UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 REGISTRATION STATEMENT

Under the Securities Act of 1933

Prime Medicine, Inc.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization) 84-3097762 (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)

Prime Medicine, Inc. 2019 Stock Option and Grant Plan Prime Medicine, Inc. 2022 Stock Option and Incentive Plan Prime Medicine, Inc. 2022 Employee Stock Purchase Plan (Full title of the plans)

Keith Gottesdiener, M.D.
President and Chief Executive Officer
21 Erie Street
Cambridge, MA 02139
(617) 564-0013

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:
Kingsley L. Taft, Esq.
Marishka DeToy, Esq.
Goodwin Procter LLP
100 Northern Avenue
Boston, Massachusetts 02210

(617) 570-1000

emerging growth co	,	accelerated filer, a non-accelerated filer, a smaller reporting company, or an accelerated filer," "smaller reporting company," and "emerging growth	l
Large Accelerated filer		Accelerated filer	
Non-accelerated filer		Smaller reporting company	X
		Emerging growth company	X
If an emerging grow	th company, indicate by check mark if the registrant ha	s elected not to use the extended transition period for complying with any no	ew

or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. \square

Part I INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Item 1. Plan Information.

The documents containing the information specified in this Item 1 will be sent or given to participants as specified by Rule 428(b)(1) under the Securities Act of 1933, as amended (the "Securities Act"). In accordance with the rules and regulations of the U.S. Securities and Exchange Commission (the "SEC") and the instructions to Form S-8, such documents are not being filed with the Commission either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424 under the Securities Act.

Item 2. Registrant Information and Employee Plan Annual Information.

The documents containing the information specified in this Item 2 will be sent or given to participants as specified by Rule 428(b)(1) under the Securities Act. In accordance with the rules and regulations of the Commission and the instructions to Form S-8, such documents are not being filed with the Commission either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424 under the Securities Act.

Part II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The registrant hereby incorporates by reference into this Registration Statement the following documents filed with the SEC:

- (a) Amendment No. 2 to the registrant's Registration Statement on Form S-1 filed with the SEC on October 17, 2022 (File No. 333-267579), which contains the registrant's audited financial statements for the latest fiscal year for which such statements have been filed;
- (b) The prospectus to be filed by the registrant with the SEC pursuant to Rule 424(b) under the Securities Act, on or about October 20, 2022, relating to the Registration Statement on Form S-1, as amended (File No. 333-267579); and
- (c) The description of the registrant's common stock contained in the registrant's Registration Statement on Form 8-A (File No. 001-41536), filed by the registrant with the SEC under Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), on October 17, 2022, including any amendments or reports filed for the purpose of updating such description.

All documents that the registrant subsequently files pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act prior to the filing of a post-effective amendment to this registration statement which indicates that all of the shares of common stock offered have been sold or which deregisters all of such shares then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be a part hereof from the date of the filing of such documents.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

Under no circumstances will any information filed under current items 2.02 or 7.01 of Form 8-K be deemed incorporated herein by reference unless such Form 8-K expressly provides to the contrary.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law, or 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 if the director or officer acted in good faith and in a manner the director or officer reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the director or officer's conduct was unlawful. 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 upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that such director or officer is not entitled to be indemnified by the corporation as authorized in Section 145. 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 third amended and restated certificate of incorporation, to be in effect immediately prior to the closing of our initial public offering, and amended and restated bylaws, which became effective upon the effectiveness of the Registration Statement on Form S-1, 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 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 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 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.

We have entered 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, executive officer or affiliate 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..

Item 7. Exemption from Registration Claimed.

Not applicable.

Exhibit

Item 8. Exhibits.

EXHIBIT INDEX

No.	Description
4.1	Form of Third Amended and Restated Certificate of Incorporation (Incorporated by reference to Exhibit 3.2 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-267579)).
4.2	Form of Amended and Restated By-laws (Incorporated by reference to Exhibit 3.4 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-267579)).
4.3	Amended and Restated Investors' Rights Agreement among the Registrant and certain of its stockholders, dated April 20, 2021 (Incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-267579)).
5.1*	Opinion of Goodwin Procter LLP.
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).
99.1	2019 Stock Option and Grant Plan, as amended, and forms of award agreements thereunder (Incorporated by reference to Exhibit 10.1 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-267579)).
99.2	2022 Stock Option and Incentive Plan and forms of award agreements thereunder (Incorporated by reference to Exhibit 10.2 to the registrant's Registration Statement on Form S-1, as amended (File No. 333-267579)).
99.3	2022 Employee Stock Purchase Plan (Incorporated by reference to Exhibit 10.3 to the registrant's Registration Statement on Form S-1, as amended (File No. 333-267579)).
107*	Filing Fee Table

^{*} Filed herewith.

Item 9. Undertakings.

- (a) The registrant hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act.
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

Provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) herein do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act (15 U.S.C. 78m or 78o(d)) that are incorporated by reference in the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment 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.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement 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.
- (c) 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 Securities and Exchange Commission 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.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, State of Massachusetts, on this 19th day of October, 2022.

PRIME MEDICINE, INC.

By: /s/ Keith Gottesdiener

Name: Keith Gottesdiener

Title: President and Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

KNOW ALL BY THESE PRESENT, that each individual whose signature appears below hereby constitutes and appoints each of Keith Gottesdiener and Carman Alenson as such person's true and lawful attorney-in-fact and agent with full power of substitution and resubstitution, for such person in such person's name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement on Form S-8, and to file the same, with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission granting unto each said attorney-in-fact and agent 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 such person might or could do in person, hereby ratifying and confirming all that any said attorney-in-fact and agent, or any substitute or substitutes of any of them, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following person in the capacities and on the date indicated.

Name	Title	Date	
/s/ Keith Gottesdiener Keith Gottesdiener	President, Chief Executive Officer, and Director (Principal Executive Officer)	October 19, 2022	
/s/ Carman Alenson Carman Alenson	Interim Chief Financial Officer and Chief Accounting Officer (Principal Financial Officer and Principal Accounting Officer)	October 19, 2022	
/s/ Robert Nelsen	– Director	October 19, 2022	
Robert Nelsen			
/s/ David Schenkein David Schenkein	- Director	October 19, 2022	
/s/ Thomas Cahill Thomas Cahill	– Director	October 19, 2022	
/s/ Michael Kelly Michael Kelly	- Director	October 19, 2022	
/s/ Wendy Chung Wendy Chung	_ Director	October 19, 2022	
/s/ Kaye Foster Kaye Foster	- Director	October 19, 2022	

Calculation of Filing Fee Table

Form S-8 (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 Rule	Amount to be Registered(1)	Proposed Maximum Offering Price per Share	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common Stock, \$0.00001 par value per share	Rule Rule 457(h)	3,947,932(2)	\$5.24(3)	\$20,687,164	\$0.00011020	\$2,279.73
Equity	Common Stock, \$0.00001 par value per share	Rule 457	7,877,166 (4)	\$18.00 (5)	\$141,788,988	\$0.00011020	\$15,625.15
Equity	Common Stock, \$0.00001 par value per share	Rule 457	164,522 (6)	\$18.00 (5)	\$2,961,396	\$0.00011020	\$326.35
Equity	Common Stock, \$0.00001 par value per share	Rule 457(a)	971,350 (7)	\$15.30 (8)	\$14,861,655	\$0.00011020	\$1,637.76
	Total Offering Amounts				\$180,299,203		_
Total Fees Previously Paid						0	
Total Fee Offsets						0	
Net Fee Due							\$19,868.99

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall also cover any additional shares of the Registrant's common stock that become issuable under the Registrant's 2022 Stock Option and Incentive Plan (the "2022 Plan), the Registrant's 2022 Employee Stock Purchase Plan (the "2022 ESPP") and/or the Registrant's 2019 Stock Option and Grant Plan (the "2019 Plan") by reason of any stock dividend, stock split, recapitalization or any other similar transaction effected without the receipt of consideration which results in an increase in the number of our outstanding shares of common stock. Pursuant to Rule 416(c) under the Securities Act, this Registration Statement shall also cover an indeterminate amount of interests to be offered or sold pursuant to the employee benefit plans described herein.
- (2) Represents shares of common stock issuable upon the exercise of outstanding stock options awards under the 2019 Plan as of the date of this Registration Statement. No further grants will be made under the 2019 Plan. To the extent outstanding options granted under the 2019 Plan are cancelled, forfeited or otherwise terminated without being exercised and would otherwise have been returned to the share reserve under the 2019 Plan, the number of shares underlying such awards will be available for future grant under the 2022 Plan.
- (3) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(h) of the Securities Act, and based on \$5.24, the weighted average exercise price (rounded to the nearest cent) of the outstanding option awards under the 2019 Plan as of the date of this Registration Statement.
- (4) Represents shares of common stock reserved for issuance under the 2022 Plan. In addition to the shares registered under the 2022 Plan, to the extent that awards outstanding under the 2019 Plan as of the date of this Registration Statement are cancelled, forfeited, are held back upon exercise or settlement of an award to cover any exercise price, as applicable, or tax withholding, are reacquired by the Registrant prior to vesting, are satisfied without the issuance of stock or are otherwise terminated (other than by exercise)

subsequent to the date of this Registration Statement, the shares reserved for issuance pursuant to such awards will become available for issuance under the 2022 Plan. The 2022 Plan provides that an additional number of shares will automatically be added to the shares authorized for issuance under the 2022 Plan on January 1, 2023 and each January 1 thereafter. The number of shares added each year will be equal to the lesser of: (i) five percent (5%) of the number of shares of common stock issued and outstanding on the immediately preceding December 31, or (ii) such lesser number of shares as determined by the Administrator (as such term is defined in the in the 2022 Plan).

- (5) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457 of the Securities Act, and based on \$18.00, the maximum initial public offering price of the registrant's common stock set forth in the registrant's preliminary prospectus dated October 17, 2022 relating to its initial public offering. Pursuant to the 2022 Plan, the purchase price of the shares of common stock reserved for issuance thereunder will be the fair market value of a share of common stock as set forth on the cover page for the final prospectus relating to the Registrant's initial public offering.
- (6) Consists of options to purchase 164,522 shares of common stock granted and outstanding under our 2022 Plan as of the date of this Registration Statement.
- (7) Represents shares of common stock reserved for future issuance under the 2022 ESPP. The number of shares of common stock reserved for future issuance under the 2022 ESPP will automatically increase on January 1, 2023 and each January 1 thereafter through January 1, 2032, in an amount equal to the least of: (i) 971,350 shares of common stock, (ii) one percent (1%) of the outstanding shares of common stock issued and outstanding on the immediately preceding December 31, or (iii) such number of shares as determined by the Administrator (as such term is defined in the 2022 ESPP).
- (8) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(a) of the Securities Act, and based on 85% of \$18.00, the maximum initial public offering price of the registrant's common stock set forth in the registrant's preliminary prospectus dated October 17, 2022 relating to its initial public offering. Pursuant to the 2022 ESPP, the purchase price of the shares of common stock reserved for issuance thereunder will be 85% of the fair market value of a share of common stock on the first trading day of the offering period or on the exercise date, whichever is less.

October 19, 2022

Prime Medicine, Inc. 21 Erie Street Cambridge, MA 02139

Re: <u>Securities Being Registered under Registration Statement on Form S-8</u>

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-8 (the "Registration Statement") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), on or about the date hereof relating to an aggregate of 12,960,970 shares (the "Shares") of Common Stock, \$0.00001 par value per share ("Common Stock"), of Prime Medicine, Inc., a Delaware corporation (the "Company"), that may be issued pursuant to the Company's 2019 Stock Option and Grant Plan, 2022 Stock Option and Incentive Plan, and 2022 Employee Stock Purchase Plan (collectively, the "Plans").

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinions set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinion set forth below, on certificates of officers of the Company.

The opinion set forth below is limited to the Delaware General Corporation Law.

For purposes of the opinion set forth below, we have assumed that no event occurs that causes the number of authorized shares of Common Stock available for issuance by the Company to be less than the number of then unissued Shares.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized and, upon issuance and delivery against payment therefor in accordance with the terms of the Plans, will be validly issued, fully paid and nonassessable.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ Goodwin Procter LLP

GOODWIN PROCTER LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of Prime Medicine, Inc of our report dated February 4, 2022, except for the effects of the reverse stock split discussed in Note 15 to the consolidated financial statements, as to which the date is October 13, 2022, relating to the financial statements of Prime Medicine, Inc., which appears in Prime Medicine, Inc's Amendment No. 2 to the Registration Statement on Form S-1 (No. 333-267579).

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts October 19, 2022