
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of the
Securities Exchange Act of 1934 (Amendment No.)

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material under §240.14a-12

PRIME MEDICINE, INC.

(Name of Registrant as Specified in Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check all boxes that apply):

- No fee required.
 - Fee paid previously with preliminary materials.
 - Fee computed on table below in exhibit required by Item 25(b) Exchange Act Rules 14a-6(i)(14) and 0-11.
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PRELIMINARY PROXY STATEMENT - SUBJECT TO COMPLETION DATED JULY 2, 2025



**NOTICE OF 2025 SPECIAL MEETING OF STOCKHOLDERS
To Be Held On August 1, 2025**

Notice is hereby given that a special meeting of stockholders (the “Special Meeting”) of Prime Medicine, Inc., a Delaware corporation (the “Company”), will be held on August 1, 2025, at 1:00 p.m., Eastern Time, in a virtual meeting format, which will be conducted via live webcast. You may attend the Special Meeting online, vote your shares electronically and submit questions by visiting www.virtualshareholdermeeting.com/PRME2025SM.

The Special Meeting will be held for the following purposes:

1. To approve the repricing of certain outstanding stock options that have been granted under the Company’s 2019 Stock Option and Grant Plan (as may be amended, restated or otherwise modified from time to time in accordance with its terms, the “2019 Plan”) and/or the 2022 Stock Option and Incentive Plan (as may be amended, restated or otherwise modified from time to time in accordance with its terms, the “2022 Plan”) (the “Option Repricing Proposal” or “Proposal 1”);
2. To approve a proposal to adjourn the Special Meeting to a later date, if necessary or appropriate, to permit further solicitation and vote of additional proxies in the event that there are insufficient votes for, or otherwise in connection with, the approval of the Option Repricing Proposal at the time of the Special Meeting (the “Adjournment Proposal” or “Proposal 2”); and
3. To transact such other business as may properly come before the Special Meeting or any continuations, adjournments, and postponements thereof.

The foregoing items of business are more fully described in the proxy statement (the “Proxy Statement”) accompanying this Notice of Special Meeting.

Our Board of Directors has established the close of business on July 9, 2025 as the “record date” for the Special Meeting. This means that you are entitled to notice of, and to vote at, the Special Meeting or any continuations, adjournments, and postponements thereof if our stock records show that you owned our common stock at that time. A list of stockholders entitled to vote at the Special Meeting will be available for inspection at our principal executive offices, during normal business hours, by any stockholder for any purpose germane to the Special Meeting, for a period of ten (10) days prior to the Special Meeting.

In accordance with the rules of the Securities and Exchange Commission (the “SEC”), we have elected to provide our proxy materials to our stockholders using the “full set delivery option” in connection with the Special Meeting, pursuant to Rule 14a-16(n) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”). As a result, we are delivering to our stockholders paper copies of the accompanying Proxy Statement and form of proxy card (collectively, the “Proxy Materials”) by mail. In addition to delivery of the Proxy Materials to our stockholders, we will post the Proxy Materials on a publicly accessible website and provide information to our stockholders about

[Table of Contents](#)

how to access the website. The Proxy Statement is dated July , 2025 and is first being mailed to stockholders on or about July , 2025.

Please see the “Information About the Special Meeting and Voting” section of the Proxy Statement that accompanies this notice for more details regarding the logistics of the virtual Special Meeting, including the ability of stockholders to submit questions during the Special Meeting, and technical details and support related to accessing the virtual platform. There is no physical location for the Special Meeting. You will not be able to attend the Special Meeting in person.

Your vote is important. Whether or not you plan to attend the Special Meeting virtually and vote your shares online, it is important that your shares be represented. You may vote over the Internet, via telephone or by mail. You are urged to vote in accordance with the instructions set forth in the Proxy Materials. We encourage you to vote by proxy so that your shares will be represented and voted at the Special Meeting, whether or not you can attend. You will need the 16-digit control number included on your proxy card or the instructions that accompany your proxy materials to attend the Special Meeting virtually via the Internet. Submitting your vote via the Internet or by telephone or proxy card will not affect your right to vote online during the Special Meeting. If your shares are held in “street name” (i.e., held for your account by a broker or other nominee), you will receive instructions from your broker or other nominee explaining how to vote your shares, and you will have the option to cast your vote by telephone or over the Internet if your voting instruction form from your broker or nominee includes instructions and a toll-free telephone number or Internet website to do so. In any event, to be sure that your vote will be received in time, please cast your vote by your choice of available means, at your earliest convenience.

Thank you for your continued support of Prime Medicine, Inc.

By Order of the Board of Directors,

/s/ Allan Reine

Allan Reine

Chief Executive Officer and Director

July , 2025

Cambridge, Massachusetts

[Table of Contents](#)

Table of Contents

	Page
Proxy Statement for 2025 Special Meeting of Stockholders	1
Important Information About the Special Meeting and Voting	2
Proposal 1 – Approval of the Repricing of Certain Outstanding Stock Options	8
Proposal 2 – Approval of an Adjournment of the Special Meeting	15
Security Ownership of Certain Beneficial Owners and Management	16
General Matters	20



PRIME MEDICINE, INC.

60 First Street
Cambridge, MA 02141

**PROXY STATEMENT FOR THE 2025 SPECIAL MEETING OF STOCKHOLDERS
To Be Held on August 1, 2025**

The Board of Directors of Prime Medicine, Inc. (the “Board of Directors,” “Board,” or “our Board”) is soliciting proxies from stockholders for its use at the 2025 special meeting of our stockholders (the “Special Meeting”), and at any continuation, postponement, or adjournment of that meeting. The Special Meeting is scheduled to be held on August 1, 2025, at 1:00 p.m., Eastern Time, in a virtual meeting format, which will be conducted via live webcast at www.virtualshareholdermeeting.com/PRME2025SM. In this proxy statement, “we,” “our,” “us,” the “Company,” “Prime,” “Prime Medicine,” and similar designations refer to Prime Medicine, Inc. and, where appropriate, our subsidiary. The mailing address of our principal executive offices is Prime Medicine, Inc., 60 First Street, Cambridge, MA 02141.

Please see the “Information About the Special Meeting and Voting” section of this proxy statement for more details regarding the logistics of the virtual Special Meeting, including the ability of stockholders to submit questions during the Special Meeting, and technical details and support related to accessing the virtual platform. There is no physical location for the Special Meeting. You will not be able to attend the Special Meeting in person.

All properly submitted proxies will be voted in accordance with the instructions contained in those proxies. If no instructions are specified, the proxies will be voted in accordance with the recommendation of the Board of Directors with respect to each of the matters set forth in the accompanying proxy card. You may revoke your proxy at any time before it is exercised at the meeting by giving our Corporate Secretary written notice to that effect.

On or about July , 2025, we will commence mailing this proxy statement and form of proxy card to all stockholders of record entitled to notice of, and to vote at, the Special Meeting.

**IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE 2025 SPECIAL STOCKHOLDER
MEETING TO BE HELD ON AUGUST 1, 2025**

This proxy statement and the accompanying proxy card are available for viewing, printing and downloading at www.proxyvote.com. To access these materials, please have your 16-digit control number(s) available that appears on your proxy card. Copies of the proxy materials will be mailed to all stockholders of record entitled to notice of, and to vote at, the Special Meeting, and will also be available on the website of the Securities and Exchange Commission (the “SEC”) at www.sec.gov.

INFORMATION ABOUT THE SPECIAL MEETING AND VOTING

Purposes of the Special Meeting

The purposes of the Special Meeting are:

1. To approve the repricing of certain outstanding stock options that have been granted under the Company's 2019 Stock Option and Grant Plan (as may be amended, restated or otherwise modified from time to time in accordance with its terms, the "2019 Plan") and/or the 2022 Stock Option and Incentive Plan (as may be amended, restated or otherwise modified from time to time in accordance with its terms, the "2022 Plan") (the "Option Repricing Proposal" or "Proposal 1");
2. To approve a proposal to adjourn the Special Meeting to a later date, if necessary or appropriate, to permit further solicitation and vote of additional proxies in the event that there are insufficient votes for, or otherwise in connection with, the approval of the Option Repricing Proposal at the time of the Special Meeting (the "Adjournment Proposal" or "Proposal 2"); and
3. To transact such other business as may properly come before the Special Meeting or any continuations, adjournments, and postponements thereof.

Stockholders Entitled to Vote at the Special Meeting

Our Board has established the close of business on July 9, 2025 as the "record date" for the Special Meeting. This means that you are entitled to notice of, and to vote, at the Special Meeting (and any continuations, adjournments and postponements thereof) if our records show that you owned our common stock at that time. As of the record date, _____ shares of our common stock were issued and outstanding. Each issued and outstanding share of common stock as of the record date is entitled to one vote on each matter properly to come before the Special Meeting and can be voted only if the record owner of that share, determined as of the record date, votes during the live webcast of the meeting or is represented by proxy. A list of stockholders entitled to vote at the Special Meeting will be available for inspection at the headquarters of the Company, 60 First Street, Cambridge, MA 02141, during ordinary business hours, by any stockholder for any purpose germane to the Special Meeting, for a period of ten (10) days prior to the Special Meeting.

Voting Shares That You Hold in Your Name

If you are a stockholder of record and your shares are registered directly in your name, you may vote:

- BY INTERNET (before the Special Meeting) – www.proxyvote.com. Use the Internet to transmit your voting instructions up until 11:59 p.m., Eastern Time, on July 31, 2025. Have your proxy card in hand when you access the website. Follow the steps outlined on the secured website.
- BY MAIL – Mark, sign and date your proxy card and return it in the postage-paid envelope provided. Votes submitted by mail must be received by July 31, 2025.
- BY PHONE – Use a touch-tone phone by calling 1-800-690-6903 (toll-free from the U.S., U.S. territories and Canada) to transmit your voting instructions up until 11:59 p.m., Eastern Time, on July 31, 2025. Have your proxy card in hand when you access the phone number. Follow the steps outlined on the phone line.
- VOTE DURING THE VIRTUAL MEETING – See "Attending the Special Meeting," below.

If the Special Meeting is adjourned or postponed, the deadlines above may be extended.

[Table of Contents](#)

Virtual Meeting

The Special Meeting will be a virtual meeting, which will be conducted via live webcast.

To participate in the Special Meeting virtually via the Internet, please visit www.virtualshareholdermeeting.com/PRME2025SM. You will need the 16-digit control number included on your proxy card or the instructions that accompanied your proxy materials.

If you are a beneficial owner of shares held in “street name” by your bank, brokerage firm or other nominee, you should have received a voting instruction form provided by your bank, brokerage firm or other nominee rather than from us. If you do not have your 16-digit control number and attend the meeting online, you will be able to listen to the meeting only — you will not be able to vote or submit questions during the meeting.

Attending the Special Meeting

The Special Meeting will be held entirely online at www.virtualshareholdermeeting.com/PRME2025SM. A summary of the information you need to attend the Special Meeting online is provided below:

- Instructions on how to attend and participate via the Internet, including how to demonstrate proof of common stock ownership, are posted at www.proxyvote.com.
- Please have your 16-digit control number to enter the Special Meeting.
- Stockholders may submit questions while attending the Special Meeting via the Internet. For instructions on how to do so, see below.
- The meeting webcast will begin promptly at 1:00 p.m., Eastern Time on August 1, 2025.
- We encourage you to access the meeting prior to the start time. Online check-in will begin at 12:45 p.m., Eastern Time, and you should allow ample time for the check-in procedures.

Submitting Questions at the Special Meeting

During the Special Meeting, if you have your 16-digit control number and wish to ask a question, you may do so by clicking the Q&A button on the virtual meeting platform and entering your question in the field provided in the web portal at or before the time the matters are before the Special Meeting for consideration. During the formal portion of the meeting, all questions presented should relate directly to the proposal under discussion, which will be answered before the voting is closed. To allow us to answer questions from as many stockholders as possible, we will limit each stockholder to two questions. Questions from multiple stockholders on the same topic or that are otherwise related to a particular topic may be grouped, summarized and answered together. If questions submitted are irrelevant to the business of the Special Meeting or are out of order or not otherwise suitable for the conduct of the Special Meeting as determined in our reasonable judgment, we may choose not to address them. If there are any matters of individual concern to a stockholder and not of general concern to all stockholders, or if a question posed was not otherwise answered, such matters may be raised separately after the Special Meeting.

Our Special Meeting will be governed by the Special Meeting’s Rules of Conduct, which will address the ability of stockholders to ask questions during the meeting and include rules for how questions will be recognized and addressed. Please review the Special Meeting’s Rules of Conduct for further details. The Special Meeting’s Rules of Conduct are available at www.proxyvote.com and will be available during the Special Meeting at www.virtualshareholdermeeting.com/PRME2025SM.

Technical Assistance for the Virtual Meeting

We encourage stockholders to log into the virtual Special Meeting at least fifteen (15) minutes prior to the start of the Special Meeting to test their Internet connectivity. If you encounter any technical difficulties with the virtual meeting platform on the day of the Special Meeting, please call the basic call center support number on the login screen. Technical support will be available starting at 12:45 p.m., Eastern Time on August 1, 2025 and will remain available until thirty (30) minutes after the meeting has finished.

Voting Shares That You Hold in Brokerage or Similar Accounts

Many stockholders hold their shares through a broker, bank or other nominee rather than directly in their own name. If you hold your shares in one of these ways, you are considered a beneficial owner of shares held in “street name,” not a record owner, and you therefore have no direct vote on any matter to come before the Special Meeting. Your broker, bank or other nominee will send you voting instructions for you to use in directing the broker, bank or other nominee in how to vote your shares. Your broker, bank or other nominee may allow you to deliver your voting instructions via the telephone or the Internet. Therefore, we urge you to carefully review and follow the voting instruction form and any other materials that you receive from that organization. If you hold your shares in multiple accounts, you should vote your shares as described in each set of proxy materials you receive.

A “broker non-vote” occurs when a broker, bank or other nominee holding shares for a beneficial owner does not vote the shares on a proposal because the broker, bank or other nominee does not have discretionary voting power for a particular item and has not received instructions from the beneficial owner regarding voting. The New York Stock Exchange (“NYSE”) has rules that govern brokers who have record ownership of listed company stock (including stock such as ours that is listed on The Nasdaq Global Market) held in brokerage accounts for their clients who beneficially own the shares. Under the rules of NYSE, brokers, banks or other nominees who hold shares for the accounts of their clients have discretionary authority to vote shares if specific instructions are not given with respect to “routine” matters.

Although the determination of whether a broker, bank or other nominee will have discretionary voting power for a particular item is typically determined only after proxy materials are filed with the SEC, we expect that the approval of the repricing of certain outstanding stock options that have been granted under the 2019 Plan and/or the 2022 Plan (Proposal 1) and the approval of a proposal to adjourn the Special Meeting to a later date, if necessary or appropriate, to permit further solicitation and vote of additional proxies in the event that there are insufficient votes for, or otherwise in connection with, the approval of the Option Repricing Proposal at the time of the Special Meeting (Proposal 2) will be non-routine matters. Accordingly, if you hold your shares through a broker, bank or other nominee and you do not timely provide your broker, bank or other nominee with specific instructions on how to vote your shares, your broker, bank or other nominee will not be authorized to cast a vote on your behalf on Proposal 1 (the Option Repricing Proposal) or Proposal 2 (the Adjournment Proposal). Abstentions and broker non-votes, if any, will have no effect on the outcome of Proposal 1. Assuming the presence of a quorum, abstentions and broker non-votes, if any, will have no effect on the outcome of Proposal 2. In the absence of a quorum, abstentions and broker non-votes, if any, will have the same effect as a vote “against” Proposal 2. Because Proposal 1 and Proposal 2 are non-routine matters for which brokers, banks or other nominees do not have discretionary voting power, broker non-votes are not expected to exist with respect to these proposals.

Your Voting Options on Each of the Proposals

The approval of the repricing of certain outstanding stock options that have been granted under the 2019 Plan and/or the 2022 Plan (Proposal 1) requires the affirmative vote of a majority of the votes properly cast at the Special Meeting for such matter. You may vote “for,” “against” or “abstain” with respect to Proposal 1. Abstentions and broker non-votes, if any, will have no effect on the outcome of the vote on this proposal.

The approval of a proposal to adjourn the Special Meeting to a later date, if necessary or appropriate, to permit further solicitation and vote of additional proxies in the event that there are insufficient votes for, or otherwise in connection with, the approval of the Option Repricing Proposal at the time of the Special Meeting (Proposal 2) requires the affirmative vote of a majority of the votes properly cast at the Special Meeting for such matter; provided, that in the absence of a quorum, the affirmative vote of a majority of the voting power present in person or by proxy at the Special Meeting and entitled to vote thereon is required for such matter. You may vote “for,” “against” or “abstain” with respect to Proposal 2. Assuming the presence of a quorum, abstentions and broker non-votes, if any, will have no effect on the outcome of the vote on this proposal. In the absence of a quorum, abstentions and broker non-votes, if any, will have the same effect as a vote “against” Proposal 2. If any other matter is presented at the Special Meeting, your proxy provides that your shares will be voted by the proxy holder named in the proxy card in accordance with his or her best judgement. At the time this proxy statement was first made available, we knew of no matters that needed to be acted on at the Special Meeting, other than those discussed in this proxy statement.

Our Board’s Voting Recommendations

Our Board recommends that you vote:

- “**FOR**” the approval of the repricing of certain outstanding stock options that have been granted under the 2019 Plan and/or the 2022 Plan (Proposal 1); and
- “**FOR**” the approval of a proposal to adjourn the Special Meeting to a later date, if necessary or appropriate, to permit further solicitation and vote of additional proxies in the event that there are insufficient votes for, or otherwise in connection with, the approval of the Option Repricing Proposal at the time of the Special Meeting (Proposal 2).

If any other matter is properly brought before the Special Meeting, the Company – through the individuals named in the Company’s proxy card and acting as the “proxy holder,” or his or her designee, and pursuant to the blanket authorization granted under the proxy – will vote your shares on that matter in accordance with the discretion and judgment of the proxy holder.

Required Votes to Approve Each Proposal

As a stockholder, you are entitled to cast one vote per share for the proposal to approve: (i) the repricing of certain outstanding stock options that have been granted under the 2019 Plan and/or the 2022 Plan (Proposal 1); and (ii) a proposal to adjourn the Special Meeting to a later date, if necessary or appropriate, to permit further solicitation and vote of additional proxies in the event that there are insufficient votes for, or otherwise in connection with, the approval of the Option Repricing Proposal at the time of the Special Meeting (Proposal 2), but you may not cumulate your votes (in other words, you may not cast votes representing two times the number of your shares entitled to vote on each such proposal).

[Table of Contents](#)

The following table summarizes the minimum vote needed to approve each proposal and the effect of abstentions and broker non-votes, if any:

Proposal	Voting Options	Board Recommends	Vote Required	Effect of Abstentions	Effect of Broker Non-Votes
Proposal 1: Option Repricing Proposal	FOR AGAINST ABSTAIN	FOR	Majority of votes properly cast.	Abstentions will have no effect in determining the outcome of the proposal.	Broker non-votes (if any) will have no effect in determining the outcome of the proposal.
Proposal 2: Adjournment Proposal	FOR AGAINST ABSTAIN	FOR	In the presence of a quorum, majority of votes properly cast. In the absence of a quorum, majority of the voting power present in person or by proxy at the Special Meeting and entitled to vote thereon.	In the presence of a quorum, abstentions will have no effect in determining the outcome of the proposal. In the absence of a quorum, abstentions will have the same effect as a vote "against."	In the presence of a quorum, broker non-votes (if any) will have no effect in determining the outcome of the proposal. In the absence of a quorum, broker non-votes (if any) will have the same effect as a vote "against."

Quorum

Our second amended and restated bylaws (our "bylaws") provide that the presence, in person or by remote communication, if applicable, or represented by proxy, of holders of at least a majority in voting power of the total number of outstanding shares entitled to vote is necessary to constitute a quorum for the transaction of business at the Special Meeting. Shares present virtually during the Special Meeting will be considered shares of common stock represented in person at the Special Meeting. Abstentions and broker non-votes, if any, will be counted for purposes of determining whether a quorum is present for the transaction of business at the Special Meeting.

If a quorum is not present, then under our bylaws, (1) the chair or presiding officer of the Special Meeting or (2) the holders of voting stock representing a majority of the voting power present in person or by proxy at the Special Meeting and entitled to vote thereon, may adjourn the Special Meeting until a quorum is present or represented. Notice need not be given of the adjourned meeting if the time, place, if any, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present virtually and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken. However, our bylaws provide that if any such adjournment is for more than thirty (30) days, or if after an adjournment a new record date

[Table of Contents](#)

for determining stockholders entitled to vote is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the adjourned meeting.

Voting on Possible Other Matters

We do not know of any other matters that may be presented for action at the Special Meeting. Should any other business come before the Special Meeting, the persons named on the Company's proxy card will have discretionary authority to vote the shares represented by such proxies. If you hold shares through a broker, bank or other nominee as described above, they will not be able to vote your shares on any other business that comes before the Special Meeting unless they receive instructions from you with respect to such matter.

Revocation of Proxies or Voting Instructions

A stockholder of record who has delivered a proxy card in response to this solicitation may revoke it before it is exercised at the Special Meeting by executing and delivering a timely and valid later-dated proxy, by a timely and valid later Internet or telephone vote, by voting during the Special Meeting or by giving written notice revoking the proxy or submitting another duly executed proxy card bearing a later date to our Corporate Secretary. Any written notice of revocation or subsequent proxy card must be received by our Corporate Secretary prior to the taking of the vote at the Special Meeting. Such written notice of revocation or subsequent proxy card should be hand delivered to our Corporate Secretary or sent to our principal executive offices at Prime Medicine, Inc., 60 First Street, Cambridge, MA 02141, Attention: Corporate Secretary. Attendance at the Special Meeting online will not have the effect of revoking a proxy unless a stockholder gives proper written notice of revocation to our Corporate Secretary before the proxy is exercised or the stockholder votes at the Special Meeting. Beneficial owners who have directed their broker, bank or other nominee as to how to vote their shares should contact their broker, bank or other nominee for instructions as to how they may revoke or change those voting directions.

Solicitation of Proxies

Our Board is making this solicitation of proxies for our Special Meeting. We will bear all costs of such solicitation, including the cost of preparing and distributing this proxy statement and the enclosed form of proxy card and including the cost of hosting the virtual Special Meeting. After the initial distribution of this proxy statement, proxies may be solicited by mail, telephone or personally by directors, officers, employees or agents of the Company. Brokerage houses and other custodians, nominees and fiduciaries will be requested to forward soliciting materials to beneficial owners of shares held by them for the accounts of beneficial owners, and we will pay their reasonable out-of-pocket expenses.

Special Meeting Voting Results

We plan to announce preliminary voting results at the Special Meeting and will publish final results in a Current Report on Form 8-K (a "Form 8-K") to be filed with the SEC within four (4) business days following the Special Meeting. If final voting results are not available to us in time to file a Form 8-K within four (4) business days after the Special Meeting, we intend to file a Form 8-K to publish preliminary results and, within four (4) business days after the final results are known to us, file an amendment to the Form 8-K to publish the final results.

PROPOSAL 1— APPROVAL OF REPRICING OF CERTAIN OUTSTANDING STOCK OPTIONS

Overview

We are seeking stockholder approval of a proposed one-time repricing (the “Option Repricing”) of certain outstanding stock options granted to, and held by, certain of our current employees, including our executive officers, and members of the Board through the Repricing Date (as defined below) (collectively, the “Eligible Optionholders”), under our 2019 Stock Option and Grant Plan (as may be amended, restated or otherwise modified from time to time in accordance with its terms, the “2019 Plan”) and 2022 Stock Option and Incentive Plan (as may be amended, restated or otherwise modified from time to time in accordance with its terms, the “2022 Plan” and, together with the 2019 Plan, the “Plans”), that have exercise prices in excess of the Repriced Exercise Price (as defined below), covering up to an aggregate of 8,285,387 shares of our common stock (such options, the “Eligible Options”). The Eligible Options were granted from August 4, 2021 through March 1, 2025, and currently have per share exercise prices between \$2.52 and \$18.22. Each holder of an Eligible Option must continue to be an employee of the Company or a member of the Board, as applicable, through the Repricing Date in order to participate in the Option Repricing. For the avoidance of doubt, options held by Eligible Optionholders that have a per share exercise price that is below the Repriced Exercise Price will not be considered Eligible Options and will not be impacted by the Option Repricing in any manner. Except as modified by the Option Repricing, all other terms and conditions of the Eligible Options, including, without limitation, any provisions with respect to vesting and term of the options, will remain in full force and effect.

On June 22, 2025, the Board approved, upon the recommendation of the Compensation Committee of the Board (the “Compensation Committee”), subject to the approval of the stockholders at the Special Meeting, the Option Repricing. If approved by the stockholders at the Special Meeting, effective as of the Repricing Date, the per share exercise price of each Eligible Option held by an Eligible Optionholder who is an employee of the Company or a member of the Board on the Repricing Date, as applicable, will automatically be reduced to the greater of (i) \$2.42 per share of our common stock, which was the exercise price per share of the annual option grants made by the Company to employees in March 2025 and (ii) the closing trading price per share of our common stock on The Nasdaq Global Market on the effective date of approval by the stockholders of the Company at the Special Meeting (such date, the “Repricing Date,” and such exercise price per share of our common stock, the “Repriced Exercise Price”) without any action on the part of the Eligible Optionholders; provided, however, that an Eligible Option will revert to its original exercise price per share (the “Original Price”) if (i) such Eligible Option is exercised prior to the applicable Retention Date (as defined below), which shall be (x) the one-year anniversary of the Repricing Date for Eligible Options held by employees who are not executive officers of the Company on the Repricing Date or (y) the 18-month anniversary of the Repricing Date for Eligible Options held by individuals who are members of the Board or executive officers of the Company, as applicable, on the Repricing Date (each, a “Retention Date”), (ii) an Eligible Optionholder’s Service Relationship (as defined in the 2022 Plan or 2019 Plan, as applicable) is terminated by the Company for Cause (as defined in the applicable award agreement) prior to the applicable Retention Date, or (iii) an Eligible Optionholder resigns from the Company (including as a member of the Board) for any reason prior to the applicable Retention Date (provided that, for any Eligible Optionholder party to an employment agreement, offer letter or severance plan or policy pursuant to which such Eligible Optionholder is entitled to “good reason” protection, such Eligible Optionholder shall retain the Repriced Exercise Price if such Eligible Optionholder resigns for “good reason”). Notwithstanding the foregoing, in the event of (A) a Sale Event (as defined in the 2022 Plan or 2019 Plan, as applicable) prior to the applicable Retention Date, (B) the termination of the Eligible Optionholder’s Service Relationship by the Company without Cause or for “good reason” (as applicable) or (iii) the Eligible Optionholder’s death or disability (as determined in accordance with the 2022 Plan or 2019 Plan, as applicable),

[Table of Contents](#)

each Eligible Option shall retain the Repriced Exercise Price to the extent it has not otherwise reverted to the Original Price in accordance with the foregoing and the ability to exercise such Eligible Option may be accelerated to earlier than the applicable Retention Date.

The Board believes that the Option Repricing is in the best interests of the Company and its stockholders, as it provides incentives to retain and motivate the Eligible Optionholders without incurring the stock dilution that would result from significant additional equity grants or additional cash expenditures that would result from additional cash compensation. Additionally, the Board continues to believe in value creation rather than value transfer and views the Option Repricing as consistent with its approach of orienting long-term incentives toward stock options as the primary tool to minimize incremental dilution for stockholders, facilitate employee and director retention as the Company pursues its business strategy, restore the retention value of the Eligible Options, and provide Eligible Optionholders with a more realistic incentive to drive stockholder value creation, thereby supporting the Company's continued focus on stock price recovery and growth.

If Proposal 1 is not approved by our stockholders, then we will not implement the Option Repricing. However, we may need to consider alternative compensation structures to achieve the objectives for which the Option Repricing was designed.

Determination to Pursue the Option Repricing

Our compensation program is designed to align with the interests of our stockholders by reflecting a pay-for-performance philosophy that supports our business strategy. A core principle of this program is our commitment to long-term equity incentive compensation, which ensures that our employees, executive officers, and directors all participate in the Company's long-term value creation alongside our stockholders. We have historically granted stock options under the Plans consistent with the view that stock-based incentive compensation opportunities play a significant role in our ability to attract, motivate and retain qualified individuals who we believe best represent our Company values and can make meaningful contributions towards achieving our purpose of delivering a new class of differentiated one-time curative genetic therapies to address the widest spectrum of diseases by deploying our Prime Editing technology. While our compensation packages generally include a number of different components, we believe that long-term equity compensation provides our employees, executive officers and members of our Board with a strong link to our long-term performance and helps create an ownership culture by encouraging them to work toward our success, aligning their interests with those of our stockholders, and rewarding efforts that drive sustained increases in stockholder value. Given the intense competition for experienced and talented individuals with critical and high demand skills in our industry, stock options remain an important part of our incentive compensation.

In considering whether to implement the Option Repricing, the Board determined that adverse changes in the market price of our common stock since the Eligible Options were granted could materially interfere with our efforts to retain the services of the Eligible Optionholders. 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, often unrelated or disproportionate to changes in the operating performance of the affected companies. As a biotechnology company, the market price of our common stock has historically been volatile, reflecting the risks and uncertainties inherent in the development of product candidates. Since 2024, the market price of our common stock has experienced material fluctuations and declined from a high of approximately \$9.39 on February 27, 2024 to a low of approximately \$1.15 on April 8, 2025. As a result, our Eligible Optionholders now hold options with exercise prices meaningfully above the recent trading range of our common stock (often referred to as "underwater" or

[Table of Contents](#)

“out-of-the-money”), rendering the options a less effective means of incentivizing and retaining such holders, as shown in the table below.

	Range of Exercise Prices of Eligible Options	Number of Shares Underlying Eligible Options ⁽¹⁾	Fair Market Value of Common Stock Per Share as of June 30, 2025 ⁽²⁾	% Over Fair Market Value of Common Stock Per Share as of June 30, 2025
Current non-executive officer employees	\$3.45 - \$18.22	3,900,066	\$2.47	39.68% - 637.65%
Current executive officers	\$3.67 - \$18.22	3,426,401	\$2.47	48.58% - 637.65%
Current non-employee directors	\$7.68 - \$17.00	958,920	\$2.47	210.93% - 588.26%

(1) Excludes the number of shares underlying certain outstanding stock options granted under the Plans that will cease to be Eligible Options as of the Repricing Date due to the previously scheduled departures of certain employees.

(2) Fair market value is based on the closing price per share of our common stock on The Nasdaq Global Market on June 30, 2025.

We also recently announced a strategic restructuring, including the deprioritization of our Chronic Granulomatous Disease programs, as well as a cost and workforce reduction to focus on our liver franchise and programs funded through external partnerships, placing additional pressure on the retention of our Eligible Optionholders. Although we continue to believe that stock options are an important component of the Company’s compensation program, underwater options may be perceived by their holders as having little or no incentive or retention value due to the disparity between the exercise prices and the current stock price. The Board believes that the Option Repricing is in the best interests of the Company and its stockholders, not only to restore the incentive and retentive value of the Eligible Options, but also to improve morale among our employees and directors to ensure alignment and motivation to execute on the Company’s reprioritized strategy, drive value for our stockholders, and share in that value going forward.

Prior to approving the Option Repricing, the Board reviewed and considered an analysis prepared by Alpine Rewards, LLC (“Alpine”), the Compensation Committee’s independent compensation consultant, and presented to the Board, as well as several alternatives to the Option Repricing. These alternatives included:

- Extending an offer to exchange underwater options for another form of equity compensation. However, any exchange proposal would have required compliance with the SEC’s tender offer rules and result in additional costs, complexities and burdens on our resources.
- Granting additional options or other types of equity awards. However, this would result in increasing our overhang of outstanding equity awards, and we believe that adjusting already outstanding options can realign the interests of the Eligible Optionholders with those of our stockholders in a less dilutive manner that would better serve the interests of our stockholders.

Table of Contents

- Waiting out the volatility in anticipation of future clinical results and stock price appreciation. However, we are concerned that if we do not improve the Eligible Optionholders' prospects of receiving long-term value from their options, we will undermine their long-term commitment to the Company and jeopardize our ability to retain the Eligible Optionholders whose knowledge, skills, and performance are critical to our success in the extremely competitive biotechnology industry, especially during a period when retention is essential as the Company continues to execute on its reprioritized strategy. We will also forgo an opportunity better to align their interests with the interests of our stockholders.
- Increase cash compensation. However, significant increases in cash compensation would substantially increase our compensation expenses and reduce our cash on hand, which could adversely affect our business and operating results.

The Board ultimately determined that the Option Repricing would be the most effective tool in obtaining our objective of realigning interests of the Eligible Optionholders with those of our stockholders because it provides a direct and straightforward means of resetting the incentive value of the Eligible Options.

Specifics of the Option Repricing

If approved by the stockholders at the Special Meeting, effective as of the Repricing Date, the per share exercise price of each Eligible Option held by an Eligible Optionholder who is an employee of the Company or a member of the Board, as applicable, through the Repricing Date will automatically be reduced to the Repriced Exercise Price; provided, however, that an Eligible Option will revert to its Original Price if (i) such Eligible Option is exercised prior to the applicable Retention Date, (ii) an Eligible Optionholder's Service Relationship is terminated by the Company for Cause prior to the applicable Retention Date, or (iii) an Eligible Optionholder resigns from the Company (including as a member of the Board) for any reason prior to the applicable Retention Date (provided that, for any Eligible Optionholder party to an employment agreement, offer letter or severance plan or policy pursuant to which such Eligible Optionholder is entitled to "good reason" protection, such Eligible Optionholder shall retain the Repriced Exercise Price if such Eligible Optionholder resigns for "good reason"). Notwithstanding the foregoing, in the event of (A) a Sale Event (as defined in the 2022 Plan or 2019 Plan, as applicable) prior to the applicable Retention Date, (B) the termination of the Eligible Optionholder's Service Relationship by the Company without Cause or for "good reason" (as applicable) or (C) the Eligible Optionholder's death or disability (as determined in accordance with the 2022 Plan or 2019 Plan, as applicable), each Eligible Option shall retain the Repriced Exercise Price to the extent it has not otherwise reverted to the Original Price in accordance with the foregoing and the ability to exercise such Eligible Option may be accelerated to earlier than the applicable Retention Date.

Except for the reduction in the exercise price of the Eligible Options, the Option Repricing will have no other impact on the Eligible Options and all outstanding stock options under the Plans will continue to remain outstanding in accordance with the current terms and conditions set forth in the Plans and the applicable award agreements, including without limitation, any provisions with respect to vesting and term of the options.

[Table of Contents](#)

The following table provides information as of June 30, 2025 regarding the Eligible Options, but excludes the number of shares underlying certain outstanding stock options granted under the Plans that will cease to be Eligible Options as of the Repricing Date due to the previously scheduled departures of certain employees. The closing price of our common stock on The Nasdaq Global Market on that date was \$2.47 per share.

	Range of Exercise Prices of Eligible Options	Number of Shares Underlying Eligible Options	Weighted Average Exercise Prices of Eligible Options	Weighted Average Remaining Term of Eligible Options (Years)
Current non-executive officer employees	\$3.45 - \$18.22	3,900,066	\$9.14	7.85
Current executive officers	\$3.67 - \$18.22	3,426,401	\$8.10	7.70
Current non-employee directors	\$7.68 - \$17.00	958,920	\$10.67	8.38

Eligible Options

Certain of our current employees (including our named executive officers) and non-employee directors hold Eligible Options that would potentially benefit from the Option Repricing, in each case subject to the terms and conditions described above under “Specifics of the Option Repricing.” The following table sets forth, with respect to the individuals and groups identified therein, the number of shares subject to Eligible Options and the weighted average exercise price of the Eligible Options, in each case, as of June 30, 2025, but excludes the number of shares underlying certain outstanding stock options granted under the Plans that will cease to be Eligible Options as of the Repricing Date due to the previously scheduled departures of certain employees.

Name and Position	Number of Shares Subject to Eligible Options	Weighted Average Exercise Price of Eligible Options
Named Executive Officers		
Allan Reine, M.D. ⁽¹⁾ <i>Chief Executive Officer and Director</i>	850,000	\$6.80
Jeremy Duffield, M.D. Ph.D., FRCP <i>Chief Scientific Officer</i>	378,073	\$10.11
Keith Gottesdiener, M.D. ⁽²⁾ <i>Former President, Chief Executive Officer and Director</i>	-	-
All current executive officers, as a group (5 persons)	2,198,328	\$8.25
All current non-employee directors, as a group (7 persons)	958,920	\$10.67
All current non-executive officer employees, as a group (149 persons)	3,900,066	\$9.14

[Table of Contents](#)

(1) Dr. Reine was appointed Chief Executive Officer and director of the Company, effective May 19, 2025.

(2) Dr. Gottesdiener resigned as President, Chief Executive Officer and director of the Company, in each case effective May 18, 2025, and will not be eligible to participate in the Option Repricing.

Interests of Certain Persons in the Option Repricing

In considering the Board's recommendation with respect to the approval of the Option Repricing, stockholders should be aware that, as discussed above, certain of our current employees, including our executive officers, and members of the Board hold Eligible Options that will be repriced if the proposal is approved at the Special Meeting. The Board acknowledges that approval of this proposal may benefit our employees, directors, and their respective successors.

Accounting Treatment of the Option Repricing

We have adopted the provisions of Financial Accounting Standards Board Accounting Standards Codification Topic 718 ("FASB ASC Topic 718") regarding accounting for share-based payments. Under FASB ASC Topic 718, we will recognize the original grant date fair value plus the incremental fair value resulting from the modification as compensation. The incremental compensation cost will be measured as the excess, if any, of the fair value of the repriced Eligible Options immediately following the Option Repricing over the fair value of the Eligible Options immediately prior to the Option Repricing.

Certain U.S. Federal Income Tax Consequences

The following is a general summary as of this date of the federal income tax consequences to us and to U.S. participants for options granted under the Plans. The federal tax laws may change and the tax consequences for any participant will depend upon his or her individual circumstances. Tax consequences for any particular individual may be different. This summary does not purport to be complete, and does not discuss state, local or non-U.S. tax consequences.

Incentive Stock Options

For income tax purposes, the repricing of an Eligible Option that is an incentive stock option ("ISO") is treated as a new option granted as of the Repricing Date and certain options previously denominated as ISOs may be converted to non-qualified stock options as a result of the Option Repricing.

The grant (including the deemed grant as a result of the repricing) or exercise of an ISO under the Plans is not expected to result in any federal income tax consequences to the participant or to the Company. However, the amount by which the fair market value of the shares at the time of exercise exceeds the exercise price will be an "item of adjustment" for participants for purposes of the alternative minimum tax, unless the shares are sold or otherwise disposed of in the same year the ISO is exercised. Gain realized by participants on the sale of shares underlying an ISO is taxable at capital gains rates, and no tax deduction is available to the Company, unless the participant disposes of the shares within (i) two years after the date of grant of the option or (ii) within one year of the date the shares were transferred to the participant. If the shares are sold or otherwise disposed of before the end of the one-year and two-year periods specified above, the difference between the option exercise price and the fair market value of the shares on the date of the option's exercise (or the date of sale, if less) will be taxed at ordinary income rates, and the Company will be entitled to a deduction to the extent that the participant recognizes ordinary income.

[Table of Contents](#)

Non-Qualified Stock Options

The grant or repricing of a non-qualified stock option under the Plans is not expected to result in any federal income tax consequences to the participant or to the Company. Generally, upon exercise of a non-qualified stock option, the participant will realize ordinary income, and the Company will be entitled to a tax deduction, in an amount equal to the difference between the option exercise price and the fair market value of the shares at the time of exercise.

Tax Effect for the Company

We generally will be entitled to a tax deduction in connection with the Option Repricing in an amount equal to the ordinary income realized by the holder at the time the holder recognizes such income (for example, the exercise of a non-qualified stock option). We will generally not be entitled to a tax deduction in the case of an ISO for which there is a qualifying disposition following exercise. Special rules limit the deductibility of compensation paid to our Chief Executive Officer and other “covered employees” within the meaning of Section 162(m) of the Internal Revenue Code of 1986, as amended (the “Code”). Under Code Section 162(m), the annual compensation paid to any of these specified service providers will be deductible only to the extent that it does not exceed \$1,000,000.

Financial Statements

Our financial statements and other information required by Item 13(a) are incorporated by reference from our Annual Report on Form 10-K for the fiscal year ended December 31, 2024, filed with the SEC on February 28, 2025.

Required Vote of Stockholders

The approval of Proposal 1 requires the affirmative vote of a majority of the votes properly cast at the Special Meeting for such matter. You may vote “for,” “against” or “abstain” with respect to Proposal 1. Abstentions and broker non-votes, if any, will have no effect on the outcome of the vote on this proposal.

THE BOARD OF DIRECTORS RECOMMENDS THAT STOCKHOLDERS VOTE “FOR” THE PROPOSAL TO APPROVE THE REPRICING OF CERTAIN OUTSTANDING STOCK OPTIONS THAT HAVE BEEN GRANTED UNDER THE 2019 PLAN AND/OR THE 2022 PLAN, AND PROXIES SOLICITED BY OUR BOARD WILL BE VOTED IN FAVOR THEREOF, UNLESS A STOCKHOLDER HAS INDICATED OTHERWISE ON THE PROXY.

(PROPOSAL 1 ON YOUR PROXY CARD)

PROPOSAL 2—APPROVAL OF AN ADJOURNMENT OF THE SPECIAL MEETING

If the Special Meeting is convened and a quorum is present, but the Company fails to receive a sufficient number of votes to approve the Option Repricing Proposal (Proposal 1) at the Special Meeting, or if there is an insufficient number of votes to constitute a quorum, the Company may propose to adjourn or postpone the Special Meeting in order to enable us to solicit additional proxies in favor of the adoption of such proposal. The Company currently does not intend to propose an adjournment or postponement at the Special Meeting if there are sufficient votes at the Special Meeting to approve Proposal 1.

In this proposal, we are asking our stockholders to authorize the holder of any proxy solicited by the Board to vote in favor of adjourning the Special Meeting to another time and place, if necessary or appropriate (as determined in good faith by the Board), to solicit additional proxies in the event there are not sufficient votes at the Special Meeting to approve Proposal 1. If our stockholders approve this proposal, we could adjourn the Special Meeting, and any adjourned or postponed session of the Special Meeting, to use the additional time to solicit additional proxies in favor of Proposal 1, including the solicitation of proxies from our stockholders that have previously voted.

Among other things, approval of Proposal 2 could mean that, even if we had received proxies representing a sufficient number of votes against Proposal 1 to defeat the proposal, we could adjourn the Special Meeting without a vote on Proposal 1 and use the additional time to solicit the holders of those shares to change their votes to vote in favor of Proposal 1.

If it is necessary or appropriate (as determined in good faith by the Board) to adjourn the Special Meeting, no notice of the adjourned meeting is required to be given to our stockholders, other than an announcement at the Special Meeting of the time and place to which the Special Meeting is adjourned, so long as the meeting is adjourned for thirty (30) days or less and no new record date is fixed for the adjourned meeting. At the adjourned meeting, we may transact any business which might have been transacted at the original meeting.

Required Vote of Stockholders

The approval of Proposal 2 requires the affirmative vote of a majority of the votes properly cast at the Special Meeting for such matter; provided, that in the absence of a quorum, the affirmative vote of a majority of the voting power present in person or by proxy at the Special Meeting and entitled to vote thereon is required for such matter. You may vote “for,” “against” or “abstain” with respect to Proposal 2. In the presence of a quorum, abstentions and broker non-votes, if any, will have no effect on the outcome of the vote on this proposal. In the absence of a quorum, abstentions and broker non-votes, if any, will have the same effect as a vote “against.”

THE BOARD OF DIRECTORS RECOMMENDS THAT STOCKHOLDERS VOTE “FOR” THE PROPOSAL TO ADJOURN THE SPECIAL MEETING TO A LATER DATE, IF NECESSARY OR APPROPRIATE, TO PERMIT FURTHER SOLICITATION AND VOTE OF ADDITIONAL PROXIES IN THE EVENT THAT THERE ARE INSUFFICIENT VOTES FOR, OR OTHERWISE IN CONNECTION WITH, THE APPROVAL OF THE OPTION REPRICING PROPOSAL AT THE TIME OF THE SPECIAL MEETING, AND PROXIES SOLICITED BY OUR BOARD WILL BE VOTED IN FAVOR THEREOF, UNLESS A STOCKHOLDER HAS INDICATED OTHERWISE ON THE PROXY.

(PROPOSAL 2 ON YOUR PROXY CARD).

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information, as of June 30, 2025, unless otherwise indicated, regarding the beneficial ownership of our common stock for (i) stockholders who beneficially owned more than 5% of our common stock, (ii) each of our directors and named executive officers, and (iii) all of our directors and executive officers as a group.

The number of shares beneficially owned by each stockholder is determined under rules issued by the SEC. Under these rules, a person is deemed to be a “beneficial” owner of a security if that person has or shares voting power or investment power, which includes the power to dispose of or to direct the disposition of such security. Except as indicated in the footnotes below, we believe, based on the information furnished to us, that the individuals and entities named in the table below have sole voting and investment power with respect to all shares of common stock beneficially owned by them, subject to any applicable community property laws.

In computing the number of shares beneficially owned by an individual or entity, shares of common stock subject to options, warrants, restricted stock units or other rights held by such person that are currently exercisable or have vested or that will become exercisable or will have vested within 60 days of June 30, 2025 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person. On June 30, 2025, there were 134,494,438 shares of our common stock outstanding. Unless noted otherwise, the address of all listed stockholders is c/o Prime Medicine, Inc., 60 First Street, Cambridge, MA 02141.

	Shares of Common Stock Beneficially Owned	Percentage of Shares Beneficially Owned
5% or Greater Stockholders		
David Liu ⁽¹⁾	20,334,460	15.12%
Entities affiliated with ARCH Venture Partners ⁽²⁾	15,456,594	11.49%
Entities affiliated with GV ⁽³⁾	15,062,498	11.20%
Bristol-Myers Squibb Company ⁽⁴⁾	11,006,163	8.18%
FMR, LLC ⁽⁵⁾	7,726,649	5.74%
Newpath Partners, L.P. ⁽⁶⁾	6,105,679	4.54%
Directors and Named Executive Officers		
Allan Reine, M.D. ⁽⁷⁾	646,875	*
Jeremy Duffield, M.D. Ph.D., FRCP ⁽⁸⁾	1,188,241	*
Keith Gottesdiener, M.D. ⁽⁹⁾	5,172,205	3.85%
Thomas Cahill, M.D., Ph.D. ⁽⁶⁾⁽¹⁰⁾	6,189,741	4.60%
Wendy Chung, M.D., Ph.D. ⁽¹¹⁾	103,576	*
Kaye Foster ⁽¹¹⁾	103,576	*
Michael Kelly ⁽¹¹⁾	103,576	*
Jeffrey Marrazzo ⁽¹¹⁾	418,833	*
Robert Nelsen ⁽²⁾⁽¹²⁾	15,556,736	11.57%
David Schenkein, M.D. ⁽¹¹⁾	84,062	*
All executive officers and directors as a group (11 persons)	30,578,893	22.74%

Table of Contents

* Less than one percent.

(1) Consists of: (a) 20,240,945 shares of common stock, and (b) 93,515 shares of common stock underlying options exercisable within 60 days of June 30, 2025.

(2) Information herein is based on Schedule 13D/A filed with the SEC on November 22, 2024 by (1) ARCH Venture Fund X, L.P. (“AVF X”), (2) ARCH Venture Partners X, L.P. (“AVP X LP”), which is the sole general partner of AVF X, (3) ARCH Venture Partners X, LLC (“AVP X LLC”), which is the sole general partner of AVP X LP and AVP X Overage LP (defined below), (4) ARCH Venture Fund X Overage, L.P. (“AVF X Overage”), (5) ARCH Venture Partners X Overage, L.P. (“AVP X Overage LP”), which is the sole general partner of AVF X Overage, (6) ARCH Venture Fund XII, L.P. (“AVF XII”), (7) ARCH Venture Partners XII, L.P. (“AVP XII LP”) which is the sole general partner of AVF XII, (8) ARCH Venture Partners XII, LLC (“AVP XII LLC”) which is the sole general partner of AVP XII LP, (9) Keith Crandell (“Crandell”), (10) Robert Nelsen (“Nelsen”), a member of our board of directors, (11) Kristina Burow (“Burow”), and (12) Steven Gillis (“Gillis”, and together with Nelsen, Crandell and Burow, referred to individually as “Committee Member” or collectively as either the “AVP X Investment Committee Members” or the “AVP XII Investment Committee Members”). Each of the individuals and entities above shall be referred to herein as an “ARCH Reporting Person” and collectively as the “ARCH Reporting Persons.” AVP X LP and AVP X Overage LP may be deemed to beneficially own the shares held by AVF X and AVF X Overage, respectively; AVP X LLC may be deemed to beneficially own the shares held by AVF X; AVP XII LP may be deemed to beneficially own the shares held by AVF XII; AVP XII LLC may be deemed to beneficially own the shares held by AVF XII; and each of the Committee Members may be deemed to share the power to direct the disposition and vote of the shares held by AVF X, AVF X Overage and AVF XII. The ARCH Reporting Persons each disclaims beneficial ownership except to any pecuniary interest therein.

Consists of: (a) 6,128,297 shares of common stock held by AVF X, (b) 6,128,297 shares of common stock held by AVF X Overage, and (c) 3,200,000 shares of common stock held by AVF XII.

The address of all entities and individuals referenced in this footnote is 8755 W. Higgins Road, Suite 1025, Chicago, IL 60631.

(3) Information herein is based on Schedule 13G/A filed with the SEC on February 29, 2024 by GV 2019, L.P., GV 2019 GP, L.P., GV 2019 GP, L.L.C., GV 2021, L.P., GV 2021 GP, L.P., GV 2021 GP, L.L.C., GV 2023, L.P., GV 2023 GP, L.P., GV 2023 GP, L.L.C., Alphabet Holdings LLC, XXVI Holdings Inc. and Alphabet Inc. Consists of: (a) 10,100,058 shares of common stock held by GV 2019, L.P., or GV 2019, (b) 1,762,440 shares of common stock held by GV 2021, L.P., or GV 2021, and (c) 3,200,000 shares of common stock held by GV 2023, L.P., or GV 2023.

The general partner of the GV 2019, L.P. (the “2019 Partnership”) is GV 2019 GP, L.P. (“2019 GP”). The general partner of 2019 GP is GV 2019 GP, L.L.C. (“2019 LLC”). The sole member of 2019 LLC is Alphabet Holdings LLC (“Alphabet Holdings”). The sole member of Alphabet Holdings is XXVI Holdings Inc. (“XXVI”). The controlling stockholder of XXVI is Alphabet Inc. (Alphabet Inc., together with 2019 GP, 2019 LLC, Alphabet Holdings, and XXVI may be collectively referred to as the “2019 Partnership Affiliates”). Each of the 2019 Partnership Affiliates may be deemed to indirectly beneficially own (as that term is defined in Rule 13d-3 of the Exchange Act) the securities directly beneficially owned by the 2019 Partnership.

The general partner of the GV 2021, L.P. (the “2021 Partnership”) is GV 2021 GP, L.P. (“2021 GP”). The general partner of 2021 GP is GV 2021 GP, L.L.C. (“2021 LLC”). The sole member of 2021 LLC is Alphabet

Table of Contents

Holdings. The sole member of Alphabet Holdings is XXVI. The controlling stockholder of XXVI is Alphabet Inc. (Alphabet Inc., together with 2021 GP, 2021 LLC, Alphabet Holdings, and XXVI may be referred to as the “2021 Partnership Affiliates”). Each of the 2021 Partnership Affiliates may be deemed to indirectly beneficially own (as that term is defined in Rule 13d-3 of the Exchange Act) the securities directly beneficially owned by the 2021 Partnership.

The general partner of the GV 2023, L.P. (the “2023 Partnership”) is GV 2023 GP, L.P. (“2023 GP”). The general partner of 2023 GP is GV 2023 GP, L.L.C. (“2023 LLC”). The sole member of 2023 LLC is Alphabet Holdings. The sole member of Alphabet Holdings is XXVI. The controlling stockholder of XXVI is Alphabet Inc. (Alphabet Inc., together with 2023 GP, 2023 LLC, Alphabet Holdings, and XXVI may be referred to as the “2023 Partnership Affiliates”). Each of the 2023 Partnership Affiliates may be deemed to indirectly beneficially own (as that term is defined in Rule 13d-3 of the Exchange Act) the securities directly beneficially owned by the 2023 Partnership.

The principal business address for all entities referenced in this footnote is 1600 Amphitheatre Parkway, Mountain View, CA 94043.

- (4) Information herein is based on Schedule 13G filed with the SEC on October 4, 2024 by Bristol-Myers Squibb Company. The address of Bristol-Myers Squibb Company is Route 206 & Province Line Road, Princeton, NJ 08543.
- (5) Information herein is based on Schedule 13G/A filed with the SEC on November 12, 2024 by FMR LLC. Abigail P. Johnson is a director, the chairman and the Chief Executive Officer of FMR LLC. Members of the Johnson family, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders’ voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders’ voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC.

The address of FMR LLC is 245 Summer Street, Boston, Massachusetts 02210.

- (6) Information herein is based on Schedule 13G/A filed with the SEC on February 14, 2025 by Newpath Partners, L.P., Newpath GP, L.P., Newpath GP, LLC and Thomas Cahill. Newpath Partners L.P. directly holds 6,105,679 shares of common 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. Dr. Cahill, a member of our board of directors, is the managing member of Newpath GP LLC.

The address of all entities and Dr. Cahill referenced in this footnote is 800 Boylston Street, Suite 2222, Boston, Massachusetts 02199.

- (7) Dr. Reine was appointed Chief Executive Officer and director of the Company, effective May 19, 2025. Consists of: (a) 125,000 shares of common stock held by Dr. Reine and (b) 521,875 shares of common stock underlying options exercisable within 60 days of June 30, 2025.
- (8) Consists of: (a) 965,001 shares of common stock held by Dr. Duffield, and (b) 223,240 shares of common stock underlying options exercisable within 60 days of June 30, 2025.

Table of Contents

- (9) Dr. Gottesdiener resigned as President, Chief Executive Officer and director of the Company, in each case effective May 18, 2025. Consists of: (a) 2,310,837 shares of common stock held by Dr. Gottesdiener, (b) 811,127 shares of common stock underlying options exercisable within 60 days of June 30, 2025, (c) 50,241 shares of common stock held by Dr. Gottesdiener's spouse, (d) 682,259 shares of common stock held by the Coolidge GST Trust-2022 (the "Coolidge Trust Shares"), and (e) 1,317,741 shares of common stock held by the Gottesdiener Family GST Trust (the "Gottesdiener Family Trust Shares"). Dr. Gottesdiener disclaims beneficial ownership of the Coolidge Trust Shares and the Gottesdiener Family Trust Shares.
- (10) Includes 84,062 shares of common stock underlying options exercisable within 60 days of June 30, 2025.
- (11) Consists entirely of shares of common stock underlying options exercisable within 60 days of June 30, 2025.
- (12) Includes (a) 84,062 shares of common stock underlying options exercisable within 60 days of June 30, 2025 and (b) 16,080 shares of common stock held by a trust for the benefit of Mr. Nelsen's family members.

GENERAL MATTERS

Stockholder Proposals for 2026 Annual Meeting

Requirements for Stockholder Proposals to be Considered for Inclusion in our Proxy Materials. To be considered for inclusion in next year's proxy statement for our next annual meeting of stockholders, stockholder proposals pursuant to Rule 14a-8 under the Exchange Act must be received by our Corporate Secretary, at Prime Medicine, Inc. no later than December 23, 2025, which is 120 days prior to April 22, 2026. Stockholder proposals should be addressed to 60 First Street, Cambridge, MA 02141.

Requirements for Stockholder Proposals or Director Nominations to be Brought Before an Annual Meeting. Our bylaws provide that, for stockholder nominations to our Board or other proposals to be considered at an annual meeting, the stockholder must have given timely notice thereof in writing to the Corporate Secretary, Prime Medicine, Inc. Stockholder nominations should be addressed to the Corporate Secretary, Prime Medicine, Inc., 60 First Street, Cambridge, MA 02141. To be timely for the 2026 annual meeting, the stockholder's notice must be delivered to or mailed and received by us not before February 4, 2026 or after March 6, 2026, which is not more than one hundred twenty (120) days, and not less than ninety (90) days before the anniversary date of the preceding annual meeting, except that if the 2026 annual meeting of stockholders is more than thirty (30) days before or sixty (60) days after the anniversary date of the previous year's annual meeting, we must receive the notice not later than ninety (90) days prior to the annual meeting date or the tenth (10th) day following the day on which public announcement of the date of the annual meeting is first made. Such notice must provide the information required by our bylaws with respect to each matter the stockholder proposes to bring before the 2026 annual meeting.

In addition, to comply with the universal proxy rules, stockholders who intend to solicit proxies in support of director nominees other than the Company's nominees must provide notice by the same deadline noted herein to submit a notice of nomination at an annual meeting of stockholders. Such notice must comply with the additional requirements of Rule 14a-19(b).

Annual Report

Upon written request, the Company will provide without charge to each stockholder who does not otherwise receive a copy of our Company's annual report to stockholders a copy of our Annual Report on Form 10-K for the fiscal year ended December 31, 2024, as filed with the SEC, except for exhibits.

Please address all requests to:

Prime Medicine, Inc.
Attn: Corporate Secretary
60 First Street
Cambridge, MA 02141

Householding of Proxy Materials

SEC rules concerning the delivery of proxy materials allow us or your broker to send a single notice or, if applicable, a single set of our proxy materials to any household at which two or more of our stockholders reside, if we or your broker believe that the stockholders are members of the same family, unless we have received contrary instructions from one or more of the stockholders. This practice, referred to as "householding," benefits both you and us. It reduces the volume of duplicate information received at your household and helps to reduce our expenses. The rule applies to our notices, annual reports, proxy statements and information statements.

[Table of Contents](#)

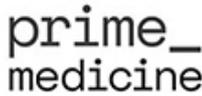
We will undertake to deliver promptly, upon written or oral request, a separate copy to a stockholder at a shared address to which a single copy of the notice or proxy materials was delivered. You may make a written or oral request by sending a notification to our Corporate Secretary at the address above, providing your name, your shared address, and the address to which we should direct the additional copy of the proxy materials. Multiple stockholders sharing an address who have received one copy of a mailing and would prefer us to mail each stockholder a separate copy of future mailings should contact us at our principal executive offices. Additionally, if current stockholders with a shared address received multiple copies of a mailing and would prefer us to mail one copy of future mailings to stockholders at the shared address, notification of that request may also be made through our principal executive offices. Stockholders who participate in householding will continue to have access to and utilize separate proxy voting instructions.

Where You Can Find More Information

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public from commercial document retrieval services and at the website maintained by the SEC at www.sec.gov. You may also access any document we file with the SEC on our website at or in the “SEC Filings” tab of the “Investors” section of our website at www.primemedicine.com. The inclusion of our website address in this proxy statement does not include or incorporate by reference the information on our website into this proxy statement, and you should not consider that information a part of this proxy statement.

You should rely on the information contained in this document to vote your shares at the Special Meeting. We have not authorized anyone to provide you with information that is different from what is contained in this document. This document is dated July 1, 2025. You should not assume that the information contained in this document is accurate as of any date other than that date, and the provision of this document to stockholders at any time after that date does not create an implication to the contrary. This proxy statement does not constitute a solicitation of a proxy in any jurisdiction where, or to or from any person to whom, it is unlawful to make such proxy solicitations in such jurisdiction.

PRELIMINARY PROXY CARD - SUBJECT TO COMPLETION



PRIME MEDICINE, INC.
60 FIRST STREET
CAMBRIDGE, MA 02141



VOTE BY INTERNET

Before The Meeting - Go to www.proxyvote.com or scan the QR Barcode above

Use the Internet to transmit your voting instructions and for electronic delivery of information by 11:59 p.m. Eastern Time on July 31, 2025. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

During The Meeting - Go to www.virtualshareholdermeeting.com/PRME2025SM

You may attend the meeting via the Internet and vote during the meeting. Have the information that is printed in the box marked by the arrow available and follow the instructions.

VOTE BY PHONE - 1-800-690-6903

Use any touch-tone telephone to transmit your voting instructions by 11:59 p.m. Eastern Time on July 31, 2025. Have your proxy card in hand when you call and then follow the instructions.

VOTE BY MAIL

Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717. Votes submitted by mail must be received by July 31, 2025.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

V76797-518152

KEEP THIS PORTION FOR YOUR RECORDS

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

DETACH AND RETURN THIS PORTION ONLY

PRIME MEDICINE, INC.

The Board of Directors recommends you vote FOR the following proposal:

1. To approve the repricing of certain outstanding stock options that have been granted under the Company's 2019 Stock Option and Grant Plan and/or the 2022 Stock Option and Incentive Plan (the "Option Repricing Proposal").

For Against Abstain

The Board of Directors recommends you vote FOR the following proposal:

2. To approve a proposal to adjourn the Special Meeting to a later date, if necessary or appropriate, to permit further solicitation and vote of additional proxies in the event that there are insufficient votes for, or otherwise in connection with, the approval of the Option Repricing Proposal at the time of the Special Meeting.

For Against Abstain

NOTE: Such other business as may properly come before the meeting or any continuations, adjournments, and postponements thereof.

Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.

Signature [PLEASE SIGN WITHIN BOX] Date

Signature (Joint Owners) Date

Important Notice Regarding the Availability of Proxy Materials for the 2025 Special Meeting of Stockholders to be Held on August 1, 2025:

The Notice and Proxy Statement are available for viewing, printing and downloading at www.proxyvote.com.

V76798-518152

**PRIME MEDICINE, INC.
2025 SPECIAL MEETING OF STOCKHOLDERS
AUGUST 1, 2025 AT 1:00 PM ET
THIS PROXY IS SOLICITED BY THE BOARD OF DIRECTORS**

The undersigned stockholder(s) hereby appoint(s) Allan Reine and Ryan Brown, or either of them, as proxies, each with the power to appoint his substitute, and hereby authorize(s) them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of common stock of PRIME MEDICINE, INC. that the undersigned stockholder(s) is/are entitled to vote at the 2025 Special Meeting of Stockholders to be held on August 1, 2025 at 1:00 PM ET, virtually at www.virtualshareholdermeeting.com/PRME2025SM and at any continuations, adjournments, and postponements thereof.

This proxy, when properly executed, will be voted in the manner directed herein. If no such direction is made, this proxy will be voted in accordance with the Board of Directors' recommendations.

Continued and to be signed on reverse side