SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934

(Amendment No. 3)*

Prime Medicine, Inc.

(Name of Issuer)

Common Stock, $0.00001 par value

(Title of Class of Securities)

(CUSIP Number)

Mark McDonnell
ARCH Venture Management, LLC, 8755 W. Higgins Road Suite 1025
Chicago, IL, 60631
(773) 380-6600

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

11/12/2026

(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box. ☐

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

SCHEDULE 13D

CUSIP No.

1	Name of reporting person ARCH Venture Fund X, L.P.
2	Check the appropriate box if a member of a Group (See Instructions)

☐ (a)
☐ (b)

3 SEC use only

Source of funds (See Instructions)

4 WC

Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5 ☐

Citizenship or place of organization

6 DELAWARE

Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 18,486,894.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 18,486,894.00

Aggregate amount beneficially owned by each reporting person

11 18,486,894.00

Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12 ☐

Percent of class represented by amount in Row (11)

13 8.3 %

Type of Reporting Person (See Instructions)

14 PN

SCHEDULE 13D

CUSIP No.

Name of reporting person

1 ARCH Venture Fund X Overage, L.P.

Check the appropriate box if a member of a Group (See Instructions)

2 ☐ (a)
☐ (b)

3 SEC use only

Source of funds (See Instructions)

4 WC

Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5 ☐

Citizenship or place of organization

6 DELAWARE

Number of	7	Sole Voting Power

Shares Beneficially Owned by Each Reporting Person With:		0.00
	8	Shared Voting Power 18,486,894.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 18,486,894.00
11		Aggregate amount beneficially owned by each reporting person 18,486,894.00
12		Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐
13		Percent of class represented by amount in Row (11) 8.3 %
14		Type of Reporting Person (See Instructions) PN

SCHEDULE 13D

CUSIP No.

1		Name of reporting person ARCH Venture Fund XII, L.P.
2		Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☐ (b)
3		SEC use only
4		Source of funds (See Instructions) WC
5		Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐
6		Citizenship or place of organization DELAWARE
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 18,486,894.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 18,486,894.00
11		Aggregate amount beneficially owned by each reporting person

18,486,894.00

Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12

☐

Percent of class represented by amount in Row (11)

13

8.3 %

Type of Reporting Person (See Instructions)

14

PN

SCHEDULE 13D

CUSIP No.

Name of reporting person

1

ARCH Venture Partners X, L.P.

Check the appropriate box if a member of a Group (See Instructions)

2

☐ (a)
☐ (b)

3 SEC use only

Source of funds (See Instructions)

4

AF

Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5

☐

Citizenship or place of organization

6

DELAWARE

Number of Shares Beneficially Owned by Each Reporting Person With:

7 Sole Voting Power

0.00

8 Shared Voting Power

18,486,894.00

9 Sole Dispositive Power

0.00

10 Shared Dispositive Power

18,486,894.00

Aggregate amount beneficially owned by each reporting person

11

18,486,894.00

Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12

☐

Percent of class represented by amount in Row (11)

13

8.3 %

Type of Reporting Person (See Instructions)

14

PN

SCHEDULE 13D

CUSIP No.

1	Name of reporting person ARCH Venture Partners X Overage, L.P.	
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☐ (b)	
3	SEC use only	
4	Source of funds (See Instructions) AF	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐	
6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially Owned by Each Reporting Person With:	7 Sole Voting Power 0.00	
	8 Shared Voting Power 18,486,894.00	
	9 Sole Dispositive Power 0.00	
	10 Shared Dispositive Power 18,486,894.00	
11	Aggregate amount beneficially owned by each reporting person 18,486,894.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐	
13	Percent of class represented by amount in Row (11) 8.3 %	
14	Type of Reporting Person (See Instructions) PN	

SCHEDULE 13D

CUSIP No.

1	Name of reporting person ARCH Venture Partners XII, L.P.
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☐ (b)

3	SEC use only	
4	Source of funds (See Instructions) WC	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐	
6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 18,486,894.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 18,486,894.00
11	Aggregate amount beneficially owned by each reporting person 18,486,894.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐	
13	Percent of class represented by amount in Row (11) 8.3 %	
14	Type of Reporting Person (See Instructions) PN	

SCHEDULE 13D

CUSIP No.

1	Name of reporting person ARCH Venture Partners X, LLC	
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☐ (b)	
3	SEC use only	
4	Source of funds (See Instructions) AF	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐	
6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially	7	Sole Voting Power 0.00

Owned by Each Reporting Person With:	8	Shared Voting Power 18,486,894.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 18,486,894.00
11		Aggregate amount beneficially owned by each reporting person 18,486,894.00
12		Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐
13		Percent of class represented by amount in Row (11) 8.3 %
14		Type of Reporting Person (See Instructions) OO

SCHEDULE 13D

CUSIP No.

1		Name of reporting person ARCH Venture Partners XII, LLC
2		Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☐ (b)
3		SEC use only
4		Source of funds (See Instructions) AF
5		Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐
6		Citizenship or place of organization DELAWARE
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 18,486,894.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 18,486,894.00
11		Aggregate amount beneficially owned by each reporting person 18,486,894.00
12		Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

☐

Percent of class represented by amount in Row (11)

13

8.3 %

Type of Reporting Person (See Instructions)

14

OO

SCHEDULE 13D

CUSIP No.

Name of reporting person

1

Robert Nelsen

Check the appropriate box if a member of a Group (See Instructions)

2

☐ (a)

☐ (b)

3 SEC use only

Source of funds (See Instructions)

4

AF

Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5

☐

Citizenship or place of organization

6

UNITED STATES

Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 155,142.00
	8	Shared Voting Power 18,486,894.00
	9	Sole Dispositive Power 155,142.00
	10	Shared Dispositive Power 18,486,894.00

Aggregate amount beneficially owned by each reporting person

11

18,642,036.00

Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12

☐

Percent of class represented by amount in Row (11)

13

8.4 %

Type of Reporting Person (See Instructions)

14

IN

SCHEDULE 13D

CUSIP No.

1	Name of reporting person Keith Crandell	
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☐ (b)	
3	SEC use only	
4	Source of funds (See Instructions) AF	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐	
6	Citizenship or place of organization UNITED STATES	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 18,486,894.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 18,486,894.00
11	Aggregate amount beneficially owned by each reporting person 18,486,894.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐	
13	Percent of class represented by amount in Row (11) 8.3 %	
14	Type of Reporting Person (See Instructions) IN	

SCHEDULE 13D

CUSIP No.

1	Name of reporting person Kristina Burow
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☐ (b)
3	SEC use only
4	Source of funds (See Instructions)

	AF	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)	☐
6	Citizenship or place of organization	UNITED STATES
Number of Shares Beneficially Owned by Each Reporting Person With:	7 Sole Voting Power	0.00
	8 Shared Voting Power	18,486,894.00
	9 Sole Dispositive Power	0.00
	10 Shared Dispositive Power	18,486,894.00
11	Aggregate amount beneficially owned by each reporting person	18,486,894.00
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)	☐
13	Percent of class represented by amount in Row (11)	8.3 %
14	Type of Reporting Person (See Instructions)	IN

SCHEDULE 13D

CUSIP No.

1	Name of reporting person	Steven Gillis
2	Check the appropriate box if a member of a Group (See Instructions)	☐ (a) ☐ (b)
3	SEC use only	
4	Source of funds (See Instructions)	AF
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)	☐
6	Citizenship or place of organization	UNITED STATES
Number of Shares Beneficially Owned by Each	7 Sole Voting Power	0.00
	8 Shared Voting Power	

Reporting Person With:

18,486,894.00

Sole Dispositive Power

9

0.00

Shared Dispositive Power

10

18,486,894.00

Aggregate amount beneficially owned by each reporting person

11

18,486,894.00

Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12

☐

Percent of class represented by amount in Row (11)

13

8.3 %

Type of Reporting Person (See Instructions)

14

IN

SCHEDULE 13D

Item 1. Security and Issuer

Title of Class of Securities:

(a)

Common Stock, $0.00001 par value

Name of Issuer:

(b)

Prime Medicine, Inc.

Address of Issuer's Principal Executive Offices:

(c)

60 First Street, Cambridge, MASSACHUSETTS , 02141.

Item 1 Comment: This Amendment No. 3 (the "Amendment No. 3") amends the statement on Schedule 13D filed on February 22, 2024 (as amended, the "Original 13D"), relating to the Common Stock, $0.00001 par value per share (the "Common Stock"), of Prime Medicine, Inc. (the "Issuer") having its principal executive office at 60 First Street, Cambridge, MA 02141. Certain terms used but not defined in this Amendment No. 3 have the meanings assigned thereto in the Original 13D.

Item 5. Interest in Securities of the Issuer

(a) Items 5(a)-(c) of the Original 13D are hereby amended and supplemented as follows: AVF X is the record owner of 6,128,297 shares of Common Stock ("AVF X Record Shares"). AVP X LP, as the sole general partner of AVF X, may be deemed to beneficially own the AVF X Record Shares. AVP X LLC, as the sole general partner of AVP X LP, may be deemed to beneficially own the AVF X Record Shares. AVF X Overage is the record holder of 6,128,297 shares of Common Stock ("AVF X Overage Record Shares"). AVP X Overage LP, as the sole general partner of AVF X Overage, may be deemed to beneficially own the AVF X Overage Record Shares. AVP X LLC, as the sole general partner of AVP X Overage LP, may be deemed to beneficially own the AVF X Overage Record Shares. AVF XII is the record holder of 6,230,300 shares of Common Stock ("AVF XII Record Shares"). AVP XII LP, as the sole general partner of AVF XII, may be deemed to beneficially own the AVF XII Record Shares. AVP XII LLC, as the sole general partner of AVP XII LP, may be deemed to beneficially own the AVF XII Overage Record Shares. By virtue of their relationship as affiliated entities who have overlapping general partners and investment committee members, each of the Committee Members and direct and indirect general partners of AVF X, AVF X Overage and AVF XII may be deemed to share the power to direct AVF X Record Shares, AVF X Overage Record Shares and AVF XII Record Shares (collectively the "Record Shares"). Nelsen and his related trusts are also the owner of 16,080 shares of Common Stock of the Issuer and are the holder of vested options to purchase 139,062 shares of Common Stock ("Nelsen Options"). Each Reporting Person disclaims beneficial ownership of the Record Shares except for the shares, if any, held of record by such Reporting Person. The percentage of outstanding Common Stock of the Issuer which may be deemed to be beneficially owned by each Reporting Person is set forth on Line 13 of such Reporting Person's cover sheet. Such percentage was calculated based on 222,992,833 shares of Common Stock outstanding, consisting of (i) the 181,921,405 shares of Common Stock reported by the Issuer to be outstanding on October 31, 2026 in the Issuer's Form 10-Q filed with the Securities and Exchange Commission on November 12, 2026, and (ii) 41,071,428 shares sold by the Issuer in its underwritten offering on November 12, 2026, as reported in the Issuer's

Current Report on Form 8-K filed with the Securities and Exchange Commission on November 12, 2026. For Nelsen, the Nelsen Options were included in the number of shares of Common Stock outstanding.

(b) Regarding the number of shares as to which such person has: (i) sole power to vote or to direct the vote: See line 7 of cover sheets. (ii) shared power to vote or to direct the vote: See line 8 of cover sheets. (iii) sole power to dispose or to direct the disposition: See line 9 of cover sheets. (iv) shared power to dispose or to direct the disposition: See line 10 of cover sheets.

(c) None of the Reporting Persons has effected any transaction in the Common Stock during the last 60 days.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

ARCH Venture Fund X, L.P.

Signature: ARCH Venture Partners X, L.P.
Name/Title: its General Partner
Date: 11/13/2026

Signature: ARCH Venture Partners X, LLC
Name/Title: its General Partner
Date: 11/13/2026

Signature: /s/ Mark McDonnell
Name/Title: Mark McDonnell, as Attorney-in-Fact for Robert Nelsen, Managing Director
Date: 11/13/2026

ARCH Venture Fund X Overage, L.P.

Signature: ARCH Venture Partners X Overage, L.P.
Name/Title: its General Partner
Date: 11/13/2026

Signature: ARCH Venture Partners X, LLC
Name/Title: its General Partner
Date: 11/13/2026

Signature: /s/ Mark McDonnell
Name/Title: Mark McDonnell, as Attorney-in-Fact for Keith Crandell, Managing Director
Date: 11/13/2026

ARCH Venture Fund XII, L.P.

Signature: ARCH Venture Partners XII, L.P.
Name/Title: its General Partner
Date: 11/13/2026

Signature: ARCH Venture Partners XII, LLC
Name/Title: its General Partner
Date: 11/13/2026

Signature: /s/ Mark McDonnell
Name/Title: Mark McDonnell, as Attorney-in-Fact for Keith Crandell, Managing Director
Date: 11/13/2026

ARCH Venture Partners X, L.P.

Signature: ARCH Venture Partners X, LLC
Name/Title: its General Partner
Date: 11/13/2026

Signature: /s/ Mark McDonnell
Name/Title: Mark McDonnell, as Attorney-in-Fact for Robert Nelsen, Managing Director

Date: 11/13/2026

ARCH Venture Partners X Overage, L.P.

Signature: ARCH Venture Partners X, LLC
Name/Title: its General Partner
Date: 11/13/2026

Signature: /s/ Mark McDonnell
Name/Title: Mark McDonnell, as Attorney-in-Fact for Keith Crandell, Managing Director
Date: 11/13/2026

ARCH Venture Partners XII, L.P.

Signature: ARCH Venture Partners XII, LLC
Name/Title: its General Partner
Date: 11/13/2026

Signature: /s/ Mark McDonnell
Name/Title: Mark McDonnell, as Attorney-in-Fact for Keith Crandell, Managing Director
Date: 11/13/2026

ARCH Venture Partners X, LLC

Signature: /s/ Mark McDonnell
Name/Title: Mark McDonnell, as Attorney-in-Fact for Robert Nelsen, Managing Director
Date: 11/13/2026

ARCH Venture Partners XII, LLC

Signature: /s/ Mark McDonnell
Name/Title: Mark McDonnell, as Attorney-in-Fact for Keith Crandell, Managing Director
Date: 11/13/2026

Robert Nelsen

Signature: /s/ Mark McDonnell
Name/Title: Mark McDonnell, as Attorney-in-Fact for Robert Nelsen
Date: 11/13/2026

Keith Crandell

Signature: /s/ Mark McDonnell
Name/Title: Mark McDonnell, as Attorney-in-Fact for Keith Crandell
Date: 11/13/2026

Kristina Burow

Signature: /s/ Mark McDonnell
Name/Title: Mark McDonnell, as Attorney-in-Fact for Kristina Burow
Date: 11/13/2026

Steven Gillis

Signature: /s/ Mark McDonnell
Name/Title: Mark McDonnell, as Attorney-in-Fact for Steven Gillis
Date: 11/13/2026

Comments accompanying signature: This Schedule 13D was executed by Mark McDonnell pursuant to Powers of Attorney filed as Exhibits 24 and 24.1 to the Form 3 relating to the beneficial ownership of shares of Prime Medicine, Inc. by the Reporting Persons filed with the Securities and Exchange Commission on October 19, 2022 and pursuant to a Power of Attorney filed as Exhibit 24.4 to the Form 3 relating to the beneficial ownership of shares by the Reporting

Persons of Neumora Therapeutics, Inc. filed with the Securities and Exchange Commission on September 14, 2023 and incorporated herein in their entireties by reference.