordance with Section 2.7.6 (Existing Development or Commercialization), or (b) notify Broad as to whether it (i) has a good faith interest in researching, developing and commercializing the [***] Proposed Product itself in accordance with Section 2.7.7 (Intended Development or Commercialization), (ii) has a good faith interest in entering into a Sublicense with the Proposing Party to research, develop and commercialize the [***] Proposed Product in accordance with Section 2.7.8 (Proposing Party Development or Commercialization), (iii) has a good faith interest in either researching, developing and commercializing the [***] Proposed Product through one or more existing Sublicensees, or entering into a Sublicense with another Third Party to research, develop and commercialize the [***] Proposed Product, in each case, in accordance with Section 2.7.9 (Third Party Development or Commercialization), or (iv) does not wish to pursue the foregoing (a), (b)(i), (b)(ii) or (b)(iii). For clarity, Licensee may notify Broad at any time that it is no longer interested in developing such [***] Proposed Product under either (a), (b)(i), (b)(ii) or (b)(iii). As part of the notice to Broad under this Section 2.7.5.1 (Notice to Broad), Licensee shall also confirm whether, in the [***] prior to the Proposed Product Notice Date, Licensee (or an Affiliate of Licensee) is already negotiating or has already negotiated with the Proposing Party to research, develop or commercialize the applicable [***] Proposed Product, and the length of time and nature of such negotiations (e.g., whether there has been active and consistent dialogue with the applicable counter-party, the exchange of terms and conditions, etc.).

2.7.5.2 Proposed Product Development Period. If Licensee so notifies Broad under (b)(i), (b)(ii) or (b)(iii) of Section 2.7.5.1 (Notice to Broad), Licensee shall have [***] from the Proposed Product Notice Date to prepare a development plan and commence activities thereunder with respect to such [***] Proposed Product in accordance with Sections 2.7.7 (Intended Development or Commercialization), 2.7.8 (Proposing Party Development or Commercialization), or 2.7.9 (Third Party Development or Commercialization), as applicable, (such [***] period, the "**Proposed Product Development Period**"). [***] into the Proposed Product Development Period, Licensee shall provide to Broad a good faith update as to the progress of such plan, including whether Licensee intends to use the remaining [***] of the Proposed Product Development Period to continue to develop such plan and commence activities thereunder. The Proposed Product Development Period for a given [***] Proposed Product shall be reduced by the length of time of active negotiations between Licensee and the Proposing Party in the [***] prior to the Proposed Product Notice Date to research, develop or commercialize the applicable [***] Proposed Product, provided that such reduction shall not be greater than [***] and provided further that only active negotiations regarding a transaction specific to such [***] Proposed Product (and

not a class or type of products generally or a Multi-Product Negotiation) shall be offset from Licensee's Proposed Product Development Period. In the event that the Parties are unable to agree as to whether Licensee has been engaged in active negotiations, or the length of time of such active negotiations, then the matter shall be resolved in accordance with Exhibit 4.5.7, provided that any final determination of the applicable arbitrator(s) shall not be deemed to extend (a) the Proposed Product Development Period beyond [***], or (b) the reduction to such Proposed Product Development Period for active negotiations beyond [***]. Further, the Proposed Product Development Period shall apply on a Proposed Product Notice-by-Proposed Product Notice basis, and shall be no longer than [***] (subject to the foregoing sentence with respect to a reduction of up to [***] for prior negotiations by Licensee). By way of example, if Licensee has actively negotiated for [***] with a Proposing Party pursuant to Section 2.7.8 (Proposing Party Development or Commercialization) prior to the applicable Proposed Product Notice Date, then the applicable Proposed Product Development Period shall be reduced by [***], and Licensee shall have [***] remaining in which to develop a plan pursuant to Section 2.7.7 (Intended Development or Commercialization) or negotiate a Sublicense pursuant to Section 2.7.8 (Proposing Party Development or Commercialization) or Section 2.7.9 (Third Party Development or Commercialization). By way of further example, if Licensee has [***] remaining of the applicable Proposed Product Development Period but Licensee ceases its ongoing negotiations with [***] remaining to negotiate a Sublicense with an alternative Third Party, then Licensee shall have no more than [***] within which to negotiate such Sublicense pursuant to Section 2.7.8 (Proposing Party Development or Commercialization) or Section 2.7.9 (Third Party Development or Commercialization).

2.7.6 Existing Development or Commercialization. If the [***] Proposed Product is directed to a [***] for which the Licensee, directly or through any of its Affiliates or Sublicensees, is currently researching, developing or commercializing a Royalty-Bearing Product in the Field, then Licensee may, within [***] of the Proposed Product Notice Date, provide a Current Development Demonstration to Broad. Thereafter, Licensee shall continue to use commercially reasonable efforts, itself or through its Affiliate or Sublicensee to continue to implement such plan. Licensee shall provide a written report to Broad describing Licensee's progress under the applicable plan at least [***] until the First Commercial Sale of such Royalty-Bearing Product. Licensee may, on [***] basis concurrently with the delivery of each [***] diligence report to be provided by Licensee to Broad under Section 3.4 (Reporting) hereof, make commercially reasonable adjustments to the applicable research, development or commercialization plan as necessary to improve Licensee's ability to meet its obligations under such plan; provided that, such adjustments shall be subject to review and approval by Broad, such approval not to be unreasonably withheld, conditioned or delayed.

2.7.7 Intended Development or Commercialization. If Licensee notifies Broad within [***] of the Proposed Product Notice Date that Licensee or its Affiliate is interested in developing a Royalty-Bearing Product directed to the [***] as such [***] Proposed Product in the Field, then within the Proposed Product Development Period, Licensee shall be required to (a) prepare, or have prepared, a commercially reasonable research, development or commercialization plan, similar to the Development Plan with respect to other

Licensed Products developed by Licensee in the Field, subject to necessary adjustments and including reasonable development milestones, at least [***] preclinical development milestone and associated timelines, and including evidence that Licensee or its applicable Affiliate or Sublicensee has, or reasonably expects to have, access to any intellectual property (other than any intellectual property owned or controlled by the Proposing Party) that would be necessary to develop and commercialize such Royalty-Bearing Product and has, or reasonably expects to have, funding available to advance such plan and (b) commence, or have commenced on its behalf, research or development activities for such Royalty-Bearing Product in the Field pursuant to such plan. Licensee's failure to prepare or have prepared a plan as described in clause (a) of the preceding sentence or to commence or have commenced research or development activities as described in clause (b) of the preceding sentence shall, in each case, not constitute a material breach of this Agreement; provided, however that, in addition to Broad having the right to grant a [***] License to the extent permitted in Section 2.7.11 ([***] License), following each such failure and solely for the subsequent [***] Proposed Product which Licensee elects to develop under Section 2.7.7 (Intended Development or Commercialization), Section 2.7.8 (Proposing Party Development or Commercialization), or Section 2.7.9 (Third Party Development or Commercialization), and for which at least [***] of the Proposed Product Development Period for such [***] Proposed Product remain following any applicable reductions pursuant to Section 2.7.5.2 (Proposed Product Development Period), Broad shall be entitled to reduce by [***] the Proposed Product Development Period; provided further that, for clarity, the right to reduce the applicable Proposed Product Development Period pursuant to this sentence shall apply following each such failure to prepare such a plan or commence or have commenced such research or development activities. Broad's rights with respect to a [***] License set forth in Section 2.7.11 ([***] License), [***] for a failure under the foregoing sentence that results in a diligence failure pursuant to Section 3.5.6.2 (Unmet Deadline), as applicable, and Broad's right to reduce a Proposed Product Development Period pursuant to the preceding sentence shall be Broad's sole and exclusive remedies under law and this Agreement for any failure by Licensee to prepare such a plan or commence or have commenced such research or development activities as described in the preceding sentence. In the discussion of such development plan and development milestones, Broad shall not unreasonably withhold its consent to Licensee's proposed plan. If the Parties agree on such development plan and milestones and Licensee or its Affiliate commences research or development activities thereunder within the Proposed Product Development Period, Licensee shall maintain its exclusive license(s) hereunder with respect to such [***] Proposed Product in the Field, but shall be obligated (i) to, itself or through its Affiliate or Sublicensee, use commercially reasonable efforts to develop and commercialize the Royalty-Bearing Product in the Field in accordance with such new development plan (which shall be incorporated into and be part of the "Development Plan" for all purposes hereunder) and (ii) to, itself or through its Affiliate or Sublicensee, meet the development milestones on the timeline associated therewith with respect to the Royalty-Bearing Product in the Field (which shall be a "Development Milestone" for all purposes hereunder) in the Field (subject to extension in the same manner as provided in Sections 3.5.1 (Notice/Explanation/Plan) through 3.5.5 (Plan Discussions) applied *mutatis mutandis*), and (iii) provide a written report to Broad describing Licensee's progress under such plan at least [***] until the First Commercial Sale of such Royalty-Bearing Product. Exhibit 3.1 shall be amended to reflect such development milestones and timeline with

respect to such Royalty-Bearing Product. Licensee may, on [***] basis concurrently with the delivery of each [***] diligence report to be provided by Licensee to Broad under Section 3.4 (Reporting) hereof, make such commercially reasonable adjustments to the applicable plan as necessary to improve Licensee's ability to meet its research, development or commercialization obligations under such plan; provided that such adjustments shall be subject to review and approval by Broad, such approval not to be unreasonably withheld, conditioned or delayed.

2.7.8 Proposing Party Development or Commercialization. If, within [***] of the Proposed Product Notice Date, Licensee notifies Broad that Licensee is not interested in developing such [***] Proposed Product in the Field but that it wishes to grant a Sublicense to the Proposing Party to develop a Royalty-Bearing Product directed to the [***] as such [***] Proposed Product in the Field, Licensee will have until the end of the Proposed Product Development Period to (a) negotiate and enter into such a Sublicense agreement with such Proposing Party, (b) prepare, or have prepared, together with the Proposing Party, a commercially reasonable research, development or commercialization plan similar to the Development Plan with respect to other Licensed Products developed by Licensee in the Field, subject to necessary adjustments and including reasonable development milestones, at least [***] preclinical development milestone and associated timelines, and including evidence that Licensee or its applicable Affiliate or Sublicensee or the Proposing Party have, or reasonably expects to have, access to any intellectual property that would be necessary to develop and commercialize such Royalty-Bearing Product in the Field and has, or reasonably expects to have, funding available to advance such plan and (c) commence research or development activities with the Proposing Party for such Royalty-Bearing Product pursuant to such plan. In the discussion of such development plan and development milestones, Broad shall not unreasonably withhold its consent to Licensee's proposed plan. If the Parties agree on such development plan and milestones and research or development activities thereunder are commenced by or on behalf of the Licensee or the Proposing Party within the Proposed Product Development Period, Licensee shall maintain its exclusive license(s) hereunder with respect to such [***] Proposed Product in the Field, but shall be obligated (i) to, itself or through its Affiliate or Sublicensee (including the Proposing Party), use commercially reasonable efforts to develop and commercialize the Royalty-Bearing Product in the Field in accordance with such new development plan (which shall be incorporated into and be part of the "Development Plan" for all purposes hereunder) and (ii) to, itself or through its Affiliate or Sublicensee (including the Proposing Party) meet the development milestones on the timeline associated therewith with respect to the Royalty-Bearing Product (which shall be a "Development Milestone" for all purposes hereunder) in the Field (subject to extension in the same manner as provided in Sections 3.5.1 (Notice/Explanation/Plan) through 3.5.5 (Plan Discussions) applied *mutatis mutandis*), and (iii) provide a written report to Broad describing Licensee's and the Proposing Party's progress under such plan at least [***] until the First Commercial Sale of such Royalty-Bearing Product. Exhibit 3.1 shall be amended to reflect such development milestones and timeline with respect to such Royalty-Bearing Product. Licensee may, on [***] basis concurrently with the delivery of each [***] diligence report to be provided by Licensee to Broad under Section 3.4 (Reporting) hereof, make such commercially reasonable adjustments to the applicable plan as necessary to improve Licensee's ability to meet its research, development or commercialization obligations under such plan; provided that such adjustments shall be subject to review and approval by Broad, such approval not to be unreasonably withheld, conditioned or delayed.

2.7.9 Third Party Development or Commercialization. In parallel with, or in lieu of, seeking to Sublicense a Royalty-Bearing Product to the Proposing Party, the Licensee may seek to enter into a Sublicense with another Third Party and/or develop such [***] Proposed Product through one or more then-existing Sublicensees. In such event, Section 2.7.8 (Proposing Party Development or Commercialization) shall apply to Licensee with such Third Party or then-existing Sublicensee(s) as the Proposing Party thereunder. If the Licensee enters or has entered into such a Sublicense with another Third Party or then-existing Sublicensee with respect to the [***] Proposed Product, as applicable, within the Proposed Product Development Period, then Licensee shall have the right to discontinue any discussions with the Proposing Party under Section 2.7.8 (Proposing Party Development or Commercialization) without consequence and as long as the Sublicense with the Third Party that Licensee entered into or the applicable then-existing Sublicense remains in effect with respect to the [***] Proposed Product, Broad shall have no right to grant a [***] License for the applicable [***] Proposed Product, subject to fulfillment of the obligations under Section 2.7.8 (Proposing Party Development or Commercialization), Section 2.7.10 (Proposed Product Development Period Obligations) and Section 2.7.11 ([***] License). In the event that such Sublicense terminates, then Licensee shall promptly notify Broad and then Section 2.7.11 ([***] License) shall govern regarding any right of Broad to grant a [***] License with respect to the relevant [***] Proposed Product.

2.7.10 Proposed Product Development Period Obligations. Throughout the Proposed Product Development Period set forth in Sections 2.7.7 (Intended Development or Commercialization) through Section 2.7.9 (Third Party Development or Commercialization), Licensee shall continuously use commercially reasonable efforts to, as applicable, (a) prepare, or have prepared, the research, development or commercialization plan and thereafter, commence research or development activities pursuant to such plan, as required by Section 2.7.7 (Intended Development or Commercialization), or (b) enter into a Sublicense agreement and thereafter, commence (or have commenced) research and development activities under the research, development or commercialization plan, as required by Section 2.7.8 (Proposing Party Development or Commercialization) or 2.7.9 (Third Party Development or Commercialization).

2.7.11 [***] License. If, with respect to a [***] Proposed Product, (a) within [***] of the Proposed Product Notice Date (or at any other time during the Proposed Product Development Period), Licensee notifies Broad that [***] in (i) [***], (b) Licensee [***], (c) Licensee [***], (d) Licensee [***], or (e) Licensee otherwise [***],

as applicable, then, in each case (a) through (e), Broad will be entitled, [***] ([***]), to grant, in its sole discretion, to such Proposing Party [***] license under the Patent Rights to make, have made, offer for sale, sell, have sold and import such [***] Proposed Product or a Related Product to such [***] Proposed Product (a "**[***] License**"), and Licensee's rights to such Patent Rights shall, [***]; provided that each [***] License will require the Proposing Party to [***], provided further that [***].

2.7.12 [***]. All consideration to Broad (or its designee) under a [***] License (other than reimbursement for patent expenses paid to third parties equal to the out-of-pocket cost to Broad of such patent expenses) is "**[***]**." Broad shall be entitled to [***]. Unless otherwise agreed by the Parties, [***] will be paid [***] on [***] basis in accordance with Broad's usual and customary practices for its distributions, except to the extent [***] under this Agreement in which case Broad may elect to [***]. **If any** [***] License [***] received by Broad or its designee, whether zero or a positive number, on [***] basis in accordance with Broad's usual and customary practices for its distributions. Such reports and any related records shall be subject to audit by the Licensee on terms equivalent to those set forth in Section 5.3 (Records), applied *mutatis mutandis*, provided, however, that such audit shall be limited to an audit of Broad's records and shall not extend to any licensee under a [***] License (either directly or by causing Broad to exercise any audit rights it may have under the [***] License), and such audit shall be limited in scope to a determination that Broad's report of [***] is true and complete.

2.7.13 [***]. Licensee shall not be required to provide a Current Development Demonstration in accordance with Section 2.7.6 (Existing Development or Commercialization) hereof, or elect a [***] Proposed Product option in accordance with Section 2.7.5 ([***] Proposed Product Options) hereof, and Broad shall have no right to grant a [***] License, for [***] Proposed Products [***] that have been selected for research, development or commercialization of a Licensed Product in the Field pursuant to a collaboration agreement between Licensee or its Affiliates and [***] (such collaboration agreement, a "[***] such [***]), in accordance with, and subject to, the following terms and conditions:

2.7.13.1 [***]. A [***] that has been selected for research, development or commercialization of a Licensed Product in the Field pursuant to a [***] may be [***] by Licensee, on a [***] basis, at the time of execution of such [***] or at any time within [***] thereafter, up to that number of [***] specified in Section 2.7.13.3 (Permitted Number of [***]), to a list of [***] ("**[***]**") generated by Licensee and provided to and maintained by Broad or [***], as applicable. In the event there is [***], the compensation, costs and expenses for [***] shall be incurred and paid solely by Licensee. A [***] shall be deemed a "**[***]**" for the purposes of this Section 2.7.13.1 ([***]) and only those [***] that are included on the [***] shall be deemed [***] for the purposes of this Section 2.7.13.1 ([***]). For the avoidance of doubt, a [***] shall not by itself constitute a [***]. Except as noted below with respect to [***], the effective date of addition of any [***] to the [***] ("**Selection Date**") shall be [***] business days prior to the date on which Broad or the [***] receives written notice from Licensee that a given [***] is to be added to the [***]. Except as noted below in connection with [***], a [***] shall be deemed a [***] for a period of [***] from the date such [***] is added to the [***] unless removed in accordance with Section 2.7.13.6 (Other Limitations on [***]). In addition to the foregoing, Licensee may add to the [***] the [***] that are the subject of [***] from a [***] at any time and from time to time between Licensee and such [***] regarding a potential [***]. A [***] that is included on the [***] shall be deemed a "**[***]**" for the purposes of this Section 2.7.13 ([***]) during the [***] (as defined below) and the date on which Broad or [***] receives written notice from Licensee that a given [***] is to be added to the [***] shall be deemed the "S**election Date**" for such [***]. The number of [***] that Licensee may add to the [***] in connection with any such [***] shall not exceed the number of [***] as Licensee would be eligible to add to the [***] if Licensee and such [***] entered into such [***], as determined based on a [***] by such prospective [***] in connection with such active discussions. Licensee shall clearly identify in its notice to Broad [***] those [***]. Licensee shall notify Broad [***] promptly if any [***] should be removed from the [***] because Licensee determines that the circumstances of the discussions with the [***] have changed and that such [***] is no longer the subject of [***], in which case such [***] shall be deemed not to have been nominated as a [***] for the purposes of this Section 2.7.13 ([***]). A [***] shall remain a [***],

a [***] and on the [***] for [***] from the Selection Date for such [***], subject to up to [***] of an additional [***] months by Licensee upon notice to Broad or [***] if Licensee determines in good faith that such [***] remains the subject of [***] between Licensee and the relevant [***] regarding a [***] at the time of such [***]. Licensee (or [***], as applicable) shall notify Broad that Licensee has [***] that a [***] shall remain on the [***]. Such notice shall not identify the [***] by name nor include any other identifiable information but shall include a [***] for such [***] which shall enable Broad to track and monitor the status of such [***]. The purpose of such notice is to permit Broad to initiate communications with Licensee and to monitor compliance by Licensee with the terms of this Agreement. If Licensee enters into a [***] with respect to a [***], Licensee shall notify Broad within [***] business days thereof, and such [***] shall remain a [***] and the Selection Date for such [***] shall remain the date on which Broad or [***] received written notice from Licensee that such [***] was to be added to the [***]. If there is a [***], the [***] shall notify Licensee within [***] business day if any [***] that Licensee notifies [***] to add to the [***] is already, at the time of such notice, the subject of a [***] Inquiry having a [***] Inquiry Date that is more than [***] business days prior to such notice from Licensee. A [***] shall not become a [***] or be added to the [***] if such [***] is the subject of a [***] Inquiry having a [***] Inquiry Date that is more than [***] business days prior to the time at which Licensee notifies [***] that Licensee is designating such [***] for inclusion on the [***].

2.7.13.2 [***]. If no [***] has been selected at the time of Licensee's selection of the first [***], Broad shall maintain the [***]. If at any time during the Term, (a) Licensee wishes to select a [***] or (b) Licensee no longer wishes for Broad to retain the [***], then Licensee shall provide Broad with written notice thereof (the "**[***]**") and shall include in such notice a list of at least [***] independent attorneys registered to practice before the United States Patent and Trademark Office of whom neither Licensee nor Broad is a client, who are experienced in intellectual property matters in the biopharmaceutical industry and who are able to take on an obligation of confidentiality to both Parties. Within [***] after the date of the [***], Broad shall select by written notice to Licensee (the "[***] **Selection Notice**") one of the individuals named in the [***]. Such individual selected by Broad shall be the "**[***]**." If Broad does not select such individual in a [***] Selection Notice within such [***]day period, then the individual selected by Licensee from among the individuals named in the [***] and identified by Licensee in writing to Broad shall be the [***]. The [***] shall be bound by confidentiality obligations to both Parties. In the event a [***] is no longer able or willing to serve in such role, the Parties shall appoint a new [***] by again following the procedures set forth in this Section 2.7.13.2 ([***]). Notwithstanding anything in this Section 2.7.13

([***]), in the event that Licensee does not provide a [***] to Broad, there will be no [***] and, unless the context otherwise requires or unless otherwise expressly set forth in this Agreement, all references to "[***]" under this Agreement will refer to Broad.

2.7.13.3 Permitted Number of [***]. The number of [***] that may be selected as [***] for a given [***] is dependent on the amount of [***] under the [***], in accordance with the following provisions of this Section 2.7.13.3 (Permitted Number of [***]). On a [***] basis, Licensee may select as [***] up to that number of [***] that is proportionate to the total amount of [***] under a given [***] at a rate of no less than [***] per [***]; provided, however, that such rate shall be [***] per [***] in effect as of the Effective Date. By way of example, (a) if the [***] under the [***], Licensee may add up to [***] to the [***], (b) if the [***] under the [***], Licensee may add up to [***] to the [***], and (c) if the [***], Licensee may add up to [***] to the [***], in each case (a) through (c) which [***] shall be deemed [***]. If at any point during the Collaboration Period, there is a reduction in the levels of [***] under a given [***], Licensee shall notify Broad of such reduction and the [***] shall be adjusted accordingly to reflect such reduction in [***]. Promptly after the date of execution of any [***] are to be selected, Licensee shall notify Broad and, if applicable, the [***] thereof, and shall include in such notice the amount of [***] under such [***].

2.7.13.4 [***] Inquiry. Notwithstanding anything to the contrary in this Agreement, this Section 2.7.13.4 ([***] Inquiry) shall only apply if a [***] has been appointed under Section 2.7.13.2 ([***]). For any [***] Proposed Product for which a Bona Fide Proposal has been provided to Broad, prior to providing a Proposed Product Notice with respect to such [***] Proposed Product to Licensee in accordance with Section 2.7.3 (Proposed Product Notice), Broad shall inquire of the [***] in writing whether or not the [***] to which the applicable [***] Proposed Product is directed is a [***] (such inquiry, the "[***] **Inquiry**," the date of such inquiry, the "**[***] Inquiry Date**"). The [***] shall, within the period beginning on the [***] business day and ending on the [***] business day following Broad's request, notify Broad in writing whether or not such [***] is a [***] (such notice, the "**[***] Notice**"). The [***] Notice shall note if [***]. If such [***], the [***] Notice shall include the Selection Date for such

[***], and the provisions of Section 2.7.13.5 (Time-Limited Preclusion of [***] and Section 2.7.13.6 (Other Limitations on [***] shall apply. If such [***] is not a [***], then Broad may provide Licensee with a Proposed Product Notice with respect to the [***] Proposed Product that is directed to the applicable [***] under Section 2.7.3 (Proposed Product Notice). If the [***] does not timely provide a [***] Notice to Broad, then Broad may notify Licensee in writing thereof ("**[***] Non-Performance Notice**") and Licensee may notify the [***] of such non-performance. If Broad does not receive a [***] Notice within [***] business days of the date of the [***] Non-Performance Notice, then Broad may provide a Proposed Product Notice directly to Licensee under Section 2.7.3 (Proposed Product Notice). [***] shall not disclose the existence or nature of a [***] Inquiry to Licensee until after the [***] business day following such [***] Inquiry, at which time [***] shall notify Licensee of each [***] that is the subject of such [***] Inquiry. Broad shall not disclose to any Third Party whether a [***] is a [***] reserved by Licensee or otherwise is under research, development and/or commercialization by Licensee or its Affiliate or Sublicensee; provided, however, that for any [***] that is the subject of a [***] Inquiry during the Collaboration Period for such [***] Broad shall be entitled to inform the Proposing Party that provided the Bona Fide Proposal for the [***] Proposed Product directed at the applicable [***] of the date on which such [***] that is a [***] may become available for a renewed Bona Fide Proposal, such date to correspond with the expiration of the Collaboration Period for the applicable [***] If such Proposing Party provides such renewed Bona Fide Proposal, and Broad provides to Licensee a corresponding Proposed Product Notice based on such Bona Fide Proposal, then the provisions of Section 2.7.13.5 (Time-Limited Preclusion of [***]) shall apply to such Proposed Product Notice.

2.7.13.5 Time-Limited Preclusion of **[***]** For a period of [***] from the Selection Date (the "**Collaboration Period**"), Licensee shall not be required to provide a Current Development Demonstration in accordance with Section 2.7.6 (Existing Development or Commercialization) hereof, or elect a [***] Proposed Product option in accordance with Section 2.7.5 ([***] Proposed Product Options) hereof, and Broad shall have no right to grant a [***] License, for any [***] Proposed Product directed to a [***], provided that the Selection Date for such [***] is within [***] from the execution date of the [***] under which the [***] has been selected. Following expiration of the Collaboration Period for a given [***] if Broad receives a Bona Fide Proposal for a [***] Proposed Product directed to such [***] and provides such Proposed Product Notice to Licensee, Licensee shall be required to provide to Broad a Current Development Demonstration for such [***] Proposed Product. If Licensee fails to provide a Current Development Demonstration for such [***] Proposed Product, then Broad shall be entitled to grant the Proposing Party a [***] License for such [***] Proposed Product.

2.7.13.6 Other Limitations on [***]. The Collaboration Period shall apply in lieu of, and not in addition to, the Proposed Product Development

Period set forth in Sections 2.7.7 (Intended Development or Commercialization) through 2.7.9 (Third Party Development and Commercialization). Once a given [***] has been selected as a [***] under a given [***], the [***] Proposed Product options set forth in Section 2.7.5 ([***] Proposed Product Options) shall not apply to [***] Proposed Products directed to such [***] may be dropped from the [***] upon notice by Licensee to Broad; provided that, once a [***] has been dropped from the [***] for a given [***] (other than a [***] that is a [***] at the time it is dropped), it may not again be selected to the [***] for such [***].

2.7.14 Processing of Proposed Notices. Licensee shall not be required to simultaneously prepare or carry-out a plan under Sections 2.7.7 (Intended Development or Commercialization), 2.7.8 (Proposing Party Development or Commercialization) or 2.7.9 (Third Party Development or Commercialization), or in connection with Section 1.2.2 ("Abbreviated Licensee Showing") or Section 1.2.3 ("Abbreviated Licensee Showing") under Section 2.7.15.2 (Reservation of Reserved Broad Targets), in accordance with the timing requirements set forth therein (to "**Process**") for more than [***] Proposed Product Notices or [***] Notices (each a "**Proposed Notice**") at any one time. If Broad provides a Proposed Notice for which Licensee fails to make a Current Development Demonstration or an Abbreviated Licensee Showing pursuant to Section 1.2.1 ("Abbreviated Licensee Showing"), and Licensee is currently Processing [***] other Proposed Notices on the Proposed Product Notice Date or Proposed Broad Target Notice Date (as applicable) for such Proposed Notice, then the time periods set forth in Sections 2.7.7 (Intended Development or Commercialization), 2.7.8 (Proposing Party Development or Commercialization), 2.7.9 (Third Party Development or Commercialization) or Section 1.2 ("Abbreviated Licensee Showing"), as applicable, for Processing of any such additional Proposed Notice by Licensee shall each be extended (and the obligation in Section 2.7.10 (Proposed Product Development Period Obligations) shall be tolled) by a period equal to the result of multiplying (a) three (3) months times (b) (i) [***] if the number of Proposed Notices being Processed by Licensee on the relevant Proposed Product Notice Date or [***] Notice Date (as applicable) is more than [***] and less than or equal to [***] if the number of Proposed Notices being Processed by Licensee on the relevant Proposed Product Notice Date or [***] Notice Date (as applicable) is more than [***] and less than or equal to [***] (iii) [***] if the number of Proposed Notices being Processed by Licensee on the relevant Proposed Product Notice Date or Proposed Broad Target Notice Date (as applicable) is more than [***] and less than or equal to [***] and (iv) [***] if the number of Proposed Notices being Processed by Licensee on the relevant Proposed Product Notice Date or [***] Notice Date (as applicable) is more than [***] ("**Proposed Product Extension Period**"). During such Proposed Product Extension Period for a given Proposed Notice, Broad shall not be permitted to grant a [***] License to any [***] Proposed Product or reserve any [***] that is the subject of such Proposed Notice. If the number of Proposed Notices being Processed by Licensee on the relevant Proposed Product Notice Date or Proposed Broad Target Notice Date (as applicable) is more than [***] Licensee shall have no obligation to Process additional Proposed Notices until the number of Proposed Notices being Processed by Licensee is fewer than [***] and

the Proposed Product Extension Period shall be extended until, and shall be recalculated at, such time.

2.7.15 Reserved Broad Targets.

2.7.15.1 Selection of Proposed Broad Targets. Beginning on the [***] anniversary of the Effective Date, if Broad, whether alone or together with an Institution, Affiliate or a Third Party, has a good faith interest in pursuing research and development of a product directed to a [***], then Broad may give written notice to Licensee of such [***] (after inquiry regarding the availability of such [***] with the [***] in accordance with Section 2.7.13.4 ([***] Inquiry)) that is not designated as a [***] by the [***] and that Broad has proposed to reserve pursuant to this Section 2.7.15 (Reserved Broad Targets) (each such notice, a "**Proposed Broad Target Notice**," the date of such notice, the "**Proposed Broad Target Notice Date**," each such proposed [***], a "**Proposed Broad Target**"). Prior to the reservation of a Proposed Broad Target as a Reserved Broad Target, Broad shall not grant a license to, nor enter into any term sheet or binding, written agreement, understanding or arrangement with, a Third Party, other than as would otherwise be permitted under this Agreement (including under Section 2.2 (Reservation of Rights; Certain Restrictions)), under or with respect to any Patent Rights exclusively licensed to Licensee under Section 2.1.1 (License Grant), for the development and/or commercialization of a Licensed Product in the Field that is a human therapeutic directed to such Proposed Broad Target.

2.7.15.2 Reservation of Reserved Broad Targets. Upon receiving a Proposed Broad Target Notice for a given Proposed Broad Target, Licensee may elect to make an Abbreviated Licensee Showing in the Field [***] that is a human therapeutic and is directed to such Proposed Broad Target.

(a) If Licensee successfully makes an Abbreviated Licensee Showing with such [***] that is directed to such Proposed Broad Target, then such Proposed Broad Target shall not be reserved as a "**Reserved Broad Target**." Thereafter, Licensee or its applicable Affiliate, Sublicensee or Collaboration Partner, must [***]. Licensee may, on an annual basis concurrently with the delivery of each annual progress report to be provided by Licensee to Broad, make such commercially reasonable adjustments to the applicable plan as necessary to improve Licensee's ability to meet its research, development and/or commercialization obligations under such plan; provided that such adjustments shall be subject to review and approval by Broad, such approval not to be unreasonably withheld, conditioned or delayed.

(b) If (a) Licensee fails to make an Abbreviated Licensee Showing with such a [***] that is directed to such Proposed Broad Target, (b) at any time after making such an Abbreviated Licensee Showing, [***], or (c) otherwise fails to comply with the obligations specified in Section 2.7.15.2(a) (Reservation of Reserved Broad Targets), then such Proposed Broad Target shall be reserved as a Reserved Broad Target.

2.7.15.3 Rights Regarding Reserved Broad Targets. Upon the reservation of a Proposed Broad Target as a Reserved Broad Target, (a) except as otherwise set forth in this Section 2.7.15.3 (Rights Regarding Reserved Broad Targets), Licensee shall have no rights under the Patent Rights to develop or commercialize products directed to such Reserved Broad Target, including to develop or commercialize any potential Licensed Products directed to such Reserved Broad Target, other than the license grant to Licensee under Section 2.1.2 for internal research activities with respect to such Reserved Broad Target, which, for clarity, shall remain in effect, and (b) Broad shall reserve the right to grant exclusive or non-exclusive licenses under the Patent Rights to Third Parties to develop or commercialize products directed to such Reserved Broad Target, including within the Field, subject to the terms of this Section 2.7.15.3 (Rights Regarding Reserved Broad Targets).

(a) Right of First Offer. Following the designation of a Proposed Broad Target as a Reserved Broad Target, Broad shall not enter into an agreement with any Third Party that is a for-profit commercial entity ("**Commercial Partner**") pursuant to which such Commercial Partner would sponsor research at Broad within the Field with respect to products directed to such Reserved Broad Target and for which, to the knowledge of Broad's Office of Strategic Alliances and Partnering, the Patent Rights are expected to be necessary or reasonably useful for the commercialization of products resulting from such sponsored research until and unless (i) Broad provides a written notice to Licensee (each such notice, a "**First Offer Notice**"), which notice will identify the general scope, purpose and financial terms of the proposed sponsored research agreement that Broad desires to enter into, and (ii) if Licensee responds in writing within [***] after its receipt of the First Offer Notice indicating Licensee's desire to discuss the proposed sponsored research agreement with Broad (each such

response, a "**First Offer Response**"), the Parties shall discuss in good faith the terms on which Licensee would sponsor similar research pursuant to a sponsored research agreement on mutually-agreed terms for at least [***] following Broad's receipt of such First Offer Response (or such longer time as mutually agreed by the Parties) ("**Research Agreement Discussion Period**"). If Licensee does not timely submit a First Offer Response or the Parties otherwise do not enter into a sponsored research agreement relating to the applicable Reserved Broad Target within the applicable Research Agreement Discussion Period, then Broad will have no further obligations to Licensee under this Section 2.7.15.3(a) (Right of First Offer) with respect to the applicable Reserved Broad Target. If the Parties enter into a sponsored research agreement with respect to the applicable Reserved Broad Target, then the terms thereof shall be set forth in a separate agreement between Broad and Licensee. If Licensee exercises an option to take, and does take, a commercial license under the intellectual property generated in the course of the foregoing sponsored research agreement, Licensee will maintain its license under the Patent Rights pursuant to this Agreement with respect to such Reserved Broad Target and such Reserved Broad Target will cease being a Reserved Broad Target; provided [***]. Notwithstanding the foregoing, the Parties acknowledge and agree that Licensee is not permitted to sponsor any research by or under the supervision of HHMI Research Personnel or their laboratories. Further notwithstanding the foregoing or anything to the contrary in this Agreement, (A) nothing in this Section 2.7.15.3(a) (Right of First Offer) shall limit the rights retained by Broad, the Institutions or HHMI under Section 2.2 (Reservation of Rights; Certain Restrictions) and (B) nothing obligates Broad, the Institutions or HHMI to provide a First Offer Notice to Licensee prior to entering into a sponsored research agreement with any Third Party for any purpose.

(b) Right to Negotiate Commercial License. Following the designation of a Proposed Broad Target as a Reserved Broad Target, Broad shall not enter into an agreement with a Commercial Partner pursuant to which Broad grants such Commercial Partner a license under the Patent Rights in the Field (other than any grant by Broad in accordance with Section 2.2 (Reservation of Rights; Certain Restrictions), if permitted by the terms thereof, or any grant by Broad of non-exclusive rights to the extent not exclusively licensed to Licensee under Section 2.1.1 (License Grants)) to commercialize products directed to such Reserved Broad Target (each such license, a "**Reserved Broad Target Third Party License**") except as set forth in this Section 2.7.15.3(b) (Right to Negotiate Commercial License). Prior to entering into any Reserved Broad Target Third Party License, Broad will notify Licensee in writing thereof (each such notice, a "**Commercial License Notice**") and if Licensee responds in writing within [***] after its receipt of the Commercial License Notice indicating Licensee's desire to negotiate such Reserved Broad Target Third Party License with such Commercial Partner (each such response, a "**Commercial License Response**"), then Licensee (and not Broad) shall have the right to negotiate and enter into such Reserved Broad Target Third Party License with such Commercial Partner within [***] following the date of the applicable Commercial License Notice (or such longer time as mutually agreed by

the Parties) ("**Commercial License Negotiation Period**"). If Licensee enters into such Reserved Broad Target Third Party License during the applicable Commercial License Negotiation Period, then, notwithstanding Section 2.7.15.3 (Rights Regarding Reserved Broad Targets), Licensee will be deemed to have all rights under the Patent Rights granted pursuant to Section 2.1 (License Grants), subject to all the rights and obligations under this Agreement, with respect to the applicable Reserved Broad Target so that Licensee may enter into such Reserved Broad Target Third Party License. If Licensee does not timely submit a Commercial License Response or otherwise fails to enter into the corresponding Reserved Broad Target Third Party License within the applicable Commercial License Negotiation Period, then Broad may enter into such Reserved Broad Target Third Party License, which license may be exclusive or non-exclusive, with respect to the applicable Reserved Broad Target with such Commercial Partner without any further obligations to Licensee under this Section 2.7.15.3(b) (Right to Negotiate Commercial License), provided that Broad shall not enter into such Reserved Broad Target Third Party License with respect to the applicable Reserved Broad Target with such Commercial Partner on terms that are, taken as a whole, more favorable to such Commercial Partner than the terms of this Agreement are to Licensee. For the avoidance of doubt, if Broad fails to enter into a Reserved Broad Target Third Party License with respect to a Commercial Partner, Broad shall not be permitted to enter into a Reserved Broad Target Third Party License with any other Commercial Partner unless and until this Section 2.7.15.3(b) applies to any such other Commercial Partner.

(c) Non-Exclusive Rights. Notwithstanding the foregoing terms of Section 2.7.15.3 (Rights Regarding Reserved Broad Targets), Broad shall provide written notice to Licensee of any license under the Patent Rights in the Field (other than a non-exclusive license under Section 2.2 (Reservation of Rights; Certain Restrictions)) granted by Broad under which the license to commercialize a product directed to a given Reserved Broad Target does not include an exclusive commercial license under the Patent Rights in the Field. Such notice shall describe the geographic scope of such license(s) and shall be Broad Confidential Information. Provided that Broad has not otherwise granted any Third Party an exclusive license with respect to products directed to such Reserved Broad Target under the

Patent Rights in the Field, then upon receiving such notice, Licensee will retain non-exclusive rights to Licensed Products directed to such Reserved Broad Target, subject to the terms and conditions of this Agreement.

2.7.15.4 Limits. Broad may designate up to [***] Reserved Broad Targets per Contract Year [***]; provided, however, that Broad may not have pending more than [***] Proposed Broad Target Notices at any time. For the avoidance of doubt, [***].

2.8 No Other Grant of Rights. Except as expressly provided herein, nothing in this Agreement will be construed to confer any ownership interest, license or other rights upon Licensee or its Affiliates or Sublicensees by implication, estoppel or otherwise as to any technology, intellectual property rights, products or biological materials of Broad, or any other entity, regardless of whether such technology, intellectual property rights, products or biological materials are dominant, subordinate or otherwise related to any Patent Rights. By way of example and not of limitation, nothing contained herein shall restrict Broad from granting licenses under the Patent Rights outside the Field.

2.9 Additional Limitations on Exercise of License Rights.

2.9.1 Germline Modification. Licensee will not use the Patent Rights for Human Germline Modification.

2.9.2 Gene-Drive Applications. Licensee will not use the Patent Rights for the stimulation of biased inheritance of particular genes or traits within a population of plants or animals.

2.9.3 Tobacco. Licensee will not use the Patent Rights for modifying the tobacco plant (including any plant part, plant cell, plant tissue or plant seed), except for modifications that (a) are related to the use of the tobacco plant as a manufacturing system or as a model system for research purposes but (b) are not related to any use or application in the cultivation, growth, manufacture, exportation or production of any tobacco product.

3. Development and Commercialization.

3.1 Diligence. Licensee shall use commercially reasonable efforts: (a) to develop Licensed Products within the Field in accordance with the Development Plan; (b) to introduce any Licensed Products within the Field that gain Regulatory Approval into the commercial market; (c) to market Licensed Products within the Field that have gained Regulatory Approval following such introduction into the market; and (d) to make such Licensed Products that have gained Regulatory Approval reasonably available to the public. In addition, Licensee, by itself or through its Affiliates or Sublicensees, shall achieve each of the Development Milestones

within the time periods specified in Exhibit 3.1, as they may be extended in accordance with this Agreement.

3.2 Adjustments of Development Plan.

3.2.1 Within [***] after the Effective Date, Licensee shall submit to Broad a written plan for the development and commercialization of Licensed Products, which shall be attached hereto as Exhibit 3.2.1. Such plan shall be designed to meet the Development Milestones attached in Exhibit 3.1, on the timeline provided in Exhibit 3.1. Broad shall have the right to approve Licensee's submitted Development Plan, such approval not to be unreasonably withheld, delayed, or conditioned. Broad shall be reasonably available to meet and discuss with Licensee as Licensee is preparing the Development Plan, to help ensure consensus as to the Development Plan that Licensee will submit.

3.2.2 Licensee will be entitled, from time to time, upon providing prior written notice to Broad, to make such adjustments to the then applicable Development Plan as Licensee believes, in its good faith judgment, are needed in order to improve Licensee's ability to meet the Development Milestones, provided that such adjustment right shall not include the right to adjust the timelines for the Milestone Deadlines except as set forth in Section 3.5.1 (Notice/Explanation/Plan).

3.3 Regulatory Filings. As between Broad and Licensee, and subject to Section 2.7 (Inclusive Innovation Model) Licensee shall have the right to prepare and present all regulatory filings necessary or appropriate to obtain Regulatory Approval for its Licensed Products in the Field in any country and to obtain and maintain any Regulatory Approval required to market Licensed Products in the Field in any such country. Licensee shall solely own all right, title and interest in and to all such Regulatory Approvals and filings.

3.4 Reporting. Within [***] after the end of each Calendar Year, Licensee shall furnish Broad with a written report summarizing its, its Affiliates' and its Sublicensees' efforts during the prior year to develop and commercialize Licensed Products within the Field, including: (a) research and development activities, including information regarding specific Royalty-Bearing Products in development and their therapeutic applications; (b) the status of applications for Regulatory Approvals; (c) commercialization or other distribution efforts; and (d) marketing efforts. Each report must contain a sufficient level of detail for Broad to assess whether Licensee is in compliance with its obligations under Section 3.1 (Diligence) and a discussion of intended efforts for the then current year. Together with each report, Licensee shall provide Broad with a copy of the then current Development Plan, which shall include sufficient detail to enable Broad to assess what Royalty-Bearing Products are in development and the status of such development.

3.5 Failure to Meet Development Milestone; Opportunity to Cure.

3.5.1 Notice/Explanation/Plan. If Licensee believes that it will not achieve a Development Milestone by the then-applicable deadline (i.e., the original timeline therefor in Exhibit 3.1, or any extension thereto in accordance with this Agreement) ("**Milestone Deadline**") or that such then-applicable Milestone Deadline needs to be or should be extended, it

may notify Broad in writing in advance of the relevant deadline, explicitly referencing this Section 3.5.1 (Notice/Explanation/Plan). Licensee shall include with such notice (a) a reasonable explanation of the reasons for such failure or need for extension (and lack of finances or development preference for a non-Royalty-Bearing Product will not constitute reasonable basis for such failure or need for extension) in sufficient detail to enable Broad to assess Licensee's compliance with Section 3.1 (Diligence) ("**Explanation**") and (b) a reasonable, detailed, written plan for promptly achieving a reasonable extended or amended milestone ("**Plan**").

3.5.2 Missing Plan or Explanation. If Licensee notifies Broad in accordance with Section 3.5.1 (Notice/Explanation/Plan), but fails to provide Broad with both an Explanation and Plan, then Licensee will have an additional [***] or until the original deadline of the relevant Development Milestone, whichever is later, to meet such milestone. Licensee's failure to do so shall constitute a material breach of this Agreement, and Broad shall have the right to terminate this Agreement solely to the extent described in the applicable provision of Section 3.5.6 (Unmet Deadline).

3.5.3 Sufficient Notice/Explanation/Plan. If Licensee notifies Broad as provided in Section 3.5.1 (Notice/Explanation/Plan) and provides Broad with an Explanation and Plan, then the applicable Milestone Deadline set forth on Exhibit 3.1 will be amended automatically to incorporate such extension to such Milestone Deadline; provided such extension does not extend the applicable Milestone Deadline by an amount greater than [***] beyond the applicable Milestone Deadline as provided in Exhibit 3.1 hereto as of the Effective Date of this Agreement. Any request by Licensee to extend a Milestone Deadline by an amount greater than [***] beyond the applicable Milestone Deadline as provided in Exhibit 3.1 hereto as of the Effective Date of this Agreement (whether as an initial request or through multiple extensions to such Milestone Deadline) shall only apply, and the applicable Milestone Deadline shall only be extended, if both such Explanation and Plan are acceptable to Broad in its reasonable discretion.

3.5.4 Explanation Discussions. If Licensee so notifies Broad and provides Broad with an explanation for such failure or need for extension and Plan, but such explanation is not an Explanation, then Licensee will have an additional [***] or until the original deadline of the relevant Development Milestone, whichever is later, to meet such milestone. Licensee's failure to do so shall constitute a material breach of this Agreement, and Broad shall have the right to terminate this Agreement solely to the extent described in the applicable provision of Section 3.5.6 (Unmet Deadline).

3.5.5 Plan Discussions. If Licensee notifies Broad in accordance with Section 3.5.1 (Notice/Explanation/Plan) and Licensee submits an Explanation and Plan to Broad that requests to extend a Milestone Deadline by an amount greater than [***] beyond the applicable Milestone Deadline as provided in Exhibit 3.1 hereto as of the Effective Date of this Agreement (whether as an initial request or through multiple extensions to such Milestone Deadline), and the Plan provided by Licensee is not acceptable to Broad in its reasonable discretion, then Broad will explain in writing to Licensee why the Plan is not acceptable and provide Licensee with written suggestions for an acceptable Plan. Licensee will have one opportunity to provide Broad with an acceptable Plan within [***], during which time

Broad agrees to work with Licensee in good faith in Licensee's effort to develop a reasonably acceptable Plan. If, within such [***], Licensee provides Broad with an acceptable Plan, then, Exhibit 3.1 will be amended automatically to incorporate the extended or amended milestone set forth in the Plan. If, within such [***], Licensee fails to provide an acceptable Plan, then Licensee will have an additional [***] or until the original deadline of the relevant Development Milestone, whichever is later, to meet such milestone.

3.5.6 Unmet Deadline. Licensee's failure to meet the then-current Milestone Deadline for any Development Milestone (taking into account any extension or modification thereof as a result of the applicable procedures set forth in Sections 3.5.1 (Notice/Explanation/Plan) through 3.5.5 (Plan Discussions)) shall constitute a material breach of this Agreement, and Broad shall have the following rights as its exclusive termination rights for such material breach of this Agreement:

3.5.6.1 If such failure is a failure to meet the first Development Milestone ("[***]") with respect to [***] Royalty-Bearing Products within the timeframe set forth on Exhibit 3.1, then Broad shall have the right to terminate this Agreement forthwith, immediately upon written notice to Licensee under Section 10.2.2.3 (Termination for Default).

3.5.6.2 If such failure relates to (a) a Royalty-Bearing Product for which Licensee exercised its rights under Sections 2.7.7 (Intended Development or Commercialization), 2.7.8 (Proposing Party Development or Commercialization), or 2.7.9 (Third Party Development or Commercialization) following receipt of a Proposed Product Notice with respect to a [***] Proposed Product, (b) a Licensed Product that was a Retained Product for which Licensee retained the licenses under Section 2.1 (License Grants) in accordance with the terms of Section 3.5.6.3 (Unmet Deadline) or (c) a Licensed Product that was a Restored Product for which Licensee was granted the licenses under Section 2.1 (License Grants) in accordance with the terms of Section 3.5.7.3 (Failure to Meet Development Milestone: Opportunity to Cure), then Broad will be entitled, without any compensation or accounting to Licensee, to terminate forthwith, immediately upon written notice to Licensee, the licenses granted under Section 2.1 (License Grants) with respect to the applicable [***] to which the [***] Proposed Product (or in the cases of clauses (b) and (c), such relevant Licensed Product) is directed. Upon such termination, Broad shall be entitled to grant to any third party(ies) an exclusive or non-exclusive license(s) under the Patent Rights to make, have made, offer for sale, sell, have sold and import such Licensed Product for use within the Field or outside the Field.

3.5.6.3 If such failure is not a failure provided for under Section 3.5.6.1 (Unmet Deadline) or Section 3.5.6.2 (Unmet Deadline) and is a failure to meet the then-current Milestone Deadline for any Development Milestone (taking into account any extension or modification thereof as a result of the applicable procedures set forth in Sections 3.5.1 (Notice/Explanation/Plan) through 3.5.5 (Plan Discussions)), Broad shall be entitled, without any compensation or accounting to Licensee, to terminate forthwith, immediately upon written notice to Licensee, the licenses granted under Section 2.1 (License Grants) with respect to all Royalty-Bearing Products for which Licensee has not

achieved Initiation of GLP Toxicology prior to the date of such notice (other than any such Royalty-Bearing Products that are Related Products to a Royalty-Bearing Product for which Licensee has achieved Initiation of GLP Toxicology prior to the date of such notice).

(a) Promptly after receipt of such notice (and in any event within [***] thereof), Licensee shall deliver to Broad a true, correct and complete list of all Royalty-Bearing Products for which Licensee has achieved Initiation of GLP Toxicology prior to the date of such notice (the "**Retained Product List**") and sufficient information for Broad to identify Related Products (i.e., [***], splicing variant or mutation, intended patient population and intended clinical outcome) to such Royalty-Bearing Products. For each such Royalty-Bearing Product (each, a "**Retained Product**"), Licensee shall follow the following procedure:

(b) For each Retained Product, the Parties will negotiate in good faith and agree, during the [***] following the date Licensee provided the Retained Product List to Broad, upon a development plan with respect to such Retained Product, which development plan will be similar to the Development Plan with respect to Licensed Products that were being developed by Licensee, subject to necessary adjustments, and will include reasonable development milestones, including at least [***] preclinical development milestone if such Retained Product is a preclinical product, and associated timelines. In the discussion of such development plan and development milestones, Broad shall not unreasonably withhold its consent to Licensee's proposed plan. If the Parties agree in writing on such development plan and development milestones within such [***] period, Broad shall grant to Licensee, and shall be deemed to have granted to Licensee, the licenses under Section 2.1.1 (License Grants) to make, have made, offer for sale, sell, have sold and import such Retained Product and Related Products to such Retained Product for use within the Field, but Licensee shall be obligated (a) to use commercially reasonable efforts to develop and commercialize the Retained Product in accordance with such new development plan (which shall be incorporated into and be part of the "Development Plan" for all purposes hereunder) and (b) to meet the development milestones on the timeline associated therewith with respect to the Retained Product (which shall be a "Development Milestone", which shall not be subject to extension in the manner provided in Sections 3.5.1 (Notice/Explanation/Plan) through 3.5.5 (Plan Discussions), but shall only be subject to extension in Broad's sole discretion). Exhibit 3.1 shall be amended to reflect such development milestones and timeline with respect to such Retained Product. If the Parties do not agree in writing on such development plan and milestones for such Retained Product within such [***] period, the licenses under Section 2.1 (License Grants) to make, have made, offer for sale, sell, have sold and import such Retained Product and Related Products to such Retained Product shall be deemed terminated as of 11:59 p.m. Eastern Time on the last day of such period.

(c) Notwithstanding anything in this Agreement to the contrary, the procedure set forth in Sections 3.5.1 (Notice/Explanation/Plan) through 3.5.5 (Plan Discussions) shall not be applicable to extend the Development Milestones for a Licensed Product that was a Retained Product (although the Development Plan may still be updated with respect thereto without modifying the Development Milestones, and the Development Milestones may still be modified with Broad's consent in its sole discretion).

(d) Notwithstanding anything in this Section 3.5.6 (Unmet Deadline) to the contrary, for any Retained Product, which Retained Product (or a Related Product to such Retained Product) already had a Development Plan and Development Milestones in place, and which applicable product has not missed such Development Milestones, such Development Plan and Development Milestones shall remain in place, with no requirement to negotiate a new Development Plan and new Development Milestones with respect thereto for such Retained Product or a Related Product to such Retained Product.

3.5.6.4 Notwithstanding anything herein to the contrary, failure to achieve the Xeno-Transplantation Milestone shall not constitute a material breach of this Agreement by Licensee and Broad shall not be entitled to terminate this Agreement under Section 3.5.6 for such failure. The terms of Section 3.6 shall govern with respect to Licensee's failure to achieve such Xeno-Transplantation Milestone.

3.5.7 If Broad has terminated any licenses granted under Section 2.1 (License Grants) in accordance with the terms of Section 3.5.6.3 (Unmet Deadline) and, during the Term, Licensee wishes to obtain the licenses under Section 2.1 (License Grants) with respect to a product for which Licensee does not have a license under Section 2.1 (License Grants) and that was, prior to such termination, within the definition of Royalty-Bearing Product (each, a "**Restored Product**" and such licenses, "**Restored Licenses**"), Licensee shall notify Broad, and Broad and Licensee shall follow the procedures below:

3.5.7.1 Licensee shall make a proposal to Broad equivalent in all material respects to a Bona Fide Proposal to Broad for developing such Restored Product in the Field, including with such proposal sufficient information for Broad to identify Related Products (i.e., [***], splicing variant or mutation, indicated patient population and clinical outcome) to such Restored Product. If Broad is interested in having such Restored Product developed and commercialized, Broad has not granted to any third party any rights or licenses that would be breached by the grant of the Restored Licenses and the grant by Broad of the Restored Licenses would not otherwise be in conflict with any contract, agreement, arrangement or understanding between Broad and a third party, Broad shall notify Licensee.

3.5.7.2 If the proposal does not meet the definition of Bona Fide Proposal (as applied to the Restored Product and not a [***] Proposed Product), then Section 3.5.7.3 (Failure to Meet Development Milestone; Opportunity to Cure) shall not apply.

3.5.7.3 If Licensee notifies Broad within [***] after Broad has notified Licensee pursuant to the last sentence of Section 3.5.7.1 (Failure to Meet Development Milestone; Opportunity to Cure), the Parties will negotiate, during the [***] following such notification by Licensee, a development plan with respect to such Restored Product, which development plan will be similar to the Development Plan with respect to Licensed Products developed by Licensee, subject to necessary adjustments, and will include reasonable development milestones, including at least one preclinical development milestone if such Restored Product is a preclinical product, and associated timelines. Broad may withhold its consent to Licensee's proposed development plan and development milestones in Broad's sole discretion. If the Parties agree in writing on such development plan and milestones within such [***] period, Broad shall grant to Licensee, and shall be deemed to have granted to Licensee, the licenses under Section 2.1 (License Grants) to make, have made, offer for sale, sell, have sold and import such Restored Product and Related Products to such Restored Product for use within the Field, but Licensee shall be obligated (a) to use commercially reasonable efforts to develop and commercialize the Restored Product in the Field in accordance with such new development plan (which shall be incorporated into and be part of the "Development Plan" for all purposes hereunder) and (b) to meet the development milestones on the timeline associated therewith with respect to the Restored Product (which shall be a "Development Milestone" (for all purposes hereunder) (subject to extension in the same manner as provided in Sections 3.5.1 (Notice/Explanation/Plan) through 3.5.5 (Plan Discussions)), applied *mutatis mutandis*). Exhibit 3.1 shall be amended to reflect such development milestones and timeline with respect to such Restored Product. If the Parties do not agree in writing on such development plan and development milestones for such Restored Product within such [***] period, Broad shall have no obligations to Licensee with respect to such Restored Product hereunder.

3.5.7.4 For clarity, the provisions of this Section 3.5.7 (Failure to Meet Development Milestone: Opportunity to Cure) shall not apply to any product with respect to which Broad exercised its rights under Section 3.5.6.2 (Unmet Deadline) to terminate the licenses under Section 2.1 (License Grants).

3.6 Xeno-Transplantation. The "**Xeno-Transplantation Milestone**" means the Development Milestone identified under the heading "Xeno-Transplantation" in Exhibit 3.1. Licensee will notify Broad promptly of Licensee's achieving the Xeno-Transplantation Milestone. If Licensee has not achieved the Xeno-Transplantation Milestone by the then-applicable deadline (*i.e.*, the original timeline set forth in Exhibit 3.1 or any extension thereto granted by Broad in its sole discretion), Licensee shall notify Broad promptly and will have an additional [***] to achieve such milestone. If Licensee does not achieve the Xeno-Transplantation Milestone within such [***], then Broad may by written notice to Licensee exclude Xeno-Transplantation from the Field and the licenses granted herein. For clarity, notwithstanding anything herein to the contrary, Licensee's failure to meet the then-applicable deadline for the Xeno-Transplantation Milestone shall not be deemed a breach of this Agreement and shall not give rise to a right of Broad to terminate this Agreement, including, without limitation pursuant to Section 3.5.6.

3.7 Activities of Others. Licensee may satisfy its obligations under Sections 3.1 (Diligence) through 3.5 (Failure to Meet Development Milestone: Opportunity to Cure) by the actions of itself, its Affiliates, its Sublicensees, or by the actions of any combination of the foregoing, subject to the terms and conditions set forth in Section 2.3 (Affiliates) and Section 2.4 (Sublicenses); provided, however, that the activities of a Sublicensee to whom Licensee grants a Cross License that is not part of a collaboration or other license agreement that is materially broader in scope than such Cross License (and that includes a development plan under which such Sublicensee has diligence obligations to Licensee) shall not be deemed to so satisfy Licensee's obligation under Sections 3.1 (Diligence) through 3.5 (Failure to Meet Development Milestone: Opportunity to Cure).

4. Consideration for Grant of License.

4.1 License Issue Fee. Licensee shall pay to Broad, within [***] days following the Effective Date, a license issue fee of Five Hundred Thousand Dollars ($500,000). This payment is nonrefundable and non-creditable.

4.2 Equity.

4.2.1 Initial Issuance. In accordance with the terms of the Subscription Agreement, Licensee shall, on the Effective Date and concurrent with the execution of this Agreement, as partial consideration for the licenses granted hereunder, issue to Broad or designees identified to Licensee in writing prior to or as of the Effective Date (the "**Broad Designees**"), an aggregate of 1,938,429 shares of Licensee's common stock, representing [***] percent ([***]%) of Licensee's outstanding capital stock on a Fully-Diluted Basis as of the date of such issuance and after giving effect to such issuance (the "**Shares**"); provided, however, that for purposes of the foregoing calculation, the number of shares of Licensee's outstanding capital stock on a Fully-Diluted Basis shall exclude [***]. Broad hereby designates Harvard and MIT as Broad Designees, and Shares (i) will be issued to Broad and (ii) may be issued to Harvard and MIT upon Broad's request in accordance with Broad's instructions. Upon Broad's request following the Effective Date, Licensee shall transfer all or a portion of the Shares to the Broad Designees or each of their respective designees, in accordance with Broad's instructions. Broad hereby agrees that, as a condition to and effective as of the issuance of the Shares, Broad and, if applicable, the Broad Designees, will execute a joinder to that certain Right of First Refusal and Co-Sale Agreement by and among the Licensee and the stockholders set forth therein and that certain Voting Agreement by and among the Licensee and the stockholders set forth therein, each dated on or about the date hereof, as a common stockholder of Licensee.

4.2.2 Anti-Dilution Issuances. If, at any time prior to the achievement of the Financing Threshold, Licensee issues Additional Securities that would cause the Shares to represent less than [***] percent ([***]%) of Licensee's outstanding capital stock on a Fully-Diluted

Basis (excluding Exempted Issuances), Licensee shall immediately issue to Broad and (in accordance with Broad's instructions) the Broad Designees on a pro rata basis, for no additional consideration, such additional number of shares of common stock of Licensee (the "**Anti-Dilution Shares**") such that the Shares plus the Anti-Dilution Shares (including any Anti-Dilution Shares previously issued to Broad pursuant to this Section 4.2.2 (Anti-Dilution Issuances), and any Shares or Anti-Dilution Shares transferred by Broad to a third party or held by an Affiliate of Broad) would then represent in the aggregate [***] percent ([***]%) of Licensee's outstanding capital stock on a Fully-Diluted Basis (excluding Exempted Issuances), as calculated after giving effect to the anti-dilutive issuance up to the Financing Threshold, but not any issuances in consideration for investment amounts in excess of the Financing Threshold; provided however, that to the extent such Additional Securities are issued pursuant to an equity incentive plan, Licensee shall issue the Anti-Dilution Shares upon the earlier of (a) the end of Licensee's fiscal year in which the issuances took place, (b) the closing of the next preferred stock financing, and (c) immediately prior to a Change of Control, in each case, calculated as of the date contemplated by (a), (b) or (c), as applicable; and provided further, however, that for purposes of the foregoing calculation, the number of shares of Licensee's outstanding capital stock on a Fully-Diluted Basis shall exclude [***]. Licensee shall provide Broad with evidence of the issuance of such Anti-Dilution Shares promptly after their issuance. Such issuances shall continue only up to, and until such time as Licensee has achieved, the Financing Threshold. Thereafter, no additional shares shall be due to Broad pursuant to this Section 4.2.2 (Anti-Dilution Issuances). The Anti-Dilution Shares will be subject to the same restrictions as the Shares in accordance with the terms of the Subscription Agreement. Upon Broad's request following Licensee's issuance of any Anti-Dilution Shares, Licensee shall transfer all or a portion of the Anti-Dilution Shares to the Broad Designees or each of their respective designees, in accordance with Broad's instructions.

4.2.3 Preemptive Rights. Broad, Harvard, MIT and the Broad Designees shall have the right to purchase shares (including, in the case of Harvard and MIT, through Osage University Partners) from Licensee in offerings of equity securities by Licensee pursuant to the Subscription Agreement entered into by the Parties as of the Effective Date.

4.2.4 Representations and Warranties. Licensee represents and warrants to Broad that, upon issuance of the Shares, and upon issuance of any Anti-Dilution Shares:

4.2.4.1 the capitalization table as provided by Licensee (the "**Cap Table**") upon issuance of the Shares or the Anti-Dilution Shares, as the case may be, sets forth all of the capital stock of Licensee on a Fully-Diluted Basis as of the date of issuance of the Shares or the Anti-Dilution Shares, on a pro forma basis as of immediately subsequent to the issuance of the Shares or the Anti-Dilution Shares, as applicable;

4.2.4.2 [***]

4.2.4.3 other than as set forth in the Cap Table, as of the date of issuance of the Shares or Anti-Dilution Shares, as applicable, there are no outstanding shares of capital stock, convertible securities, outstanding warrants, options or other rights to subscribe for, purchase or acquire from Licensee any capital stock of Licensee and there are no contracts or binding commitments providing for the issuance of, or the granting of rights to acquire, any capital stock of Licensee or under which Licensee is, or may become, obligated to issue any of its securities; and

4.2.4.4 the Shares or the Anti-Dilution Shares, as the case may be, when issued pursuant to the terms hereof, shall, upon such issuance, be duly authorized, validly issued, fully paid and nonassessable.

4.2.5 Information. Upon request, but no more frequently than [***] per Calendar Quarter, Licensee will deliver to Broad a statement of the outstanding capital stock of Licensee on a Fully-Diluted Basis in sufficient detail as to permit Broad to calculate its percentage equity ownership in Licensee. Prior to the Initial Public Offering or a Change of Control, at the request of Broad or a Broad Designee, but in no event more than [***] per Calendar Year, representatives of Licensee with knowledge of the Licensee's general business shall meet with representatives of Broad to discuss matters pertaining to Licensee and its business; provided that Licensee shall have no obligation to deliver such information to the extent delivery could adversely affect the attorney-client privilege between Licensee and its counsel or because Licensee owes a duty of confidentiality with respect to such information to a Third Party.

4.3 Annual License Maintenance Fees. Licensee shall pay Broad annual license maintenance fees ("**Maintenance Fees**") as follows:

Calendar Year(s)	**Maintenance Fee (U.S. Dollars)**
2019	[***] Dollars ($[***])
2020	[***] Dollars ($[***])
2021 and each subsequent Calendar Year during the Term	[***] Dollars ($[***])

Each such Maintenance Fee shall be due and payable on [***] of the Calendar Year to which such fee applies; provided that with respect to the Maintenance Fee due for Calendar Year 2019, the Maintenance Fee shall be due and payable within [***] of the Effective Date.

4.4 Milestone Payments.

4.4.1 Schedule 1 Products.

4.4.1.1 Development Milestone Payments for Schedule 1 Products. Licensee shall pay Broad the Milestone Payments set forth in this Section 4.4.1.1 (Development Milestone Payments for Schedule 1 Products) with respect to each Single Schedule 1 Product to achieve each Milestone Event, regardless of whether such Milestone Event is achieved by Licensee, an Affiliate of Licensee or a Sublicensee:

Milestone Event	*Milestone Payment (in Dollars)*
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]

[***]

* Milestone Events subject to Change of Control Multiplier in accordance with Section 4.4.3 (Change of Control Multiplier).

Licensee shall notify Broad in writing within [***] following the achievement of each Milestone Event described in Section 4.4.1.1 (Development Milestone Payments for Schedule 1 Products), and shall make the appropriate Milestone Payment within [***] after the achievement of such Milestone Event. Each Milestone Payment is payable only once for each Single Schedule 1 Product, as applicable. The Milestone Events set forth in Section 4.4.1.1 (Development Milestone Payments for Schedule 1 Products) are intended to be successive; for example, if a Single Schedule 1 Product is not required to undergo the event associated with a particular Milestone Event (a "**Skipped Milestone**") for such Single Schedule 1 Product, then such Skipped Milestone shall be deemed to have been achieved upon the achievement by such Single Schedule 1 Product of the next successive Milestone Event ("**Achieved Milestone**"); provided that the Milestone Events based on [***] shall not be deemed to be successive with each other [***] occurs prior to the Milestone Event for

[***], the Milestone Event for [***] shall not be deemed a Skipped Milestone). Payment for any Skipped Milestone that is owed in accordance with the provisions of this Section 4.4.1.1 (Development Milestone Payments for Schedule 1 Products) shall be due within [***] after the achievement of the Achieved Milestone.

4.4.1.2 Sales Milestone Payments for Schedule 1 Products. Licensee shall pay Broad the Milestone Payments set forth in this Section 4.4.1.2 (Sales Milestone Payments for Schedule 1 Products) with respect to each Single Schedule 1 Product to achieve each Milestone Event, regardless of whether such Milestone Event is achieved by Licensee, an Affiliate of Licensee or a Sublicensee:

Milestone Event	*Milestone Payment (in Dollars)*
[***]	[***]
[***]	[***]

4.4.1.3 Adjustment for Enabled Products. Notwithstanding the foregoing Section 4.4.1.1 (Development Milestone Payments for Schedule 1 Products) or Section 4.4.1.2 (Sales Milestone Payments for Schedule 1 Products), the Milestone Payments set forth in Section 4.4.1.1 (Development Milestone Payments for Schedule 1 Products) and Section 4.4.1.2 (Sales Milestone Payments for Schedule 1 Products) above shall be reduced by [***] percent ([***]%) for any Single Schedule 1 Product that is an Enabled Product.

4.4.2 Schedule 2 Products.

4.4.2.1 Development Milestone Payments for Schedule 2 Products. Licensee shall pay Broad the Milestone Payments set forth in this Section 4.4.2.1 (Development Milestone Payments for Schedule 2 Products) with respect to each Single Schedule 2 Product to achieve each Milestone Event, regardless of whether such Milestone Event is achieved by Licensee, an Affiliate of Licensee or a Sublicensee:

Milestone Event	*Milestone Payment (in Dollars)*
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]

[***]

Milestone Event	*Milestone Payment (in Dollars)*
[***]	[***]
[***]	[***]

* Milestone Events subject to Change of Control Multiplier in accordance with Section 4.4.3 (Change of Control Multiplier).

Licensee shall notify Broad in writing within [***] following the achievement of each Milestone Event described in Section 4.4.2.1 (Development Milestone Payments for Schedule 2 Products), and shall make the appropriate Milestone Payment within [***] after the achievement of such Milestone Event. Each Milestone Payment is payable only once for each Single Schedule 2 Product, as applicable. The Milestone Events set forth in Section 4.4.2.1 (Development Milestone Payments for Schedule 2 Products) are intended to be successive; for example, if a Single Schedule 2 Product is not required to undergo the event associated with a particular Milestone Event (a "**Skipped Milestone**") for such Single Schedule 2 Product, then such Skipped Milestone shall be deemed to have been achieved upon the achievement by such Single Schedule 2 Product of the next successive Milestone Event ("**Achieved Milestone**"); provided that the Milestone Events based on Regulatory Approval shall not be deemed to be successive with each other [***] shall not be deemed a Skipped Milestone). Payment for any Skipped Milestone that is owed in accordance with the provisions of this Section 4.4.2.1 (Development Milestone Payments for Schedule 2 Products) shall be due within [***] after the achievement of the Achieved Milestone.

4.4.2.2 Sales Milestone Payments for Schedule 2 Products. Licensee shall pay Broad the Milestone Payments set forth in this Section 4.4.2.2 (Sales Milestone Payments for Schedule 2 Products) with respect to each Single Schedule 2 Product to achieve each Milestone Event, regardless of whether such Milestone Event is achieved by Licensee, an Affiliate of Licensee or a Sublicensee:

Milestone Event	*Milestone Payment (in Dollars)*
[***]	[***]

4.4.2.3 Adjustment for Enabled Products. Notwithstanding the foregoing Section 4.4.2.1 (Development Milestone Payments for Schedule 2 Products) or Section 4.4.2.2 (Sales Milestone Payments for Schedule 2 Products), the Milestone Payments set forth in Section 4.4.2.1 (Development Milestone Payments for Schedule 2 Products) and Section 4.4.2.2 (Sales Milestone Payments for Schedule 2 Products) above shall be reduced by [***] percent ([***]%) for any Single Schedule 2 Product that is an Enabled Product.

4.4.3 Change of Control Multiplier. In the event that a Change of Control of Licensee occurs at any time during the Term, the Milestone Payments for those Milestone Events designated by an asterisk (*) in Section 4.4.1.1 (Development Milestone Payments for Schedule 1 Products) and Section 4.4.2.1 (Development Milestone Payments for Schedule 2 Products) that have not yet been paid by Licensee shall be increased by [***] percent ([***]%) ("**Change of Control Multiplier**") of the Milestone Payments set forth in Section 4.4.1.1 (Development Milestone Payments for Schedule 1 Products) and Section 4.4.2.1 (Development Milestone Payments for Schedule 2 Products). For example, [***]

4.4.4 Milestone Payments for Schedule 1 Products and Schedule 2 Products. In the event that a Licensed Product or Enabled Product is both a Schedule 1 Product and a Schedule 2 Product, then Licensee shall pay the applicable Milestone Payment based on whether the achievement of each Milestone Event first occurred with respect to development, regulatory approval or sales of a Licensed Product or Enabled Product as a Single Schedule 1 Product or Single Schedule 2 Product, with simultaneous achievement being deemed to have first occurred with respect to a Licensed Product or Enabled Product as a Single Schedule 2 Product. If achievement of a Milestone Event first occurs with respect to development, regulatory approval or sales of a Licensed Product or Enabled Product as a Single Schedule 1 Product, Licensee shall pay the difference between the applicable Milestone Payment for a Single Schedule 2 Product and the applicable Milestone Payment for a Single Schedule 1 Product if such Licensed Product or Enabled Product thereafter achieves such Milestone Event with respect to development, regulatory approval or sales as a Single Schedule 2 Product. If achievement of a Milestone Event first occurs with respect to development, regulatory approval or sales of a Licensed Product or Enabled Product as a Single Schedule 2 Product, no additional Milestone Payments shall be due if such Licensed Product or Enabled Product thereafter achieves such Milestone Event with respect to development, regulatory approval or sales as a Single Schedule 1 Product. For clarity, under no circumstances shall Licensee pay Milestone Payments for a Licensed Product or Enabled Product that are more than the Milestone Payments set forth for a Single Schedule 2 Product.

4.5 Royalty on Net Sales.

4.5.1 Rate for Licensed Products. Licensee shall pay Broad an amount equal to [***] percent ([***]%) of Net Sales of Licensed Products, calculated in accordance with and subject to the remainder of this Section 4.5 (Royalty on Net Sales).

4.5.2 Rate for Enabled Products. Licensee shall pay Broad an amount equal to [***] percent ([***]%) of Net Sales of Enabled Products, calculated in accordance with and subject to the remainder of this Section 4.5 (Royalty on Net Sales).

4.5.3 Royalty Term. On a country-by-country and Royalty-Bearing Product by Royalty-Bearing Product basis, royalties shall be paid on the sum of Net Sales of such Royalty-Bearing Product until the latest of: (a) the expiration date of the last to expire Valid Claim within the Patent Rights Covering the applicable Royalty-Bearing Product (or if the last Covering Valid Claim with respect to such Royalty-Bearing Product in such country is a pending Valid Claim, the date such pending Valid Claim ceases to be a Valid Claim; provided, however, that subsequent issuance of such Valid Claim shall again extend the Royalty Term from the date of such issuance to the expiration date of such Valid Claim); (b) the period of regulatory exclusivity associated with such Royalty-Bearing Product in such country; or (c) ten (10) years after the First Commercial Sale of such Royalty-Bearing Product in such country (the "**Royalty Term**"). During time periods when the Royalty Term is only in effect in a given country for a given Licensed Product due to clause (c) of the foregoing sentence, then the royalty rate provided for such Licensed Product in such country shall be reduced by [***] percent ([***]%) from that set forth in Section 4.5.1 (Rate for Licensed Products) above for such portions of the Royalty Term for such Licensed Product in such country.

4.5.4 Third Party Royalty Set-Off. On a Royalty-Bearing Product-by-Royalty-Bearing Product basis, if Licensee is legally required by a future court order, settlement agreement, contract, or other legally binding written commitment to make payments to a Third Party for a license under or the use of [***] Patent Rights held by such Third Party, then Licensee may offset [***] percent ([***]%) of any running royalty payments on net sales actually paid by Licensee to such Third Party under such third-party license with respect to such [***] Patent Rights with respect to sales of Royalty-Bearing Products against the running royalty payments that are due to Broad with respect to Net Sales of such Royalty-Bearing Products in such country; provided that in no event shall (a) the running royalty payments to Broad with respect to such Royalty-Bearing Products be reduced by more than the applicable percentage set forth in Section 4.5.6 (Royalty Reduction Cap) of the amount otherwise due under Section 4.5.1 (Rate for Licensed Products) or Section 4.5.2 (Rate for Enabled Products), as applicable, as may be reduced by Section 4.5.3 (Royalty Term), and (b) with respect to royalties paid to the Third Party solely on the basis of claims of pending patent applications of the third party (and no issued patent claim of the third party covers the applicable Royalty-Bearing Product), such amounts shall only be offsettable in accordance with the foregoing in this Section 4.5.4 (Third Party Royalty Set-Off) if the Covering pending claim of the third party's pending application would meet the definition of Valid Claim set forth in this Agreement were such pending claim within the Patent Rights as of the Effective Date and (c) the royalty offset provided in this Section 4.5.4 (Third Party Royalty Set-Off) may be applied to any Combination Product for which an adjustment to Net Sales has been made in accordance with Section 4.5.7 (Combination Products), but to avoid doubt only as relates to royalties on patent applications and patents that would apply in the absence of the Other Active Components (third

party patent royalties due because of the presence of the Other Active Components shall not be offsettable against adjusted Net Sales of a Combination Product).

4.5.5 Loss of Market Exclusivity. If a Loss of Market Exclusivity exists in a country with respect to a Royalty-Bearing Product, then the royalty rate for such Royalty-Bearing Product in such country shall be reduced by [***] percent ([***]%) of the applicable rate determined pursuant to Section 4.5.1 (Rate for Licensed Products) as may be reduced in Section 4.5.3 (Royalty Term), in the case of a Licensed Product, and Section 4.5.2 (Rate for Enabled Products), in the case of an Enabled Product. In the event that Licensee reasonably believes in good faith that a Loss of Market Exclusivity will exist in a Calendar Year with respect to a Royalty-Bearing Product in a country, then Licensee shall provide Broad with written notice describing Licensee's reasonable basis for believing that Loss of Market Exclusivity may exist and Licensee may reduce by [***] percent ([***]%) the applicable royalty rate for such Royalty-Bearing Product in such country for each Calendar Quarter in such Calendar Year. Within [***] following the end of any Calendar Year in which Licensee has taken the deduction under this Section 4.5.5 (Loss of Market Exclusivity) in a country, Licensee shall determine whether a Loss of Market Exclusivity actually occurred in such country in such prior Calendar Year, and if it is subsequently determined that a Loss of Market Exclusivity did not exist, then Licensee shall reimburse Broad for any erroneous reductions to royalties owed to Broad in such Calendar Year taken under this Section 4.5.5 (Loss of Market Exclusivity) within [***] of the end of the applicable Calendar Year.

4.5.6 Royalty Reduction Cap. Notwithstanding anything to the contrary herein, on a country-by-country and Royalty-Bearing Product-by-Royalty-Bearing Product basis, in no event shall the effective royalty rate applied to Net Sales of such Royalty-Bearing Product in such country be reduced as a result of the application of the terms of Section 4.5.4 (Third Party Royalty Set-Off) and Section 4.5.5 (Loss of Market Exclusivity) to less than [***] percent ([***]%) of the applicable rate determined pursuant to Section 4.5.1 (Rate for Licensed Products) or Section 4.5.2 (Rate for Enabled Products), as applicable, as may be reduced by Section 4.5.3 (Royalty Term) [***].

4.5.7 Combination Products. If a Royalty-Bearing Product is sold as part of a combination product with other active pharmaceutical ingredient(s) (or active biologic(s)) that are not Royalty-Bearing Products and perform a function distinct from the Royalty-Bearing Product component of the combination ("**Other Active Component(s)**") (no matter the form, including as a fixed dose combination or co-packaged product offering) for a single invoice price (a "**Combination Product"**), then Net Sales of the Combination Product shall be adjusted prior to calculation of the royalty to Broad hereunder, by multiplying total Net Sales of the

Combination Product by the fraction, A/A+B, where A is [***] and B is the [***], in each case during the applicable royalty reporting period or, if sales of both the Royalty-Bearing Product and the Other Active Component(s) did not occur in such period, then in the most recent royalty reporting period in which sales of both occurred. In the event that such average sale price cannot be determined for both the Royalty-Bearing Product and Other Active Component(s) included in such Combination Product, the Parties shall determine any adjustment to Net Sales of the Royalty-Bearing Product by virtue of its being sold as part of a Combination Product with Other Active Components in such country by mutual agreement based on the relative contribution of value of the Royalty-Bearing Product and the Other Active Component(s) in the Combination Product. If the Parties do not reach written agreement as to such allocation within [***], then the matter shall be decided by arbitration in accordance with Exhibit 4.5.7. To avoid doubt, the royalty offset provided in Section 4.5.4 (Third Party Royalty Set-Off) does not allow for the offset of royalties on third party patent applications and patents that are necessary only for the Other Active Component(s), and would not apply to the Royalty-Bearing Product component as a single agent.

4.6 Patent Challenge.

4.6.1 If Licensee, its Affiliate or a Sublicensee takes any action that constitutes a Patent Challenge (a "**Challenging Party**"), then (a) Licensee shall provide Broad with at least [***] notice prior to a Challenging Party taking any such action, provided that with respect to a Sublicensee, such notice shall be provided upon Licensee becoming aware of such action, (b) Licensee shall pay all reasonable costs, fees and expenses associated with such Patent Challenge that are incurred by Institutions and their trustees, managers, officers, agents, employees, faculty, affiliated investigators, personnel, and staff, including reasonable attorneys' fees and all reasonable costs associated with administrative, judicial or other proceedings, within [***] after receiving an invoice from Broad for the same, (c) subject to Section 4.6.3 (Patent Challenge), the fees, milestones, royalties and other amounts payable to Broad under Sections 4.3 (Annual License Maintenance Fees), 4.4 (Milestone Payments), and 4.5 (Royalty on Net Sales) will be [***] with respect to any payments that become due and Net Sales of Royalty-Bearing Products that are sold during the pendency of such Patent Challenge, and all such payments shall be made directly to Broad and not into escrow, (d) subject to Section 4.6.3 (Patent Challenge), the exclusive license granted in this Agreement may, as of the date of initiation of such challenge or opposition, upon notice by Broad to Licensee, be converted by Broad at its option into a non-exclusive license for the remainder of the Term, and in such event the Institutions shall have the right to grant licenses under the Patent Rights to any Person, subject to the then-existing non-exclusive licenses provided herein, and (e) at any time after the Patent Challenge is brought, Broad may, at its option, terminate this Agreement according to Section 10.2.3 (Termination for Patent Challenge); provided that if any of subsections (a) through (e) are held invalid or unenforceable for any reason, such invalidity or unenforceability shall not affect any of the other said subsections. If the outcome of such Patent Challenge is a determination against the Challenging Party, the fees, milestones, royalties and other amounts payable to Broad under Sections 4.3 (Annual License Maintenance Fees), 4.4 (Milestone Payments), and 4.5 (Royalty on Net Sales) shall remain at such [***] rate and Licensee shall reimburse Broad [***] the amount of all reasonable expenses incurred by Broad (including

reasonable attorneys' fees) in connection with such Patent Challenge. If the outcome of such Patent Challenge is a determination in favor of the Challenging Party, Licensee will have no right, nor will any Affiliate or Sublicensee have any right, to recoup any royalties or other amounts paid before or during the pendency of such Patent Challenge. Notwithstanding any provision of this Agreement to the contrary, Licensee shall not have the right to assume or participate in the defense, settlement or other disposition of such Patent Challenge through its status as licensee under this Agreement, but shall pay associated costs, fees and expenses as provided in this Section 4.6.1 (Patent Challenge). The Parties agree that any Patent Challenge by Licensee, or any of its Affiliates or Sublicensees, may be detrimental to the Institutions, and that the foregoing provisions shall constitute reasonable liquidated damages to reasonably compensate the Institutions for any loss they may incur as a result of Licensee, or any of its Affiliates' or Sublicensees', taking such action.

4.6.2 Licensee shall include in each agreement for a Sublicense a clause equivalent with respect to the Sublicensee to the provisions found in the foregoing Section 4.6.1 (Patent Challenge) (adjusted for party names, section references, and the like) and shall make the Institutions explicit third party beneficiaries thereof.

4.6.3 Notwithstanding Section 4.6.1 (Patent Challenge), if the Challenging Party that takes an action that constitutes a Patent Challenge is a Sublicensee rather than Licensee or an Affiliate, then, the adjustment contemplated under Section 4.6.1 (Patent Challenge) to the fees, milestones, royalties and other amounts payable to Broad under Sections 4.3 (Annual License Maintenance Fees), 4.4 (Milestone Payments), and 4.5 (Royalty on Net Sales) shall apply only to the calculation of royalties on Net Sales by such challenging Sublicensee and the adjustment to the milestone payments under Section 4.4 (Milestone Payments) with respect to Royalty-Bearing Products achieved by Sublicensees shall apply only to the milestone payments with respect to Royalty-Bearing Products achieved by such challenging Sublicensee. Licensee will make Broad an explicit intended third-party beneficiary of the obligation in the Sublicense agreement for the Sublicensee to pay Broad [***] the amount of all expenses incurred by Broad (including reasonable attorneys' fees) in connection with such Patent Challenge, and will reasonably assert its rights under the Sublicense for such [***] payments to be made, and reasonably cooperate with Broad if Broad takes enforcement actions of its own as to such right to [***] payment. Notwithstanding Section 4.6.1 (Patent Challenge), if the Challenging Party that takes an action that constitutes a Patent Challenge is solely a Sublicensee and not Licensee or its Affiliates, Broad shall not have the right to convert Licensee's exclusive licenses to non-exclusive licenses as contemplated by clause (d) of Section 4.6.1 (Patent Challenge) if Licensee terminates the Sublicense of such Sublicensee within [***] of receiving notice of such challenge; provided that, neither Licensee nor its Affiliates assist or participate in the Patent Challenge either prior to or after such termination.

To avoid doubt, the fees, milestones, royalties and other amounts owed by a Sublicensee and its Affiliates who are not Challenging Parties shall not be [***] under Section 4.6.1 (Patent Challenge) as a result of Patent Challenge actions by an unrelated Sublicensee Challenging Party.

4.7 Non-Royalty Sublicense Income. Licensee will pay Broad a percentage in accordance with the following table of all Non-Royalty Sublicense Income, without deduction

(other than as provided in the definition of Non-Royalty Sublicense Income in Section 1.105 ("Non-Royalty Sublicense Income")); provided, however, that Licensee may deduct from Non-Royalty Sublicense Income received by Licensee as a result of the achievement by a Sublicensee of a Milestone Event set forth in Section 4.4.1.1 (Development Milestone Payments for Schedule 1 Products) or Section 4.4.2.1 (Development Milestone Payments for Schedule 2 Products) the amount of the corresponding milestone payment due Broad under Section 4.4.1.1 (Development Milestone Payments for Schedule 1 Products) or Section 4.4.2.1 (Development Milestone Payments for Schedule 2 Products), as applicable, in connection with the achievement of such Milestone Event. For the avoidance of doubt, in the event any Sublicensee obtains rights granted or transferred by Broad under this Agreement along with rights owned by the Licensee or granted to the Licensee by a Third Party, Licensee shall pay to Broad the following percentages of all Non-Royalty Sublicense Income received by Licensee or its Affiliates under such Sublicense without deduction from or apportionment of any part of such consideration. Licensee agrees that all rights controlled by Licensee and reasonably expected to be relevant at the given time to make, use, sell, offer to sell or import particular Royalty-Bearing Products shall be included in or deemed to be included in the same Sublicense under which the rights granted or otherwise transferred to Licensee hereunder are granted with respect to such Royalty-Bearing Product for the purpose of calculating Non-Royalty Sublicense Income.

Category of Sublicense	*Percentage of Non-Royalty Sublicense Income*
(a) With respect to a Sublicense executed [***]	[***]%
(b) With respect to a Sublicense executed [***]	[***]%
(c) With respect to a Sublicense executed [***]	[***]%

Subject to Section 1.105 ("Non-Royalty Sublicense Income"), in the case of Non-Royalty Sublicense Income received in kind in the form of a freely transferable security (except for such restrictions on transfer imposed by Applicable Law), Licensee shall nonetheless distribute the applicable Non-Royalty Sublicense Income to Broad in the form of cash.

4.8 Complex Consideration. Licensee acknowledges and agrees that the Parties have chosen to apply set royalty rates and milestone payments to the rights granted under this

Agreement for Licensee's convenience in calculating and paying royalties and milestones. In doing so, Licensee acknowledges and agrees that certain royalty rates and milestones payments chosen incorporate discounts reflecting that certain products and services may not be Covered by the Valid Claims of the Patent Rights but may be based upon, derived from or use the Patent Rights or other licensed intellectual property rights, so that Licensee, unless explicitly provided otherwise in this Agreement, shall not be entitled to a reduction in the royalty rate or milestone payment, even if it does not at all times need or use a license to specific Patent Rights, until the end of the Royalty Term for such product or service.

4.9 Assumption of Obligations. Any acquirer, lessee, exclusive licensee or other transferee of all or substantially all of the Licensee's assets, or any successor entity to the Licensee (each, an "**Acquirer**"), shall be obligated to assume and guarantee the Licensee's obligations pursuant to Article 4 (Consideration for Grant of License) and Exhibit 4.9 hereto, as such obligations are set forth herein and therein and subject to the terms and conditions (including contingent events) set forth herein and therein.

5. Reports; Payments; Records.

5.1 Reports and Payments.

5.1.1 Reports. Within [***] after the conclusion of each Calendar Quarter commencing with the first Calendar Quarter in which Net Sales are generated or Non-Royalty Sublicense Income is received, Licensee shall deliver to Broad a report containing the following information (in each instance, with a Royalty-Bearing Product-by-Royalty-Bearing Product and country-by-country breakdown):

5.1.1.1 the number of units of Royalty-Bearing Products sold, leased or otherwise transferred by Invoicing Entities for the applicable Calendar Quarter;

5.1.1.2 the gross amount billed or invoiced for Royalty-Bearing Products sold, leased or otherwise transferred by Invoicing Entities during the applicable Calendar Quarter;

5.1.1.3 a calculation of Net Sales for the applicable Calendar Quarter, including an itemized listing of allowable deductions;

5.1.1.4 a detailed accounting of all Non-Royalty Sublicense Income received during the applicable Calendar Quarter, including an itemized listing of allowable exclusions, as well as a reasonably detailed description of any profit share arrangement, as applicable;

5.1.1.5 the total amount payable to Broad in U.S. Dollars on Net Sales and Non-Royalty Sublicense Income for the applicable Calendar Quarter, together with the exchange rates used for conversion; and

5.1.1.6 a good faith list of [***] for all Patent Rights that have Valid Claims covering the Licensed Products;

provided that, Licensee shall use reasonable efforts to include in each Sublicense a provision requiring the Sublicensee to provide the information required under this Section 5.1.1 (Reports) and provided further that, to the extent that the information set forth on such report is provided by a Sublicensee, Licensee shall, notwithstanding anything to the contrary in this Section 5.1 (Reports and Payments), provide such report within [***] after the conclusion of each such Calendar Quarter and in any event shall promptly provide such report from Sublicensee to Broad following Licensee's receipt of such. Each such report shall be certified on behalf of Licensee as true, correct and complete in all material respects. If no amounts are due to Broad for a particular Calendar Quarter, the report shall so state. Broad may reasonably request further information regarding the calculation of payments under any report and Licensee will consider such reasonable requests in good faith.

5.1.2 Payment. Within [***] after the end of each Calendar Quarter, Licensee shall pay Broad all amounts due with respect to Net Sales and Non-Royalty Sublicense Income for the applicable Calendar Quarter; provided, however, that for royalties to Broad on Net Sales by Sublicensees, Licensee shall have until the earlier of (a) [***] after receiving the quarterly royalty payment from the Sublicensee and (b) [***] after the end of the applicable Calendar Quarter to turn around payment to Broad on the underlying Net Sales.

5.2 Payment Currency. All payments due under this Agreement will be paid in U.S. Dollars. Conversion of foreign currency to U.S. Dollars will be made at the conversion rate existing in the United States (as reported in the Wall Street Journal) on the last working day of the applicable Calendar Quarter. Such payments will be without deduction of exchange, collection or other charges. Notwithstanding the foregoing, a reasonable and customary currency conversion methodology as is set forth in a Sublicense agreement shall be the method used for currency conversion of amounts due in relation to such Sublicense agreement, provided that such conversion methodology governs payments received by Licensee under such Sublicense agreement.

5.3 Records. Licensee shall maintain, and shall cause its Affiliates and Sublicensees to maintain, complete and accurate records of Royalty-Bearing Products that are made, used, sold, leased or transferred under this Agreement, any amounts payable to Broad in relation to such Royalty-Bearing Products, and all Non-Royalty Sublicense Income received by Licensee and its Affiliates, which records shall contain sufficient information to permit Broad to confirm the accuracy of any reports or notifications delivered to Broad under Section 5.1 (Reports and Payments). Licensee and its Affiliates shall, and shall use reasonable efforts to require its Sublicensees to, as applicable, retain such records relating to a given Calendar Quarter for at least [***] after the conclusion of that Calendar Quarter; provided that Licensee shall require that its Sublicensees retain such records relating to a given Calendar Quarter for no fewer than [***] after the conclusion of that Calendar Quarter (the "**Record Retention Period**").

5.3.1 Audit of Licensee and Affiliates. During the Record Retention Period, Broad will have the right, at its expense, to cause an independent, certified public accountant (or, in the event of a non-financial audit, other appropriate auditor) chosen by Broad to inspect such records during normal business hours for the purposes of verifying the accuracy of any reports

and payments delivered under this Agreement and Licensee's compliance with the terms hereof. Such accountant or other auditor, as applicable, shall be under reasonable written obligations of confidentiality to the audited party and shall not disclose to Broad any information other than information relating to the accuracy of reports and payments delivered under this Agreement. In addition, the auditor shall disclose its draft conclusions to Licensee and Broad, and the basis for such conclusions to Licensee, prior to making its final report to Broad, and shall be instructed to read the Licensee's comments in response thereto (if any). The accounting records as to any accounting period shall not be audited more than [***] per accounting period, nor more than [***] after the end of such accounting period. The Parties shall reconcile any underpayment or overpayment within [***] after the accountant delivers the results of the audit. If any audit performed under this Section 5.3 (Records) reveals an underpayment in excess of [***] percent ([***]%) in any Calendar Year, Licensee shall reimburse Broad for all amounts incurred in connection with such audit. Broad may exercise its rights under this Section 5.3 (Records) only [***] every year per audited entity and only with reasonable prior notice to the audited entity.

5.3.2 Audit of Sublicensees. Notwithstanding the foregoing, provided that the Licensee obtains an [***] audit right for itself with respect to a Sublicensee's records, as well as the right to share the results of such audit with Broad, the Licensee shall not be required to obtain from such Sublicensee a direct audit right for Broad. During the Record Retention Period, Broad shall have the right, at its expense, to require Licensee to make available to an independent, certified public accountant (or, in the event of a non-financial audit, other appropriate auditor) chosen by Broad, during normal business hours, such information as Licensee has in its possession with respect to reports and payments from Sublicensees for the purposes of verifying the accuracy of any reports and payments delivered under this Agreement and Licensee's compliance with the terms hereof. If such information as Licensee has in its possession is not sufficient for such purposes, Broad shall have the right, at its expense, in any Calendar Year in which Licensee would not otherwise exercise its right to audit a given Sublicensee, to cause Licensee to exercise such audit right. If Licensee does not have the right to conduct an audit of such Sublicensee for the relevant Calendar Year, Licensee and Broad shall meet and use reasonable efforts to agree on an appropriate course of action. The Parties shall reconcile any underpayment or overpayment within [***] the applicable accountant delivers the results of the audit. If any audit performed under this Section 5.3.2 (Audit of Sublicensees) reveals an underpayment (either by the Sublicensee alone or when taken together with all other contemporaneous audits conducted by or at the request of Broad) to Broad in excess of [***] percent ([***]%) in any Calendar Year, Licensee shall reimburse Broad for all amounts incurred in connection with such audit.

5.4 Late Payments. Any payments by Licensee that are not paid on or before the date such payments are due under this Agreement will bear interest at the lower of (a) [***] percent ([***]%) per month (to be pro-rated for any partial month) and (b) the maximum rate allowed by law. Interest will accrue beginning on the [***] day following the due date for payment and will be compounded [***]. Payment of such interest by Licensee shall not limit, in any way, Broad's right to exercise any other remedies Broad may have as a consequence of any payment due but unpaid hereunder.

5.5 Payment Method. Each payment due to Broad under this Agreement shall be paid by check or wire transfer of funds to Broad's account in accordance with written instructions

provided by Broad. If made by wire transfer, such payments shall be marked so as to refer to this Agreement.

5.6 Withholding and Similar Taxes. All amounts to be paid to Broad pursuant to this Agreement shall be without deduction of exchange, collection, or other charges, and, specifically, without deduction of withholding or similar taxes or other government imposed fees or taxes, except as permitted in the definition of Net Sales; provided that Licensee shall be entitled to make payment to an account of Broad held in the United States.

6. Patent Filing, Prosecution and Maintenance.

6.1 Control. Subject to Section 7.7 (Declaratory Judgment), Broad shall be responsible for the preparation, filing, prosecution, protection, defense, issuance and maintenance of all Patent Rights, including oppositions, *inter partes* reviews, interferences, post-grant reviews and similar proceedings before any patent office (or appeals therefrom) (collectively, the "**Prosecution**"). Broad shall: (a) choose patent counsel; instruct such patent counsel to furnish the Licensee with copies of all correspondence relating to the Patent Rights received from and sent to the United States Patent and Trademark Office (USPTO) and any other patent office, as well as copies of all proposed responses to such correspondence received from any patent office in time for Licensee to review and comment on such response; supply Licensee with a copy of the application as filed, together with notice of its filing date and serial number; supply Licensee with a draft copy of proposed preliminary amendments to be filed subsequent to the filing of a non-provisional application within Patent Rights on the express condition that Licensee will not propose any claim amendment or new claim that it believes, or has reason to believe, would result in the addition of any new inventor(s) to the application in question; and keep Licensee advised of the status of actual patent filings related to the Patent Rights. Broad shall give Licensee the opportunity to provide comments on and make requests of Broad concerning the Prosecution of the Patent Rights and shall consider such comments and requests in good faith; [***]. [***] Broad shall allow Licensee to propose claims to pose in draft applications prior to filing and will consider the proposed claims in good faith.

6.1.2 Broad shall provide notice to Licensee in the event Prosecution of the Patent Rights involves an interference or derivation proceeding. Upon declaration of any such interference or initiation of any such derivation proceeding, Licensee's rights under Section 6.1 (Control), including the right to receive correspondence to or from a patent office and the right to review draft responses, shall be suspended with respect to the Patent Rights involved in the interference or derivation proceeding. Notwithstanding the foregoing, any such interference or derivation proceeding is considered Prosecution of the Patent Rights and Licensee remains responsible for [***] in connection with such Prosecution, including costs and expenses associated with settlement or attempts to settle the interference. Notwithstanding the foregoing, if Licensee does not have an interest, such as by ownership, license or opinion, in opposing patents or applications involved in the interference or derivation proceeding, Broad shall enter into a common interest agreement to facilitate the sharing of the materials set forth in Section 6.1 (Control) with the Licensee.

6.1.3 Notwithstanding the foregoing, if Licensee, its Affiliates or Sublicensees is or becomes a Challenging Party, then Licensee's rights to participate in Prosecution under Section 6.1 (Control), including the right to receive correspondence to or from a patent office and the right to review draft responses, shall be suspended during the pendency of the relevant Patent Challenge with respect both to the Patent Rights that are the subject of the Patent Challenge and to any related Patent Rights.

6.1.4 No later than [***] prior to the deadline for entering into the national/regional phase with respect to any PCT application included in the Patent Rights, Licensee shall provide Broad with a list of countries in which Licensee would like Broad to file the patent application (each, a "**List of Countries**"). Broad shall consider each List of Countries in good faith and, except as provided below in this Section 6.1.4 (Control), shall file national/regional phase applications in all countries on each List of Countries. Notwithstanding anything to the contrary contained in this Agreement, and without intending to limit any of Broad's rights hereunder, Broad expressly reserves the right (i) to decline to initiate Prosecution of any of the Patent Rights in a Developing Country(ies) (excluding Brazil, China and India) included on a List of Countries or (ii) to initiate, and in its discretion, continue Prosecution of any of the Patent Rights in a Developing Country(ies) (excluding Brazil, China and India) whether or not included on a List of Countries at Broad's expense, provided that Broad provides Licensee with [***] advance notice of its intention to take the action described in the foregoing clause (i) or (ii), provides Licensee an opportunity for Licensee to meet with Broad to discuss, and reasonably considers Licensee's comments regarding such intention. Broad shall thereafter notify Licensee of the taking of any action described in the foregoing clause (i) or (ii) at least [***] before the taking of such action. If Broad takes the action described in clause (ii) of the immediately preceding sentence, then Broad expressly reserves the right, upon notice to Licensee, either (A) to remove the applicable Patent Right in such Developing Country(ies) from the scope of the licenses granted pursuant to Section 2.1.1 (License Grants), effective upon such notice, or (B) treat the applicable Patent Right as an Abandoned Patent Right, in which case under this clause (B) all licenses granted to the Licensee under such Patent Right in such Developing Country(ies) shall terminate upon such notice; whereupon Broad shall be free, without further notice or obligation to Licensee, to grant non-exclusive or exclusive rights in and to such Patent Right to Third Parties for all purposes within such Developing Country(ies). Further, Broad may, in its sole discretion, file additional national/regional phase applications (the "**Additional National Stage Filings**") in countries not included on a List of Countries provided by Licensee, and all expenses, including translation fees associated with Prosecution of such Additional National Stage Filings shall be expenses associated with Prosecution under this Agreement, in accordance with Section 6.3 (Expenses). If Licensee does not wish to reimburse Broad for all expenses associated with Prosecution of such Additional National Stage Filings, such Additional National Stage Filings shall be deemed Abandoned Patent Rights and treated in accordance with Section 6.4.1 (Abandonment by Licensee).

6.2 Common Interest. All non-public information disclosed by Broad or its outside patent counsel to Licensee regarding Prosecution of the Patent Rights, including [***], shall be deemed Broad Confidential Information (either for itself or on behalf of another Institution, as applicable). In addition, the Parties acknowledge and agree that, with regard to such Prosecution of the Patent Rights, the interests of the Parties as licensor and licensee are aligned and are legal in nature.

The Parties agree and acknowledge that they have not waived, and nothing in this Agreement constitutes a waiver of, any legal privilege concerning the Patent Rights or their Confidential Information, including privilege under the common interest doctrine and similar or related doctrines.

6.3 Expenses. [***]. In addition, subject to Section 6.4 (Abandonment) below, Licensee shall reimburse Broad for [***] documented, out-of-pocket expenses, including attorneys' fees, translation costs and official fees, incurred by Broad in the Prosecution of the Patent Rights pursuant to this Article 6 (Patent Filing, Prosecution and Maintenance), incurred after the Effective Date within [***] after the date of each invoice from Broad for such expenses. In the event that after the Effective Date, Broad enters into an exclusive license with a third party with respect to any of the Patent Rights outside the Field, then Broad shall use reasonable efforts to secure a provision under such license that provides for payment of an appropriate portion of past and future expenses related to such Patent Rights by such licensee at the time such expenses are incurred, taking into consideration the scope of such license. In the event that Broad is able to collect such amounts, Broad shall credit Licensee for the applicable share previously paid by Licensee for past expenses and Licensee shall thereafter be obligated to only pay its applicable share of such expenses.

6.4 Abandonment.

6.4.1 Abandonment by Licensee. If Licensee decides that it does not wish to pay for the Prosecution of any Patent Rights in a particular country, then Licensee shall provide Broad with prompt written notice of such election and upon such written notice, the Patent Rights that were the subject of the notice, solely in the countries identified in the notice for such Patent Rights, shall be "**Abandoned Patent Rights.**" Upon receipt of such notice by Broad, Licensee shall be released from its obligation to reimburse Broad for the expenses incurred thereafter as to such Abandoned Patent Rights; provided, however, that expenses authorized prior to the receipt by Broad of such notice that cannot be cancelled as of the date of the notice shall be deemed incurred prior to the notice. Any license granted by Broad to Licensee hereunder with respect to any Abandoned Patent Rights will terminate and Licensee will have no rights whatsoever to exploit such Abandoned Patent Rights. Broad will then be free, without further notice or obligation to Licensee, to grant rights in and to such Abandoned Patent Rights to third parties without limitation. For clarity, Abandoned Patent Rights are defined on a country-by-country basis, not a worldwide basis, and Licensee shall retain its rights in all other countries to the Patent Rights that are counterparts in other countries to the Abandoned Patent Rights (and the non-exclusive licenses referred to in this paragraph shall not extend to such other countries).

6.4.2 Abandonment by Broad. Broad agrees to maintain any application or patent within the Patent Rights for as long as (a) Licensee continues to meet its obligation to reimburse expenses associated with such application or patent in accordance with Section 6.3

(Expenses) and (b) there is a good faith basis for doing so. In the event that Broad is permitted under this Section 6.4.2 (Abandonment by Broad) to cease Prosecution of an application or patent within the Patent Rights and elects to do so, it shall notify Licensee at least [***] prior to ceasing Prosecution for such Patent Right and shall discuss such proposed action with Licensee in good faith. For the avoidance of doubt, this Section 6.4.2 (Abandonment by Broad) shall not apply and shall not limit Broad's right to cease Prosecution of a given application within the Patent Rights in lieu of a divisional, continuation or continuation-in-part application that is also within the Patent Rights.

6.5 Marking. Licensee shall, and shall cause its Affiliates and Sublicensees to, mark all Royalty-Bearing Products sold or otherwise disposed of in such a manner as to conform with the patent laws and practice of the country to which such products are shipped or in which such products are sold for purposes of ensuring maximum enforceability of Patent Rights in such country.

6.6 CREATE Act. No Party shall have the right to use this Agreement as a joint research agreement to make an election under the Cooperative Research and Technology Enhancement Act of 2004, 35 U.S.C. 103(c)(2)-(c)(3), as amended by the America Invents Act and set forth in 35 U.S.C. 102(b)(2)(C) and 102(c), without the prior written consent of each other Party having an ownership interest in a patent or patent application involved in such election, such consent to be granted or withheld in the sole discretion of each such other Party.

7. Enforcement of Patent Rights.

7.1 Notice. In the event either Party becomes aware of any possible or actual infringement of any Patent Rights with respect to Licensed Products, that Party shall promptly notify the other Party and provide it with details regarding such Infringement.

7.2 Suit by Licensee. So long as Licensee remains the exclusive licensee of the Patent Rights with respect to a Licensed Product in the Field, Licensee shall have the first right, but not the obligation, to institute infringement suits under the Patent Rights with respect to such Licensed Product in the Field where Licensee reasonably determines that a Third Party is marketing or has specific plans and is preparing to market an infringing product in any country that competes with such Licensed Product in the Field ("**Infringement**"); provided that prior to initiating action against the Third Party with respect to such Infringement, Licensee has provided evidence to Broad and other Institutions, as applicable, that there is a good faith basis for doing so. Notwithstanding anything to the contrary contained herein with respect to any Infringement, if Licensee owns one or more patents that cover the allegedly infringing product ("**Other IP**"), Licensee shall not initiate action under the Patent Rights pursuant to this Section 7.2 (Suit by Licensee) unless it (i) also asserts [***] of such Other IP or (ii) obtains written consent from Broad. Licensee shall use the same degree of diligence in prosecuting such Infringement as it uses or would use in prosecuting infringement of its own patent rights.

7.2.1 Before Licensee commences an action with respect to any Infringement, Licensee shall give Broad no less than [***] advance written notice, and Licensee shall consult with Broad and the other Institutions, as applicable, and, to the extent feasible, any other exclusive licensee of the applicable Patent Rights who have a right to enforce such Patent

Rights outside of the Field, upon such exclusive licensee's request, subject, in the case of any such other exclusive licensee to an obligation of confidentiality that apply to such other licensee that is no less strict than that set forth herein, with respect to its proposed course of action to address the Infringement and Licensee shall consider in good faith the views and concerns (if any) of Broad, the other Institutions, and, as applicable, other exclusive licensees of such Patent Rights outside of the Field, and potential effects on the public interest in making its decision whether to take such action, especially with regard to the locally affordable availability of Licensed Products or equivalents thereof, e.g., generic products, in Developing Countries. Notwithstanding the foregoing or anything to the contrary contained in this Agreement, Licensee agrees that, consistent with Section 6.1 (Control), Broad shall hold final decision-making authority, to be exercised in good faith, on a case-by-case basis, as to whether Licensee shall be permitted to enforce the Patent Rights in any Developing Country.

7.2.2 Should Licensee elect (and, where consent of Broad is required, be permitted) to take action against an actual or potential infringer, Licensee shall select counsel reasonably acceptable to Broad, shall keep Broad and other Institutions, as applicable, reasonably informed of the progress of the action and shall give Broad and other Institutions, as applicable, a reasonable opportunity in advance to consult with Licensee and offer its views about major decisions affecting the action. Licensee shall give careful consideration to those views, but shall have the right to control the action; provided, however, that if Licensee fails to defend in good faith the validity or enforceability of the Patent Rights in the action, or if Licensee's exclusive license to a Valid Claim in the suit terminates pursuant to Section 10.2 (Termination), or if infringement in the Field terminates, Broad may elect to take control of the action pursuant to Section 7.3 (Suit by Broad). The expenses of Licensee with respect to any suit or suits that Licensee elects to bring in accordance with this Section 7.2 (Suit by Licensee) shall be paid for entirely by Licensee. If required under Applicable Law to establish standing for the initiation or maintenance of such infringement action by Licensee, (a) Broad and other Institutions, as applicable, shall, upon request of Licensee or as required by a court or procedural rules, or may voluntarily, join or be joined as a party to such action, provided that neither Broad nor another Institution, as applicable, shall be the first named party in such action, (b) Licensee shall hold Broad (and other Institutions, if applicable) free, clear and harmless from and against any and all costs and expenses, including attorneys' fees, incurred in conjunction with the prosecution, adjudication, defense, management or settlement of, or joinder to, such suits and any related appeals, remands or other related proceedings ("**Litigation Expenses**") and (c) Licensee shall reimburse any and all Litigation Expenses incurred by Broad (and other Institutions, if applicable) within [***] after receiving an invoice (including a copy of detailed time and expense entries from attorneys) from Broad (and other Institutions, if applicable) for same. Licensee shall not compromise or settle such litigation without the prior written consent of Broad (subject to concurrence of other Institutions, as applicable), which shall not be unreasonably withheld or delayed. In the event Licensee exercises its right to sue pursuant to this Section 7.2 (Suit by Licensee), then out of any sums recovered in such suit or in settlement thereof, such recoveries shall first be used to reimburse Licensee for its Litigation Expenses incurred in the prosecution of any such suit. If, after such reimbursement, any funds remain from said recovery, then Broad shall receive an amount of such remaining funds equal to the applicable percentage in Section 4.7 (Non-Royalty Sublicense Income) had the infringer been a Sublicensee instead (and such recovery was Non-Royalty Sublicense Income paid under a Sublicense executed on the effective date of such settlement or the date of entry of judgment by

the court awarding such recovered sums, whichever is applicable), and the remainder of such funds shall be retained by Licensee.

7.3 Suit by Broad. If Licensee does not take action in the prosecution, prevention, or termination of any Infringement pursuant to Section 7.2 (Suit by Licensee) above, and has not commenced negotiations with the suspected infringer for the discontinuance of said Infringement, within [***] after receipt of notice of the existence of an actual Infringement, then Broad may elect to do so. Broad shall give due consideration to Licensee's reasons for not initiating a lawsuit or otherwise making or prosecuting a claim. Subject to Section 7.2.2 (Suit by Licensee), any and all expenses, including reasonable attorneys' fees, incurred by Broad with respect to the prosecution, adjudication or settlement of such suit in accordance with this Section 7.3 (Suit by Broad), including any related appeals, shall be paid for entirely by Broad. In the event Broad exercises its right to sue pursuant to this Section 7.3 (Suit by Broad), out of any sums recovered in such suit or in settlement thereof, such expenses incurred by Broad shall be first reimbursed and then Licensee shall receive [***] percent ([***]%) of the remaining funds, with the remainder of such funds to be retained by Broad.

7.4 Own Counsel. The Party initiating the suit shall have the sole and exclusive right to elect counsel for any suit initiated by it pursuant to Section 7.2 (Suit by Licensee) or Section 7.3 (Suit by Broad); provided that such counsel is reasonably acceptable to the other Party. Each Party shall have the right to participate in and be represented by counsel of its own selection and at its own expense, subject to Section 7.2.2 (Suit by Licensee), in any suit instituted under this Article 7 (Enforcement of Patent Rights) by the other Party for Infringement.

7.5 Cooperation. Each Party agrees to cooperate fully in any action under this Article 7 (Enforcement of Patent Rights) that is controlled by the other Party, including executing legal papers and cooperating in the prosecution as may be reasonably requested by the controlling Party; provided that the controlling Party reimburses the cooperating Party promptly for any costs and expenses incurred by the cooperating Party in connection with providing such assistance within [***] after receiving an invoice from the cooperating Party for same.

7.6 Patent Validity Challenge. Each Party shall promptly notify the other Party in the event it receives notice of any legal or administrative action by any Third Party against a Patent Right, including any opposition, nullity action, revocation, *inter partes* review, post-grant review, compulsory license proceeding or declaratory judgment action. Any such actions are Prosecution of the Patent Rights and shall be addressed as provided in Section 6.1 (Control) and Section 6.3 (Expenses).

7.7 Declaratory Judgment. If a declaratory judgment action is brought naming Licensee or any of its Affiliates or Sublicensees as a defendant and alleging invalidity or unenforceability of any claims within the Patent Rights, Licensee shall promptly notify Broad in writing. Similarly, if Broad is named as a defendant in a declaratory judgment action related to the Patent Rights, Broad shall promptly notify Licensee in writing. In either case, Broad may elect, upon written notice to Licensee (such written notice to be given within [***] after Broad receives notice of the commencement of such action, in the case of actions of which Licensee notifies Broad) to conduct or to take over the sole defense of the invalidity or unenforceability aspect of the action at Licensee's expense in accordance with Section 6.3

(Expenses). In such event, Broad shall keep Licensee fully informed in advance of the strategy in responding to such declaratory judgment action, the Parties shall enter into a common interest/joint defense agreement as appropriate (which shall not be in conflict with this Agreement), and Broad shall reasonably consult with and consider the comments of Licensee and its counsel. If Broad does not promptly elect to conduct the defense or take over the defense of the applicable suit (or portion thereof), then it shall so notify the Licensee and, upon Licensee's request, the Parties shall discuss in good faith Broad's reasons for not conducting such defense and the possibility of Broad permitting Licensee to conduct the defense at Licensee's expense, and if Licensee does so conduct such defense, Broad shall reasonably cooperate with Licensee in relation thereto. The rights granted to Broad under this Section 7.7 (Declaratory Judgment) shall be in addition to any rights granted under Section 6.1 (Control) and Section 6.3 (Expenses). In the event that after the Effective Date, Broad enters into an exclusive license with a Third Party with respect to any of the Patent Rights outside the Field, then Broad shall use reasonable efforts to secure a provision under such license that provides for payment of an appropriate portion of past and future expenses related to such Patent Rights under this Section 7.7 (Declaratory Judgment) by such licensee at the time such expenses are incurred, taking into consideration the scope of such license. In the event that Broad is able to collect such amounts, Broad shall credit Licensee for the applicable share previously paid by Licensee for past expenses under this Section 7.7 (Declaratory Judgment) and Licensee shall thereafter be obligated to only pay its applicable share of such expenses under this Section 7.7 (Declaratory Judgment).

7.8 Actions Against Infringement Outside the Field. Prior to taking action to enforce any Patent Rights against infringement outside the Field, Broad shall, and shall cause its exclusive licensees of the applicable Patent Rights who have a right to enforce such Patent Rights outside of the Field, to the extent feasible and consistent with any obligations of confidentiality that apply to Broad or such exclusive licensee, give Licensee no less than [***] advance written notice. Promptly after such notice, if requested by Licensee, Broad shall, and shall cause its exclusive licensee of the applicable Patent Right to, meet and confer with Licensee, subject to any obligations of confidentiality that apply to Broad or such licensee, and consider in good faith Licensee's views and concerns (if any) related to the potential enforcement action.

7.9 Licensee Actions in Support of Affiliates and Sublicensees. Unless, based on the advice of counsel to Broad, it is reasonably likely to adversely affect attorney-client privilege, it is understood that the Licensee may, upon [***] prior written notice to Broad, exercise its rights under this Article 7 (Enforcement of Patent Rights) in support of its Affiliates and Sublicensees, and may seek the comments and financial support of Affiliates and Sublicensees on patent prosecution and enforcement, and may make comments and seek to enforce Patent Rights in accordance with this Article 7 (Enforcement of Patent Rights) to protect the interests of its Affiliates and Sublicensees, in addition to the Licensee's own interests.

7.10 RESERVED

8. Warranties and Covenant: Limitation of Liability.

8.1 Compliance with Law. Licensee represents and warrants that it will comply, and will ensure that its Affiliates and Sublicensees comply, with all Applicable Law, including all local, state, federal and international laws and regulations relating to the development, manufacture, use, sale and importation of Royalty-Bearing Products. Without limiting the foregoing, Licensee represents and warrants, on behalf of itself and its Affiliates and Sublicensees, that it shall comply with all Applicable Laws and regulations controlling the export of certain commodities and technical data, including without limitation all Export Administration Regulations of the United States Department of Commerce. Among other things, these laws and regulations prohibit or require a license for the export of certain types of commodities and technical data to specified countries. Licensee hereby gives written assurance that it will comply with, and will cause its Affiliates to comply with (and will contractually obligate its Affiliates and Sublicensees to comply with), all applicable United States export control laws and regulations, that as between the Parties it bears sole responsibility for any violation of such laws and regulations by itself or its Affiliates or Sublicensees, and that it will indemnify, defend, and hold Indemnitees and HHMI Indemnitees harmless (in accordance with Section 9.1 (Indemnity)) for the consequences of any such violation.

8.2 Representations and Warranties.

8.2.1 By Broad. Broad represents and warrants that (A) Broad has the authority and right to enter into and perform its obligations under this Agreement and grant the licenses granted to Licensee herein on behalf of itself and the other Institutions, (B) as of the Effective Date, to the best of the knowledge of Broad's Office of Strategic Alliances and Partnering, the execution, delivery and performance of this Agreement by Broad does not conflict with, or constitute a breach of, any order, judgment, agreement or instrument to which it is a party or is otherwise bound, and (C) as of the Effective Date, to the best of the knowledge of Broad's Office of Strategic Alliances and Partnering, no consent of any Third Party, including without limitation any governmental authority, is required for Broad to execute, deliver and perform under this Agreement, including without limitation to grant the licenses granted to Licensee herein, except for such consents as may have been obtained prior to the Effective Date.

8.2.2 By Licensee. Licensee represents and warrants that (A) Licensee has the authority and right to enter into and perform its obligations under this Agreement, (B) as of the Effective Date, to the best of Licensee's knowledge, the execution, delivery and performance of this Agreement by Licensee does not conflict with, or constitute a breach of, any order, judgment, agreement or instrument to which it is a party or, to its knowledge, is otherwise bound, and (C) as of the Effective Date, to the best of Licensee's knowledge, no consent of any Third Party, including without limitation any governmental authority, is required for Licensee to execute, deliver and perform under this Agreement, except for such consents as may have been obtained prior to the Effective Date.

8.3 No Warranty.

8.3.1 Broad makes no representations or warranties other than those set forth above.

8.3.2 Nothing contained herein shall be deemed to be a warranty by Broad or by any other Institution that it can or will be able to obtain patents on patent applications included in the Patent Rights, or that any of the Patent Rights will afford adequate or commercially worthwhile protection.

8.3.3 NEITHER BROAD NOR ANY INSTITUTION MAKES ANY WARRANTIES WHATSOEVER AS TO THE COMMERCIAL OR SCIENTIFIC VALUE OF THE PATENT RIGHTS OR THE TRANSFERRED MATERIALS. NEITHER BROAD NOR ANY INSTITUTION MAKES ANY REPRESENTATION THAT THE PRACTICE OF THE PATENT RIGHTS OR USE OF THE TRANSFERRED MATERIALS OR THE DEVELOPMENT, MANUFACTURE, USE, SALE OR IMPORTATION OF ANY ROYALTY-BEARING PRODUCT, OR ANY ELEMENT THEREOF, WILL NOT INFRINGE ANY PATENT OR PROPRIETARY RIGHTS.

8.3.4 EXCEPT AS OTHERWISE EXPRESSLY PROVIDED IN THIS AGREEMENT, NEITHER LICENSEE NOR BROAD NOR ANY INSTITUTION MAKES ANY WARRANTY WITH RESPECT TO ANY TECHNOLOGY, PATENTS, GOODS, SERVICES, RIGHTS OR OTHER SUBJECT MATTER OF THIS AGREEMENT AND EACH OF LICENSEE, BROAD AND THE INSTITUTIONS EACH HEREBY DISCLAIM WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT WITH RESPECT TO ANY AND ALL OF THE FOREGOING.

8.4 Limitation of Liability.

8.4.1 EXCEPT WITH RESPECT TO MATTERS FOR WHICH LICENSEE IS OBLIGATED TO INDEMNIFY INDEMNITEES UNDER ARTICLE 9 (INDEMNIFICATION AND INSURANCE), AND LIABILITY RESULTING FROM A BREACH BY LICENSEE OF THE LICENSE GRANT RESTRICTIONS UNDER SECTION 2.1.2 (LICENSE GRANTS), NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY WITH RESPECT TO ANY SUBJECT MATTER OF THIS AGREEMENT UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR (A) ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES OR LOST PROFITS OR (B) COST OF PROCUREMENT OF SUBSTITUTE GOODS, TECHNOLOGY OR SERVICES.

8.4.2 Institutions' aggregate liability for all damages of any kind arising out of or relating to this Agreement or its subject matter under any contract, negligence, strict liability or other legal or equitable theory shall not exceed the amounts paid to Broad under this Agreement.

9. Indemnification and Insurance.

9.1 Indemnity.

9.1.1 Licensee shall (and shall cause its Affiliates and Sublicensees to) indemnify, defend and hold harmless each Institution and each of their current and former directors, governing board members, trustees, officers, faculty, affiliated investigators, medical and professional staff, employees, students, and agents and their respective successors, heirs and

assigns (collectively, the "**Indemnitees**") from and against any claim, suit, investigation, action, demand, judgment, liability, cost, expense, damage, deficiency, loss or obligation of any kind or nature (including reasonable attorneys' fees and other costs and expenses of litigation or defense), based upon, arising out of, or otherwise relating to (a) this Agreement or any Sublicense or subcontract, including any cause of action relating to product liability concerning any product, process, or service made, used, sold or performed pursuant to any right or license granted under this Agreement or (b) the use, handling, storage or disposition of any Transferred Materials by Licensee or others who possess the Transferred Materials through a chain of possession leading back, directly or indirectly, to Licensee (collectively, "**Claims**") except to the extent any such Claim results from or arises out of the gross negligence or willful misconduct of an Indemnitee or material breach of this Agreement by Broad. No Affiliate of Licensee (other than an Affiliate controlling Licensee) shall have an obligation to indemnify Broad for any Claim based upon, arising out of, or otherwise relating to the exercise of rights under this Agreement by a different Affiliate of Licensee or by any other Person unless such Affiliate or other Person is exercising rights granted by such first Affiliate or acting on such first Affiliate's behalf or upon its instruction or advice. No Sublicensee shall have an obligation to indemnify Broad for any Claim based upon, arising out of, or otherwise relating to the exercise of rights under this Agreement by a different Sublicensee, Licensee, any Affiliate of Licensee or by any other Person unless such different Sublicensee, Licensee or Affiliate or other Person is exercising rights granted by such first Sublicensee or acting on such first Sublicensee's behalf or upon its instruction or advice.

9.1.2 Procedures. For purposes of this Section 9.1.2 (Procedures), Licensee and each of its Affiliates and Sublicensees are referred to as "**Indemnitor**". The Indemnitees agree to provide Licensee with prompt written notice of any Claim for which indemnification is sought under this Agreement; provided, however, that an Indemnitee's delay in providing or failure to provide such notice shall not relieve Indemnitor of its indemnification obligations under this Agreement, except to the extent Indemnitor can demonstrate actual prejudice due to the delay or lack of notice. Indemnitor agrees, at its own expense, to provide attorneys reasonably acceptable to Broad and the applicable indemnified Institution to defend against any such Claim. The Indemnitees shall cooperate with Indemnitor, at Indemnitor's expense, in such defense and shall permit Indemnitor to conduct and control such defense and the disposition of such Claim (including without limitation all decisions relative to litigation, appeal, and settlement); provided, however, that any Indemnitee shall have the right to retain its own counsel, at the expense of Indemnitor, if representation of such Indemnitee by the counsel retained by Indemnitor would be inappropriate because of actual or potential differences in the interests of such Indemnitee and any other party represented by such counsel. Each Institution agrees to use diligent efforts to select counsel, and to cause any other Indemnitees affiliated with their respective institutions to select counsel, that minimizes the number of counsel retained by all Indemnitees if representation of an Indemnitee by the counsel retained by Indemnitor would be inappropriate because of actual or potential differences in the interests of such Indemnitee and any other party represented by such counsel. Indemnitor agrees to keep counsel(s) for Indemnitees informed of the progress in the defense and disposition of such claim and to consult with Broad and the indemnified Institution (as applicable) with regard to any proposed settlement. Licensee shall not settle any Claim that has an adverse effect on the rights of any Indemnitee hereunder that is not immaterial or that admits any liability by or imposes any obligation on any Indemnitee without the prior written consent of such Indemnitee, which consent shall not be unreasonably

withheld, conditioned or delayed. An Indemnitee may not settle any Claim without the prior written consent of Licensee, which consent shall not be unreasonably withheld, conditioned or delayed.

9.1.3 Notwithstanding anything express or implied, Licensee shall not be required to indemnify, defend, or hold harmless any Indemnitee with respect to any dispute amongst any Indemnitee(s) and/or subsets of any of the foregoing, as to the division amongst themselves of the consideration paid by Licensee under this Agreement.

9.1.4 HHMI Indemnification. HHMI, and its trustees, officers, employees, and agents (collectively, "**HHMI Indemnitees**"), shall be indemnified, defended by counsel reasonably acceptable to HHMI, and held harmless by Licensee from and against any claim, liability, cost, expense, damage, deficiency, loss or obligation, of any kind or nature (including, without limitation, reasonable attorneys' fees and other costs and expenses of defense) (collectively, "**HHMI Claims**"), based upon, arising out of or otherwise relating to this Agreement or any Sublicense, or the use, handling, storage or disposition of the Transferred Materials by Licensee or others who possess the Transferred Materials through a chain of possession leading back, directly or indirectly, to Licensee, including without limitation any cause of action relating to product liability. The previous sentence shall not apply to the extent that the relevant HHMI Claim is determined with finality by a court of competent jurisdiction to result from the gross negligence or willful misconduct of an HHMI Indemnitee. Notwithstanding any other provision in this Agreement, Licensee's obligation to defend, indemnify and hold harmless the HHMI Indemnitees under this paragraph shall not be subject to any limitation or exclusion of liability or damages or otherwise limited in any way. Licensee shall require any Sublicensee(s) to indemnify, hold harmless and defend the HHMI Indemnitees under the same terms set forth in this Section 9.1.4 (HHMI Indemnification).

9.2 Insurance.

9.2.1 Beginning at the time any Royalty-Bearing Product is being commercially distributed or sold (other than for the purpose of obtaining Regulatory Approvals) by Licensee, or by an Affiliate, Sublicensee or agent of Licensee, Licensee shall, at its sole cost and expense, procure and maintain commercial general liability insurance in amounts not less than [***] Dollars ($[***]) per incident and [***] Dollars ($[***]) annual aggregate and naming the Indemnitees and HHMI Indemnitees as additional insureds. During Clinical Studies of any such Royalty-Bearing Product Licensee shall, at its sole cost and expense, procure and maintain commercial general liability insurance in such equal or lesser amount as Broad or any other Institution or HHMI shall require, naming the Indemnitees and HHMI Indemnitees as additional insureds. Such commercial general liability insurance shall provide: (a) product liability coverage and (b) broad form contractual liability coverage for Licensee's indemnification obligations under this Agreement.

9.2.2 If Licensee elects to self-insure all or part of the limits described above in Section 9.2.1 (Insurance) (including deductibles or retentions that are in excess of [***] Dollars ($[***]) annual aggregate) such self-insurance program must be acceptable to Broad, the other Institutions, HHMI and Federal Insurance Company [***] in their sole discretion. The minimum amounts of insurance coverage required shall not

be construed to create a limit of Licensee's liability with respect to its indemnification obligations under this Agreement.

9.2.3 Licensee shall provide each Institution and HHMI with written evidence of such insurance upon request of such Institution or HHMI, as applicable. Licensee shall provide each Institution and HHMI with written notice at least [***] prior to the cancellation, non-renewal or material change in such insurance. If Licensee does not obtain replacement insurance providing comparable coverage within such [***] period, Broad shall have the right to terminate this Agreement effective at the end of such [***] period without notice or any additional waiting periods.

9.2.4 Licensee shall maintain such commercial general liability insurance beyond the expiration or termination of this Agreement during: (a) the period that any Royalty-Bearing Product is being commercially distributed or sold by Licensee, or an Affiliate, Sublicensee or agent of Licensee; and (b) a reasonable period after the period referred to in (a) above which in no event shall be less than [***].

10. Term and Termination.

10.1 Term. The term of this Agreement shall commence on the Effective Date and, unless earlier terminated as provided in this Article 10 (Term and Termination), shall continue in full force and effect until the expiration of the later of: (a) the last to expire Valid Claim or (b) the end of the last Royalty Term of a Royalty-Bearing Product in the Field in a country in the Territory (the "**Term**").

10.2 Termination.

10.2.1 Termination Without Cause. Licensee may terminate this Agreement upon [***] days prior written notice to Broad, with or without cause.

10.2.2 Termination for Default.

10.2.2.1 Subject to 3.5.6 (Unmet Deadline), in the event that either party commits a material breach of its obligations under this Agreement and fails to cure that breach within [***] after receiving written notice thereof which written notice explicitly states that it is a notice of material breach under this Section 10.2.2.1 (Termination for Default), the other party may terminate this Agreement immediately upon written notice to the party in breach.

10.2.2.2 If Licensee defaults in its obligations under Section 9.2 (Insurance) to procure and maintain insurance or, if Licensee has in any event failed to comply with the notice requirements contained therein, then Broad may terminate this Agreement immediately without notice or additional waiting period.

10.2.2.3 Broad shall be entitled to, in accordance with the provisions of Section 3.5.6 (Unmet Deadline), (a) terminate this Agreement in its entirety under Section 3.5.6.1 (Unmet Deadline), (b) under Section 3.5.6.2 (Unmet Deadline), terminate licenses granted to Licensee under Section 2.1 (License Grants) with respect to a

Licensed Product, and (c) under Section 3.5.6.3 (Unmet Deadline), terminate licenses granted to Licensee under Section 2.1 (License Grants) with respect to Royalty-Bearing Products that are not either a Retained Product or a Related Product to a Retained Product.

10.2.3 Termination for Patent Challenge. If Licensee or any of its Affiliates or Sublicensees directly or indirectly brings, assumes or participates in, or knowingly, willfully or recklessly assists in bringing a Patent Challenge (except as required under a court order or subpoena), then the following shall apply: (a) if Licensee or any of its Affiliates is the party so bringing, assuming, participating in or assisting in such Patent Challenge, then Broad shall be entitled to immediately terminate this Agreement upon written notice to Licensee, and (b) if a Sublicensee is the party so bringing, assuming, participating in or assisting in such Patent Challenge, then (i) Broad shall be entitled to immediately terminate the rights hereunder as and to the extent sublicensed to a Sublicensee upon written notice to Licensee and (ii) Broad shall grant Licensee a period not to exceed [***] from the date of notice by Broad to Licensee for Licensee to inform Sublicensee of its intention to terminate this Agreement due to such Sublicensee bringing, assuming, participating in or assisting in a Patent Challenge, during which period Licensee may terminate any and all agreements with such Sublicensee that contain a Sublicense. If, pursuant to the foregoing clause (ii), Licensee terminates such sublicense agreement(s) during such [***] period, then Broad shall not be entitled to terminate this Agreement, in whole or in part, by virtue of such Sublicensee bringing, assuming, participating in or assisting in such Patent Challenge. However, if Licensee does not terminate such agreement(s) during such [***] period, then Broad shall be entitled to immediately terminate this Agreement in whole or in part upon written notice to Licensee thereof.

10.2.4 Bankruptcy. Broad may terminate this Agreement upon written notice to Licensee if Licensee becomes subject to a Bankruptcy Event or if Licensee becomes the subject of dissolution proceedings or otherwise discontinues all business operations to which this Agreement relates.

10.2.5 Termination without Prejudice. Broad's right of termination in this Section 10.2 (Termination) shall be in addition and without prejudice to, and shall not constitute a waiver of, any right of Broad for recovery of any monies then due to it hereunder or any other right or remedy Broad may have at law, in equity or under this Agreement.

10.3 Effect of Termination.

10.3.1 Termination of Rights. Upon expiration or termination of this Agreement, in whole or in part, by either Party pursuant to any of the provisions of Section 10.2 (Termination) or this Agreement: (a) the applicable rights and licenses granted to Licensee under Article 2 (License) shall terminate, all rights in and to and under the applicable Patent Rights will revert to Broad and neither Licensee nor its Affiliates may make any further use or exploitation of the applicable Patent Rights; and (b) any existing agreements that contain a Sublicense of rights terminated under this Agreement shall automatically terminate to the extent of such terminated rights [***] following the effective date of termination of this Agreement; provided, that if a Sublicensee is (i) an Affiliate of Licensee, (ii) in material default of any

material provision of the applicable Sublicense such that Licensee would have the right to terminate the Sublicense or (iii) the basis for the termination of the Agreement due to such Sublicensee's actions or inactions ((i), (ii) and (iii) together, "**Ineligible Sublicensees**"), then the applicable Sublicense to which such Sublicensee is a party shall terminate effective immediately upon termination of this Agreement. Upon termination of this Agreement, in whole or in part, under any of the provisions in Section 10.2 (Termination), each Sublicensee subject to potential automatic termination under this Section 10.3.1 (Termination of Rights) that is not an Ineligible Sublicensee shall have the right to enter into a direct license from Broad (a "**Direct License**") on substantially the same non-economic terms and conditions set forth in the Sublicense and on economic terms providing for the payment by such Sublicensee to Broad of the consideration that otherwise would have been payable to Broad if the applicable Sublicense and this Agreement were still simultaneously in effect. Broad agrees to negotiate in good faith the final form of such Direct License on such financial terms and conditions; such final form of Direct License agreement shall not (i) impose any representations, warranties, obligations or liabilities on Broad or any other Institution that are not included in this Agreement, (ii) have any obligations that are greater than or inconsistent with the obligations of Broad under this Agreement or the nature of Broad as an academic and non-profit entity, and (iii) have any fewer rights than Broad has under this Agreement, as applicable to the Direct License. If any Sublicensee, other than Ineligible Sublicensees, desires to enter into such a Direct License with Broad, it shall wholly be the responsibility of Sublicensee to notify Broad of such desire no later than [***] after the effective date of termination of this Agreement. If Broad and the applicable Sublicensee, for any reason, do not enter into a Direct License within [***] after the effective date of termination of this Agreement, the applicable Sublicense subject to potential automatic termination under this Section 10.3.1 (Termination of Rights), and all rights granted thereunder, shall automatically terminate.

10.3.2 Accruing Obligations. Termination or expiration of this Agreement shall not relieve the Parties of obligations accruing prior to such termination or expiration, including obligations to pay amounts accruing hereunder up to the date of termination or expiration. After the date of termination or expiration of this Agreement in its entirety (except in the case of termination by Broad pursuant to Section 10.2 (Termination)), Licensee, its Affiliates and Sublicensees may sell (a) Licensed Products then in stock and (b) Enabled Products; provided that Licensee shall pay the applicable royalties and payments to Broad in accordance with Article 4 (Consideration for Grant of License), provide reports and audit rights to Broad pursuant to Article 5 (Reports; Payments; Records) and maintain insurance in accordance with the requirements of Section 9.2 (Insurance). The Parties agree that the obligations in Section 4.2 (Equity), and Section 6.3 (Expenses) (with respect to patent expenses incurred by Broad prior to the Effective Date) will accrue immediately upon execution of this Agreement by both Parties, regardless of the events, invoice and payment timing details set forth therein.

10.3.3 Documentation, Right of Reference and License. Upon termination of the Agreement in its entirety, subject to the terms of any Direct Licenses and Sublicenses:

10.3.3.1 At Broad's request, the parties will discuss in good faith (and subject to Licensee's other contractual commitments with Third Parties) during the [***] period after such termination, whether and on what terms Licensee will grant Broad a sublicensable license to any patents, patent applications, data and other

information controlled by Licensee or its Affiliates that improve or are otherwise related to the Patent Rights or that Cover a Licensed Product that Broad is interested in pursuing either itself or through a licensee; provided that the terms of any such license shall be consistent with Licensee's obligations under its then-existing contracts and Applicable Law and its officers' and directors' fiduciary obligations.

10.3.3.2 At Broad's request, Licensee shall deliver to Broad, and Broad and its licensees shall be free to use, (a) all records required by all Regulatory Authorities to be maintained with respect to the applicable Licensed Products, all regulatory filings, approvals, reports, records, correspondence and other regulatory materials (including any related to reimbursement or pricing approvals), and all documents, data and other information related to Clinical Studies and other studies of the applicable Licensed Products and (b) any documentation and technical information that are necessary or useful for the manufacture of the applicable Licensed Products, in each case (a) and (b), if and to the extent that the provision of, access to and delivery of such documentation shall not conflict with Licensee's obligations under its then-existing contracts and Applicable Law. Licensee shall retain the right to use, and grant to Affiliates and Third Parties the right to use, any records, filings, documentation or other information given to Broad under this Section 10.3.3.2 (Documentation, Right of Reference and License).

10.3.3.3 Licensee shall permit Broad and its licensees to utilize, reference, cross reference, incorporate in applications and filings, and otherwise have the benefit of all Regulatory Approvals of, or Clinical Studies or other studies conducted on, and all filings made with regulatory agencies with respect to, the applicable Licensed Products.

10.4 Survival. The Parties' respective rights, obligations and duties under Articles 5 (Reports; Payments; Records) (solely to the extent royalties or other payments remain payable and only for those time periods set forth therein) and 11 (Miscellaneous) (with respect to Section 11.1, solely with respect to the time period set forth therein), and Sections 4.2 (Equity) and 4.3 (Annual License Maintenance Fees) (to the extent of payment obligations accruing prior to the effective date of expiration or termination), 4.4 (Milestone Payments) (to the extent of payment obligations accruing prior to the effective date of expiration or termination), 4.5 (Royalty on Net Sales) (to the extent of Net Sales prior to the effective date of expiration or termination, and as contemplated by Section 10.3 (Effects of Termination)), 4.8 (Complex Consideration) (for so long as Licensee, its Affiliate or a Sublicensee is researching, developing or commercializing an Enabled Product(s)), 6.3 (Expenses) (for expenses incurred prior to the effective date of expiration or termination), 8.3 (No Warranty), 8.4 (Limitation of Liability), 9.1 (Indemnity), Section 9.2 (Insurance) (solely if applicable and for the time periods set forth therein), Section 10.3 (Effects of Termination), this Section 10.4 (Survival) shall survive any expiration or termination of this Agreement. In addition, Licensee's obligations under Section 4.5 (Royalty on Net Sales), and 4.7 (Non-Royalty Sublicense Income) with respect to Sublicenses granted prior to the effective date of expiration or termination of the Agreement shall survive such expiration or termination. Further, any rights, obligations and duties which by their nature extend beyond the expiration or termination of this Agreement shall survive any expiration or termination of this Agreement.

11. Miscellaneous.

11.1 Confidentiality.

11.1.1 Definitions.

11.1.1.1 "**Broad Confidential Information**" means (a) the Transferred Materials and any information related to Prosecution of Patent Rights provided to Licensee by or on behalf of Broad; (b) any information or material in tangible form that is marked as "confidential" or proprietary by or on behalf of Broad at the time it is sent to Licensee; (c) information that is furnished orally by or on behalf of Broad if Broad identifies such information as "confidential" or proprietary in writing by a memorandum delivered to Licensee within [***] after the date of disclosure; and (d) the terms of this Agreement (but not its existence or its general subject matter), which shall constitute the Confidential Information of both Parties. The Parties agree the terms of this Agreement may be shared with the Institutions and with Broad's other member institutions and financial sponsors of the licensed technology (including HHMI).

11.1.1.2 "**Licensee Confidential Information**" means (a) any Development Plan, any Current Development Demonstration, and any plan provided to Broad under Sections 2.7.7 (Intended Development or Commercialization), 2.7.8 (Proposing Party Development or Commercialization), or 2.7.9 (Third Party Development or Commercialization), (b) [***]; (c) any information or evidence provided to Broad in accordance with Sections 2.7.7 (Intended Development or Commercialization), 2.7.8 (Proposing Party Development or Commercialization), or 2.7.9 (Third Party Development or Commercialization) that is not included within the preceding clause (a); (d) any reports prepared by Licensee and provided to Broad pursuant to this Agreement (including any under Section 3.3 (Regulatory Filings) and Section 5.1.1 (Reports)); (e) any copies of Sublicenses, or information extracted therefrom, provided by Licensee to Broad under Section 2.4.3 (Delivery of Sublicense Agreement); (f) any information or material in tangible form that is provided to Broad's Office of Strategic Alliances and Partnering in connection with this Agreement and is marked as "confidential" or proprietary by Licensee at the time it is sent to Broad; (g) information that is furnished orally by Licensee if Licensee identifies such information as "confidential" or proprietary in writing by a memorandum delivered to Broad's Office of Strategic Alliances and Partnering within [***] after the date of disclosure; or (h) the terms of this Agreement (but not its existence or its general subject matter), which shall constitute the Confidential Information of both Parties. Notwithstanding anything to the contrary in this Agreement, Broad may, in response to a Bona Fide Proposal, inform a Proposing Party that the [***] that is the subject of such Bona Fide Proposal is currently under research or development in a manner consistent with the inclusive innovation model set forth in Section 2.7 (Inclusive Innovation Model), without

providing additional detail as to the specific manner pursuant to which such [***] is unavailable.

11.1.1.3 "**Confidential Information**" means the Broad Confidential Information and the Licensee Confidential Information, as applicable.

11.1.2 Obligations of Confidentiality. For the Term of this Agreement and a period of [***] thereafter, (a) Licensee shall maintain in confidence and shall not disclose to any third party any Broad Confidential Information without the prior written consent of Broad, and (b) Broad shall maintain in confidence and shall not disclose to any third party any Licensee Confidential Information without the prior written consent of Licensee, provided that Broad may disclose to the Institutions and HHMI (1) this Agreement and any Sublicenses including any Exhibits thereto, and (2) such Confidential Information of Licensee as the Institutions or HHMI reasonably request, provided that any disclosure under the foregoing clause (1) shall be made in confidence to the applicable Institution or HHMI, and that any disclosure under the foregoing clause (2) shall be under terms of a written confidentiality agreement prohibiting the use and further disclosure by HHMI or the applicable Institution(s) of such Confidential Information on terms as least as restrictive as those contained herein. Each Party shall take all reasonable steps to protect the Confidential Information of the other Party with the same degree of care used to protect its own confidential or proprietary information. Neither Party shall use the Confidential Information of the other Party for any purpose other than those contemplated by this Agreement. The foregoing obligations under this Section 11.1.2 (Obligations of Confidentiality) shall not apply to:

(i) information that is known to the receiving Party or independently developed by the receiving Party prior to the time of disclosure without use of or reference to the other Party's Confidential Information, in each case, to the extent evidenced by contemporaneous written records;

(ii) information that is independently developed by the receiving Party at or after the time of disclosure without use of or reference to the other Party's Confidential Information, to the extent evidenced by contemporaneous written records;

(iii) information disclosed to the receiving Party by a third party that has a right to make such disclosure;

(iv) information that is or becomes generally known or available to the public, other than as a result of a breach of this Agreement by the receiving Party; or

(v) information that is required to be disclosed by order of the FDA or similar authority or a court of competent jurisdiction or other government authority or agency; provided that the Parties shall use commercially reasonable efforts to obtain confidential treatment of such information by the agency, authority, or court.

11.1.3 Permitted Disclosures. Notwithstanding Section 11.1.2 (Obligations of Confidentiality), either Party may disclose Confidential Information of the other Party to the extent such disclosure is reasonably necessary in the following instances:

11.1.3.1 prosecuting or defending litigation in accordance with Article 7 (Enforcement of Patent Rights) of this Agreement; provided that the party making a disclosure under this Section 11.1.3.1 (Permitted Disclosures) shall seek confidential treatment, a protective order, or seek to file under seal if reasonably requested by the other party;

11.1.3.2 making filings with the Securities and Exchange Commission or foreign equivalent, any stock exchange or market, or any Regulatory Authorities, which shall include publicly disclosing or filing this Agreement as a "material agreement" in accordance with Applicable Law or applicable stock exchange regulations; provided, however, that in the case of Licensee as the disclosing party, Licensee shall provide Broad with an opportunity to review, redact and comment on any such filing and shall incorporate Broad's reasonable comments and redactions to the extent consistent with Applicable Law; provided, further, that the terms of the inclusive innovation model included in this Agreement shall be disclosed in full and such terms shall not be subject to any redactions in any such filing;

11.1.3.3 complying with Applicable Law or submitting information to governmental authorities, including without limitation any Regulatory Authority, and including without limitation any order of a court or agency of competent jurisdiction, including without limitation any Regulatory Authority; provided that if either Party is required by Applicable Law to make any public disclosure of Confidential Information of the other Party, to the extent the Party so required may legally do so, it will give reasonable advance notice to the other Party of such disclosure and will use its reasonable efforts to secure confidential treatment of such Confidential Information prior to its disclosure (whether through protective orders or otherwise);

11.1.3.4 in the case of Licensee as the receiving Party, to its Affiliates and its and their prospective and actual acquirers, licensees, sublicensees, distributors, investors, lenders and underwriters, each of which prior to disclosure must be bound by written or legally enforceable professional ethical obligations of confidentiality and non-use of substantially equivalent or greater scope and duration than those set forth in this Section 11.1 (Confidentiality), and (a) its and their employees, consultants, agents, and advisors, on a need to know basis, each of whom prior to disclosure must be bound by written obligations of confidentiality and non-use of substantially equivalent or greater scope and duration than those set forth in this Section 11.1 (Confidentiality), and (b) its and their accountants and lawyers, on a need to know basis, each of whom prior to disclosure must be bound by written or legally enforceable professional ethical obligations of confidentiality and non-use of substantially equivalent or greater scope and duration than those set forth in this Section 11.1 (Confidentiality); provided that the scope of Confidential Information that may be disclosed to any Person under this Section 11.1 (Confidentiality) is limited to the terms of this Agreement and any notices given hereunder and not any other Broad Confidential Information unless otherwise agreed to in writing by Broad; and

11.1.3.5 in the case of Broad as the receiving Party, to Broad's prospective and actual licensees (including Sublicensees in the event of termination of

this Agreement), acquirers of payment or equity rights, lenders and underwriters, each of which prior to disclosure must be bound by written or legally enforceable professional ethical obligations of confidentiality and non-use of substantially equivalent or greater scope and duration than those set forth in this Section 11.1 (Confidentiality) and (a) its and their employees, consultants, agents, and advisors, on a need to know basis, each of whom prior to disclosure must be bound by written obligations of confidentiality and non-use of substantially equivalent or greater scope and duration than those set forth in this Section 11.1 (Confidentiality), and (b) its and their accountants and lawyers, on a need to know basis, each of whom prior to disclosure must be bound by written or legally enforceable professional ethical obligations of confidentiality and non-use of substantially equivalent or greater scope and duration than those set forth in this Section 11.1 (Confidentiality); provided that the disclosure to prospective or actual licensees (and the related Persons noted in the foregoing clauses (a) and (b)) is limited this Agreement and such Confidential Information of Licensee as is reasonably necessary for such prospective or actual licensee to conduct technical or legal due diligence or exercise its rights under the license granted or proposed to be granted under the Patent Rights to such actual or prospective licensee by Broad.

11.2 Additional Permitted Disclosure. In addition to the rights set forth elsewhere in this Section 11.2 (Additional Permitted Disclosure), each Institution and Licensee shall have the right to disclose (i) to Third Parties without an obligation of confidentiality all or part of a redacted copy of this Agreement, or the substance thereof, in the form filed by Licensee to comply with its obligations under the Securities Act or the Exchange Act and (ii) to Third Parties, without an obligation of confidentiality, the existence of this Agreement, the general subject matter of this Agreement, Broad's right to receive consideration under this Agreement, and all or a portion or summary of the terms of the inclusive innovation model provisions.

11.3 Preference for United States Industry. During the period of exclusivity of this license in the United States, Licensee shall comply with 37 C.F.R. § 401.14 (i) or any successor rule or regulation.

11.4 No Security Interest. Licensee shall not enter into any agreement under which Licensee grants to or otherwise creates in any third party a security interest in this Agreement or any of the rights granted to Licensee herein. Any grant or creation of a security interest purported or attempted to be made in violation of the terms of this Section 11.4 (No Security Interest) shall be null and void and of no legal effect.

11.5 Use of Names. Except as provided below, Licensee shall not, and shall ensure that its Affiliates and Sublicensees shall not, use or register the name "The Broad Institute, Inc.," "Broad," "President and Fellows of Harvard College," the "Massachusetts Institute of Technology," "Lincoln Laboratory," "Wyss Institute for Biologically Inspired Engineering at Harvard University," or "Howard Hughes Medical Institute" or any variation, adaptation, or abbreviation thereof (alone or as part of another name), or of any of their trustees, directors, officers, faculty, students, staff, employees, agents, or affiliated investigators or any trademark owned by any Institution, or any logos, seals, insignia or other words, names, symbols or devices that identify Broad, HHMI or Institutions or any Institution's school, unit, or division ("**Institution Names**") for any purpose except with the prior written approval of, and in

accordance with restrictions required by the applicable Institution or HHMI, as applicable. Without limiting the foregoing, Licensee shall, and shall ensure that its Affiliates and Sublicensees shall, cease all use of Institution Names on the termination or expiration of this Agreement except as otherwise approved by the applicable Institution. This restriction shall not apply to any information required by Applicable Law to be disclosed to any governmental entity.

11.6 Entire Agreement. This Agreement is the sole agreement with respect to the subject matter hereof and except as expressly set forth herein, supersedes all other agreements and understandings between the Parties with respect to the same.

11.7 Notices. Unless otherwise specifically provided, all notices required or permitted by this Agreement shall be in writing and may be delivered personally, or may be sent by e-mail, expedited delivery or certified mail, return receipt requested, to the following addresses, unless the Parties are subsequently notified of any change of address in accordance with this Section 11.7 (Notices):

If to Licensee: [***]

If to Broad: The Broad Institute, Inc.
415 Main Street
Cambridge, MA 02142
[***]

Any notice shall be deemed to have been received as follows: (a) by personal delivery or expedited delivery, upon receipt; (b) by e-mail, upon transmission and electronic confirmation of delivery; (c) by certified mail, as evidenced by the return receipt. If notice is sent by e-mail, a confirming copy of the same shall be sent by mail to the same address.

11.8 Dispute Resolution. If any dispute between the Parties arises out of or relates to this Agreement (a "**Dispute**"), either Party by written notice to the other Party may have such issue referred for resolution to the Chief Executive Officer of Licensee, and the Executive Director of Broad (collectively, the "**Executive Officers**"). The Executive Officers shall meet promptly to discuss the matter submitted and to determine a resolution. If the Executive Officers are unable to resolve the Dispute within [***] after it is referred to them, then the Parties may pursue all other rights and remedies available to them under this Agreement, including the right to terminate this Agreement, and the matter may be brought by a Party as a Suit in a court of competent jurisdiction in accordance with Section 11.9 (Governing Law and Jurisdiction).

11.9 Governing Law and Jurisdiction. This Agreement will be governed by, and construed in accordance with, the substantive laws of the Commonwealth of Massachusetts, without giving effect to any choice or conflict of law provision, except that questions affecting the construction and effect of any patent shall be determined by the law of the country in which the patent shall have been granted. Any action, suit or other proceeding arising under or relating to this Agreement (a "**Suit**") shall be brought in a court of competent jurisdiction in the Commonwealth of Massachusetts, and the Parties hereby consent to the sole jurisdiction of the state and federal courts sitting in the Commonwealth of Massachusetts. Each party agrees not to raise any objection at any time to the laying or maintaining of the venue of any Suit in any of the specified courts, irrevocably waives any claim that Suit has been brought in any inconvenient forum and further irrevocably waives the right to object, with respect to any Suit, that such court does not have any jurisdiction over such party.

11.10 Binding Effect. This Agreement shall be binding upon and inure to the benefit of the Parties and their respective legal representatives, successors and permitted assigns.

11.11 Headings. Section and subsection headings are inserted for convenience of reference only and do not form a part of this Agreement.

11.12 Counterparts. The Parties may execute this Agreement in two or more counterparts, each of which shall be deemed an original, but both of which together shall constitute one and the same instrument. Transmission by facsimile or electronic mail of an executed counterpart of this Agreement shall be deemed to constitute due and sufficient delivery of such counterpart. If by electronic mail, the executed Agreement must be delivered in a .pdf format.

11.13 Amendment; Waiver. This Agreement may be amended, modified, superseded or canceled, and any of the terms may be waived, only by a written instrument executed by each party or, in the case of waiver, by the party waiving compliance. The delay or failure of either party at any time or times to require performance of any provisions hereof shall in no manner affect the rights at a later time to enforce the same. No waiver by either party of any condition or of the breach of any term contained in this Agreement, whether by conduct, or otherwise, in any one or more instances, shall be deemed to be, or considered as, a further or continuing waiver of any such condition or of the breach of such term or any other term of this Agreement.

11.14 No Agency or Partnership. Nothing contained in this Agreement shall give either party the right to bind the other, or be deemed to constitute either party as agent for or partner of the other or any third party.

11.15 Assignment and Successors. This Agreement may not be assigned by either Party without the consent of the other Party, which consent shall not be unreasonably withheld, provided that, Licensee may assign this Agreement and the rights, obligations and interests of Licensee hereunder without Broad's prior consent (a) to an Affiliate of Licensee or (b) any purchaser of all or substantially all of its assets or all of its equity, or to any successor corporation resulting from any merger or consolidation of Licensee with or into such corporation; provided, in all cases, that (i) the assignee agrees in writing to be bound by the terms of this Agreement, (ii) the assignee is in compliance with Section 9.2 (Insurance) at the

time of transfer, and (iii) a copy of such writing is provided to the Broad within [***] after such assignment; provided also that in the case of clause (a), Licensee remains responsible and liable for the performance of this Agreement by such Affiliate; and provided further that in the case of clause (b), if such assignee does not itself have assets in excess of [***] Dollars ($[***]) and active drug development or commercialization operations beyond those contemplated under this Agreement, then the ultimate controlling (as defined in Section 1.7 ("Affiliate")) Person agrees to guarantee the performance of this Agreement by such assignee. For clarity, such assignee's investors shall not be deemed the ultimate controlling Person in the immediately foregoing sentence. Notwithstanding anything to the contrary in this Agreement, Broad may, without the consent of Licensee, assign this Agreement and the rights, obligations and interests of Broad to (x) an Affiliate of Broad or (y) any purchaser of all or substantially all of its assets or all of its equity, or to any successor corporation resulting from any merger or consolidation of Broad with or into such corporation, provided that (1) in each case of clause (x) and (y), such assignee is also an assignee of the Patent Rights, such assignee agrees in writing to be bound by the terms of this Agreement and a copy of such writing is provided to Licensee within [***] after such assignment and (2) Broad may assign its right to receive payments and distributions under this Agreement without restriction. This Agreement shall be binding upon a party's permitted successors and assigns. Any assignment purported or attempted to be made in violation of the terms of this Section 11.15 (Assignment and Successors) shall be null and void and of no legal effect.

11.16 Third Party Beneficiary. HHMI is not a party to this Agreement and has no liability to Licensee or to any licensee, sublicensee or user of anything covered by this Agreement, but HHMI is an intended third-party beneficiary of this Agreement and certain of this Agreement's provisions are for the benefit of HHMI and are enforceable by HHMI in its own name. Licensee shall require any Sublicensee(s) to agree to HHMI's third-party beneficiary status under the same terms set forth in this Section 11.16 (Third Party Beneficiary). This provision shall survive termination or expiration of this Agreement.

11.17 Force Majeure. Except for monetary obligations hereunder, neither party will be responsible for delays resulting from causes beyond the reasonable control of such party, including fire, explosion, flood, war, strike, or riot, provided that the nonperforming party uses commercially reasonable efforts to avoid or remove such causes of nonperformance and continues performance under this Agreement with reasonable dispatch whenever such causes are removed.

11.18 Interpretation. Each Party hereto acknowledges and agrees that: (a) it or its counsel reviewed and negotiated the terms and provisions of this Agreement and has contributed to its revision; (b) the rule of construction to the effect that any ambiguities are resolved against the drafting party shall not be employed in the interpretation of this Agreement; (c) the terms and provisions of this Agreement shall be construed fairly as to both Parties hereto and not in favor of or against either Party, regardless of which Party was generally responsible for the preparation of this Agreement; (d) the use of "include," "includes," or "including" herein shall not be limiting; (e) the word "hereof", "herein", "hereby" and derivative or similar work refers to this Agreement (including any Exhibits); (f) the words "will" and "shall" shall have the same obligatory meaning; and (g) the use of "or" shall not be exclusive.

11.19 Severability. If any provision of this Agreement is or becomes invalid or is ruled invalid by any court of competent jurisdiction or is deemed unenforceable, or interferes with the enforceability of any Patent Right, it is the intention of the Parties that the remainder of this Agreement shall not be affected.

11.20 Publicity. Notwithstanding the terms of Section 11.5 (Use of Names) above, the Parties hereby agree to issue a mutually-acceptable press release (which press release shall also be acceptable (i) to the Institutions, to the extent of any reference to such Institution in such press release and (ii) to HHMI, to the extent of any reference to HHMI or HHMI Research Personnel in such press release) announcing the execution of this Agreement, within [***] following the Effective Date; provided, however, that Licensee may extend such [***] period one time for an additional [***] upon advance written notice to Broad if Licensee has a good faith belief that premature disclosure of the existence of this Agreement would be detrimental to the business or affairs of Licensee in light of then ongoing negotiations with a Third Party(ies) regarding a license(s) or strategic transaction(s), and the Parties may extend such period by additional [***] increments by mutual written consent. Licensee shall provide Broad with a written summary of the basis for such belief with any such notice. Each Party agrees that it will not issue a press release or other public statement relating to this Agreement or the relationship of the Parties without obtaining the prior written approval of the other Party. Permission shall not be required to repeat information that has already been publicly released or to disclose information that a Party is permitted to disclose under Section 11.1 (Confidentiality). Notwithstanding any other provision of this Agreement, the Parties agree that the Institutions may make the inclusive innovation model, as set forth in Section 2.7 (Inclusive Innovation Model), highly visible as a new and transformative open innovation model, including by disclosing such model publicly or to Third Parties.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

The Broad Institute, Inc.		**Prime Medicine, Inc.**	
By:	/s/ Jesse Souweine	By:	/s/ Stephen Knight
Name:	Jesse Souweine	Name:	Stephen Knight
Title:	Chief Operating Officer	Title:	President

Exhibit 1.33

Competitors

[***]

Exhibit 1.111

Patent Rights

[***]

Exhibit 3.1

Development Milestones

[***]

Exhibit 3.2.1

Development Plan

To be attached in accordance with Section 3.2.

Exhibit 4.2

Form of Subscription Agreement

[***]

[Signature Page to Subscription Agreement]

Exhibit 4.5.7

Arbitration

[***]

Certain identified information has been excluded from this exhibit because it is both not material and is the type that the registrant treats as private or confidential. Information that was omitted has been noted in this document with a placeholder identified by the mark "[***]".

FIRST AMENDMENT TO LICENSE AGREEMENT

This First Amendment to License Agreement (this "**Amendment**"), entered into as of this 5th day of May, 2020 (the "**Amendment Effective Date**"), by and between Prime Medicine, Inc., a corporation existing under the laws of Delaware, having a place of business at [***] ("**Licensee**"), and The Broad Institute, Inc., a non-profit corporation existing under the laws of Massachusetts, having a place of business at 415 Main Street, Cambridge, MA 02142 ("**Broad**"), hereby amends that certain License Agreement, dated as of September 26, 2019, by and between Licensee and Broad (the "**License Agreement**"). Capitalized terms used herein but not defined herein shall have the same meaning as set forth in the License Agreement. Each of Broad and Licensee may be referred to herein as a "**Party**" or together as the "**Parties**."

WHEREAS, Broad and Licensee are parties to the License Agreement;

WHEREAS, pursuant to Section 11.13 (Amendment; Waiver) of the License Agreement, the Parties may amend the License Agreement by a written instrument executed by each Party; and

WHEREAS, the Parties wish to amend the License Agreement as set forth herein.

NOW, THEREFORE, the Parties, intending to be legally bound, hereby amend the License Agreement as follows:

1. Amendment.

   a. Exhibit 1.111 (Patent Rights) of the License Agreement is hereby deleted in its entirety and replaced with the schedule set forth on Exhibit A of this Amendment.

2. Effect of Amendment. This Amendment shall not constitute a waiver, amendment or modification of any other provision of the License Agreement. Except as amended hereby, the License Agreement shall remain in full force and effect as originally written.

3. Governing Law. This Amendment shall be governed by, and construed in accordance with, the substantive laws of the Commonwealth of Massachusetts, without giving effect to any choice or conflict of law provision, except questions affecting the construction and effect of any patent shall be determined by the law of the country in which the patent shall have been granted.

4. Binding Effect. This Amendment shall be binding upon and inure to the benefit of the Parties and their respective legal representatives, successors and permitted assigns.

5. Headings. Section and subsection headings are inserted for convenience of reference only and do not form a part of this Amendment.

6. Amendment; Waiver; Assignment. This Amendment may be amended, modified, superseded or canceled, and any of the terms may be waived, only by a written instrument executed by each Party or, in the case of waiver, by the Party waiving compliance. The delay or failure of either Party at any time or times to require performance of any provisions hereof shall in no manner affect the rights at a later time to enforce the same. No waiver by either Party of any condition or of the breach of any term contained in this Amendment, whether by conduct, or otherwise, in any one or more instances, shall be deemed to be, or considered as, a further or continuing waiver of any such condition or of the breach of such term or any other term of this Amendment. This Amendment may not be assigned except in connection with an assignment of the License Agreement.

7. Severability. If any provision of this Amendment is or becomes invalid or is ruled invalid by any court of competent jurisdiction or is deemed unenforceable, or interferes with the enforceability of any Patent Right, it is the intention of the Parties that the remainder of this Amendment shall not be affected.

8. Entire Agreement. This Amendment (including Exhibit A hereof) and the License Agreement (as amended by this Amendment) are the sole agreements with respect to the subject matter hereof and thereof and except as expressly set forth herein and therein, supersede all other agreements and understandings between the Parties with respect to the same.

9. Counterparts. The Parties may execute this Amendment in two counterparts, each of which shall be deemed an original, but both of which together shall constitute one and the same instrument. Transmission by electronic mail of an executed counterpart of this Amendment shall be deemed to constitute due and sufficient delivery of such counterpart. If by electronic mail, the executed Amendment must be delivered in a .pdf format.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the Parties have caused this Amendment to be executed by their duly authorized representatives as of the Amendment Effective Date.

PRIME MEDICINE, INC.

By: /s/ John Evans

Name: John Evans

Title: CEO

THE BROAD INSTITUTE, INC.

By: /s/ Jesse Souweine

Name: Jesse Souweine

Title: Chief Operating Officer

EXHIBIT A

Exhibit 1.111
(Patent Rights)

[***]

Certain identified information has been excluded from this exhibit because it is both not material and is the type that the registrant treats as private or confidential. Information that was omitted has been noted in this document with a placeholder identified by the mark "[***]".

SECOND AMENDMENT TO LICENSE AGREEMENT

THIS SECOND AMENDMENT TO LICENSE AGREEMENT (this "Amendment") is made as of February 18, 2021 (the "Amendment Effective Date"), by and between The Broad Institute, Inc. ("Broad") and Prime Medicine, Inc. ("Company"). Capitalized terms used herein but not defined herein shall have the same meaning as set forth in the License Agreement (as defined below). Each of Broad and Company may be referred to herein as a "Party" or together as the "Parties."

WHEREAS, Company and Broad are parties to that certain License Agreement, dated as of September 26, 2019 (the "License Agreement"); and

WHEREAS, the Parties wish to amend the License Agreement (pursuant to Section 11.13 thereof) as set forth herein.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties do hereby amend the License Agreement as follows:

1. Exhibit 1.111 of the License Agreement is hereby deleted in its entirety and replaced with the schedule set forth on Exhibit A of this Amendment.

2. The table in Section 4.3 of the License Agreement is hereby removed and replaced in its entirety with the following:

Calendar Year(s)	**Maintenance Fee (U.S. Dollars)**
2019	[***] Dollars ($[***])
2020	[***] Dollars ($[***])
2021 and each subsequent Calendar Year during the Term	[***] Dollars ($[***])

3. **Consideration for Amendment**. As partial consideration for the addition of certain Patent Rights set forth on Exhibit A of this Amendment:

a. Company shall pay to Broad a nonrefundable payment of One Hundred and Twenty-Five Thousand Dollars ($125,000) within [***] of the Amendment Effective Date; and

b. Company shall reimburse Broad for all unreimbursed, documented, out-of-pocket expenses incurred by Broad prior to the Amendment Effective Date with respect to the Prosecution of such Patent Rights, which Broad estimates as equal to [***] Dollars ($[***]), within [***] after the Amendment Effective Date; provided that if the actual amount of such expenses exceeds such estimate, then Company shall reimburse Broad for any unreimbursed amount within [***] of receipt of an invoice from Broad.

4. **Effect of Amendment**. This Amendment shall not constitute a waiver, amendment or modification of any other provision of the License Agreement or any other provision not expressly

referred to herein. Except as amended hereby, the License Agreement shall remain in full force and effect as originally written.

5. **Governing Law**. This Amendment will be governed by, and construed in accordance with, the substantive laws of the Commonwealth of Massachusetts, without giving effect to any choice or conflict of law provision, except that questions affecting the construction and effect of any patent shall be determined by the law of the country in which the patent shall have been granted.

6. **Binding Effect**. This Amendment shall be binding upon and inure to the benefit of the Parties and their respective legal representatives, successors and permitted assigns.

7. **Headings**. Section and subsection headings are inserted for convenience of reference only and do not form a part of this Amendment.

8. **Amendment; Waiver; Assignment**. This Amendment may be amended, modified, superseded or canceled, and any of the terms may be waived, only by a written instrument executed by each Party or, in the case of waiver, by the Party waiving compliance. The delay or failure of either Party at any time or times to require performance of any provisions hereof shall in no manner affect the rights at a later time to enforce the same. No waiver by either Party of any condition or of the breach of any term contained in this Amendment, whether by conduct, or otherwise, in any one or more instances, shall be deemed to be, or considered as, a further or continuing waiver of any such condition or of the breach of such term or any other term of this Amendment. This Amendment may not be assigned except in connection with an assignment of the License Agreement.

9. **Severability**. If any provision of this Amendment is or becomes invalid or is ruled invalid by any court of competent jurisdiction or is deemed unenforceable, or interferes with the enforceability of any Patent Right, it is the intention of the Parties that the remainder of this Amendment shall not be affected.

10. **Entire Agreement**. This Amendment (including Exhibit A hereof) and the License Agreement, as amended, are the sole agreements with respect to the subject matter hereof and thereof and except as expressly set forth herein and therein, supersede all other agreements and understandings between the Parties with respect to the same.

11. **Counterparts; Facsimile**. This Amendment may be executed in two or more counterparts, each of which shall be deemed an original and all of which shall together be deemed to constitute one instrument. The Parties agree that execution of this Amendment by industry standard electronic signature software or by exchanging facsimile or PDF signatures shall have the same legal force and effect as the exchange of original signatures and that in any proceeding arising under or relating to this Amendment, each Party hereby waives any right to raise any defense or waiver based upon execution of this Amendment by means of such electronic signatures or maintenance of the executed document electronically.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the Parties have executed this Amendment as of the Amendment Effective Date.

THE BROAD INSTITUTE, INC.

PRIME MEDICINE, INC.

By: /s/ Keith Gottesdiener
Name: Keith Gottesdiener
Title: CEO

By: /s/ Juliana Leung
Name: Juliana Leung
Title: Director, Strategic Alliances

EXHIBIT A

Exhibit 1.111
(Patent Rights)

[***]

Gift Pledge from Prime Medicine

Amended and Restated August 2022

I. Intention

Prime Medicine (the "Donor") is pleased to make a commitment of $5,000,000 annually for 14 years to The Broad Institute, Inc. (the "Broad") for the research and development related to new genome editing technologies, as described under Purpose.

II. Purpose

The funds will be used support the laboratory of Dr. David Liu, to research and develop new genome-editing technologies, improve on existing genome-editing technologies, identify delivery mechanisms for these technologies, and apply these technologies to the understanding and treatment of rare genetic diseases.

III. Commitment

The Donor hereby pledges to the Broad a sum of $5,000,000 per year over 14 years (from the first initiation of the pledge signed on March 8, 2021 [Exhibit A]).

Such installment payments shall be made in the form of cash and/or marketable securities, or payment in other form mutually agreed to by the parties. Gifts will be paid on a quarterly basis.

The initial division of the gift is 1/2 to the Broad Institute and 1/2 to Harvard University. The division of the gift may change as the Donor feels is appropriate to best support the intended research.

Funds may be used by Dr. Liu's laboratory, consistent with the purpose of the gift.

At its sole discretion, the Donor may decide to terminate the funding if the purpose of the gift is not met.

Should the Donor decide to terminate, they commit to provide one year of funding ($5,000,000) from the date when Broad is notified of this termination.

The grant can be paused unilaterally by the Donor if the company has less than $50M of available in committed funds (including committed but yet "called" tranche funding that is not tied to a specific milestone). In this case, the gift will resume in arrears as soon this condition is no longer met.

The Donor recognizes and acknowledges that the Broad will make expenditures, enter into contracts, perform labor, and engage in other activities for the benefit of Dr. Liu's laboratory, all in reliance on and as consideration for the foregoing pledge and the fulfillment thereof.

IV. Stewardship

The Broad will prepare an annual narrative and financial stewardship report to the Donor and will provide more frequent updates in order to share progress on the work made possible by their contribution.

V. Recognition

The Broad may not publish the name of the Donor in various publications, press releases, and other forms of communication unless it receives consent or appropriate approvals by the Donor. In addition, with the Donor's approval, the Broad may acknowledge the Donor in the annual donor report as Prime Medicine. The amount of the gift will not be disclosed.

VI. Tax Status

The Broad has received and continues to hold its qualifications from the Internal Revenue Service as a tax-exempt organization under the Internal Revenue Code Section 501(c)(3), and as a public charity as defined by the Internal Revenue Code Section 509(a)(1). Federal ID # 26-3428781. The Donor's support is conditioned on the Broad retaining such qualifications.

Signatures

/s/ Keith Gottesdiener	8/5/2022
Keith Gottesdiener **CEO** **Prime Medicine**	**Date**

/s/ Todd Golub	8/3/2022
Todd Golub **Director** **The Broad Institute, Inc.**	**Date**

Exhibit A: March 2021 Agreement

License Agreement

This License Agreement, made and entered into as of March 16, 2020 ("**Agreement**"), is by and between Prime Medicine, Inc., a Delaware corporation, having a place of business located at One Main Street, 13th Floor, Cambridge, MA 02142("**Licensee**") and MIL 21E, LLC a Delaware limited liability company having a place of business located at 21 Erie Street, Cambridge, MA 02139 ("**Licensor**").

RECITALS

WHEREAS, Licensor, or its affiliate, has leased certain space located at 21 Erie Street, Cambridge, MA 02139 (the "**Building**") through a lease agreement (the "**Lease**") between Licensor and BMR-21 Erie Street, LLC ("**Landlord**"); and

WHEREAS, Licensee desires to use certain space and services, as set forth below, for research and development, laboratory research and office use, and Licensor desires to grant a license to Licensee for such use.

For good and valuable consideration, the receipt and legal sufficiency of which are hereby acknowledged, accepted and agreed to, the parties agree as follows:

1. License.

(a) **License Description.** Licensor grants to Licensee the following (A) and (B), of which shall constitute the Licensee's license (the "**License**"), solely to, (i) use as office, and laboratory space consistent with current zoning for the Building and all applicable laws; (ii) conduct Licensee's business; and (iii) collaborate with Licensor's staff and other licensees in accordance with this Agreement: (A) a non-transferable, non-assignable license (except as expressly set forth herein), (i) use Innovation Suite 2, more specifically identified in the blue-shaded portion of the floor plan attached to this Agreement as Exhibit 1 ("**Innovation Suite 2**"); (ii) use Innovation Suite 4, more specifically identified in the blue-shaded portion of the floor plan attached to this Agreement as Exhibit 1 ("**Innovation Suite 4**"); (iii) use ten (10) dedicated desks in Shared Office, more specifically identified in the blue- shaded portion of the floor plan attached to this Agreement as Exhibit 1 ("**Dedicated Desks**"); (iv) use the Mini-Suite more specifically identified in the blue-shaded portion of the floor plan attached to this Agreement as Exhibit 1 ("**Mini- Suite**"); and (v) use a one- person private office, more specifically identified in the blue-shaded portion of the floor plan attached to this Agreement as Exhibit 1 ("**Private Office**") and (B) a non-transferable, non-exclusive, non-assignable license to use any common areas ("**Shared Premises**"), subject to Licensor's reasonable rules and restrictions; provided, however, in the event of a conflict between any such rules and regulations and this Agreement, this Agreement shall control. The Innovation Suite 2, Innovation Suite 4, Dedicated Desks, Mini-Suite, Private Office, and Shared Premises are collectively the "**Licensed Premises**." The parties acknowledge in all events during the Term (as hereinafter defined) of this Agreement, the Shared Premises shall include access to those conference room spaces, kitchen, snack, showers, and wellness room that exist as of the date of this Agreement, subject to Licensor and

Landlord's reasonable rules and regulations and modifications to said spaces which shall be within Licensor's sole discretion. Subject to the deliver requirements set forth in Section 2(a) below, Licensee shall accept the Licensed Premises and Shared Premises in their "as-is" conditions and Licensor shall have no obligation to alter, repair or otherwise prepare the Licensed Premises for Licensee's use or to pay for, or provide any, improvements to the Licensed Premises except as expressly provided herein. Licensee shall not use the Licensed Premises or Shared Premises for any use other than the foregoing, including but not limited to medical care or human clinical trials, without first obtaining written permission from Licensor, which Licensor may withhold in its sole discretion.

(b) **Scope of License.** The License shall not include access to any additional office or laboratory space in the Building. Licensee understands and agrees that other licensee(s) may jointly occupy portions of the Building, including but not limited to the Shared Premises. Licensee agrees to cooperate and coordinate with any other licensee(s) that occupies portions of the Building and that, other than the Innovation Suite 2, Innovation Suite 4, Mini-Suite and the private office, use of any other portion of the Building shall not be exclusive to Licensee. Sections 10, 11 and 13 below shall apply to any and all Claims (as defined below) arising out of, or in connection with, any other licensee(s), persons or entities using or occupying the Building.

(c) **Occupants.** The License shall only grant Licensee, and no more than eleven (11) of Licensee's members, employees or agents (collectively, "**Occupants**"), access to the Licensed Premises and Shared Premises; provided, however, that Licensor may grant access to additional Occupants ("**Additional Occupants**") as set forth in Section 3 below.

2. Term and Termination.

(a) **Term.** Unless terminated earlier in accordance with this Section 2, the term of this Agreement as it relates to Innovation Suite 2 and two (2) Dedicated Desks ("**Partial Dedicated Desks**") shall commence on March 15, 2020 ("**Innovation Suite 2 and Partial Dedicated Desks Term Commencement Date**") and expire on March 31, 2022 ("**Innovation Suite 2 and Partial Dedicated Desks Expiration Date**"). Under no circumstance shall Licensor be liable to Licensee for failure to provide access to the Innovation Suite 2 and Partial Dedicated Desks or Shared Premises on or before March 15, 2020; provided, however, that if Licensor is unable to provide Licensee access to the Innovation Suite 2 and Partial Dedicated Desks on or before March 15, 2020, the Innovation Suite 2 and Partial Dedicated Desks Term Commencement Date and Expiration Date shall be extended by the number of days Licensor is unable to provide access to Innovation Suite 2 and Partial Dedicated Desks.

Unless terminated earlier in accordance with this Section 2, the term of this Agreement as it relates to Innovation Suite 4, Mini-Suite, Private Office and the remaining eight (8) Dedicated Desks ("**Remainder of Dedicated Desks**") shall commence on April 1, 2020 ("**Innovation Suite 4, Mini-Suite, Private Office and Remainder of Dedicated Desks Term Commencement Date**") and expire on

March 31, 2022 ("**Innovation Suite 4, Mini-Suite, Private Office and Remainder of Dedicated Desks Expiration Date**"). Under no circumstance shall Licensor be liable to Licensee for failure to provide access to the Innovation Suite 4, Mini- Suite, Private Office and Remainder of Dedicated Desks or Shared Premises on or before April 1, 2020; provided, however, that if Licensor is unable to provide Licensee access to the Innovation Suite 4, Mini-Suite, Private Office and Remainder of Dedicated Desks on or before April 1, 2020, the Innovation Suite 4, Mini-Suite, Private Office and Remainder of Dedicated Desks Term Commencement Date and Expiration Date shall be extended by the number of days Licensor is unable to provide access to Innovation Suite 4, Mini-Suite, Private Office and Remainder of Dedicated Desks.

(b) **Termination.** Licensor may terminate this Agreement immediately for "Default" by giving written notice to Licensee specifying the cause. "**Default**" shall include, but is not limited to be deemed as Licensee's: (i) failure to pay when due any sum of money under this Agreement, and such failure shall continue for a period of five (5) days after written notice from Licensor to Licensee that such payment was not paid when due; (ii) failure to comply with any covenants contained herein or (iii) use of the Licensed Premises or Shared Premises in violation of any rules and procedures promulgated by Licensor or Landlord and to the extent Licensee shall not cure such failure within thirty (30) days after written notice of such failure from Licensor to Licensee; provided, however, that such failure shall not be deemed a Default if such failure could not reasonably be cured during such thirty (30) day period, Licensee has commenced the cure within such thirty (30) day period and thereafter is diligently pursuing such cure to completion, but the total aggregate cure period shall not exceed forty five (45) days; further provided, however, in the event any Default endangers the health and/or safety of any other Building occupant and/or the Building itself, such failure shall be deemed a Default if Licensee receives notice of the same (which may be oral) and fails to cure within 24 hours, whereas for the avoidance of doubt in such instances Licensor shall have the immediate right to terminate this License following such failure to cure within 24 hours. Upon the occurrence of any of the foregoing, and at any time thereafter, with or without further notice or demand and without limiting Licensor in the exercise of any right or remedy that Licensor may have, Licensor may do any or all of the following by written notice to Licensee or by any lawful means, (A) terminate Licensee's access to the Licensed Premises, or (B) terminate the License. In either instance, Licensee shall immediately surrender the Licensed Premises to Licensor. In such event, Licensor shall have the immediate right to re-enter and remove all persons and property from the Licensed Premises and Shared Premises, and such property may be removed and stored in a public warehouse or elsewhere at the cost and for the account of Licensee, without being deemed guilty of trespass or becoming liable for any loss or damage that may be occasioned thereby. In the event that Licensor shall elect to so terminate this License, then Licensor shall be entitled to recover from Licensee all direct and indirect damages incurred by Licensor by reason of Licensee's default, including, but not limited to, recovery of any broker's fee paid by Licensor in relation to this Agreement

and all reasonable attorneys' fees. Upon termination of this Agreement, the License shall expire and Licensee shall immediately vacate the Licensed Premises and Shared Premises. Under no circumstances shall Licensor or Landlord be liable for any alleged, purported, consequential or indirect damages resulting from Licensor or Landlord terminating this Agreement. Notwithstanding anything to the contrary contained herein, except as expressly set forth in Section 8 and in the event of damages stemming from hold over after termination of this Agreement, in no other case shall Licensee be liable under this Agreement for any lost profits, damage to business or any form of special, indirect, punitive or consequential damages.

After March 31, 2021, Licensee shall have the right to terminate this Agreement provided Licensee gives Licensor written notice of its exercise of its termination right no less than three (3) months prior to requested termination date. By way of clarification, Licensee shall be entitled to provide written notice beginning December 31, 2020 for a termination right effective on or after March 31, 2021. There shall be no termination fee or penalty associated with Licensee's exercise of its termination right in accordance with this paragraph.

3. License Fee.

(a) **Base Fee.** Licensee shall pay the amount of $19,000.00 for the license fee for Innovation Suite 2 and Partial Dedicated Desks for March 15, 2020 through March 31, 2020, which shall be paid immediately upon execution of this Agreement. Licensee shall pay a monthly license fee equal to $107,500.00 ("License Fee") for the Licensed Premises, which shall be paid in advance on or before the first day of each and every month during the Term. Licensee shall pay each License Fee payment by electronic payment to Licensor. The License Fee shall be subject to a three percent (3%) increase upon each anniversary of the License Agreement.

(b) **Late Fee.** If any payment of the License Fee, or any other payment due under this Agreement, is not received by Licensor, or when otherwise due, Licensee shall pay to Licensor a late payment charge equal to five percent (5%) of the amount of such delinquent payment, in addition to any outstanding License Fee or any other payment due under this Agreement then owing; provided, however, Licensor hereby agrees to waive one such late fee in any twelve (12) month period so long as Licensee shall pay such outstanding amounts within five (5) days of written notice from Licensor to Licensee of such late payment. Licensee shall pay twelve percent (12%) interest per annum on any outstanding License Fee or other payment due under this Agreement that remains unpaid; such interest shall accrue beginning the date such payment is due until the date such payment is actually paid.

(c) **Additional Fees.** Licensee may request that Licensor grant access to Additional Occupants provided that Licensee first (i) submits a written request to Licensor requesting Additional Occupants; (ii) Licensee receives written confirmation from Licensor granting access to Additional Occupants (which Licensor may withhold in its sole discretion); and (iii) Licensee pays, in addition to the License Fee, an amount equal to $1,000.00 per month for each Additional Occupant.

Licensee may request that Licensor grant access to Additional Dedicated Desks and/or Office Space provided that Licensee first (i) submits a written request to Licensor requesting Additional Dedicated Desks and/or Office Space ; (ii) Licensee receives written confirmation from Licensor granting access to Additional Dedicated Desks and/or Office Space; and (iii) Licensee pays, in addition to the License Fee, an amount equal to $500.00 per month for each Additional Dedicated Desk and/or an additional amount as determined by the Licensor for Additional Office Space. Licensor shall grant such access in its sole discretion.

(d) **Security Deposit.** Licensee shall to pay a Security Deposit equal to $110,725.00 ("**Security Deposit**"). The purpose of the Security Deposit is to guarantee the full, prompt and faithful performance by Licensee of all of the terms, conditions, covenants, agreements, warranties and provisions of this Agreement to be performed, fulfilled or observed by Licensee hereunder, including but not limited to the payment of the License Fee and other charges. If Licensee breaches any term or condition of this Agreement, beyond applicable notice and cure periods, said Security Deposit or any part thereof may be used to pay any such payment or perform any obligations of the Licensee, and the Licensee shall immediately replace the amount of the Security Deposit so used. Said Security Deposit may be co-mingled with the Licensor's other funds, need not be kept in a separate account, and Licensor shall not be required to pay interest on same. Licensor shall return the balance of the Security Deposit within thirty (30) days following the end of Term, as extended from time to time. Licensor, from time to time, may transfer the Security Deposit to any mortgagee or any grantee or grantees to be held by such mortgagee, grantee or grantees as the Security Deposit hereunder on the above terms, and upon such transfer to such mortgagee, grantee or grantees, Licensor thereupon shall be relieved from all further liability to the Licensee with respect to the Security Deposit, and Licensee thereafter shall look only to such mortgagee, grantee or grantees for the return of the Security Deposit.

(e) **Initial Payment.** Licensee shall pay, immediately upon executing this Agreement, an amount equal to the License Fee for the first month of the Term of this Agreement ($107,500.00), the License Fee for Innovation Suite 2 and Partial Dedicated Desks ($19,000.00) for March 15, 2020 through March 31, 2020), the License Fee for the last month of the Term of this Agreement ($110,725.00), a Security Deposit equal to $110,725.00, and the Parking Fees (as defined below) associated with Licensee's Parking Spaces (as defined below) as applicable. As such, Licensee shall pay a total of $347,950.00 plus the aforementioned Parking Fees as applicable, on or before the execution of this Agreement.

4. Service Agreement. Licensor agrees to provide to Licensee, during the entire Term of this Agreement, the services set forth in the Service Agreement attached hereto as Exhibit 2. The License Fee shall cover and include the cost of the services set forth in the Service Agreement and, unless the scope of services requested by Licensee exceed those set forth in the Service Agreement, Licensee shall not be assessed any additional fees for services contained in the Service Agreement. The Service Agreement shall be governed by the terms of this Agreement and if there is any conflict between the covenants and

representations contained in this Agreement and the Service Agreement, the terms of this Agreement shall prevail and be binding upon Licensor and Licensee. Licensor shall not be liable for any failure to provide the services set forth in the Service Agreement to the extent such failure is beyond Licensor's reasonable control. Notwithstanding the foregoing to the contrary, if, due to any gross negligent or willful and wrongful act of Licensor, there is an interruption of one or more services or utilities that Licensor is obligated to perform or deliver under this Agreement, and such interruption of services or utilities renders the Licensed Premises untenantable (meaning that either (x) electric service to the Licensed Premises has been interrupted or (y) any other service or utility to the Licensed Premises is interrupted and Licensee is unable to reasonably use the Licensed Premises for the conduct of Licensee's business and, as a result thereof, Licensee has in fact ceased use of the Licensed Premises or portion thereof for the conduct of Licensee's business), and if such interruption shall continue for a period of five (5) consecutive business days after notice thereof from Licensee to Licensor that the Licensed Premises are untenantable as a result thereof, then License Fee, together with Tenant's payments on account of the Parking Fees and any additional fees related to Additional Occupant(s) shall equitably abate, based upon the degree of interference with Licensee's ongoing business, commencing on the sixth business day after such notice (and, if less than all of the Licensed Premises are made untenantable, such abatement shall be pro-rated according to the area made untenantable) until such time as such services and/or utilities are restored. Licensor shall use due diligence to cause such restoration of the interruption at the soonest reasonable time. Licensee's abatement rights herein granted shall be Licensee's sole and exclusive remedies for any loss or damage arising from any such interruption.

5. **Common Areas.** Licensee hereby acknowledges that other licensees and/or occupants are occupying or may in the future occupy other portions of the Building. Licensee's use of the Licensed Premises, and access to and use of the common areas and any other services in connection with the Licensed Premises or this Agreement, shall be subject to any and all rules and procedures reasonably promulgated by Licensor and/or Landlord and delivered to Licensee from time to time; provided, however, in the event of a conflict between the terms and conditions of those rules and regulations and this Agreement, this Agreement shall control. Licensee's compliance with such rules and procedures constitutes a material inducement to Licensor's willingness to enter into this Agreement; any violation thereof shall constitute a material breach of this Agreement.

6. **Parking.** During the Term, Licensee shall have a non-exclusive, irrevocable license to use (N/A) unreserved parking spaces ("**Licensee's Parking Spaces**"). Licensee shall have no right to elect to reduce its number of Licensee's Parking Spaces and shall be responsible for the Parking Fees (defined below) for such spaces regardless of whether its Occupants use Licensee's Parking Spaces. Licensee shall pay, in addition to the License Fee, monthly parking fees equal to the prevailing rates for the Building ("**Parking Fees**") and shall pay such Parking Fees to Licensor at the time each License Fee payment is due. Parking fees are subject to change.

7. **Modifications to Licensed Premises.** Licensee shall not make any modification to the Licensed Premises without Licensor's prior written approval, which approval may be withheld or conditioned in Licensor's sole discretion. Licensee shall bear the cost of any approved modifications to the Licensed Premises completed by or on behalf of the Licensee. All articles of personal property, and all business and trade fixtures, machinery and equipment, cabinet work, furniture and movable partitions, if any, paid for or installed by Licensee in the Licensed Premises will be and remain the property of Licensee and may be removed by Licensee at any time, provided that Licensee, at its expense, shall repair any damage to the Licensed Premises caused by such removal or by the original installation. Licensee shall remove all of Licensee's personal property at the expiration of the Term of this Agreement or sooner termination of this Agreement, in which event the removal shall be done at Licensee's expense and Licensee, prior to the end of the Term of this Agreement or upon sooner termination of this Agreement, shall repair any damage to the Licensed Premises caused by its removal.

8. **Hazardous Materials.** Licensee shall strictly comply with all Environmental Laws to the extent such provisions relate to the Licensed Premises during the Term of this Agreement. For purposes hereof, "**Environmental Laws**" shall mean all laws, statutes, ordinances, rules and regulations of any local, state or federal governmental authority having jurisdiction concerning environmental, health and safety matters, including but not limited to any discharge by Licensee or Licensee's Occupants into the air, surface water, sewers, soil or groundwater of any Hazardous Material (defined below) whether within or outside the Licensed Premises, including, without limitation (i) the Federal Water Pollution Control Act, 33 U.S.C. Section 1251 et seq., (ii) the Federal Resource Conservation and Recovery Act, 42 U.S.C. Section 6901 et seq., (iii) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601 et seq., (iv) the Toxic Substances Control Act of 1976, 15 U.S.C. Section 2601 et seq., and (v) Chapter 21E of the General Laws of Massachusetts. Licensee, at its sole cost and expense, shall comply with (a) Environmental Laws, and (b) any rules, requirements and safety procedures of the Massachusetts Department of Environmental Protection, the city in which the Building is located, and any insurer of the Building or the Licensed Premises with respect to Licensee's use, storage and disposal of any Hazardous Materials. Notwithstanding anything in this Agreement to the contrary, Licensee shall have no liability to Licensor or responsibility under this Agreement for any Hazardous Materials in, on, under or about the Licensed Premises that were not released, discharged, stored or introduced by Licensee or its agents. Licensee understands and agrees that Licensor must decontaminate the Licensed Premise prior to Licensee vacating same and therefore Licensee shall fully cooperate with Licensor in the aforementioned decontamination, which may include Licensee ceasing its operations and/or removing personal property prior to the expiration of the Term. The term "**Hazardous Material**" means asbestos, oil or any hazardous, radioactive or toxic substance, material, waste or petroleum derivative which is or becomes regulated by any Environmental Law or which is designated as a "hazardous substance," "hazardous material," "oil," "hazardous waste" or toxic substance under any Environmental Law. Licensee shall follow all of Licensor's Environmental

Health and Safety ("**EH&S**") guidelines and requirements, which may be modified from time to time.

9. **Fire, Other Casualty; Eminent Domain**. In the event of a fire or other casualty affecting the Building or the Licensed Premises, or of a taking of all or a part of the Building or Licensed Premises under the power of eminent domain: (i) Licensor shall not have any obligation to repair or restore the Licensed Premises or any alterations or personal property; (ii) Licensee shall be entitled only to a proportionate abatement of the License Fee during the time and to the extent the Licensed Premises are unfit for the purposes permitted under this Agreement and not used by Licensee as a result thereof; (iii) Licensee shall not, by reason thereof, have a right to terminate this Agreement unless the Lease shall be terminated; and (iv) Licensor and Landlord reserve the right to terminate this Agreement in connection with any right granted to either Licensor or Landlord under the Lease whether or not the Licensed Premises is damaged or the subject of a taking. In the event Licensor or Landlord exercises the right to terminate the Lease as the result of any such fire, casualty or taking, (a) Licensor shall provide Licensee with a copy of the relevant termination notice and this Agreement shall terminate on the date upon which the Lease terminates and (b) Licensee shall immediately pay to Licensor all of Licensee's insurance proceeds relating to all alterations (but not to Licensee's personal property). Notwithstanding anything to the contrary contained herein, in the event a casualty or condemnation proceeding occurs during the last twelve (12) months of the Term resulting in the destruction or taking of all or a material portion of the Licensed Premises or access thereto, Licensee and Licensor shall each have the right to terminate this Agreement upon thirty (30) days prior written notice to the other, with such notice to be given within thirty (30) days following the casualty or condemnation event.

10. **Limit of Liability**. Notwithstanding anything to the contrary contained in this Agreement, Landlord, Licensor, their respective, members, officers, directors, employees, agents, servants, lenders, mortgagees, ground lessors beneficiaries and contractors (collectively, the "**Licensor Parties**"), shall not be liable for any damages or injury to person or property or resulting from the loss of use thereof sustained by Licensee or anyone having claims through or on behalf of Licensee, based on, arising out of, or resulting from, any cause whatsoever, including any due to the Building becoming out of repair, or due to the occurrence of any accident or event in or about the Building, or due to any act or neglect of any tenant or occupant of the Building or any other person. Notwithstanding the foregoing provision of this Section, Licensor Parties shall not be released from liability to Licensee for any physical injury to any natural person caused by Licensor Parties' gross negligence or willful misconduct to the extent such injury is not covered by insurance either carried by Licensee (or such person) or required by this Agreement to be carried by Licensee; provided that Licensor Parties shall not, under any circumstances, be liable for any exemplary, punitive, consequential or indirect damages (or for any interruption of or loss to business). No Licensor Parties' shall be held to have any personal liability for satisfaction or any claim or judgment.

11. **Waiver of Claims**. Licensee hereby releases and waives any and all claims against the Licensor Parties for injury or damage to person, property or business of every kind,

nature and description, sustained in or about the Building or the Licensed Premises by Licensee or anyone claiming under Licensee, other than by reason of gross negligence or willful misconduct of the Licensor Parties and except in any case which would render this release and waiver void under applicable law.

12. Insurance. See Insurance Requirements attached hereto as **Exhibit 3.**

(a) **Subrogation.** Licensee and its insurers hereby waive any and all rights of recovery or subrogation against the Licensor Parties with respect to any Claims (as defined below) howsoever caused, that are covered, or should have been covered, by valid and collectible insurance, including any deductibles or self-insurance maintained thereunder. If necessary, Licensee agrees to endorse the required insurance policies to permit waivers of subrogation as required hereunder and hold harmless and indemnify the Licensor Parties for any loss or expense incurred as a result of a failure to obtain such waivers of subrogation from insurers. Such waivers shall continue so long as Licensee's insurers so permit. Any termination of such a waiver shall be by written notice to Licensor. Licensee, upon obtaining the policies of insurance required or permitted hereunder, shall give notice to its insurance carriers that the foregoing waiver of subrogation is contained in herein. If such policies shall not be obtainable with such waiver or shall be so obtainable only at a premium over that chargeable without such waiver, then Licensee shall notify Licensor of such conditions.

(b) **Assumption of Risk**. Licensee assumes the risk of damage, and shall be liable for any damage caused to, any fixtures, goods, inventory, merchandise, equipment and leasehold improvements, and the Licensor Parties shall not be liable for injury to Licensee's business or any loss of income therefrom, relative to such damage. Licensee shall, at Licensee's sole cost and expense, carry such insurance as Licensee desires for Licensee's protection with respect to personal property of Licensee or business interruption.

13. Indemnification. Except to the extent the same is solely the result of the gross negligence or willful misconduct of Licensor or any of the Licensor Parties, and subject to the waiver of subrogation contained in Section 12 hereof, Licensee shall indemnify, defend (by counsel acceptable to Licensor), release, protect and hold the Licensor Parties harmless from and against any and all demands, claims, liabilities, losses, costs, expenses, actions, causes of action, damages, suits or judgments, and all reasonable expenses (including reasonable attorneys' fees, charges and disbursements, regardless of whether the applicable demand, claim, action, cause of action or suit is voluntarily withdrawn or dismissed) incurred in investigating or resisting the same (collectively, "**Claims**") of any kind or nature that arise before, during or after the Term, arising out of or related to: (i) the use or occupancy of the Licensed Premises or Shared Premises by Licensee or its Occupants or anyone claiming by, through or under Licensee; (ii) the failure by Licensee or anyone claiming by, through or under Licensee to comply with any term, condition, or covenant of this Agreement or the Lease, including, without limitation, Licensee's obligation to surrender the Licensed Premises in the condition herein required; (iii) the negligence or willful misconduct of Licensee, its agents or

anyone claiming by, through or under Licensee; (iv) the existence of Hazardous Materials on, under or about the Licensed Premises to the extent caused, stored, released, discharged or introduced by Licensee or its agents; (v) the death of or injury to any person or damage to any property in the Licensed Premises; or (vi) the death of or injury to any person or damage to any property on or about the Building to the extent caused by the negligence, recklessness or willful misconduct of Licensee or its agents.

14. Assignment.

(a) **No Assignment**. Licensee shall not assign, encumber or transfer this Agreement, or any part of it, or its right or interest in it, without Licensor's prior written approval. Licensee shall not in any way obstruct or interfere with the rights of other licensees, occupants or users of the Building, nor shall it permit its employees, representatives, or contractors to do so. Licensor may assign this Agreement.

(b) **Prohibited Transfers**. Notwithstanding any other provision contained in this Agreement to the contrary, Licensee shall not knowingly, after reasonable inquiry, transfer or permit the transfer of any legal or beneficial interest in Licensee to, or assign, sublicense or otherwise transfer all or any portion of its interest under this Agreement or in all or any portion of the Licensed Premises to, or enter into any sublicense or other use or occupancy agreement to, any:

i. Person (or any Person whose operations are directed or controlled by a Person) that has been convicted of or has pleaded guilty in a criminal proceeding to a felony or that is an ongoing target of a grand jury investigation convened pursuant to applicable statutes concerning organized crime;

ii. Person organized in or controlled from a country, the activities with respect to which are regulated or controlled pursuant to the following laws and the regulations or executive orders promulgated thereunder: (A) the Trading with the Enemy Act of 1917, 50 U.S.C. App. §1, et seq., as amended; (B) the International Emergency Economic Powers Act of 1976, 50 U.S.C. §1701, et seq., as amended; or (C) the Anti-Terrorism and Arms Export Amendments Act of 1989, codified at Section 6(j) of the Export Administration Act of 1979, 50 U.S.C. App. §2405W, as amended; or

iii. Person with whom Landlord or Licensor is restricted from doing business under either (A) Executive Order No. 13224 on Terrorist Financing (effective September 24, 2001 (as amended or supplemented from time to time, the "**Executive Order**"), or (B) the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (Public Law 10756; as amended, from time to time, the "**Patriot Act**"), or (C) the regulations of the United Stated Department of the Treasury Office of Foreign Assets Control (including, without limitation, those Persons named on the list of "Specially Designated Nationals and Blocked Persons" as modified from time to time), or other governmental action; or

iv. Affiliate of any of the Persons described in the preceding paragraphs (i), (ii) or (iii).

As used herein, "Person" shall mean any individual or entity, and the heirs, executors, administrators, legal representatives, successors and assigns of such Person where the context so admits; "Affiliate" shall mean, with respect to any Person, (i) in the case of any such Person which is an Entity, any partner, shareholder, member or other owner of such Entity, provided that such partner, shareholder, member or other owner owns more than fifty percent (50%) of the Equity Interests of such Entity, and (ii) any other Person which is a Parent, a Subsidiary, or a Subsidiary of a Parent with respect to such Person or with respect to one or more of the Persons referred to in the preceding clause (i); "Equity Interest" shall mean with respect to any Entity, (i) the legal (other than as a nominee) or beneficial ownership of outstanding voting or non-voting stock of such Entity if such Entity is a business corporation, a real estate investment trust or a similar entity, (ii) the legal (other than as a nominee) or beneficial ownership of any partnership, membership or other voting or non-voting ownership interest in a partnership, joint venture, limited liability company or similar entity, (iii) a legal (other than as a nominee) or beneficial voting or non-voting interest in a trust if such Entity is a trust and (iv) any other voting or nonvoting interest that is the functional equivalent of any of the foregoing; "Parent" shall mean, with respect to any Subsidiary, any Person which owns directly or indirectly through one or more Subsidiaries the entire Equity Interest in such Subsidiary; and "Subsidiary" shall mean, with respect to any Parent, any Entity in which a Person owns, directly or indirectly through one or more Subsidiaries, the entire Equity Interest in such Subsidiary.

15. Miscellaneous.

(a) **Investment Right.** [INTENTIONALLY OMITTED]

(b) **Attorneys' Fees**. In the event of any litigation or arbitration between Licensee and Licensor, whether based on contract, tort or other cause of action or involving bankruptcy or similar proceedings, in any way related to this Agreement, the non-prevailing party shall pay to the prevailing party all reasonable attorneys' fees and costs and expenses of any type, without restriction by statute, court rule or otherwise, incurred by the prevailing party in connection with any action or proceeding (including arbitration proceedings, any appeals and the enforcement of any judgment or award), whether or not the dispute is litigated or prosecuted to final judgment. The "prevailing party" shall be determined based upon an assessment of which party's major arguments or positions taken in the action or proceeding could fairly be said to have prevailed (whether by compromise, settlement, abandonment by other party of its claim or defense, final decision after any appeals, or otherwise) over the other party's major arguments or positions on major disputed issues. Any fees and cost incurred in enforcing a judgment shall be recoverable separately from any other amount included in the judgment and shall survive and not be merged in the judgment.

(c) **Authority.** Each person executing this Agreement on behalf of a party hereto represents and warrants that he or she is authorized and empowered to do so and to thereby bind the party on whose behalf he or she is signing.

(d) **Captions.** All captions and headings in this Agreement are for the purposes of reference and convenience and shall not limit or expand the provisions of this Agreement.

(e) **Counterparts.** This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original and all of which taken together shall comprise but a single instrument.

(f) **Entire Agreement.** This Agreement contains all of the covenants, conditions and agreements between the parties concerning the Licensed Premises, and shall supersede any and all prior correspondence, agreements and understandings concerning the Licensed Premises, both oral and written. No addition or modification of any term or provision of this Agreement shall be effective unless set forth in writing and signed by both Licensor and Licensee.

(g) **Notices.** Any notice required or permitted under this Agreement shall be effective if in writing and delivered to the other party at the following address.

MIL 21E, LLC	**PRIME MEDICINE, INC.**
21 Erie Street	One Main Street, 13th Floor
Cambridge, MA 02139	Cambridge, MA 02142
Attn: Amrit Chaudhuri	Attn: John Evans

(h) **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts. Licensee hereby consents to the personal jurisdiction and venue of any state or federal court located in Suffolk County Massachusetts, and any successor court, and the service or process by any means authorized by such court.

(i) **Exhibits.** All exhibits and any schedules or riders attached to this Agreement are incorporated herein by this reference and made a part hereof, and any reference in the body of the Agreement or in the exhibits, schedules or riders to the Agreement shall mean this Agreement, together with all exhibits, schedules and riders.

(j) **Waiver of Trial by Jury**. LICENSEE AND LICENSOR HEREBY WAIVE ANY AND ALL RIGHTS THEY MAY HAVE UNDER APPLICABLE LAW TO TRIAL BY JURY WITH RESPECT TO ANY DISPUTE WITH ANY LICENSOR OR LICENSEE PARTIES, AS APPLICABLE, ARISING DIRECTLY OR INDIRECTLY IN CONNECTION WITH THIS AGREEMENT OR THE LICENSED PREMISES. NOTHING CONTAINED IN THIS SECTION SHALL BE CONSTRUED AS A WAIVER BY LICENSOR OR LANDLORD OF ANY OF ITS RIGHTS TO TRIAL BY JURY IN CONNECTION WITH THE LEASE OR THIS AGREEMENT FOR ANY CLAIMS OR CAUSES OF ACTION SO TRIABLE.

(k) **Successors and Assigns.** Subject to the provisions of this Agreement relating to assignment and subletting, this Agreement shall be binding upon, and shall inure to the benefit of the parties' respective representatives, successors and assigns.

(l) **Relationship of Parties.** Nothing in this Agreement shall be deemed to create any joint venture or principal-agent relationship or partnership between any of the parties hereto, and no party is authorized to, and no party shall, act toward third parties or the public in any manner that would indicate any such relationship.

(m) **Access.** Landlord and Licensor reserve the right to enter the Licensed Premises upon reasonable prior written or oral notice to Licensee (except that in case of emergency no notice shall be necessary) in order to inspect the Licensed Premises and/or the performance by Licensee of the terms of this Agreement or to exercise Licensor's rights or perform Licensor's obligations hereunder. Licensee shall have access to the Licensed Premises and the Shared Premises seven (7) days a week, twenty-four (24) hours a day, and except in instances of an emergency. The foregoing shall be subject to the Lease and any applicable Building rules and regulations.

LICENSEE UNDERSTANDS AND ACKNOWLEDGES THAT RIGHTS UNDER THIS AGREEMENT ONLY CONSTITUTE A LICENSE FOR USE OF THE LICENSED PREMISES AND DO NOT INVOLVE THE GRANT OF ANY INTEREST IN REAL ESTATE. LICENSEE SPECIFICALLY DISCLAIMS ANY RIGHTS TO SUMMARY PROCESS AND, PROVIDED THAT LICENSOR COMPLIES WITH ALL OBLIGATIONS (INCLUDING WITHOUT LIMITATION NOTICE AND CURE REQUIREMENTS) HEREUNDER, EXPLICITLY PERMITS LICENSOR TO USE SELF- HELP REMEDIES PROVIDED THAT SUCH SELF-HELP REMEDIES DO NOT BREACH THE PEACE AND ARE ALLOWABLE UNDER APPLICABLE LAW.

IN WITNESS WHEREOF, Licensor and Licensee have duly executed this Agreement as of the day and year first above written.

MIL 21 E, LLC,	**PRIME MEDICINE, INC.,**
/s/ Amrit Chaudhuri	/s/ John Evans
By: Amrit Chaudhuri	By: John Evans
Title: CEO	Title:

CONSULTING AGREEMENT

This Consulting Agreement (this "Agreement") is made as of September 13, 2019 (the "Effective Date"). In consideration of retaining David R. Liu (the "Consultant") by Prime Medicine, Inc. (the "Company"), a Delaware company, the parties agree as follows:

1. Services and Payment.

(a) Consultant will perform the consulting services specified on Schedule A(the "Services") as the Company and Consultant may from time to time mutually agree upon in writing (email is acceptable). Consultant will devote Consultant's commercially reasonable efforts to performing the Services. Consultant will not perform any services for which Consultant expects to be compensated under this Agreement except as mutually agreed upon by the parties in writing as provided above.

(b) The Company will pay Consultant a consulting fee of One Hundred Fifty Thousand dollars ($150,000) per year, payable in monthly installments in arrears, commencing within 30 days of the closing of the Company's first equity financing but effective as of the date of this Agreement, for Services performed by Consultant. The Company will reimburse Consultant for such reasonable business expenses as are incurred by Consultant in performing the Services that the Company approves in advance. In addition, the Consultant shall be entitled to the Common Stock of the Company as set forth in a Founder Stock Restriction Agreement by and between the Company and the Consultant of even date herewith.

(c) In furnishing the Services, Consultant understands that Consultant will at all times be acting as an independent contractor and not an employee of the Company and will not be entitled to participate in or to receive any benefit or right under any of the Company's employee benefit, welfare or like plans. Consultant will be responsible for paying all withholding and other taxes arising from the performance of the Services when they become due and payable. Consultant will not enter into any agreements binding on the Company.

2. Relationship of Consultant to Others.

(a) The Company recognizes that as of the date first written above Consultant is an employee of the Howard Hughes Medical Institute and a member of the faculty of Harvard University ("Harvard") and The Broad Institute, Inc. ("Broad") and may become a member of other institutions or associations in the future (collectively the "Institutions" and each an "Institution"), and that Consultant's activities are and will be subject to the policies and regulations of the Institutions, including the Howard Hughes Medical Institute Uniform Consulting Agreement Provisions) (the ("Uniform Provisions") and may require Institution specific addenda and each such policy, regulation and addendum may be amended from time-to- time (such policies, regulations and addenda are collectively referred to as the "Applicable Policies"), copies of which are attached hereto as Exhibit A and made an integral part of this Agreement. The parties agree that the Applicable Policies and Uniform Provisions are an integral part of this Agreement and this Agreement shall have no force or effect unless the Applicable Policies and Uniform Provisions are signed by both parties. The parties agree that if required by the Institutions, the attached Applicable Policies will be signed by both parties to give effect to

this Agreement, and that in the event of any conflict between this Agreement and the Applicable Policies, the Applicable Policies shall govern. Consultant will promptly inform the Company in writing of any applicable material changes or additions to the Applicable Policies after he becomes aware of any such changes or additions. In the event any of such changes or additions to the Applicable Policies will in the Company's judgment interfere with Consultant's performance of the Services, the Company may terminate this Agreement immediately upon written notice to Consultant.

(b) The Company recognizes that as of the date first written above Consultant is a party to an agreement with Editas Medicine, Inc. ("Editas") pursuant to which the Consultant provides consulting services to Editas in the field of Cas9 and TALEN genome editing technologies, and that for one year from the Effective Date, Consultant's activities are and will be subject to his agreement with Editas as currently in effect (the "Editas Agreement"). The parties agree that in the event of any conflict between this Agreement and the Editas Agreement during such one year period, the Editas Agreement shall govern, provided that during the term of this Agreement, Consultant will not enter into any agreement to amend or otherwise modify the Editas Agreement in a manner that would be inconsistent with or otherwise conflict with Consultant's obligations under this Agreement, and provided further that notwithstanding the primacy of the Editas Agreement, Consultant agrees not to provide services to Editas in the PMI Field (as defined below), whether personally or through any consulting entity, except to the extent contractually required by the Editas Agreement.

(c) The Company recognizes that as of the date first written above Consultant is a party to an agreement with Beam Therapeutics, Inc. ("Beam") pursuant to which the Consultant provides consulting services to Beam in the Beam "Field" (or like term) as defined in that certain Consulting Agreement, dated March 1, 2017, by and between the Consultant and Beam as currently in effect (the "Beam Agreement"). During the term of the Beam Agreement, the parties agree that in the event of any conflict between this Agreement and the Beam Agreement, the Beam Agreement shall govern, provided that during the term of this Agreement, Consultant will not enter into any agreement to amend or otherwise modify the Beam Agreement in a manner that would be inconsistent with or otherwise conflict with Consultant's obligations under this Agreement, and provided further that notwithstanding the primacy of the Beam Agreement, Consultant agrees not to provide services to Beam in the PMI Field (as defined below), whether personally or through any consulting entity, except to the extent contractually required by the Beam Agreement.

(d) During the term of this Agreement and for six (6) months thereafter, Consultant will not directly (i) provide material services to any third party in any of the PMI Field (as defined below), or (ii) become an owner, partner, shareholder, consultant, agent, employee or co-venturer of any third party that has committed, or intends to commit at the time Consultant becomes an owner, partner, shareholder, consultant, agent, employee or co-venturer of such third party, significant resources to the PMI Field (other than in Consultant's capacity as a holder of not more than 1% of the combined voting power of the outstanding stock of such a third party that is a publicly held company, or with respect to Beam or Editas). Further, Consultant shall not enter into any agreement or other arrangement that would prevent Consultant from providing diagnostic consulting services to the Company in support of PMI Editing. "PMI Editing" means

any and all gene editing and technology therefor (including CRISPR, Prime Editing (as defined in the Broad License (as defined below)), and technology in the "Field" (or like term) as defined in the Beam Agreement), in each case, for any and all human prophylactic or therapeutics uses (including to address any potential human disease or condition, including any protective mutations), including any activities directed to the discovery, identification, optimization, development, manufacture or commercialization of any agent for any such human prophylactic or therapeutics uses (even if the result of such activities do not themselves practice any such gene editing). For purposes of this Agreement, "Broad License" means that certain License Agreement by and between the Company and The Broad Institute, Inc. The foregoing restrictions will not prohibit Consultant from (w) meeting any of his obligations under any Applicable Policies, (x) conducting research at an Institution that is funded by a third party sponsored research arrangement or that utilizes funds or facilities administered by such Institution, where inventions conceived by Consultant in the course of such research will be owned by such Institution pursuant to the Applicable Policies, or that utilizes funds received under a grant from a governmental entity, a foundation or non-profit organization, (y) publishing the results of any such research, or (z) providing educational, clinical or other such services for an Institution. Without limiting the foregoing, the Services shall not encompass work at the Institutions, because of prior obligations to such institutions and funding organizations, including the United States Government.

(e) During the term of this Agreement and for one year thereafter, Consultant will not (i) solicit, encourage, or take any other action which is intended to induce any employee of, or consultant to, the Company to terminate his or her employment or relationship with the Company in order to become employed by or otherwise perform services for any third party, or (ii) solicit, endeavor to entice away from the Company or otherwise interfere with the relationship of the Company with any third party who is, or was within the then-most recent twelve month period, a client or customer of the Company.

(f) Attached as Exhibit B is a list of all agreements or relationships pursuant to which Consultant provides or is committed to provide any services in the field of life sciences as of the Effective Date, other than with respect to the Institutions. During the term of this Agreement, before entering into (or amending or restating) any agreements or other relationships with any third party pursuant to which Consultant will provide any such services, other than with any Institutions, Consultant will give reasonable advance notice to the Company in writing and the parties will discuss.

3. Developments.

(a) Consultant will promptly disclose in confidence to the Company all inventions, discoveries, ideas, processes, products, computer programs, works of authorship and know-how that Consultant makes, conceives or reduces to practice, during the term of this Agreement, and that (i) arise from the Services, or (ii) arise from use of Confidential Information of the Company (collectively, "Developments"). Consultant will neither make any use of any funds, space, personnel, facilities, equipment or other resources of any Institution or other third party in performing the Services hereunder nor without limiting Section 2(a) or 2(b) or 2(c), take any

other action that would result in any Institution or other third party owning or having a right in any Developments under the Applicable Policies, the Uniform Provisions or otherwise.

Consultant will not make use of any funds, space, personnel, facilities, equipment or other resources of Company in fulfilling his obligations to Institutions.

(b) Consultant will make and maintain adequate and current written records of all Developments, which records will be available to and remain the property of the Company at all times. All Developments will be the sole property of the Company. For purposes of the copyright laws of the United States, all Developments will constitute works made for hire as applicable. Consultant hereby assigns and, to the extent any such assignment cannot be made at present, hereby agrees to assign to the Company, without further compensation, all right, title and interest in and to all Developments and any and all related patent rights, copyrights, trade secrets and other proprietary rights in any and all countries.

(c) Consultant will assist the Company in any reasonable manner (at the request of Company) to obtain for its own benefit patents, copyrights and other proprietary rights in any and all countries with respect to the Developments, and Consultant will execute and deliver, when reasonably requested, patent and other applications and assignments thereof. Consultant will further assist the Company, at the Company's reasonable request, to enforce any patents, copyrights and other legal protections obtained for the Developments, including testifying in any suit or proceeding. Company will reimburse Consultant for expenses incurred at the Company's request and, with respect to any performance after the term of this Agreement, compensate Consultant at a reasonable rate for time actually spent by Consultant at the Company's request. In the event the Company is unable after reasonable best effort to obtain Consultant's signature on any document which Consultant may be required to sign pursuant to this Section, whether because of Consultant's physical or mental incapacity or for any other reason whatsoever, Consultant hereby irrevocably appoints each of the President and the Secretary of the Company (whether now or hereafter in office) as Consultant's attorney-in-fact to execute any such document on Consultant's behalf.

(d) Notwithstanding anything to the contrary in this Agreement, Company agrees that Consultant is free to reuse all generalized knowledge, experience, know-how and technologies (including ideas, concepts, processes and techniques) acquired during performance of the Services (including without limitation, that which it could have acquired performing the same or similar services for another company).

4. Confidential Information.

(a) As used in this Agreement, "Confidential Information" means all trade secrets and confidential or proprietary information owned, possessed or used by the Company that is disclosed to the Consultant under this Agreement and is marked or otherwise identified as "proprietary" or "confidential" at the time of disclosure or is of such a nature that a reasonable person would understand such information to be proprietary or confidential. Subject to the foregoing, Confidential Information may include (i) all Developments, technology, business strategies and plans, financial information, personnel information and customer lists of the Company, (ii) all materials relating to the PMI Field and furnished by the Company, and (iii) all

information of third parties that the Company has an obligation to keep confidential. In addition, the terms and conditions of this Agreement will be treated by Consultant as Confidential Information hereunder, provided that such terms and conditions may be disclosed to (1) an Institution or other entity to whom Consultant provides or may provide consulting services, in each case, upon the request of such Institution or other entity and (2) Consultant's legal, financial and accounting advisors.

(b) During the term of this Agreement and for five (5) years after first disclosed to the Consultant, Consultant will keep and hold all Confidential Information in confidence, and Consultant will not use or disclose any of such Confidential Information without the prior written consent, and with the authorization, of the Company, except as may be necessary to perform the Services. Consultant will not disclose to the Company any confidential information belonging to any third party, unless authorized to do so. Disclosure of any such confidential information hereunder does not grant to Company any right or license under any copyright, patent, trade secret or other intellectual property right of the applicable third party. In the event that Consultant is authorized to disclose any Confidential Information to anyone outside the Company in performing the Services, Consultant, with the Company's advice, will take adequate steps, consistent with the policies and practices of the Company, to require that the recipient maintain the confidentiality of the Confidential Information.

(c) The term "Confidential Information" hereunder will not include information that Consultant can establish by competent written evidence (i) is or becomes generally known within the industry through no fault of Consultant; (ii) was known to Consultant at the time it was disclosed, (iii) is lawfully and in good faith made available to Consultant by a third party who did not derive it from the Company and who imposes no obligation of confidence on Consultant; (iv) is required to be disclosed by order of a governmental authority or a court of competent jurisdiction, provided that reasonable advance notice (if practicable) of the pendency of any such order is given to the Company and Consultant reasonably cooperates with Company, at its request and expense, in its efforts (if any) to protect its Confidential Information with respect to such order; or (v) is independently developed by Consultant without use of any Confidential Information of Company. For the purpose of this Section, Confidential Information will not be deemed to fall within any of the foregoing exceptions merely because individual features are separately publicly available.

(d) Upon termination of this Agreement or at any other time upon the request of the Company, Consultant will promptly deliver to the Company or destroy, at Company's request and expense, all records and materials documenting, evidencing or embodying any Confidential Information.

(e) Notwithstanding the foregoing, in accordance with the federal Defend Trade Secrets Act of 2016, Consultant shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that (i) is made (A) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney and (B) solely for the purpose of reporting or investigating a suspected violation of law; or (ii) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. In addition, this Agreement does not affect Consultant's immunity under 18 USC Sections

1833(b)(1) or 1833(b)(2) if Consultant files a lawsuit for retaliation by an employer for reporting a suspected violation of law and discloses a trade secret to his attorney and uses the trade secret information in the court proceeding, if the Consultant (1) files any document containing the trade secret under seal; and (2) does not disclose the trade secret, except pursuant to court order.

5. No Conflicts.

(a) Consultant represents and warrants that Consultant is permitted to enter into this Agreement and to perform the obligations contemplated hereby, and that this Agreement and the terms and obligations hereof are not inconsistent or otherwise in conflict with any other obligations Consultant may have, under the Applicable Policies, the Uniform Provisions or otherwise. In addition, during the term of this Agreement, Consultant will not enter into any agreement or modification of any existing agreement (whether written or oral) that are inconsistent with or otherwise conflict with Consultant's obligations under this Agreement.

(b) Consultant represents and warrants that Consultant has disclosed to the Institutions all aspects of Consultant's relationship with the Company which are required to be disclosed under the Applicable Policies, and that Consultant has obtained any required consents or approvals of the Institutions concerning such relationship and this Agreement.

6. Publication.

(a) Company understands that Consultant has primary professional, academic and ethical obligations arising in connection with Consultant's positions at the Institutions and that Consultant is subject to Applicable Policies and Uniform Provisions which protect academic freedom and preserve ownership of intellectual property rights. Company therefore agrees that within the scope of the Consultant's professional and academic duties, Consultant is free to publish and present at conferences or discuss with colleagues as Consultant deems appropriate, provided that, in no event will the Consultant disclose any Confidential Information.

7. Term and Termination.

(a) Subject to earlier termination as expressly provided herein, this Agreement will commence on the date first written above and will continue until the fourth anniversary of that date, and thereafter will continue in effect until terminated by either party, with or without cause, upon at least thirty (30) days prior written notice. If either party breaches in any material respect any of its material obligations under this Agreement, in addition to any other right or remedy, the non-breaching party may terminate this Agreement in the event that the breach is not cured within thirty (30) days after receipt by such party of written notice of such breach.

(b) No expiration or termination of this Agreement will relieve or affect any rights or liabilities of the parties which may have accrued prior to the date of expiration or termination. Notwithstanding anything herein to the contrary, upon any expiration or termination of this Agreement, the provisions of Sections 1(b) (only for amounts owed in connection with Services performed up to the date of expiration or termination), 1(c), 2(a) (the second sentence only), 2(b) (the second sentence only), 2(c) (the second sentence only), 2(d) (only for the post-termination or expiration period provided therein), 2(e) (only for the post-termination or expiration period provided therein), 3, 4 (only for the post-termination or expiration period provided therein), 6, 7

and 8 will survive such expiration or termination and continue in effect in accordance with their terms.

8. General.

(a) EXCEPT TO THE EXTENT THAT ANY EXCLUSION OR LIMITATION OF LIABILITY IS VOID, PROHIBITED OR UNENFORCEABLE BY APPLICABLE LAW, IN NO EVENT SHALL CONSULTANT BE LIABLE CONCERNING THE SUBJECT MATTER OF THIS AGREEMENT, REGARDLESS OF THE FORM OF ANY CLAIM OR ACTION (WHETHER IN CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE), FOR ANY (I) INDIRECT, PUNITIVE, INCIDENTAL, RELIANCE, SPECIAL, EXEMPLARY OR CONSEQUENTIAL MONEY DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF BUSINESS, REVENUES, PROFITS OR GOODWILL OR (II) AGGREGATE DAMAGES IN EXCESS OF THE AMOUNTS PAID TO CONSULTANT BY COMPANY HEREUNDER DURING THE TWELVE (12)-MONTH PERIOD PRIOR TO THE DATE THE CAUSE OF ACTION AROSE, EVEN IF CONSULTANT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THESE LIMITATIONS ARE INDEPENDENT FROM ALL OTHER PROVISIONS OF THIS AGREEMENT AND SHALL APPLY NOTWITHSTANDING THE FAILURE OF ANY REMEDY PROVIDED HEREIN.

(b) Company agrees to (i) defend Consultant against any claim by a third party (other than to any such third party to which Consultant has or is providing services) that results from or arises out of any services provided hereunder, including, without limitation, any use of any Developments or any other results of any Services by Company, any of its affiliates or any of its or their employees, independent contractors, or licensees and (ii) indemnify Consultant for, and hold Consultant harmless from, settlement amounts and damages, liabilities, penalties, costs and expenses (including reasonable attorneys' fees) arising out of such claim; except to the extent any such claim is attributable to the Consultant’s gross negligence or willful misconduct or breach of this Agreement. Consultant shall provide prompt written notice of any such claim to Company and reasonable cooperation, information, and assistance in connection therewith, at Company’s reasonable request and expense, and Company shall have sole control and authority to defend, settle or compromise such claim, provided that any settlement that does not include the full and unconditional release of Consultant shall require the prior written consent of Consultant which shall not be unreasonably withheld.

(c) Consultant recognizes that, in the event of a breach or threatened breach by Consultant of this Agreement, the Company may suffer irreparable harm, and Consultant therefore agrees that, in addition to all other rights and remedies available to the Company at law or in equity, the Company will be entitled to seek injunctive relief to restrain any such breach and to enforce the provisions hereof, without showing or proving any actual damage to the Company.

(d) The Services to be rendered by Consultant are personal in nature. Consultant may not assign or transfer this Agreement or any of Consultant’s rights or obligations hereunder except to a corporation of which Consultant is the sole stockholder or a limited liability company of which Consultant is the sole member. In no event will Consultant assign or delegate responsibility for actual performance of the Services to any other individual. This Agreement

will be binding upon and inure to the benefit of the parties and their respective legal representatives, heirs, successors and permitted assigns.

(e) All notices and other communications hereunder will be delivered by hand or sent by registered or certified mail, or by reputable package delivery service, return receipt requested, addressed to the party at the address herein set forth, or to such other address as such party may designate in writing to the other in accordance with this Section.

(f) This Agreement, together with Exhibits A and B and Schedule A attached hereto, constitutes the entire agreement between the parties as to the subject matter hereof, and supersedes any previous oral or written communications, representations, understandings, or agreements between them as to such subject matter. No provision of this Agreement will be waived, altered or canceled except in writing signed by the party against whom such waiver, alteration or cancellation is asserted. Any such waiver will be limited to particular instance and the particular time when and for which it is given.

(g) This Agreement will be governed by, and construed and enforced in accordance with, the substantive laws of The Commonwealth of Massachusetts without regard to its principles of conflicts of laws.

(h) The invalidity or unenforceability of any provision hereof as to an obligation of a party will in no way affect the validity or enforceability of any other provision of this Agreement, provided that if such invalidity or unenforceability materially adversely affects the benefits the other party reasonably expected to receive hereunder, that party will have the right to terminate this Agreement. Moreover, if one or more of the provisions contained in this Agreement will for any reason be held to be excessively broad as to scope, activity or subject so as to be unenforceable at law, such provision or provisions will be construed by limiting or reducing it or them, so as to be enforceable to the extent compatible with the then-applicable law.

(i) The titles and headings herein are for reference purposes only and will not in any manner limit the construction of this Agreement which will be considered as a whole. As used in this Agreement, “herein” and “hereof” will refer to this Agreement as a whole, and “including” means “including but not limited to.” This Agreement will not be interpreted or construed against a party because that party or any attorney or representative for that party drafted or participated in the drafting of this Agreement.

(j) If this Agreement is executed by the Company and the Consultant, the Company will reimburse the Consultant for reasonable legal expenses incurred by the Consultant in connection with the review and negotiation of this Agreement.

* * *

IN WITNESS WHEREOF, the parties hereto have duly executed this Consulting Agreement under seal as of the date first set forth above.

PRIME MEDICINE, INC.

By: /s/ Mary Pendergast

Name: Mary Pendergast

Title:

Address:

DAVID R. LIU

/s/ David R. Liu

Print Name: David R. Liu

Address:

Amendment to Consulting Agreement

This Amendment to the Consulting Agreement (the "Amendment"), effective October 22, 2021 (the "Amendment Effective Date"), is made and entered into by and between Prime Medicine, Inc. (the "Company"), and David R. Liu (the "Consultant").

WHEREAS, Company and Consultant entered into a Consulting Agreement, dated September 13, 2019 (the "Agreement"), wherein Consultant agreed to perform consulting services to Company; and

WHEREAS, Company and Consultant have agreed to amend the Agreement to extend the term of the Agreement as set forth below.

NOW, THEREFORE, in consideration of the mutual covenants contained herein and for other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Section 7(a) of the Agreement is hereby amended and restated in its entirety as set forth below:

(a) Subject to earlier termination as expressly provided herein, this Agreement will commence on the date first written above and will continue until the sixth anniversary of that date, and thereafter will continue in effect until terminated by either party, with or without cause, upon at least thirty (30) days prior written notice. If either party breaches in any material respect any of its material obligations under this Agreement, in addition to any other right or remedy, the non-breaching party may terminate this Agreement in the event that the breach is not cured within thirty (30) days after receipt by such party of written notice of such breach.

2. All other terms of the Agreement shall remain in full force and effect.

3. This Amendment may be executed in counterparts (facsimile and electronic transmission included), each of which shall constitute an original, but all of which shall constitute one and the same agreement when taken together.

IN WITNESS WHEREOF, Company and Consultant have executed this Amendment as of the Amendment Effective Date.

Prime Medicine, Inc.		**David R. Liu**	
By:	/s/ Keith Gottesdiener	By:	/s/ David R. Liu
Name:	Keith Gottesdiener	Name:	David R.Liu
Title:	CEO	Title:	Co-founder

Prime Medicine, Inc.

December 20, 2019

Andrew V. Anzalone, MD, PhD

Dear Andrew:

On behalf of Prime Medicine, Inc. (the "Company"), I am pleased to offer you the employment with the Company. The terms and conditions of your employment are set forth below.

1. Position. Your initial position with the Company will be Senior Scientist II, Head, Prime Editing Platforms.

2. Start Date. Your employment will begin on a mutually agreeable date, to be no later than August 17, 2020 (the "Start Date").

3. Salary. The Company will pay you an annual base salary of $165,000, payable in accordance with the Company's standard payroll schedule and subject to applicable deductions and withholdings. This salary will be subject to periodic review and adjustments at the Company's discretion.

4. Bonus. You will be eligible to receive an annual performance bonus. The Company will target the bonus at up to 15% of your annual base salary rate. The actual bonus percentage, whether a bonus is awarded and the amount of any bonus are discretionary and will be subject to the Company's assessment of your performance, as well as business conditions at the Company. To earn any bonus, you must be employed by the Company on the date the bonus is paid.

5. Equity Incentive. You will be eligible to participate in the Company's equity incentive program, subject to approval by the board of directors. We will recommend to the board of directors after you join the Company that you be granted an option to purchase 2,159,621 shares of the Company's common stock (the "Founder Award") representing approximately 1% of the fully-diluted capitalization of the Company through the last closing of the Company's Series A Preferred Stock financing, at the stock's then fair market value. Subject to your continued service to the Company, the Founder Award will follow a vesting schedule providing for (i) the portion of the shares underlying the Founder Award that represents 1% of the Company's capitalization on a fully-diluted basis as of immediately after the first closing to vest on a 4-year vesting schedule with a first year cliff and monthly thereafter, with the first year cliff vesting to occur on the one year anniversary of your service commencement date (the "Founder Vesting Schedule), and (ii) the portion of the shares underlying the Founder Award that represents 1% of the Company's capitalization on a fully-diluted basis as of immediately after the second closing, third closing, and last closing, as the case may be, to become eligible to vest on the same Founder Vesting Schedule as of the second closing, third closing, and last closing, respectively;

provided that if the Company raises less cash proceeds in its Series A Preferred Stock financing than the total amount contemplated in connection with the calculation of your total Founder Award, then the portion of the shares underlying your Founder Award shall be adjusted down proportionately.

In addition, as a full time employee, you will be eligible to participate in the Company's equity incentive program, subject to approval by the board of directors. We will recommend to the board of directors after you join the Company that you be granted an option to purchase 223,000 shares of the Company's common stock at the stock's then fair market value. Your eligibility for this equity incentive will be governed by the Company's stock plan and any associated equity agreement required to be entered into by you and the Company.

6. Benefits. At the present time, the Company does not offer medical insurance coverage or other similar benefits. However, you will be eligible to participate in benefits programs that may be adopted by the Company in the future to the same extent as, and subject to the same terms, conditions and limitations applicable to, other employees of the Company of similar rank and tenure.

7. Representation Regarding Other Obligations. You also will be required to sign, as a condition of your employment, an Employee Confidentiality, Assignment and Nonsolicitation Agreement (the "Employee Agreement"), a copy of which is enclosed and incorporated herein by reference. This offer is conditioned on your representation that you are not subject to any confidentiality, non-competition, nonsolicitation, invention assignment or other agreements that restricts your employment activities or that may affect your ability to devote full time and attention to your work at the Company. If you have entered into any agreement that may restrict your activities on behalf of the Company, please provide me with a copy of the agreement as soon as possible. You further represent that you have not used and will not use or disclose any trade secret or other proprietary right of any previous employer or any other party.

8. Taxes. All forms of compensation referred to in this Offer Letter are subject to reduction to reflect applicable withholding and payroll taxes and other deductions required by law. You hereby acknowledge that the Company does not have a duty to design its compensation policies in a manner that minimizes your tax liabilities, and you will not make any claim against the Company or its board of directors related to tax liabilities arising from your compensation.

9. Interpretation, Amendment and Enforcement. This Offer Letter, the Employee Agreement, and any plans and agreements applicable to the issuance of incentive awards referred in Section 5 of this Offer Letter (the "Equity Documents") constitute the complete agreement between you and the Company, contain all of the terms of your employment with the Company and supersede any prior agreements, representations or understandings (whether written, oral or implied) between you and the Company. You agree that you are not relying on any representation or promise of the Company or any agent of the Company's except as is expressly set forth herein. Except as expressly otherwise provided in the Equity Documents or the Employee Confidentiality and Assignment Agreement, the terms of this Offer Letter and the resolution of any disputes as to the meaning, effect, performance or validity of this Offer Letter or arising out of, related to, or in any way connected with, this Offer Letter, your employment

with the Company or any other relationship between you and the Company (the "Disputes") will be governed by Massachusetts

law, excluding laws relating to conflicts or choice of law. You and the Company submit to the exclusive personal jurisdiction of the federal and state courts located in the Commonwealth of Massachusetts in connection with any Dispute or any claim related to any Dispute, and waive any right to a jury with respect to such Dispute.

10. Other Terms. Your employment with the Company will be on an "at will" basis. In other words, you or the Company may terminate your employment for any reason and at any time, with or without cause. Although your job duties, title, compensation and benefits, as well as the Company's benefit plans and personnel policies and procedures, may change from time to time, the "at will" nature of your employment may only be changed in an express written agreement signed by you and the Company.

In addition, this offer is subject satisfactory background and reference checks. As with all employees, our offer to you is also contingent on your submission of satisfactory proof of your identity and your legal authorization to work in the United States.

We are excited about the prospect of having you join the Company. We look forward to receiving a response from you within one week acknowledging, by signing below, that you have accepted this offer of employment.

Very truly yours,

PRIME MEDICINE, INC.

By: /s/ John Evans
Name: John Evans
Title: CEO

I have read and accept this employment offer:

/s/ Andrew V. Anzalone	1/17/2020
Andrew V. Anzalone, MD, PhD	Date

Employee Confidentiality, Assignment and Nonsolicitation Agreement

In consideration and as a condition of the commencement of my employment or my continued employment by Prime Medicine, Inc. (including its subsidiaries and other affiliates and its and their successors and assigns, the "Company"), I enter into this Employee Confidentiality, Assignment and Nonsolicitation Agreement (the "Agreement") and agree as follows:

1. Proprietary Information. I agree that all information, whether or not in writing, concerning the Company's business, technology, business relationships or financial affairs that the Company has not released to the general public (collectively, "Proprietary Information") and all tangible embodiments thereof are and will be the exclusive property of the Company. By way of illustration, Proprietary Information may include information or material that has not been made generally available to the public, such as: (a) *corporate information*, including plans, strategies, methods, policies, resolutions, negotiations or litigation; (b) *marketing information*, including strategies, methods, customer or business partner identities or other information about customers, business partners, prospect identities or other information about prospects, or market analyses or projections; (c) *financial information*, including cost and performance data, debt arrangements, equity structure, investors and holdings, purchasing and sales data and price lists; (d) *operational and technological or scientific information*, including plans, specifications, manuals, forms, templates, software, pre-clinical and clinical testing data and strategies, research and development strategies, designs, methods, procedures, formulae, data, reports, discoveries, inventions, improvements, concepts, ideas, and other Developments (as defined below), know-how and trade secrets; and (e) *personnel information*, including personnel lists, reporting or organizational structure, resumes, personnel data, performance evaluations and termination arrangements or documents. By way of further illustration, Proprietary Information does not include any information or material that I knew prior to the commencement of my service at the Company, whether as an employee or as a consultant, as evidenced by tangible and contemporaneous record (such excluded information, "Excluded Information"). Proprietary Information also includes information received in confidence by the Company from its customers, suppliers, business partners or other third parties except Excluded Information.

2. Recognition of Company's Rights. I will not, at any time, without the Company's prior written permission, either during or after my employment, disclose any Proprietary Information to anyone outside of the Company except in the good faith performance of my duties to the Company as directed by the Chief Executive Officer of the Company (the "CEO") or another duly authorized officer of the Company, or use or permit to be used any Proprietary Information for any purpose other than the performance of my duties as an employee of the Company. I will reasonably cooperate with the Company and use reasonable efforts at Company's expense to prevent the unauthorized disclosure of all Proprietary Information. I will deliver to the Company all copies and other tangible embodiments of Proprietary Information in my possession or control upon the earlier of a request by the Company or termination of my employment.

3. Rights of Others. I understand that the Company is now and may hereafter be subject to nondisclosure or confidentiality agreements with third persons that require the Company to protect or refrain from use or disclosure of proprietary information. I agree to be bound by the terms of such agreements in the event I have access to such proprietary information to the extent that they do not conflict with the provisions hereof with respect to what constitutes Proprietary Information and are otherwise reasonable in their terms. I understand that the Company strictly prohibits me from using or disclosing confidential or proprietary information that I know or believe to belong to any other person or entity (including any employer or former employer), in connection with my employment consistent with the provisions hereof with respect to what constitutes Proprietary Information. In addition, I agree not to bring any confidential information that I know or believe to belong to any other person or entity onto Company premises or into Company workspaces.

4. Commitment to Company; Avoidance of Conflict of Interest. Subject to the terms of my offer letter with the Company, while an employee of the Company, I will devote my full-time efforts to the Company's business and I will not, directly or indirectly, engage in any other business activity, except as expressly authorized in writing and in advance by the CEO. I will advise the CEO at such time as any activity of either the Company or another business presents me with a conflict of interest or the appearance of a conflict of interest as an employee of the Company. I

will take whatever reasonable action is requested of me by the Company to resolve any conflict or appearance of conflict which it finds to exist.

5. Developments. I will make full and prompt disclosure to the Company of all inventions, discoveries, designs, developments, methods, modifications, improvements, processes, algorithms, data, databases, computer programs, research, formulae, techniques, trade secrets, graphics or images, and audio or visual works and other works of authorship, and other intellectual property, including works-in-process (collectively "Developments") whether or not patentable or copyrightable, that are created, made, conceived or reduced to practice by me (alone or jointly with others) or under my direction during the period of my employment. I acknowledge that all work performed by me is on a "work for hire" basis, and I hereby do assign and transfer and, to the extent any such assignment cannot be made at present, will assign and transfer, to the Company and its successors and assigns all my right, title and interest in and to all Developments that (a) relate to the business of the Company or any of the products or services being researched, developed, manufactured or sold by the Company or which may be used with such products or services; or (b) result from tasks assigned to me by the Company; or (c) result from the use of premises or personal property (whether tangible or intangible) owned, leased or contracted for by the Company ("Company-Related Developments"), and all related patents, patent applications, trademarks and trademark applications, copyrights and copyright applications, *sui generis* database rights and other intellectual property rights in all countries and territories worldwide and under any international conventions ("Intellectual Property Rights").

To preclude any possible uncertainty, if there are any Developments that I have, alone or jointly with others, conceived, developed or reduced to practice prior to the commencement of my employment with the Company that I consider to be my property or the property of third parties and that I wish to have excluded from the scope of this Agreement ("Prior Inventions"), I have set forth on Exhibit A attached hereto a complete list of those Prior Inventions. If disclosure of any such Prior Invention would cause me to violate any prior confidentiality agreement, I understand that I am not to list such Prior Inventions in Exhibit A but am only to disclose a cursory name for each such invention, a listing of the party(ies) to whom it belongs and the fact that full disclosure as to such inventions has not been made for that reason. If there are any patents or patent applications in which I am named as an inventor, other than those that have been assigned to the Company ("Other Patent Rights"), I have also listed those Other Patent Rights on Exhibit A. If no such disclosure is attached, I represent that there are no Prior Inventions or Other Patent Rights. If, in the course of my employment with the Company, I incorporate a Prior Invention into a Company product, process or machine, research or development program, or other work done for the Company, I hereby grant to the Company a nonexclusive, royalty-free, fully paid-up, irrevocable, worldwide license (with the full right to sublicense through multiple tiers) to make, have made, modify, use, sell, offer for sale and import such Prior Invention. Notwithstanding the foregoing, I will not incorporate, or permit to be incorporated, Prior Inventions in any Company-Related Development without the Company's prior written consent.

This Agreement does not obligate me to assign to the Company any Development that, in the sole judgment of the Company, reasonably exercised, is developed entirely on my own time and does not relate to the business efforts or research and development efforts in which, during the period of my employment, the Company actually is engaged or reasonably would be engaged, and does not result from the use of premises or equipment owned or leased by the Company. However, I will also promptly disclose to the Company any such Developments for the purpose of determining whether they qualify for such exclusion. I understand that to the extent this Agreement is required to be construed in accordance with the laws of any state which precludes a requirement in an employee agreement to assign certain classes of inventions made by an employee, this Section 5 will be interpreted not to apply to any invention that a court rules and/or the Company agrees falls within such classes. I also hereby waive all claims to any moral rights or other special rights that I may have or accrue in any Company-Related Developments.

6. Documents and Other Materials. I will keep and maintain adequate and current records of all Proprietary Information and Company-Related Developments developed by me during my employment, which records will be available to and remain the sole property of the Company at all times.

All files, letters, notes, memoranda, reports, records, data, sketches, drawings, notebooks, layouts, charts, quotations and proposals, specification sheets, blueprints, models, prototypes, or other written, photographic or other tangible material containing Proprietary Information, whether created by me or others, which come into my custody or

possession, are the exclusive property of the Company to be used by me only in the performance of my duties for the Company. Any property situated on the Company's premises and owned by the Company, including without limitation computers, disks and other storage media, filing cabinets or other work areas, is subject to inspection by the Company at any time with or without notice. In the event of the termination of my employment for any reason, I will deliver to the Company all Company property and equipment in my possession, custody or control, including all files, letters, notes, memoranda, reports, records, data, sketches, drawings, notebooks, layouts, charts, quotations and proposals, specification sheets, blueprints, models, prototypes, or other written, photographic or other tangible material containing Proprietary Information, and other materials of any nature pertaining to the Proprietary Information of the Company and to my work, and will not take or keep in my possession any of the foregoing or any copies.

7. Enforcement of Intellectual Property Rights. I will cooperate fully with the Company, at Company's expense, both during and after my employment with the Company, with respect to the procurement, maintenance and enforcement of Intellectual Property Rights in Company-Related Developments. I will sign, both during and after my employment, all papers, including without limitation copyright applications, patent applications, declarations, oaths, assignments of priority rights, and powers of attorney, which the Company may deem necessary or desirable in order to protect its rights and interests in any Company-Related Development or Intellectual Property Rights therein, subject to the provisions and statements in such documents being acceptable to me.

8. Nonsolicitation.

In order to protect the Company's Proprietary Information and goodwill, during my employment and for a period of: (i) one (1) year following the date of the cessation of my employment with the Company (the "Last Date of Employment"), or (ii) two (2) years following the Last Date of Employment if a court of competent jurisdiction determines that I have breached my fiduciary duty to the Company or if I have unlawfully taken, physically or electronically, property belonging to the Company (in either case the "Restricted Period"):

(a) I shall not, directly or indirectly, in any manner, other than for the benefit of the Company, solicit or transact any business with any of the customers of the Company or any of its vendors. For purposes of this Agreement, (i) customers shall include then current customers to which the Company provided products or services during the twelve months prior to the Last Date of Employment (the "One Year Lookback") and customer prospects that the Company solicited during the One Year Lookback and that I had significant contact with or learned confidential information about in the course of my employment, and (ii) vendors shall include then current vendors and vendors that provided services to or in connection with the Company during the One Year Lookback.

(b) I shall not, directly or indirectly, in any manner, solicit, entice or attempt to persuade any employee or consultant of the Company to leave the Company for any reason or otherwise participate in or facilitate the hire, directly or through another entity, of any person who is then employed or engaged by the Company.

9. Government Contracts. I acknowledge that the Company may have from time to time agreements with other persons or with the United States Government or its agencies that impose obligations or restrictions on the Company regarding inventions made during the course of work under such agreements or regarding the confidential nature of such work. I agree to comply with any such obligations or restrictions upon the direction of the Company. In addition to the rights assigned under Section 5, I also assign to the Company (or any of its nominees) all rights that I have or acquired in any Developments, full title to which is required to be in the United States under any contract between the Company and the United States or any of its agencies.

10. Prior Agreements. I hereby represent that, except as I have fully disclosed previously in writing to the Company, I am not bound by the terms of any agreement with any previous or current employer or other party to refrain from using or disclosing any trade secret or confidential or proprietary information in the course of my employment with the Company or to refrain from competing, directly or indirectly, with the business of such employer or any other party. I further represent that my performance of all the terms of this Agreement as an employee of the Company does not and will not breach any agreement to keep in confidence proprietary information, knowledge or data acquired by me in confidence or in trust prior to my employment with the Company.

I will not disclose to the Company or induce the Company to use any confidential or proprietary information or material belonging to any previous employer or others.

11. Remedies Upon Breach. I understand that the restrictions contained in this Agreement are necessary for the protection of the business and goodwill of the Company and I consider them to be reasonable for such purpose. Any breach of this Agreement is likely to cause the Company substantial and irrevocable damage and therefore, in the event of such breach, the Company, in addition to such other remedies which may be available, will be entitled to specific performance and other injunctive relief, without the posting of a bond. I further acknowledge that a court may render an award extending the Restricted Period as one of the remedies in the event of my violation of this Agreement. In the event that Company seeks injunctive relief, Company shall provide me at least five business days advance written notice of any hearing. Such notice shall include copies of any court filings and be by overnight delivery service at my personal address, and also by email.

12. Use of Voice, Image and Likeness. I give the Company permission to use any and all of my voice, image and likeness, with or without using my name, in connection with the products and/or services of the Company, for the purposes of advertising and promoting such products and/or services and/or the Company, and/or for other purposes deemed appropriate by the Company in its reasonable discretion, except to the extent prohibited by law.

13. No Employment Obligation. I understand that this Agreement does not create an obligation on the Company or any other person to continue my employment. I acknowledge that, unless otherwise agreed in a formal written employment agreement signed on behalf of the Company by CEO or another duly authorized officer of the Company, my employment with the Company is at will and therefore may be terminated by the Company or me at any time and for any reason, with or without cause.

14. Survival and Assignment by the Company. I understand that my obligations under this Agreement will continue in accordance with its express terms regardless of any changes in my title, position, duties, salary, compensation or benefits or other terms and conditions of employment. I further understand that my obligations under this Agreement will continue following the termination of my employment regardless of the manner of such termination and will be binding upon my heirs, executors and administrators. The Company will have the right to assign this Agreement to its affiliates, successors and assigns. I expressly consent to be bound by the provisions of this Agreement for the benefit of the Company or any parent, subsidiary or affiliate to whose employ I may be transferred without the necessity that this Agreement be resigned at the time of such transfer.

15. Post-Employment Notifications. During the Restricted Period, I will notify the Company of any change in my address and of each subsequent employment or business activity, including the name and address of my employer or other post-Company employment plans and the nature of my activities.

16. Disclosures During Restricted Period. I will provide a copy of this Agreement to any person or entity with whom I may enter into a business relationship, whether as an employee, consultant, partner, coventurer or otherwise, prior to entering into such business relationship during the Restricted Period.

17. Severability. In case any provisions (or portions thereof) contained in this Agreement shall, for any reason, be held invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect the other provisions of this Agreement, and this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein. If, moreover, any one or more of the provisions contained in this Agreement shall for any reason be held to be excessively broad as to duration, geographical scope, activity or subject, it shall be construed by limiting and reducing it, so as to be enforceable to the extent compatible with the applicable law as it shall then appear.

18. Waiver. I acknowledge and agree that no waiver of any of my obligations under this Agreement shall be effective unless made in writing by the Company. The failure of the Company to require my performance of any term or obligation of this Agreement, or the waiver of any breach of this Agreement, shall not prevent the Company's subsequent enforcement of such term or obligation or be deemed a waiver of any subsequent breach.

19. Choice of Law and Jurisdiction. This Agreement will be deemed to be made and entered into in the Commonwealth of Massachusetts, and will in all respects be interpreted, enforced and governed under the laws of the Commonwealth of Massachusetts. I hereby consent to personal jurisdiction of the state and federal courts situated within Massachusetts for purposes of enforcing this Agreement, and waive any objection that I might have to personal jurisdiction or venue in those courts.

20. Protected Disclosures. I understand that nothing contained in this Agreement limits my ability to communicate with any federal, state or local governmental agency or commission or if required pursuant to applicable law, court order or subpoena, including to provide documents or other information, without notice to the Company. I also understand that nothing in this Agreement limits my ability to share compensation information concerning myself or others, except that this does not permit me to disclose compensation information concerning others that I obtain because my job responsibilities require or allow access to such information. Nothing in this Agreement prohibits me from providing documents or truthful testimony to the minimum extent reasonably necessary in pursuing or defending against any claim pursuant to any litigation or arbitration between me and the Company or any of its affiliates.

21. Defend Trade Secrets Act of 2016. I understand that pursuant to the federal Defend Trade Secrets Act of 2016, I shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that (a) is made (i) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney; and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (b) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

22. Entire Agreement; Amendment. This Agreement constitutes the entire agreement between the Company and me with respect to the subject matter hereof, and supersedes all prior agreements or understandings, both written and oral, between the Company and me with respect to the subject matter hereof, but does not in any way merge with or supersede any other confidentiality, assignment of inventions or other restrictive covenant agreement or obligation entered into by the Company and me, which agreements and obligations shall supplement, and shall not limit or be limited by, this Agreement. This Agreement may be amended only in a written agreement executed by the CEO or another duly authorized officer of the Company and me.

[Remainder of Page Intentionally Left Blank]

I UNDERSTAND THAT THIS AGREEMENT AFFECTS IMPORTANT RIGHTS. BY SIGNING BELOW, I CERTIFY THAT I HAVE READ IT CAREFULLY AND AM SATISFIED THAT I UNDERSTAND IT COMPLETELY.

IN WITNESS WHEREOF, the undersigned has executed this agreement as a sealed instrument as of the date set forth below.

Signed: /s/ Andrew Anzalone

Type or print name: Andrew Anzalone

Date: 10/26/2020

EXHIBIT A

To: PRIME MEDICINE, INC.

From: Andrew Anzalone
Print Employee Name

Date: 10/26/2020

SUBJECT: **Prior Inventions**

The following is a complete list of all inventions or improvements relevant to the subject matter of my employment by the Company that have been made or conceived or first reduced to practice by me alone or jointly with others prior to my engagement by the Company:

☐ No inventions or improvements
☒ See below:
Prime editing patents from the Broad Institute

☐ Additional sheets attached

The following is a list of all patents and patent applications in which I have been named as an inventor:

☐ None
☒ See below:
Prime editing patents from the Broad Institute

Subsidiaries

Subsidiary	Jurisdiction of Incorporation or Organization
Prime Medicine Massachusetts Securities Corp.	Massachusetts

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the use in this Registration Statement on Form S-1 of Prime Medicine, Inc. of our report dated February 4, 2022 relating to the financial statements of Prime Medicine, Inc., which appears in this Registration Statement. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
September 23, 2022