prime medicine

Delivering on the promise of
Prime Editing

Corporate Presentation

July 2026

Forward Looking Statements

This presentation contains forward-looking statements of Prime Medicine, Inc. ("Prime", "we" or "our") within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. These forward-looking statements contain information about our current and future prospects and our operations, which are based on currently available information. All statements other than statements of historical facts contained in this presentation, including statements regarding our strategy, projects and plans are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “aim,” “anticipate,” “assume,” “believe,” “contemplate,” “continue” “could,” “design,” “due,” “estimate,” “expect,” “goal,” “hope,” “intend,” “may,” “might,” “objective,” “opportunity,” “plan,” “predict,” “positioned,” “possible,” “potential,” “project,” “seek,” “should,” “strategy,” “target,” “will,” “would” and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology. These forward-looking statements include, but are not limited to, express or implied statements about Prime’s beliefs and expectations regarding: the potential of Prime Editing to correct the causative mutations of diseases, including CGD, Wilson Disease ("WD"), CF, and AATD; the continued development and advancement of its AATD and WD programs, including the initiation of the Phase 1/2 trial of PM577a in the second half of 2026, the timing of the filing of IND and/or CTA applications in Q3 2026 for AATD, and the timing of initial data for both programs in 2027; the initiation, timing, progress and results of our research and development programs, preclinical studies and future clinical trials, including the release of data related thereto; the significance of data from our Phase 1/2 trial of PM359; the regulatory interactions with the FDA based on the data from our Phase 1/2 trial of PM359 and the outcomes of any such interactions; our ability to obtain regulatory approval for PM359 and the timing of commercial launch; the safety profile of Prime Editing, our modular LNP, and our programs; the timing of, and our ability to achieve, clinical validation and sustained, long-term value creation; the modularity of the Prime Editing platform and the benefits thereof; the 2025 agreement with the Cystic Fibrosis Foundation, its expanded funding pursuant thereto, and the intended and potential benefits thereof; the collaboration with Bristol Myers Squibb and the intended and potential benefits thereof, including the receipt of potential milestone and royalty payments from commercial product sales, if any; our expectations regarding the breadth of Prime Editing, including the potential of Prime Editing to address more than 90% of genetic diseases and to address non-genetic diseases; the continued development and optimization of various non-viral and viral delivery systems, including our universal liver-targeted LNP delivery approach; the scope of protection we are able to establish and maintain for intellectual property rights covering our Prime Editing technology; the implementation of our strategic plans for our business, programs and technology, including our ability to maintain collaborations or strategic relationships and identify and enter into future license agreements and collaborations; regulatory developments in the United States and foreign countries; developments related to our competitors and our industry; our estimates of our expenses, capital requirements, and needs for additional financing; and our expectations regarding the anticipated timeline of our cash runway and future financial performance. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make due to a number of risks and uncertainties. These and other risks, uncertainties and important factors are described in the section entitled "Risk Factors" in our most recent Annual Report on Form 10-K, as well as any subsequent filings with the Securities and Exchange Commission. Any forward-looking statements represent our views only as of the date of this presentation and we undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, the occurrence of certain events or otherwise subject to any obligations under applicable law. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. No representations or warranties (expressed or implied) are made about the accuracy of any such forward-looking statements.

Certain information contained in this presentation relates to or is based on studies, publications, surveys and other data obtained from third-party sources and our own internal estimates and research. While we believe these third-party studies, publications, surveys and other data to be reliable as of the date of this presentation, we have not independently verified, and make no representation as to the adequacy, fairness, accuracy or completeness of, any information obtained from third-party sources. In addition, no independent source has evaluated the reasonableness or accuracy of our internal estimates or research and no reliance should be made on any information or statements made in this presentation relating to or based on such internal estimates and research.

Prime Editing: Emerging as the Predominant Gene Editing Technology

Gene editing **permanently corrects** genetic alterations

Prime Editing is the **most versatile** gene editing technology

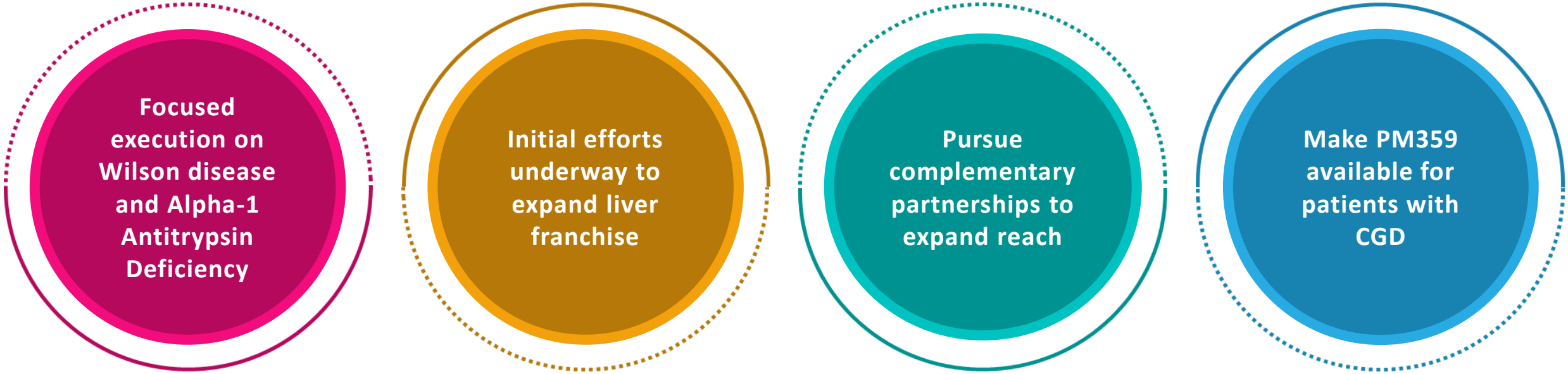
Prime Medicine's **strong IP position** covers any permutation of Prime Editing

Prime Editing **does not cause double-strand breaks or bystander edits**

New regulatory models pave way for **platform-based approvals**

Clinical data with Prime Editors support **curative potential**

Prime Medicine is Strategically Delivering on the Promise of Prime Editing



DISCIPLINED CLINICAL DEVELOPMENT, MAXIMIZE PLATFORM IMPACT AND ENSURE ACCESS TO BREAKTHROUGH THERAPIES

Near-Term, Focused Execution Positions Prime Medicine to Capitalize on the Full Potential of Prime Editing

	2026	2027+
WILSON DISEASE	✓ PM577a CTA cleared in H1 • Initiate Phase 1 clinical trial, expand global footprint • Advance follow-on Prime Editors for other common mutations	• Announce PM577a initial clinical data • Capitalize on platform modularity vis-a-vis additional common mutations (e.g., R778L in Asia among other pathogenic variants)
AATD	• File PM647 IND and/or CTA in Q3 • Initiate Phase 1 clinical trial	• Announce PM647 initial clinical data
OTHER	• Progress towards a BLA filing for CGD • Share *in vivo* proof-of-concept data in CF • Expand pipeline within priority focus areas and beyond	• Commercial launch for PM359 in CGD • Initiate IND-enabling studies for CF • Relaunch programs targeting neurological and other large indications

Secure multiple additional strategic partnerships to accelerate our pipeline and bolster our financial resources

Prime Medicine's Pipeline: Focused on Value Creating Opportunities

Therapeutic Area	Indication	Delivery	Discovery	Lead Optimization	IND-enabling	Phase 1/2	Pivotal / Registration
LIVER	Wilson Disease	LNP					
	Alpha-1 Antitrypsin Deficiency (AATD)	LNP					
LUNG	Cystic Fibrosis[1] (including PASSIGE™)	LNP/AAV					
IMMUNOLOGY & ONCOLOGY	*p47^{phox} Chronic Granulomatous Disease*	*ex vivo*					
	Ex vivo CAR-T[2] (with PASSIGE™)	*ex vivo*					

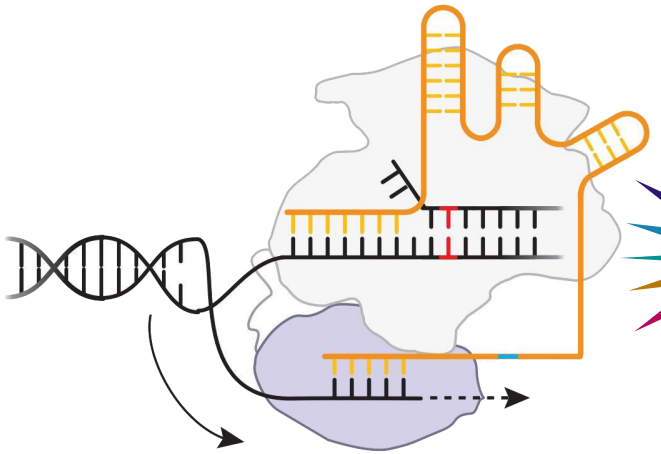
Multi-target collaboration advancing Prime Editors for the treatment of complex oncology and autoimmune indications

Plan to submit BLA following final FDA alignment

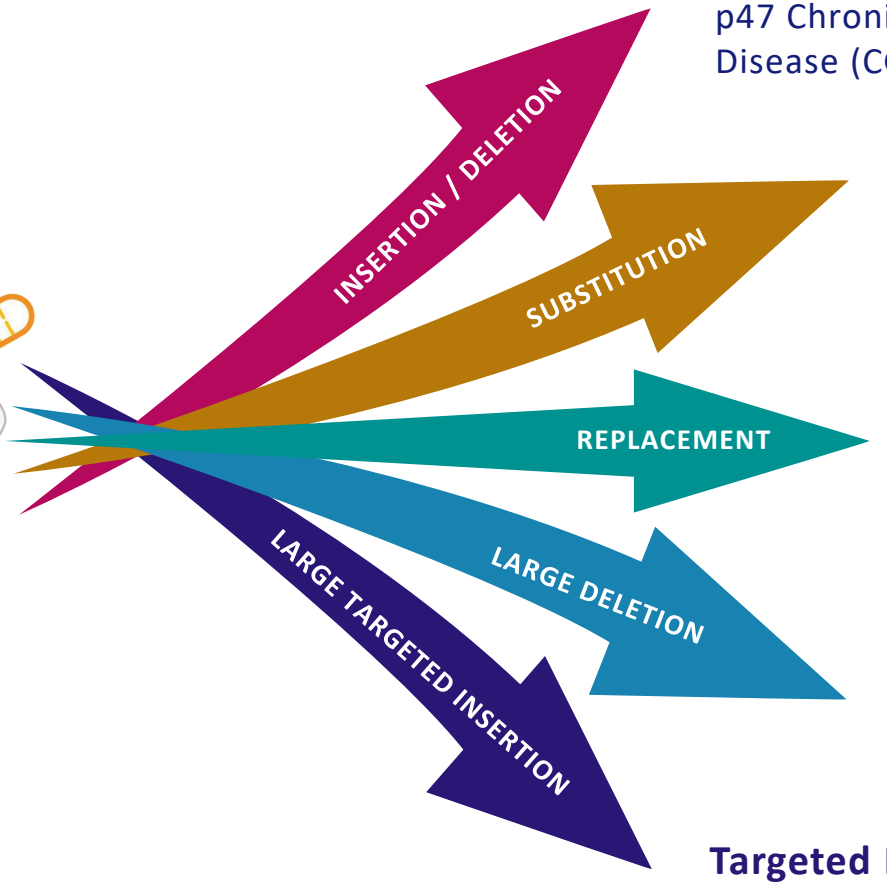
Prime Medicine is identifying opportunities to expand the reach of Prime Editing either via organic growth around its liver franchise and / or business development

[1] In January 2024 and July 2025, Prime entered into agreements with the CF Foundation for up to $15 million and $24 million, respectively, to support development of Prime Editors for Cystic Fibrosis.
[2] In September 2024, Prime entered into a strategic research collaboration and license agreement with Bristol Myers Squibb to develop and commercialize multiple *ex vivo* T cell products in immunology and oncology.
LNP = lipid nanoparticle; AAV = adeno-associated virus; CGD = chronic granulomatous disease

We Plan to Leverage the Versatility of Prime Editing to Address a Range of Diseases Across Target Tissues



Prime Editor



Deletion / Insertion Correction
p47 Chronic Granulomatous Disease (CGD)

Point Mutation Correction
Wilson Disease, Alpha-1 Antitrypsin Deficiency

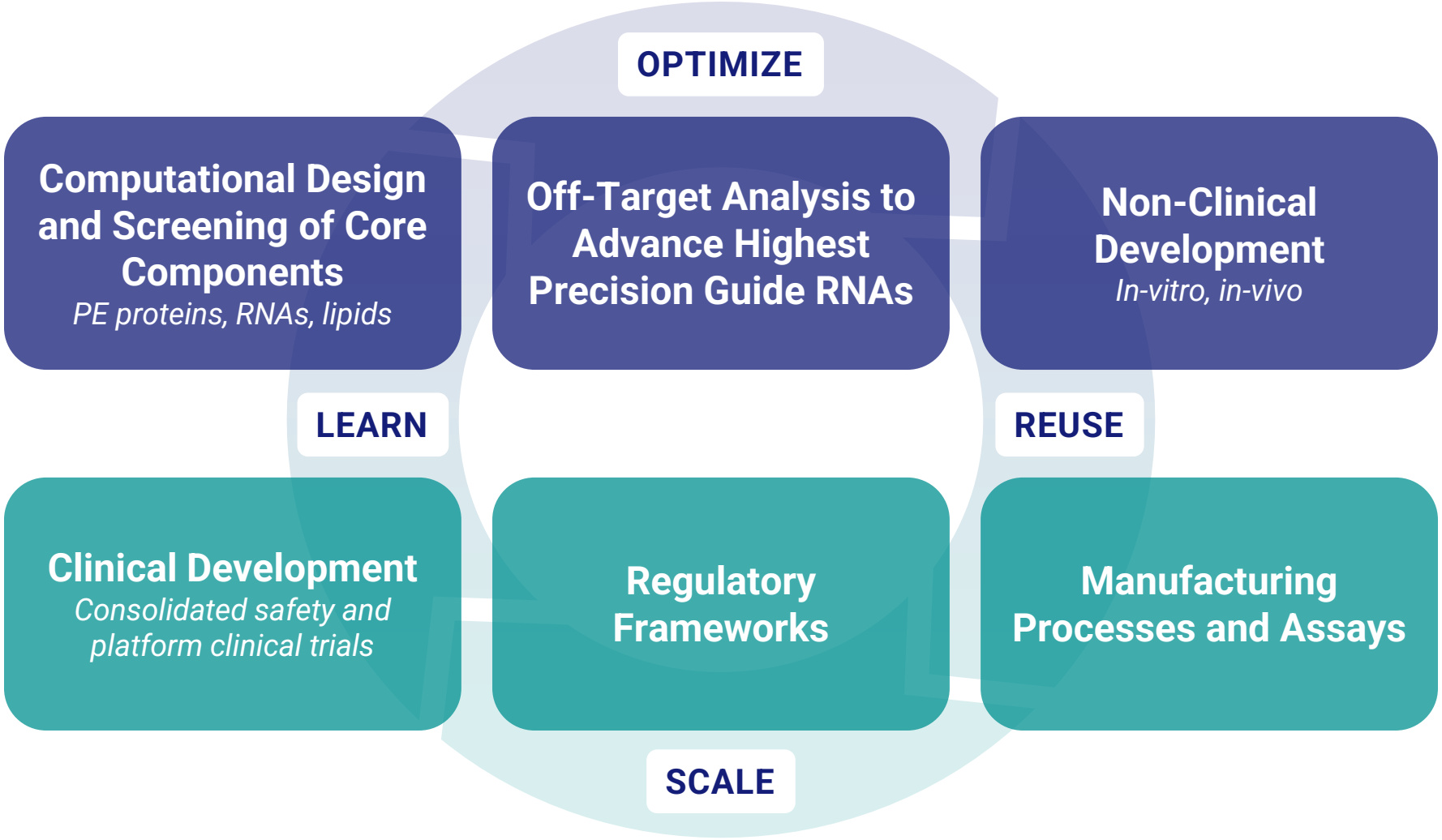
Hotspot Correction
Cystic Fibrosis, Retinitis Pigmentosa (RHO adRP)

Repeat Excision
Repeat expansion diseases

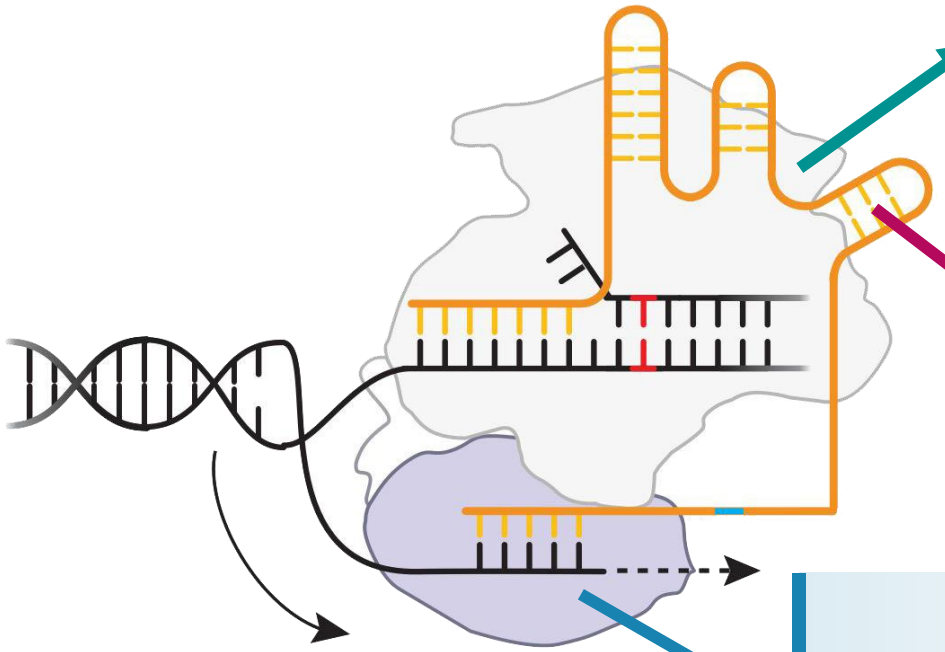
Targeted Full Gene Insertion (PASSIGE™)
CAR-T, Cystic Fibrosis

Prime Editing is designed with a wide range of genome editing capabilities and the ability to make edits of any size, from small base pair swaps to large, multi-kilobase insertions or inversions

Modular Prime Editing Platform Flywheel Effect: Industrialized Engine is Reused Across Programs



Prime Medicine Holds Extensive, Foundational Intellectual Property for Prime Editing Technologies



CRISPR-Cas Enzyme
Any programmable nuclease to specifically identify and cut DNA sequences

Guide RNA
Engineered RNAs that locate the exact editing site and provide the template for transcription

Reverse Transcriptase
Converts RNA into complementary DNA

Any combination or permutation of a **CRISPR-Cas enzyme**, template **Guide RNA** with a **Reverse Transcriptase** is **Prime Editing** and is covered by our extensive patent estate

Prime Medicine holds 10 U.S. and 19 ex-U.S. issued patents in an extensive patent estate that protects its breakthrough Prime Editing platform, delivery technologies and therapeutics

Liver

Prime Medicine's Initial Liver Franchise: Aspiring to Cure Two of the Largest Genetic Liver Diseases, Enabled by Platform Modularity

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PM577: Wilson Disease

Opportunity (Patients)

>20,000 US and EU

7,500-15,000+ Japan

CTA cleared in H1 2026; data 2027

Initial focus on H1069Q mutation

PM647: AATD

Opportunity (Patients)

200,000 US and EU

20,000-30,000 Diagnosed

IND and/or CTA in Q3 2026; data 2027

Plan to leverage key learnings, regulatory frameworks and manufacturing synergies from PM577a to accelerate efforts and reduce costs for other Wilson Disease mutations, AATD and future follow-on liver programs

WD = Wilson Disease; AATD = Alpha-1 Antitrypsin Deficiency; IND = investigational new drug; CTA = clinical trial application

Proprietary LNP-Formulated Prime Editor is a Complex Multi-Component Drug Product Designed to Support Current and Future Liver Programs

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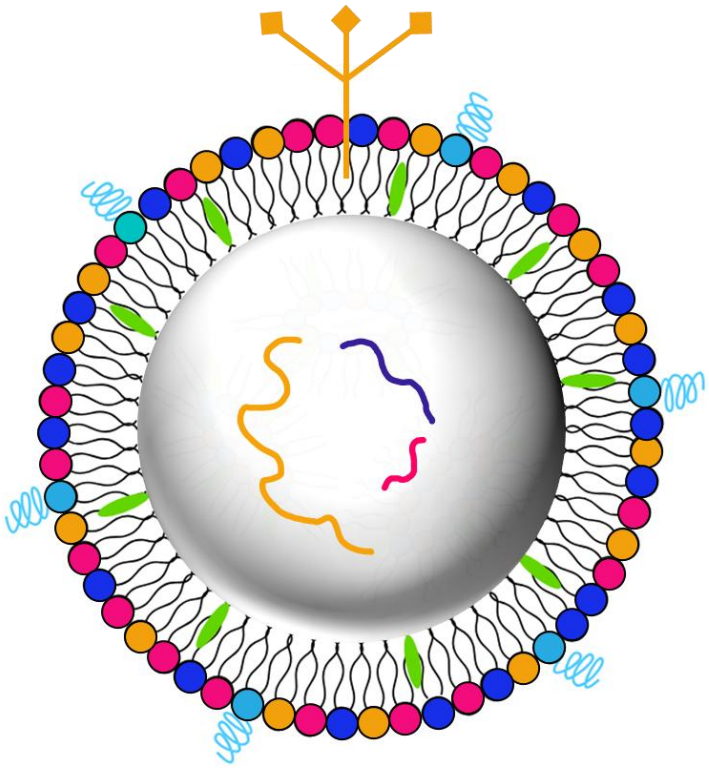
LNP Modularity:

Majority of components in the LNP are the same across liver programs



Ionizable Lipid	Nucleic acid encapsulation and endosomal escape
Helper Lipid	Stabilize and improve LNP pharmacokinetics, facilitate membrane fusion and endosomal escape
PEG Lipids	Control particle size and stability, stealth coating reduces serum interactions and increases half-life
Cholesterol	Improve intracellular delivery, increase LNP stability
Targeting Ligand	Proprietary GalNAc formulation to improve biodistribution of LNPs to hepatocytes
PE mRNA	Prime editor enzyme
pegRNA	pegRNA is disease and mutation specific
ngRNA	ngRNA is disease and mutation specific; usage is dependent on the Prime Editing strategy applied

Wilson Disease

Advancing Prime Editors for Wilson Disease: Disease Overview

Large genetically defined disease well suited for Prime Editing

Disease Severity and Opportunity

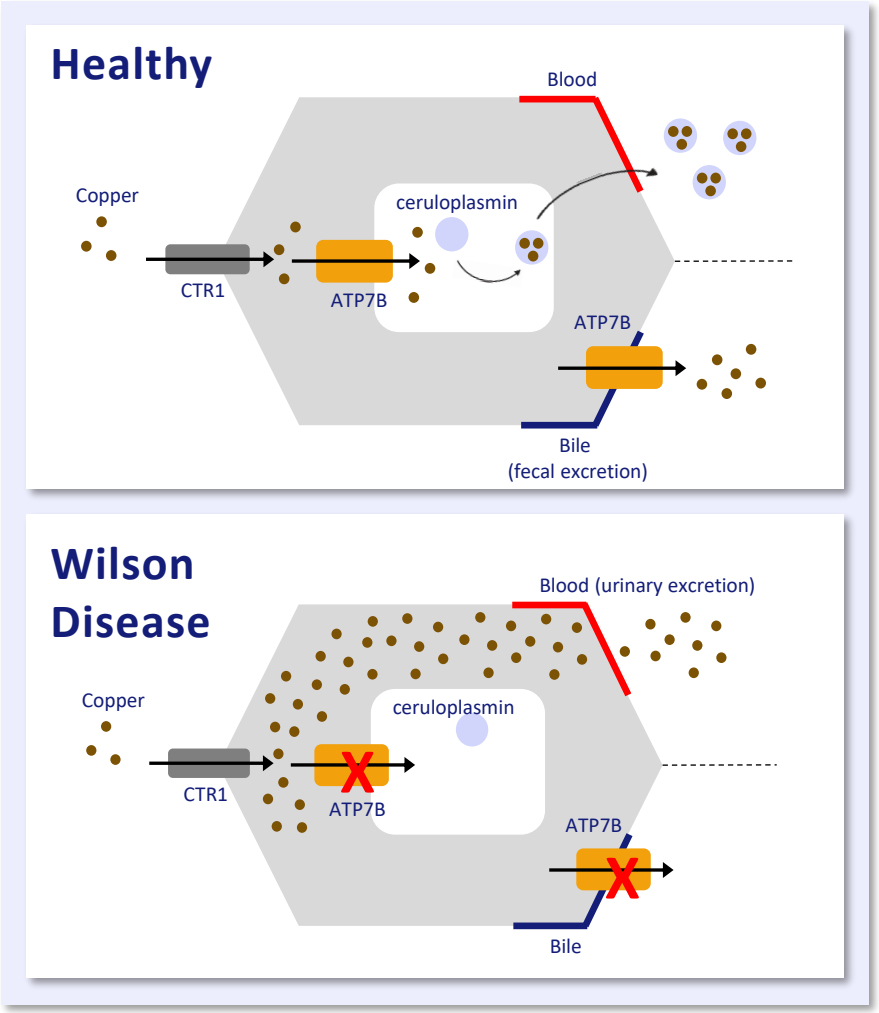
- Common liver and systemic disease presenting in teens to 20s
- Leads to liver failure, neurocognitive decline and premature death
- Greater than 20,000 patients in US and Europe, 30-50% harboring H1069Q mutation
- 7,500 – 15,000+ patients in Japan, R778L is the predominant mutation in the Asian population

Unmet Need

- No approved disease modifying therapies
- Current standard of care aims to prevent copper accumulation; options include chelating agents and low copper diet
- Liver transplantation is last resort option in most severe patients

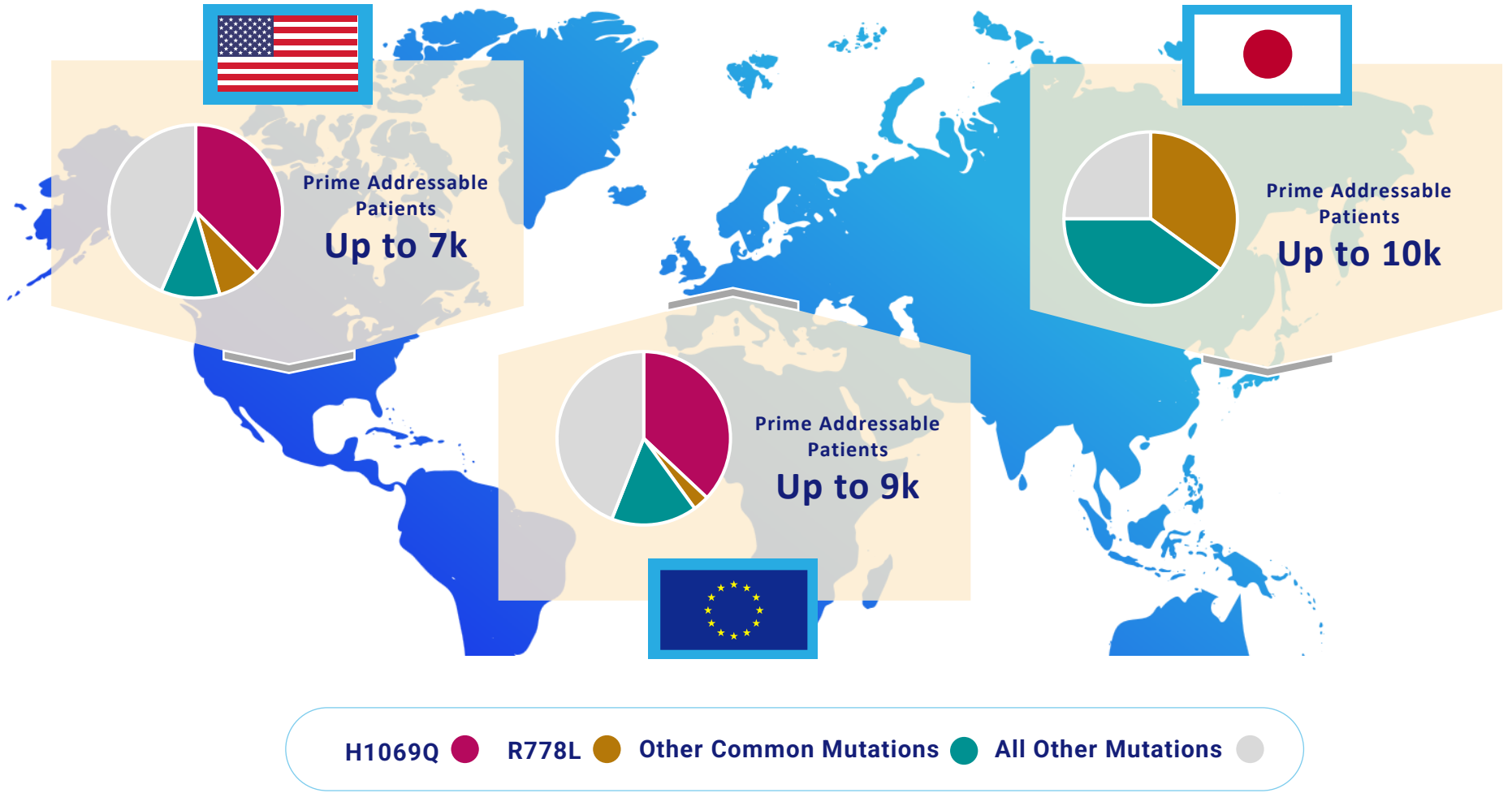
Human Biology

- Autosomal recessive due to loss of function mutations in ATP7B
- Affects copper homeostasis, leading to toxic accumulation of copper in liver and brain



Prime Medicine's Wilson Disease Programs Have Potential to Address Multi-Billion Dollar Market

- **Six most common mutations account for up to 26,000 patients** in addressable markets (US, Europe, Japan) with unique geographic mutational distribution; incidence rate of approximately 300 new patients per year
- **Consistency in disease presentation and management** across mutations and key markets enables Prime Medicine to establish an anchor with PM577a (H1069Q) to provide leverage and read-through to other mutations



Prime Editors Efficiently and Precisely Corrected the Two Most Prevalent Disease-Causing Mutations in Wilson Disease

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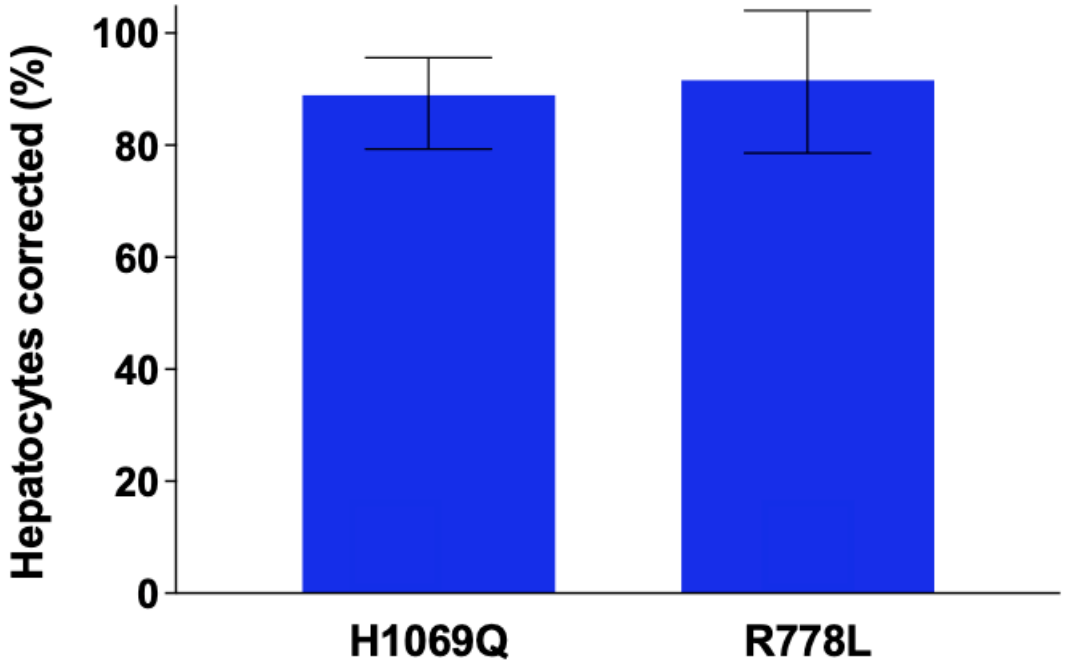
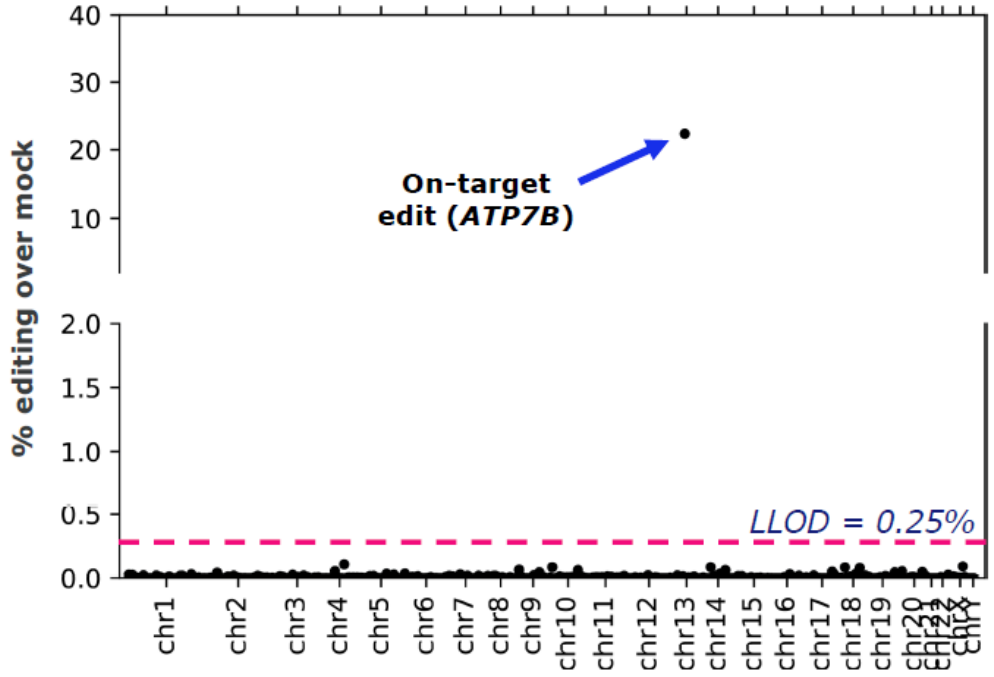
Efficient correction of the H1069Q and R778L mutations in fully humanized mouse models



No detectable off-target editing identified in patient-derived cells for PM577a



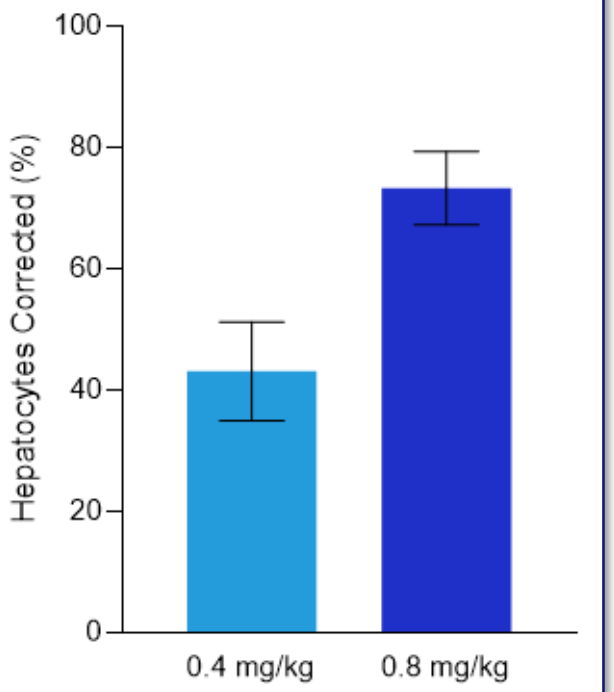
Prime Editors delivered with Prime Medicine's universal liver LNP administered at clinically relevant doses

LNP = lipid nanoparticle

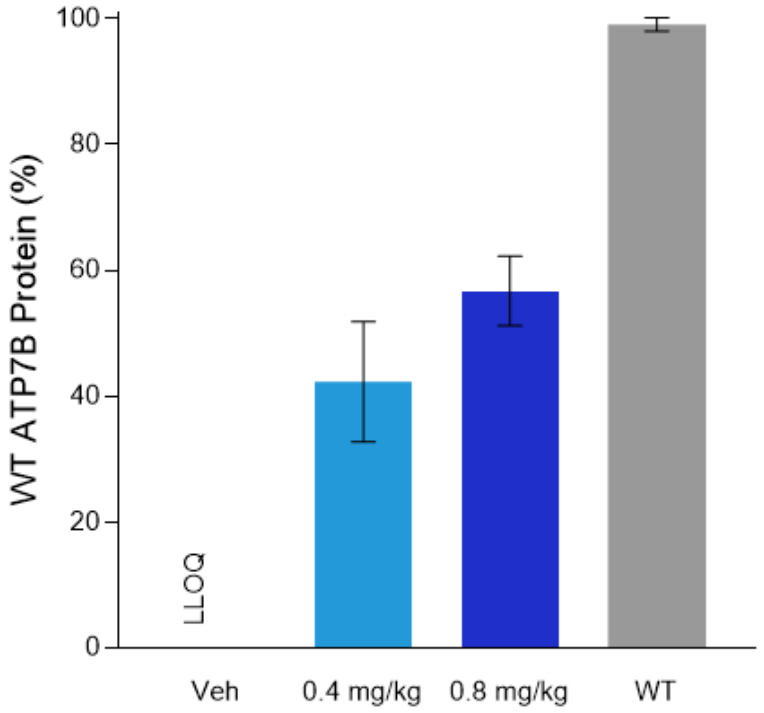
PM577a Efficiently Corrects the H1069Q Mutation and Restores Wild-Type Copper Concentration at Multiple Doses

~45% hepatocyte editing restored copper levels to near wild-type levels

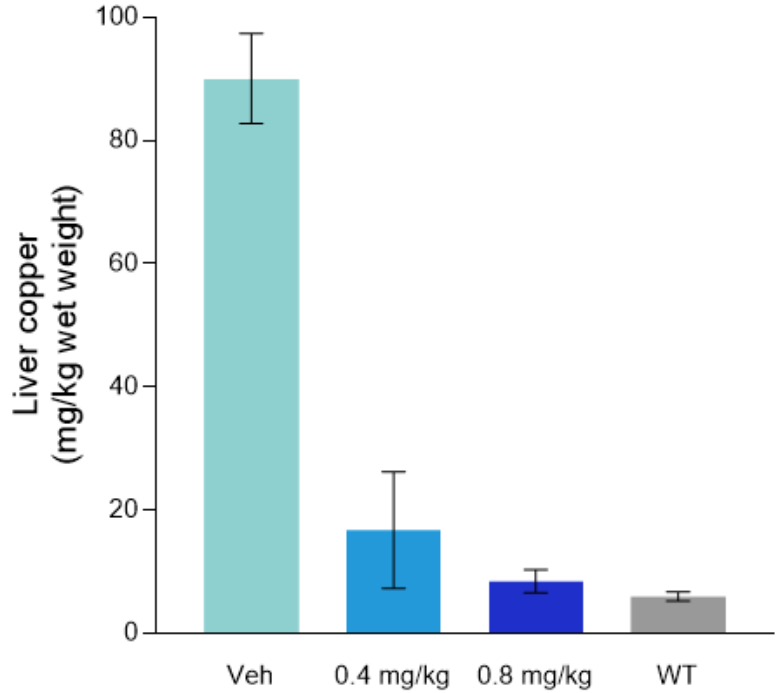
Precise correction of ATP7B p.H1069Q in mice



Increase in wild-type ATP7B protein expression*



Liver copper restored to wild-type levels*



*ATP7B protein expression and liver copper measurements taken at 4 weeks

Prime Edited Mice Challenged with Radiolabeled Copper Demonstrated Normal Copper Metabolism At Multiple Doses

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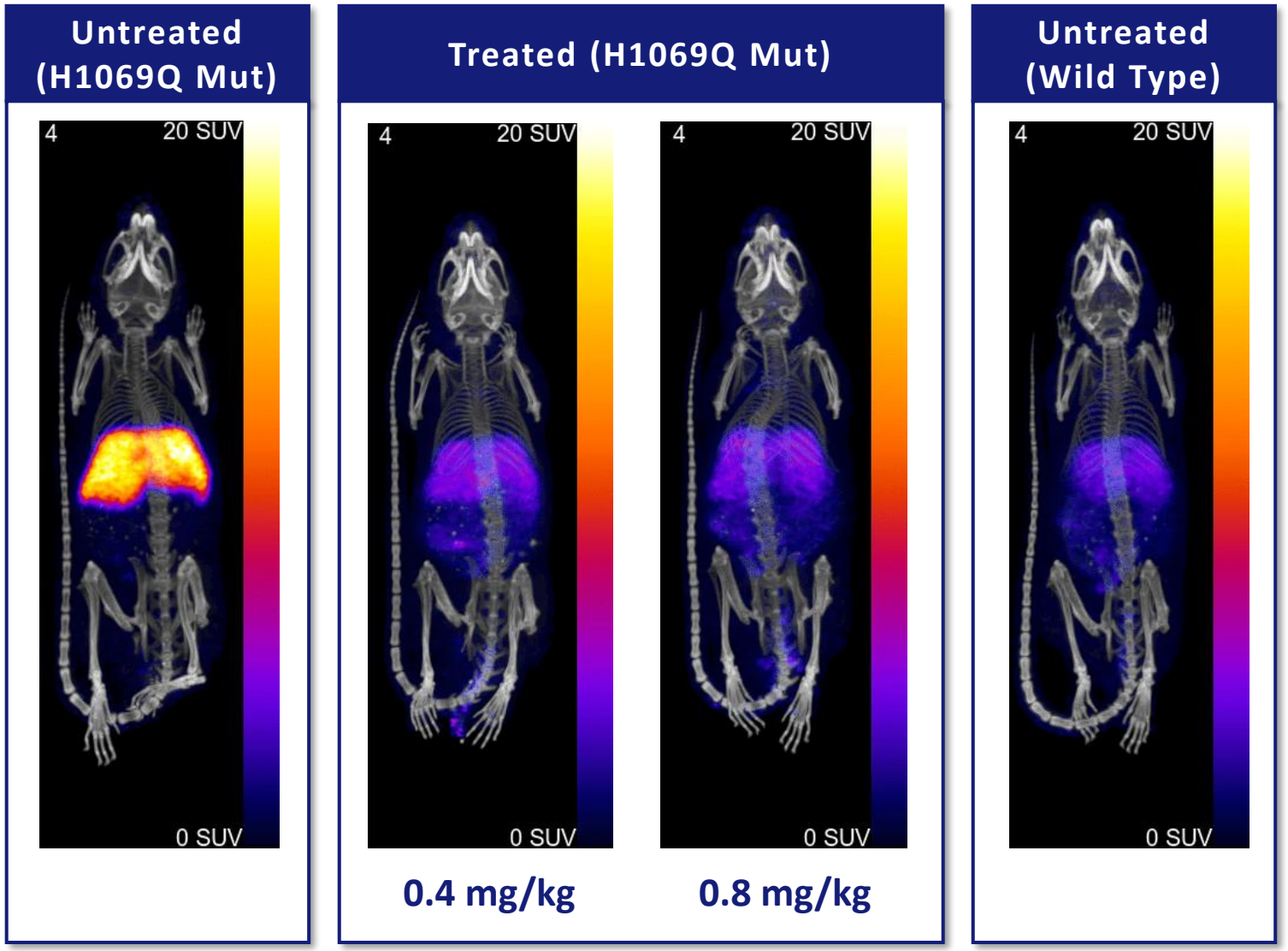


Copper challenge and PET imaging performed 4 weeks post PE treatment, PET imaging performed 24hrs post copper challenge

PM577a Clinical Trial Overview

Trial Overview

Design
Phase 1/2, open-label

Population
Adults and adolescents with Wilson Disease and at least one ATP7B p.H1069Q allele

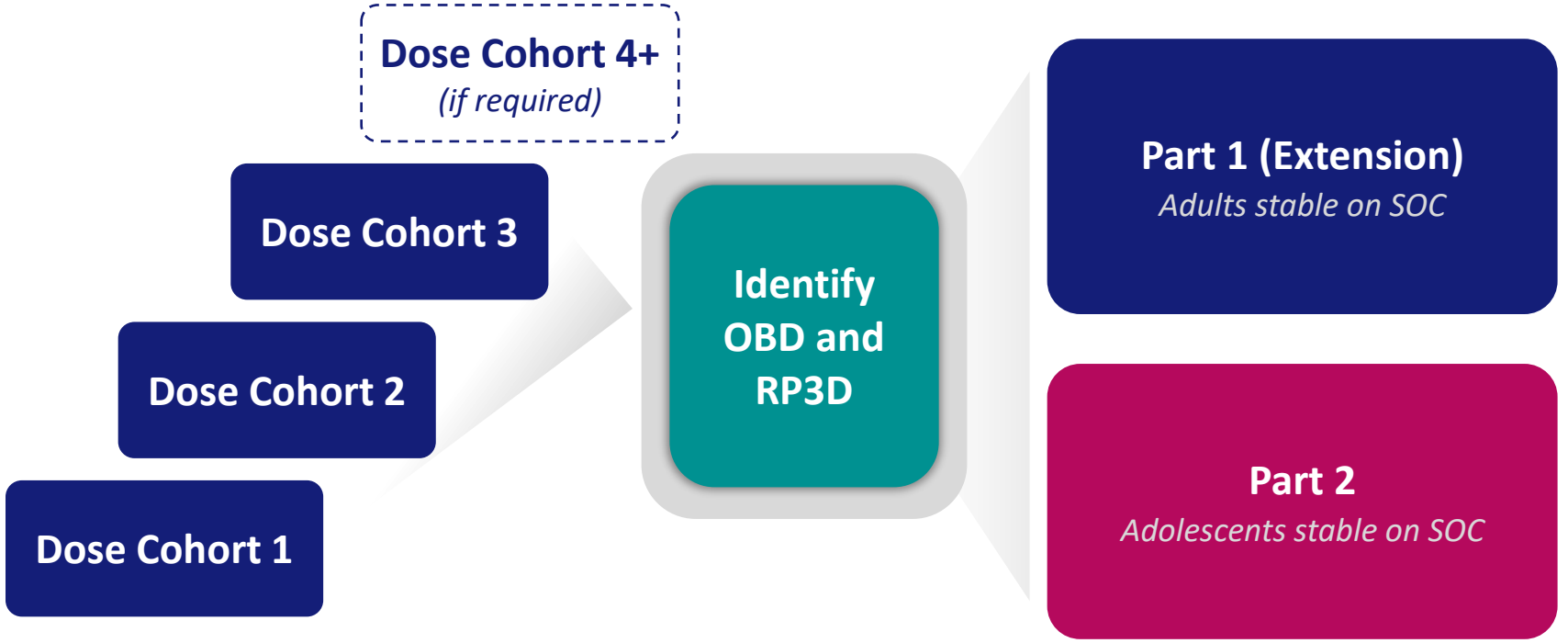
Treatment
Single IV infusion of PM577a

Primary Endpoints
Safety and tolerability

Key Secondary Endpoints
Ability to discontinue SOC, NCC-Sp, ceruloplasmin, 24-hour urinary copper and CuPET

Dose Escalation

H1069Q adult patients stable on SOC



Dose Expansion

Initiate Phase 1/2 clinical trial in H2 2026, anticipate initial clinical data in 2027

OBD = Optimal Biological Dose; NCC = Non-Ceruloplasmin-bound Copper; PD = Pharmacodynamics; LNP = Lipid Nanoparticle; SOC = Standard of Care; LTFU = Long-Term Follow-Up; RP3D = recommended phase 3 dose

We Plan to Leverage Platform Modularity to Rapidly Advance Prime Editors for a Majority of Wilson Disease Patients

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H1069Q (PM577a)

ANCHOR MUTATION:

Large commercial opportunity in U.S. and Europe

- 1H 2026 CTA, initiate clinical trial in 2H 2026
- Lead in observational study to potentially expedite patient recruitment

Follow-on programs to leverage same liver-targeted LNP; swap out guide sequence

R778L

Large commercial opportunity in Japan

- >90% editing efficiency, minimal preclinical work to formalize DC
- Goal to incorporate into existing regulatory filings; engage PMDA

Other Mutations

Attractive business case to develop follow-on programs

- Fast path to DC (potentially off in vitro data)
- Goal to incorporate into existing regulatory filings

IND = investigational new drug; CTA = clinical trial application; LNP = lipid nanoparticle; DC = development candidate; PMDA = Japan's Pharmaceuticals and Medical Devices Agency

Alpha-1 Antitrypsin Deficiency (AATD)

Advancing Prime Editors for AATD: Disease Overview

Disease Severity and Opportunity

- AATD is an inherited genetic disorder that causes low levels of AAT protein
- Low levels of AAT protein increases the risk of lung disease (emphysema)
- Patients are also at risk of liver disease (cirrhosis) caused by mutant protein aggregation
- Approximately 200,000 patients in the US and EU, ~10-15% of which are diagnosed today

Unmet Need

- Many patients progress to liver failure or severe lung disease, requiring transplant
- Current standard of care includes chronic AAT augmentation therapy for lung disease; no approved curative therapies
- No approved treatments for liver disease

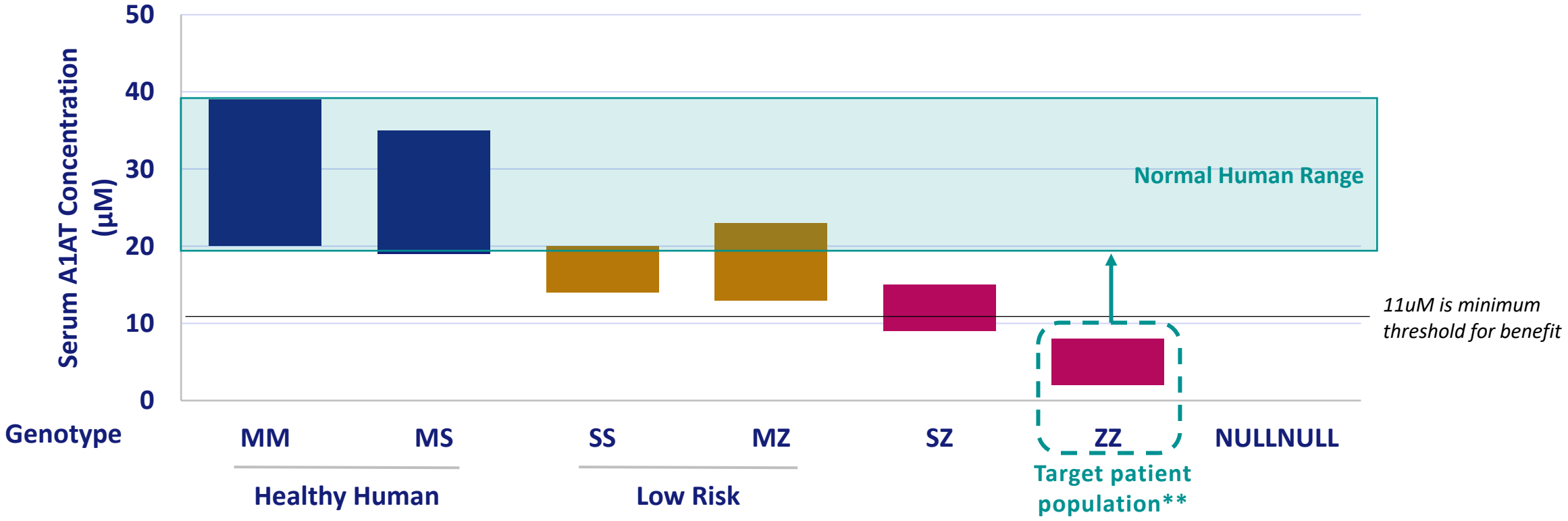
Human Biology

- Autosomal codominant disorder due to mutations in SERPINA1 gene
- Lung: lack of functional AAT leads to unrestricted neutrophil elastase activity, among other pathological changes (loss of function)
- Liver: defective AAT protein misfolding and accumulation (gain of function)
- 20-30% correction in hepatocytes could be curative

We believe Prime Editing is uniquely well-suited to correct mutant AAT protein to wild-type without the risk of bystander edits

AATD = Alpha-1 Antitrypsin Deficiency; A1AT = alpha-1 antitrypsin

AATD Program Objective: Normalize AAT Levels in PiZZ Genotype Patients to Healthy Human Levels



Program Goals

- Restore SERPINA1 gene to wild type, without bystander or other unwanted edits
- Increase M-AAT levels minimally above protective threshold (~11 µM), ideally into healthy human range (>20 µM)
- Maintain wild-type protein under endogenous control to protect patients during acute episodes (M-AAT levels rise 2-4x)
- Decreasing Z-AAT in the liver may potentially ameliorate the liver manifestations of AATD

*Taken from Vidal R, Blanco I, Casas F, *et al*. Arch Bronconeumol. 2006;42(12):645-59; ** MZ, SZ and ZZ genotype contain Pi*Z mutation; Z-AAT = mutant A1AT protein.

PM647 Efficiently Corrected the Mutation *In Vivo* Resulting in M-AAT Protein Restoration at Clinically Relevant Doses

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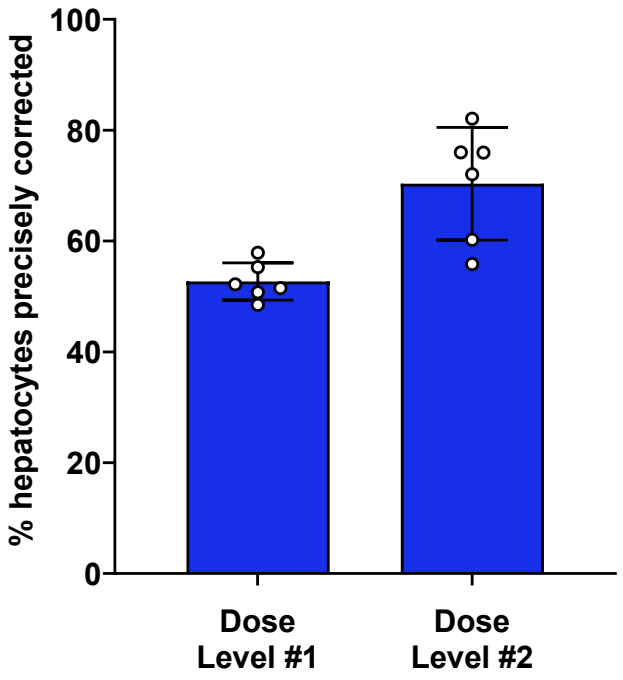
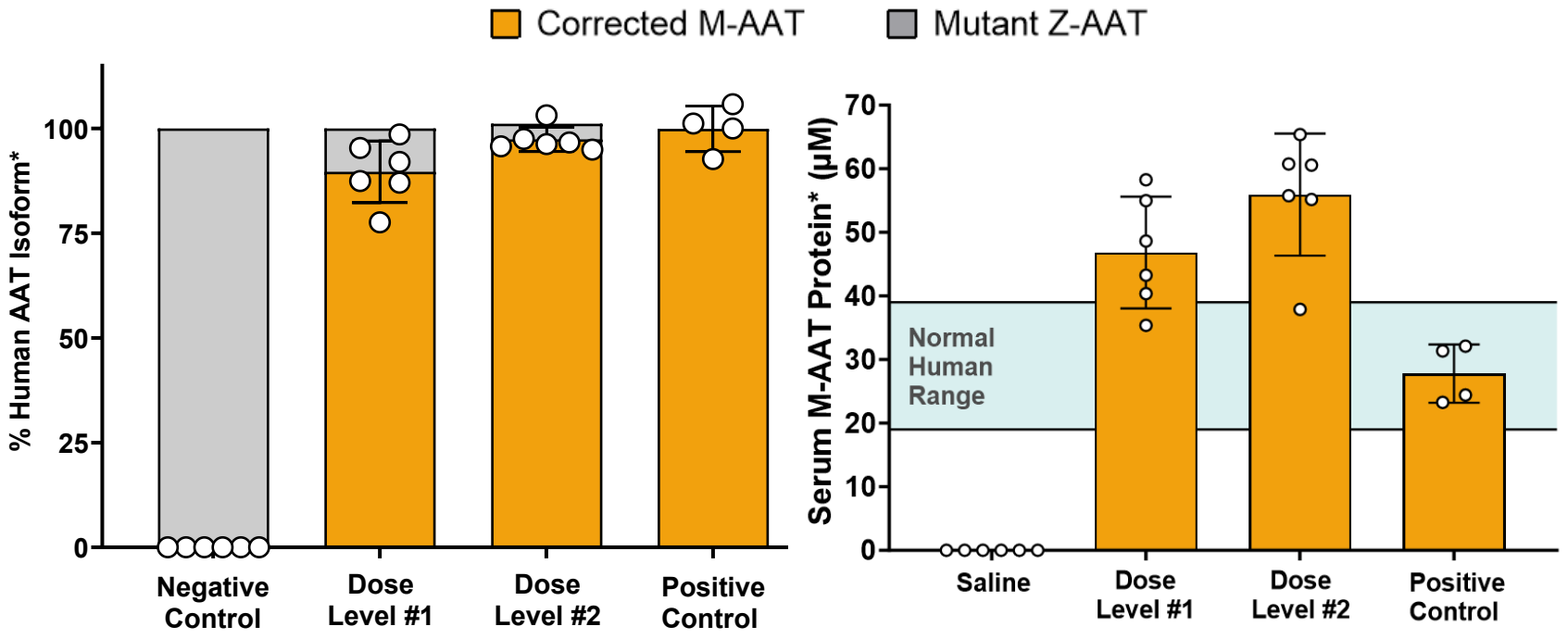
Efficient correction



Restoration M-AAT Protein**



Prime has initiated IND-enabling activities and is on track for Q3 2026 IND and/or CTA application(s)

M-AAT = healthy A1AT protein; Z-AAT = mutant A1AT protein; IND = investigational new drug; CTA = clinical trial application
*Performed by LC-MS; **Analysis at day 7 positive control = healthy human serum

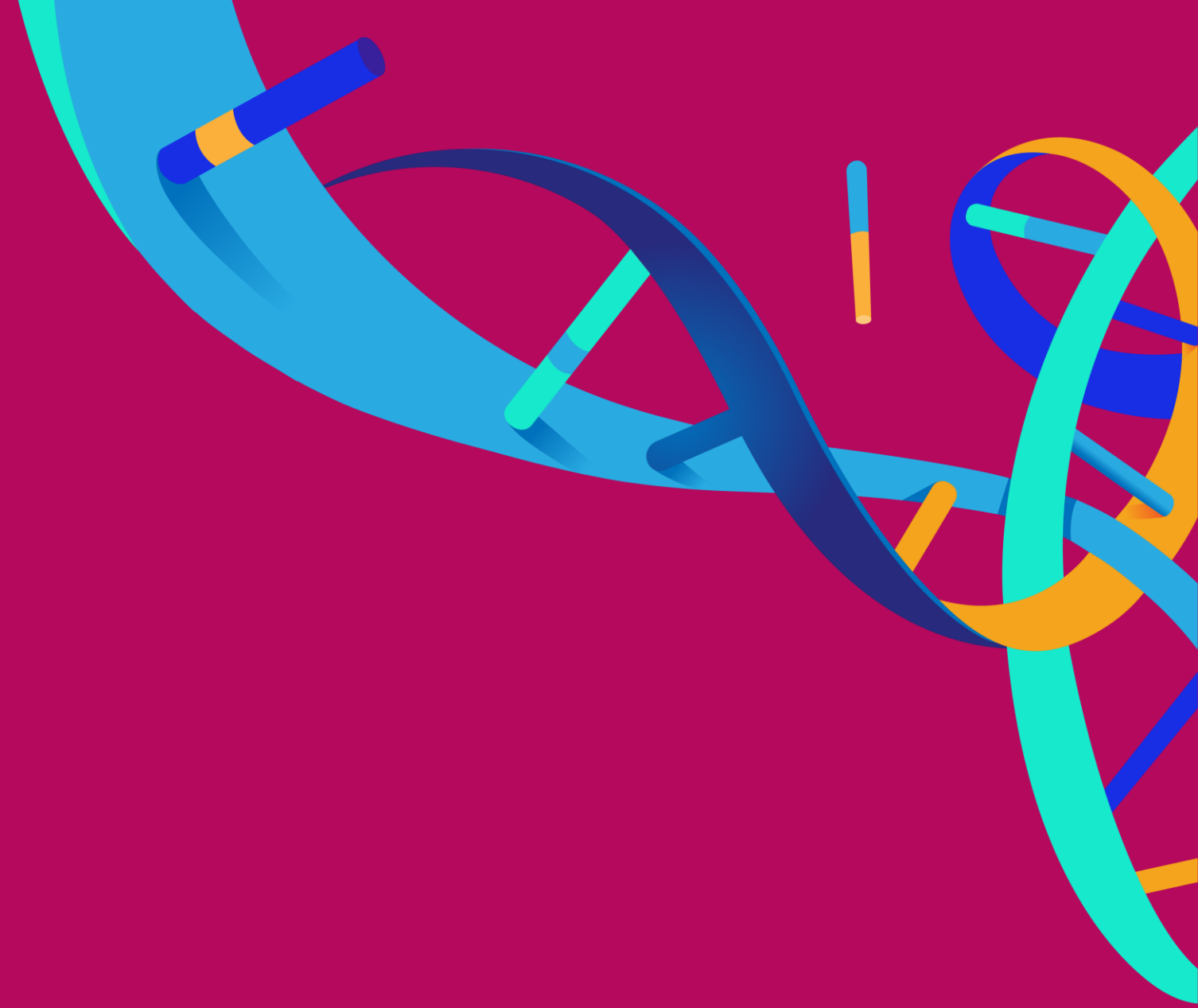
PM647 Clinical Development: On Track for Q3 2026 IND and/or CTA with Proof-of-Concept Data Anticipated in 2027

Anticipated Enrollment Criteria	Group A: adult patients with pulmonary only disease Group B: adult patients with liver disease with or without pulmonary disease
Primary Safety Endpoints	Safety, tolerability
Primary Efficacy Endpoints	Group A: Measurement of serum AAT levels Group B: Measurement of Z-AAT in liver

Ultimate goal of the Phase 1/2 study is to demonstrate the ability of PM647 treatment to restore wild type (M-AAT) protein levels and potentially ameliorate liver disease

IND = investigational new drug; CTA = clinical trial application

Lung



Advancing Prime Editors for Cystic Fibrosis (CF), a Disease for Which There is No Curative Therapy

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Prime Medicine's efforts in Cystic Fibrosis funded through multiple grants from the Cystic Fibrosis Foundation

Disease Severity and Opportunity

- Progressive, genetic disease that affects the lungs, pancreas and other organs, leading to premature death
- Impacts close to 40,000 people in the United States, ~1,000 new cases diagnosed each year

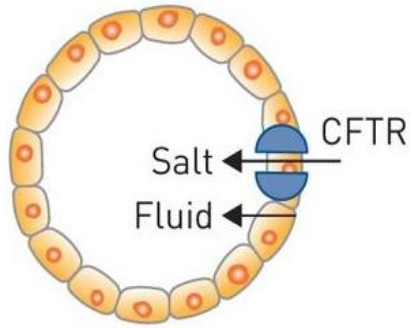
Unmet Need

- Existing treatment options include airway clearance, inhaled medicines, pancreatic enzyme supplements, fitness plans and CFTR modulators for patients with specific mutations
- No cure and existing treatments are ineffective for, or not tolerated by, approximately 15% of patients

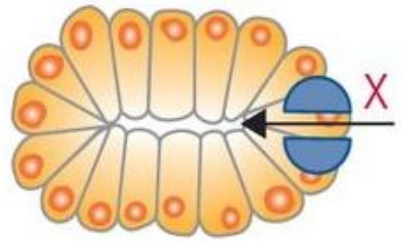
Human Biology

- Autosomal recessive disorder caused by mutations in the CFTR gene, which cause CFTR protein to become dysfunctional
- Dysfunctional CFTR reduces chloride and bicarbonate transport to epithelial lumen

Healthy



Cystic Fibrosis



We believe Prime Editing-based approaches could eventually benefit more than 93% of all people with CF

CFTR = cystic fibrosis transmembrane conductance regulator

Prime Medicine has Made Significant Progress Developing Prime Editors for G542X Mutated Cystic Fibrosis

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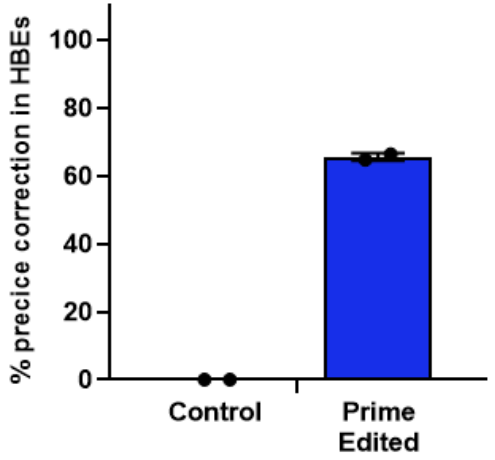
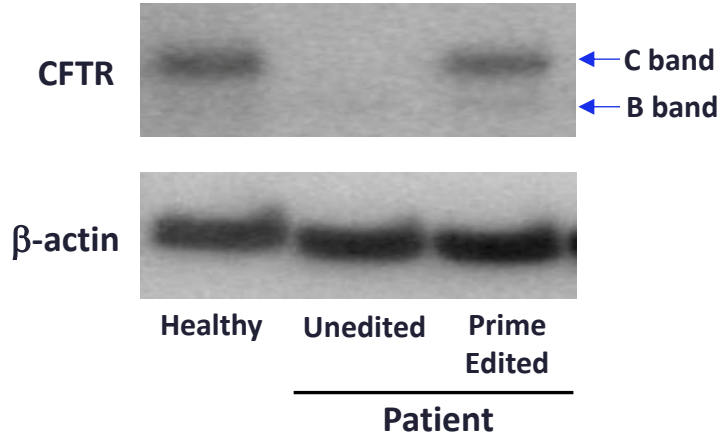
G542X In vitro Prime Editor in Primary HBEs



Phenotypic restoration of G542X mutated CFTR in differentiated ALI culture



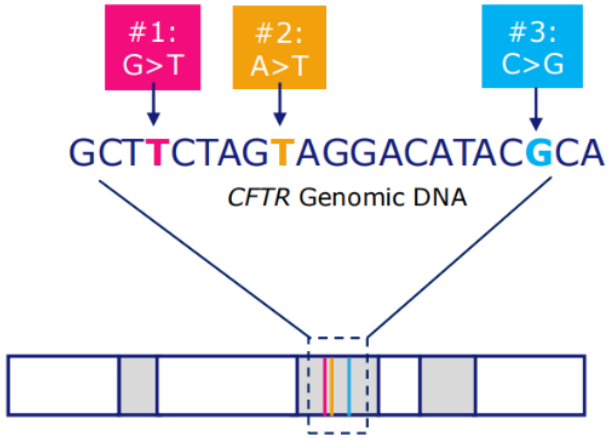
Efforts towards LNP and AAV *in vivo* delivery to humanized mice and large animals ongoing

- We believe primary human lung progenitor data is most predictive of *in vivo* efficacy
- Comprehensive suite of assays in development to enable selection of development candidate and advance to IND enabling studies
- Humanized mouse colonies, ferret and NHP colony established for *in vivo* optimization
- Prime's targeted modular lung LNP as well as alternative delivery system are being applied to accelerate CF hotspot editing *in vivo*

Parallel Prime Editing Approaches to CF: Hotspot and PASSIGE

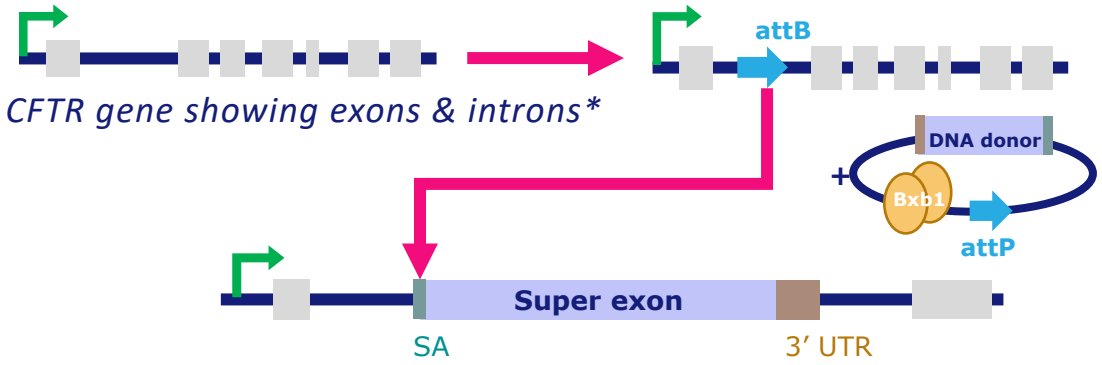
Hotspot

Eight hotspot Prime Editors could address the "high unmet need" mutations; these same Prime Editors could address >93% of all CF patients



PASSIGE

Potential to address nearly all CF patients with a single super exon insertion strategy



Restoring CFTR function in Prime Edited cells under endogenous control

CF = cystic fibrosis; attP = complimentary recognition sequence for attB; SA = splice acceptor; 3' UTR = 3' untranslated region; *Exons in gray introns in black

Immunology and Oncology

Chronic Granulomatous Disease (CGD)

Advancing Prime Editor for CGD: Disease Overview

Rare genetic disease, characterized by defective neutrophil function

Disease Severity and Opportunity

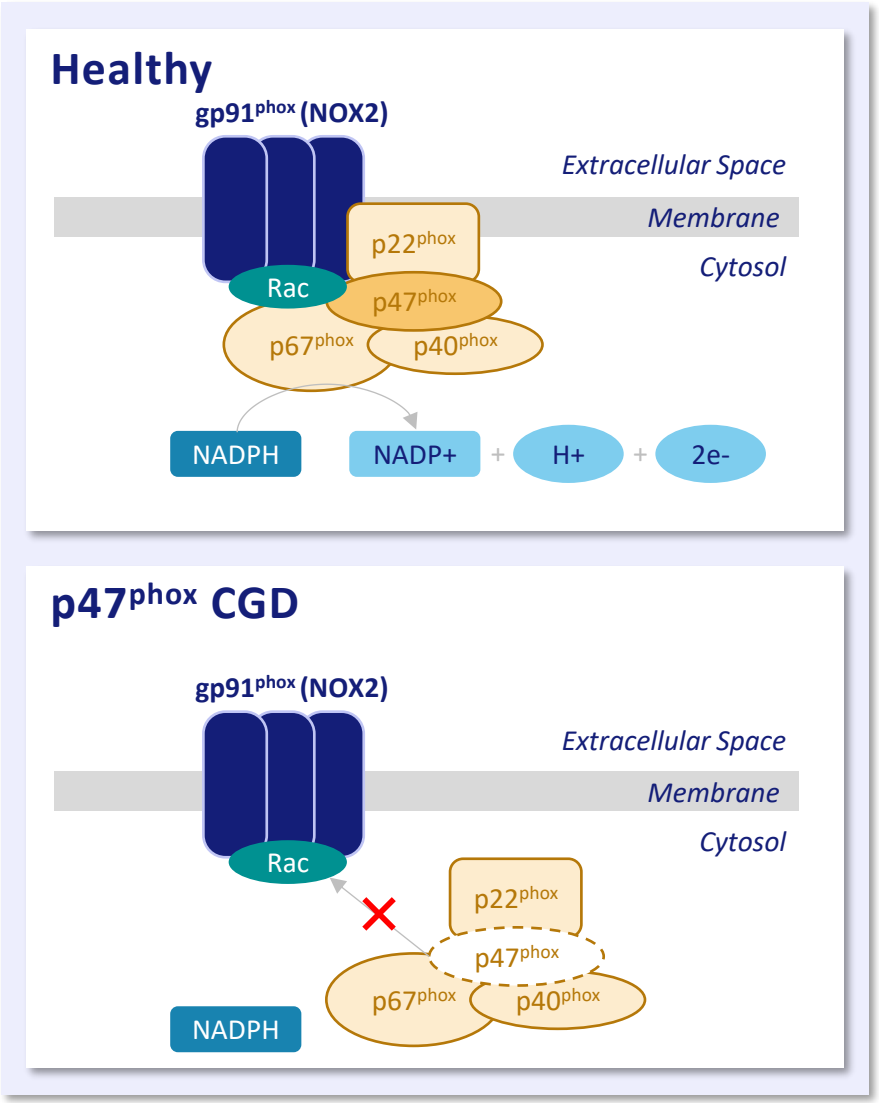
- Serious life-threatening disease presents in childhood; life expectancy approximately 40 years
- Results in recurrent, life-threatening infections which are difficult to eradicate, leads to frequent hospitalizations
- Potentially deadly infections from normal exposures (e.g., gardening, swimming)

Unmet Need

- Current treatment options include
  - Lifelong anti-microbial therapy (frequently leading to antimicrobial resistance)
  - Allogenetic HSCT is the only curative option made complicated by GvHD, graft failure and limited availability (e.g., matched donor)

Human Biology

- p47phox is a cytosolic regulatory subunit of the NADPH oxidase complex
- Majority of p47phox CGD patients share single causative dinucleotide deletion (ΔGT)
- Defective NADPH oxidase renders neutrophils, monocytes and macrophages ineffective



Breakthrough Clinical Data with PM359 in CGD Provide Proof-of-Concept for Prime Editing as the Foundation for a New Class of Curative Therapies

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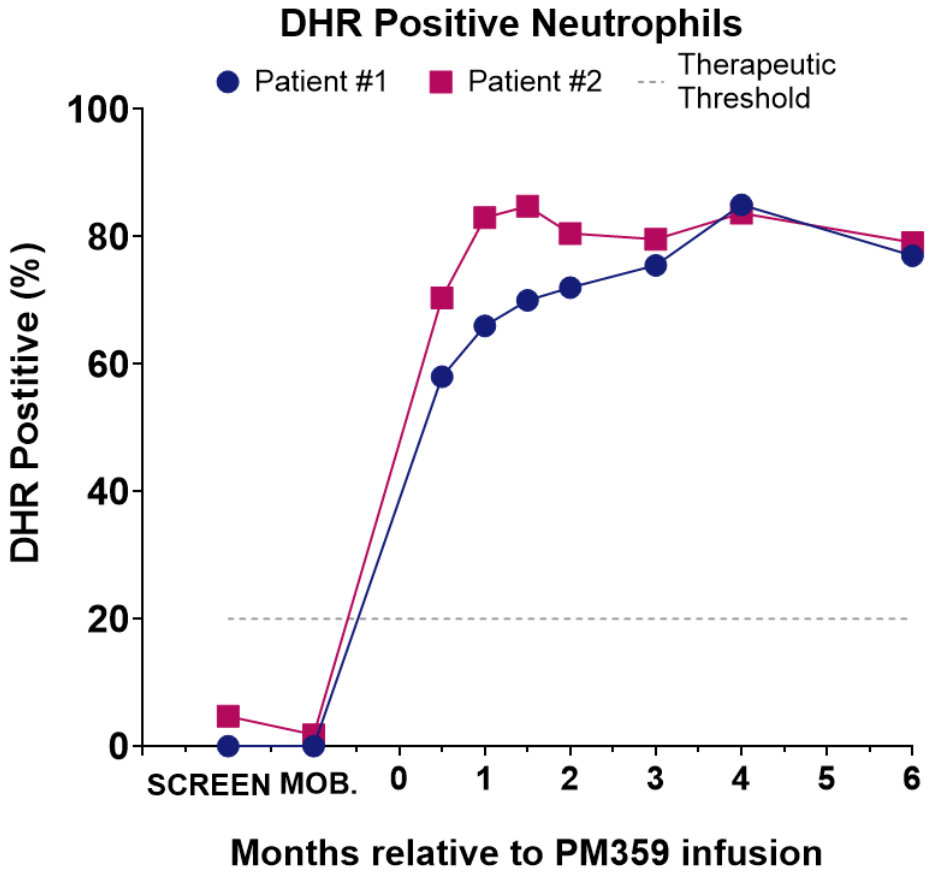
Observed rapid engraftment, restored DHR positivity and improvement in inflammatory markers, with acceptable safety



- **Successful manufacturing** from single mobilizations
- **Tolerable myeloablative conditioning** at fully therapeutic exposures with expected adverse events (transitory mucositis, pancytopenia)
- **No serious adverse events** attributed to PM359
- **Rapid neutrophil and platelet engraftment** confirmed within 2-3 weeks post transplant, markedly faster than current benchmarks
- **Rapid recovery of NADPH oxidase activity**: ~3-4x therapeutic threshold by day 30, sustained out to six months post infusion
- **Both patients remain free of new CGD-related complications or significant intercurrent illness post-infusion;** patient 2 demonstrated improvement in inflammatory markers of CAC

Prime Medicine plans to submit a BLA following final regulatory alignment

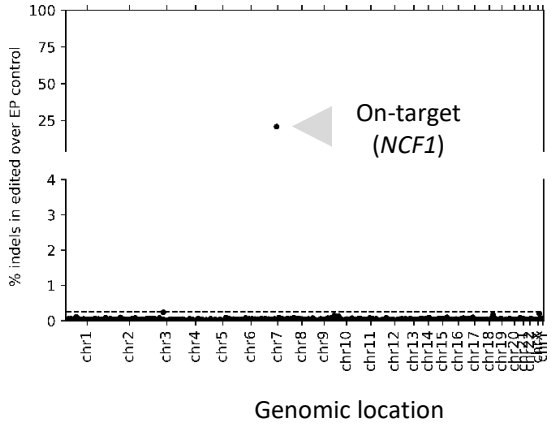
*Source: CASGEVY label, median time to engraftment for neutrophils and platelets observed at days 27 and 35, respectively
Note: patient #1 was an 18 year old male, patient #2 was a 57 year old male
DHR = dihydrorhodamine, an assay to measure NADPH oxidase activity

Prime Medicine Has Not Observed Any Detectable Off-Target Editing, Large Deletions, or Translocations in Any Lead Program

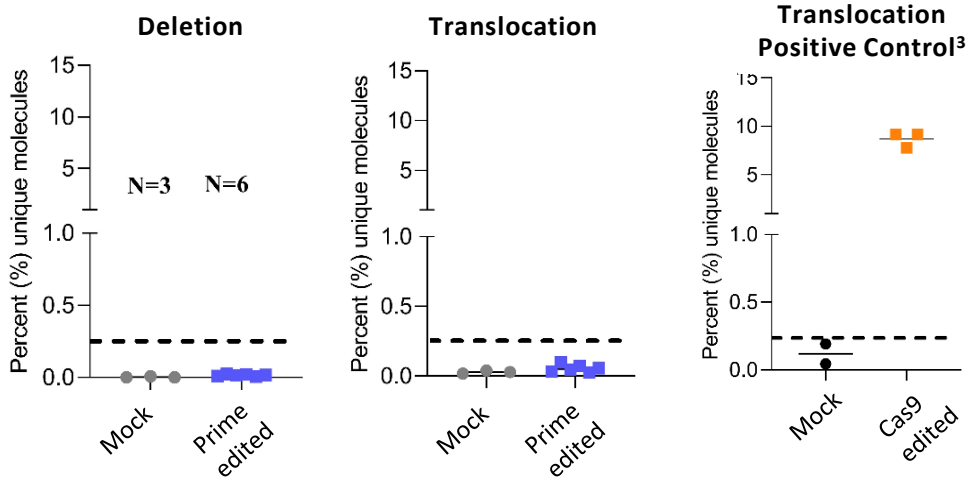
Prime Medicine uses CRISPR-Cas9 editors as a positive control in off-target analyses

Examples from CGD program used to support IND/CTA filings

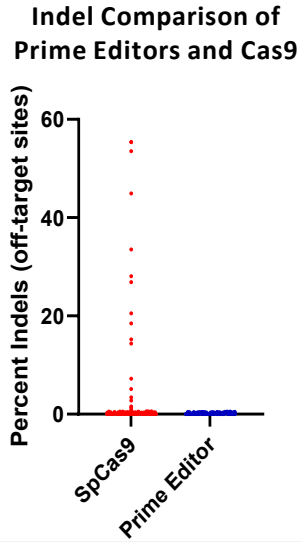
No off-target editing detected in healthy human donor CD34+ cells[1]



No large deletions or translocations observed in Prime-Edited LT-HSCs[2] vs. Cas-9 nuclease edited cells



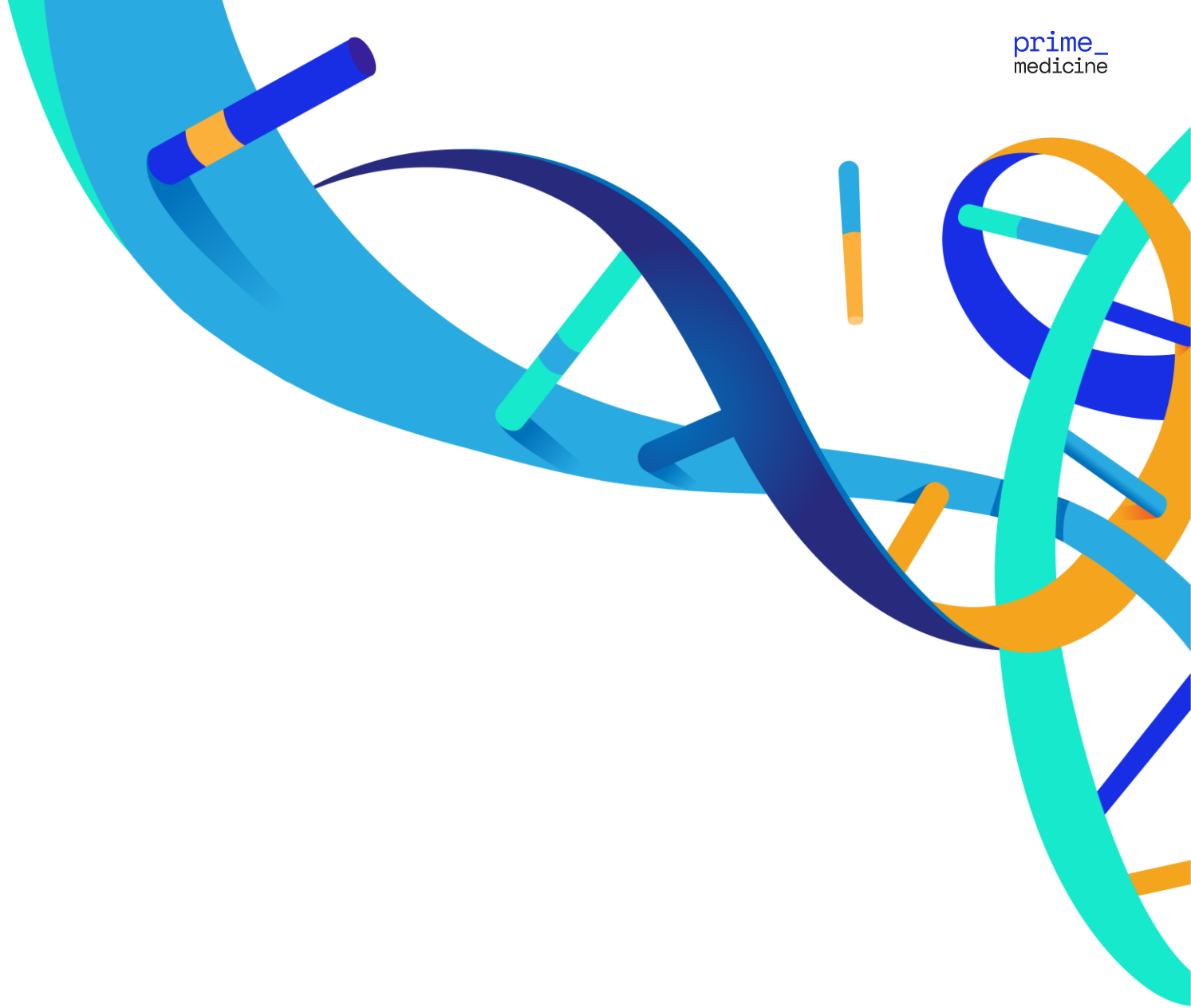
No off-target edits detected with Prime Editing vs. Cas9



- **No** detectable double strand breakage
- **No** detectable off-target edits
- **No** detectable bystander edits
- **No** detectable deletions, chromosomal translocations or rearrangements

[1]Analysis of edited CD34+ cells from CGD program: Targeted *in vitro* Analysis of 550 potential off-target sites of off-target editing. [2]Data from *in vivo* analysis from mouse bone marrow harvested 16 weeks after engraftment was complete. [3]Cas9 nuclease-edited cells, generated by transfecting HEK293T with sgRNA targeting *NCF1* and SpCas9 mRNA.
CGD = chronic granulomatous disease; HSC = hematopoietic stem cell; IND = investigational new drug; CTA = clinical trial application

Ex-Vivo CAR-T



CAR-T: PASSIGE and Multiplex Prime Editing is the Foundation of Prime Medicine's Collaboration with BMS

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Platform modularity has potential to accelerate development of additional CAR-T Programs

	Existing Limitations	Prime Editing Solution
Multiplex Engineering	✗ Low payload integration efficiency ✗ Constrained to limited number of knock-outs and limited single base pair changes	✓ **>80% integration** efficiency of CAR, aimed at TRAC locus to maintain **endogenous control** ✓ Capable of **multiple edits done safely**, each with a **full suite of functional modifications**
Safety	✗ Random or semi-random integration ✗ High rate of translocations / chromosomal abnormalities	✓ **Precise on-target** transgene integration ✓ Based on our extensive off-target evaluations in other settings, **there is the potential for no detectable off-target edits, translocations, or unintended structural abnormalities** in Prime-Edited CAR-T's
Manufacturing / Cost of Goods	✗ Dependence on viral components ✗ Complicated by multi-step engineering	✓ **Entirely non-viral** manufacturing process ✓ **Single-step** editing and integration

TRAC = T-cell receptor alpha constant; Data presented at ASH, December 2022, ASGCT, May 2023 and ASH, December 2023

Strategic License and Broad Collaboration Agreement with Bristol Myers Squibb (BMS) to Develop Prime Edited *ex Vivo* CAR-T Products

First broad, multi-target collaboration advancing Prime Editors for the treatment of complex oncology and autoimmune indications

Leadership in Prime Editing; PASSIGE technology may enable one-step, non-viral, multi-kilobase-size editing approach with no double-stranded breaks

Global leader in cell therapy for hematology, immunology and oncology

- $110 million upfront
- >$3.5 billion in potential milestones, including:
  - $185 million in preclinical milestones
  - $1.2 billion in development milestones
  - More than $2.1 billion in commercial milestones
  - Royalties on net sales
- Multiple targets in immunological diseases and cancer, beyond the genetic diseases in Prime Medicine's internal pipeline

Prime Medicine retains the ability to advance reagents designed under this collaboration in certain *ex vivo* (non-BMS targets) and all *in vivo* T cell and other cell therapy applications

Beyond Precisely Inserting a Chimeric Antigen Receptor, We Can Simultaneously and Efficiently Multiplex Edit CAR-T Cells

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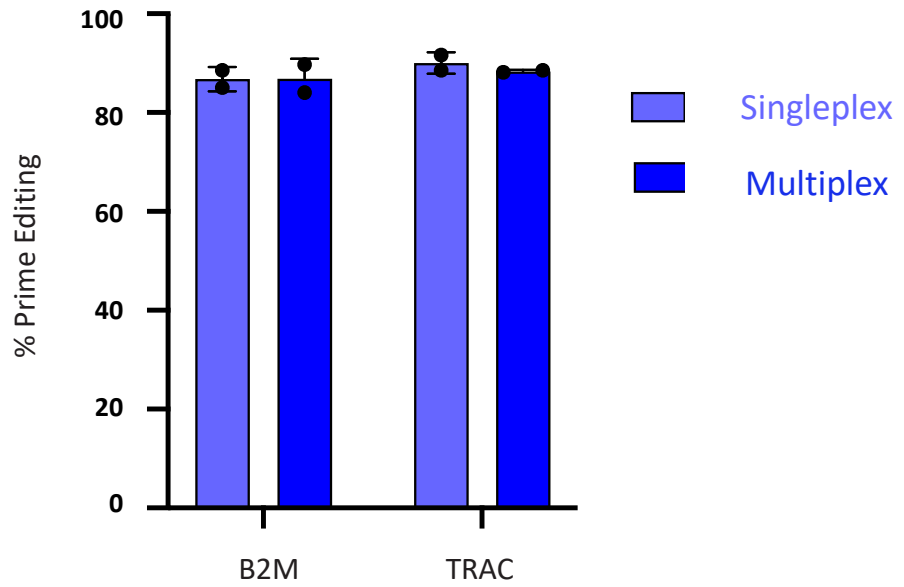
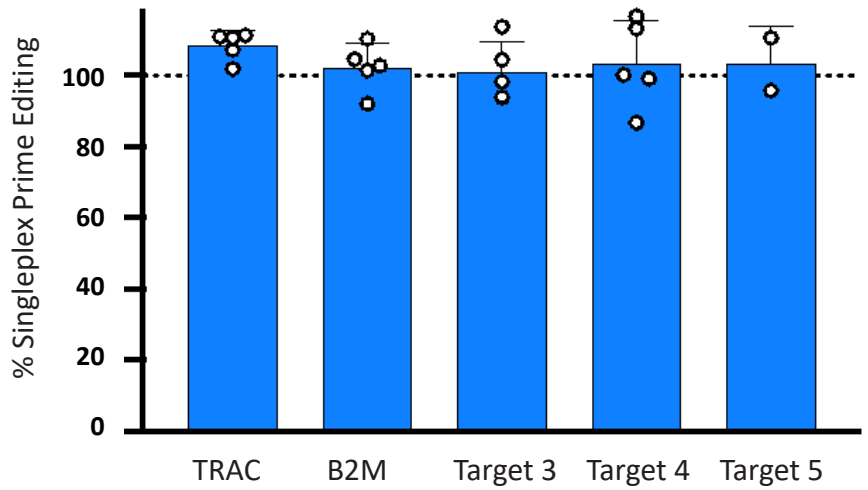
Prime Editors can be multiplexed to introduce multiple genomic modifications in CAR-T cells

High efficiency multiplex editing of B2M and TRAC



Maintained efficiency with five multiplex edits



Corporate

Our Strategy to Maximize the Broad Therapeutic Potential of Prime Editing

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Within Our Core

Partner at the right time to fund, advance and commercialize our wholly owned pipeline programs (e.g., liver, lung)

CYSTIC FIBROSIS FOUNDATION

Funding accelerates the development of Prime Editors for Cystic Fibrosis

Outside Our Core

Form strategic partnerships to access expertise and expand into therapeutic areas beyond our near-term internal focus (e.g., cell therapy, CNS)

Bristol Myers Squibb

Developing Prime Edited CAR-T products leveraging PASSIGE and platform

Enabling Innovation

Access best-in-class enabling technologies to unlock the full potential of Prime Editing (e.g., delivery technologies)

By pairing our internal resources with strategic partners and best-in-class enabling technologies, we aim to accelerate platform development and extend the reach of Prime Editing

Prime Medicine is Leading the Next Generation of Gene Editing

Preeminent Editing Technology

- Permanently corrects genetic alterations, without causing double-strand breaks or bystander edits
- Potential to address approximately 90% of genetic diseases and opportunities in non-genetic diseases
- Prime Medicine's comprehensive IP portfolio covers any permutation of Prime Editing

Platform Modularity Oriented for Growth

- Fully integrated modular platform powers every program and drives leverage
- Proprietary modular delivery systems accelerate follow-on programs within target tissues
- New regulatory models pave way for platform-based approvals

Pipeline Positioned for Value Creation

- CGD data provides proof-of-concept for curative potential of Prime Editing, planning for BLA submission
- CTA cleared for PM577a in Wilson Disease; AATD IND and/or CTA expected in Q3 2026
- Focused on programs in large genetic diseases, with clear path to value and multi billion-dollar opportunities

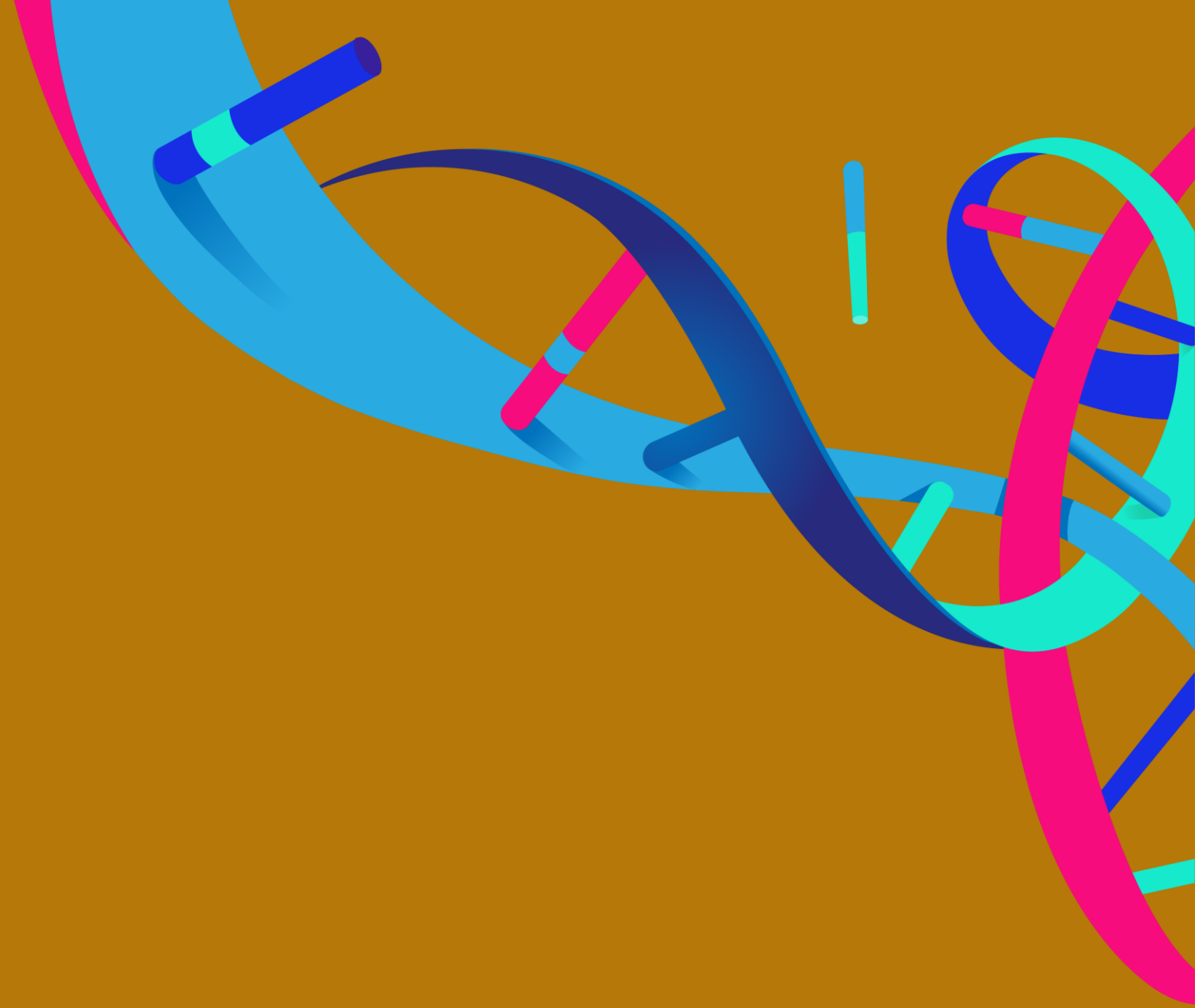
Significant Partnerships and BD Potential

- BMS partnership to develop Prime Edited *ex vivo* CAR-T products
- Cystic Fibrosis Foundation relationship and funding to advance Prime Editors for Cystic Fibrosis
- Additional business development to accelerate and expand pipeline

Pro-forma cash, cash equivalents, investments and restricted cash of $149.2M for 3/31/2026, cash runway into 2027

AATD = Alpha-1 Antitrypsin Deficiency; IND = investigational new drug; CTA = clinical trial application

Appendix



Prime Editing is Designed with a Wide Range of Genome Editing Capabilities

Flexibility to select right approach for each indication based on editing need

Prime Editing Approach	Small edits (e.g., all 12 bp swaps, 1-bp to 20-bp ins or del, combinations thereof)	Mid-sized edits (e.g., hotspot corrections, del up to 1-kb, ins up to 250 bp)	Large deletions (e.g., multi-kb repeat excision, exon del)	Large insertions or inversions (e.g., targeted multi-kb gene integration)
Short Flap Prime Editing	✓ +++			
Dual Flap Prime Editing	✓ ++	✓ +++	✓ +++	
Long Flap Prime Editing	✓ ++	✓ +++	✓ ++	
PASSIGE		✓ +	✓ +	✓ +++

✓ = capable of the edit

+/++/+++ = how fit Prime Medicine believes the technology is for making the edit, based on Prime Medicine's internal assessment

BP = base pair; KB = kilobase

PASSIGE Technology Enables Prime Editing to Insert Gene Sized Sequences Precisely, Potentially Addressing Large Markets

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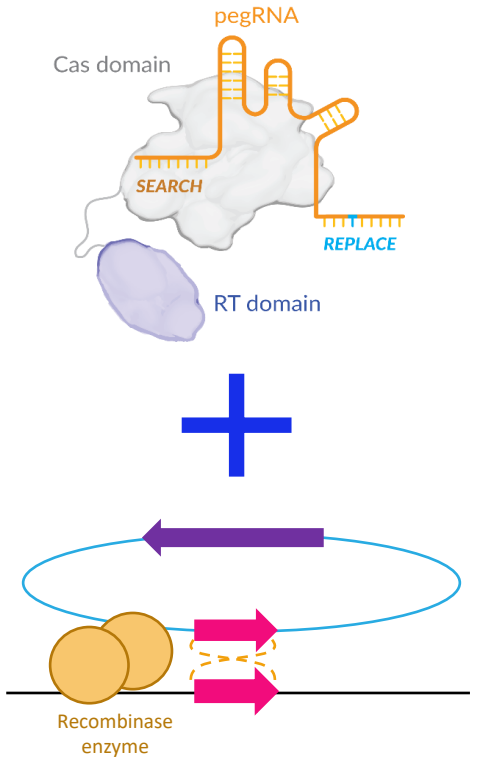
PASSIGE: Prime-Assisted Site-Specific Integrase Gene Editing:

One step non-viral multi-kilobase-size gene editing approach with no double-stranded breaks



Where we are working today:

- **Non-viral, multiplex-edited CAR-T therapies**
  BMS collaboration (e.g., oncology and autoimmune diseases)
- **Cystic Fibrosis**

Areas of opportunity:*

- **Targeted whole gene replacement for bone marrow diseases**
  (e.g., Hereditary anemias, such as Fanconi Anemia)
- **Correct inversion mutations**
  (e.g., Hemophilia A)
- **Targeted whole gene replacement for rare liver diseases**
  (e.g., Phenylketonuria, Tyrosinemia)
- ***In vivo* protein factory**
  (e.g., GLA enzyme for Fabry's disease)

*Not part of Prime Medicine's current pipeline