Registration No. 333-

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 Number)

21 Erie Street
Cambridge, MA 02139
(617) 564-0013
(Address of Principal Executive Offices)
Prime Medicine, Inc. 2022 Stock Option and Incentive Plan
(Full Title of the Plan)

Keith Gottesdiener, M.D.
President and Chief Executive Officer
Prime Medicine, Inc.
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

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•	ny. S	See the definitions of "la		elerated filer, an accelerate accelerated filer," "accelerated filer,"				1 0 1	-
Large accelerated filer		Accelerated filer	\boxtimes	Non-accelerated filer	\boxtimes	Smaller reporting company	\boxtimes	Emerging growth company	\boxtimes

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 7(a)(2)(B) of the Securities Act. \Box

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

This Registration Statement on Form S-8 (this "Registration Statement") is being filed for the purpose of registering an additional 4,868,856 shares of common stock, par value \$0.00001 per share ("Common Stock") of Prime Medicine, Inc. (the "Registrant") available for issuance under the Registrant's 2022 Stock Option and Incentive Plan, as amended (the "2022 Plan").

These additional shares are of the same class as other securities relating to the 2022 Plan for which the Registrant's Registration Statements on Form S-8 (<u>File No. 333-267953</u>), filed with the Securities and Exchange Commission (the "SEC") on October 19, 2022, and Registration Statement on Form S-8 (<u>File No. 333-270400</u>), filed with the Commission on March 9, 2023, respectively, are effective (collectively, the "Earlier Registration Statements").

Pursuant to General Instruction E to Form S-8 regarding registration of additional securities, the contents of the Earlier Registration Statements, except for "Item 8. Exhibits", are incorporated herein by reference, except to the extent supplemented, amended or superseded by the information set forth herein. Only those items of Form S-8 containing new information not contained in the Earlier Registration Statements are presented herein.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 8. Exhibits.

The exhibits to this Registration Statement are listed in the Exhibit Index attached hereto and incorporated by reference herein.

EXHIBIT INDEX

Exhibit number	Description of exhibit
4.1	Third Amended and Restated Certificate of Incorporation of Prime Medicine, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on October 24, 2022)
4.2	Amended and Restated Bylaws of Prime Medicine, Inc. (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K, filed with the SEC on October 24, 2022)
4.3	Specimen stock certificate evidencing the shares of common stock (incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1/A (File No. 333-267579) filed on October 17, 2022)
4.4	Form of Pre-Funded Warrant (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on February 16, 2024)
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	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) filed on October 17, 2022
107*	Filing Fee Table
*	Filed herewith.

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, Commonwealth of Massachusetts, on the 1st day of March 2024.

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, Allan Reine, 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 persons in the capacities and on the dates indicated.

Name	Title	Date		
/s/ Keith Gottesdiener	President, Chief Executive Officer and Director	March 1, 2024		
Keith Gottesdiener	(Principal Executive Officer)	·		
/s/ Allan Reine	Chief Financial Officer	March 1, 2024		
Allan Reine	(Principal Financial Officer)			
/s/ Carman Alenson	Chief Accounting Officer	March 1, 2024		
Carman Alenson	(Principal Accounting Officer)			
/s/ Thomas Cahill	Thomas Cahill Director			
Thomas Cahill				
/s/ Wendy Chung	Director	March 1, 2024		
Wendy Chung				
/s/ Kaye Foster	Director	March 1, 2024		
Kaye Foster				
/s/ Michael Kelly	Director	March 1, 2024		
Michael Kelly				
/s/ Jeff Marrazzo	Director	March 1, 2024		
Jeff Marrazzo				
/s/ Robert Nelsen	Director	March 1, 2024		
Robert Nelsen	-			
/s/ David Schenkein	Director	March 1, 2024		
David Schenkein				

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	Other (2)	4,868,856 shares (3)	\$9.30 (2)	\$45,280,360.80 (2)	\$0.00014760	\$6,683.38
Total Offerin	g Amounts				\$45,280,360.80		\$ —
Total Fees Previously Paid						\$ —	
Total Fee Offsets						\$	
Net Fee Due							\$

- Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement shall be deemed to cover any additional shares of common stock, \$0.00001 par value per share ("Common Stock") which become issuable under the Registrant's 2022 Stock Option and Incentive Plan (the "2022 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 the Registrant's outstanding shares of Common Stock.
- Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457 (c) and 457(h) of the Securities Act, and based upon the average of the high and low prices reported for the Common Stock on the Nasdaq Global Market on February 27, 2024.
- Represents shares of Common Stock that were added to the shares authorized for issuance under the 2022 Plan, effective as of January 1, 2024 (3) pursuant to an "evergreen" provision contained in the 2022 Plan. Pursuant to such provision, an additional number of shares will automatically be added to the shares authorized for issuance under the 2022 Plan on January 1 of each year.



Goodwin Procter llp 100 Northern Avenue Boston, MA 02210

goodwinlaw.com +1 617 570 1000

March 1, 2024

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

Re: Securities Being Registered under Registration Statement on Form S-8

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 4,868,856 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 2022 Stock Option and Incentive Plan (the "Plan").

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 Plan, will be validly issued, fully paid and nonassessable.

This opinion letter and the opinion it contains shall be interpreted in accordance with the Core Opinion Principles as published in 74 Business Lawyer 815 (Summer 2019).

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 March 1, 2024 relating to the financial statements, which appears in Prime Medicine, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2023.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts March 1, 2024