SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934

(Amendment No. 2)*

Neurogene Inc.

(Name of Issuer)

Common Stock, $0.000001 par value per share

(Title of Class of Securities)

(CUSIP Number)

09/30/2026

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- ☐ Rule 13d-1(b)
- ☑ Rule 13d-1(c)
- ☐ Rule 13d-1(d)

SCHEDULE 13G

CUSIP No.

1	Names of Reporting Persons Samsara BioCapital, L.P.
2	Check the appropriate box if a member of a Group (see instructions) ☐ (a) ☑ (b)
3	Sec Use Only
4	Citizenship or Place of Organization DELAWARE

Number of Shares Beneficially Owned by Each Reporting Person With:	5	Sole Voting Power 0.00
	6	Shared Voting Power 1,804,197.00
	7	Sole Dispositive Power 0.00
	8	Shared Dispositive Power 1,804,197.00
9		Aggregate Amount Beneficially Owned by Each Reporting Person 1,804,197.00
10		Check box if the aggregate amount in row (9) excludes certain shares (See Instructions) ☐
11		Percent of class represented by amount in row (9) 9.0 %
12		Type of Reporting Person (See Instructions) PN

SCHEDULE 13G

CUSIP No.

1		Names of Reporting Persons Samsara BioCapital GP, LLC
2		Check the appropriate box if a member of a Group (see instructions) ☐ (a) ☑ (b)
3		Sec Use Only
4		Citizenship or Place of Organization DELAWARE
Number of Shares Beneficially Owned by Each Reporting Person With:	5	Sole Voting Power 0.00
	6	Shared Voting Power 1,804,197.00
	7	Sole Dispositive Power 0.00
	8	Shared Dispositive Power 1,804,197.00
9		Aggregate Amount Beneficially Owned by Each Reporting Person 1,804,197.00
10		Check box if the aggregate amount in row (9) excludes certain shares (See Instructions) ☐

11	Percent of class represented by amount in row (9)	
	9.0 %	
12	Type of Reporting Person (See Instructions)	
	OO	

SCHEDULE 13G

CUSIP No.

1	Names of Reporting Persons	
	Samsara Opportunity Fund, L.P.	
2	Check the appropriate box if a member of a Group (see instructions)	
	☐ (a) ☑ (b)	
3	Sec Use Only	
4	Citizenship or Place of Organization	
	DELAWARE	
Number of Shares Beneficially Owned by Each Reporting Person With:	5 Sole Voting Power	
	0.00	
	6 Shared Voting Power	
	150,000.00	
	7 Sole Dispositive Power	
	0.00	
	8 Shared Dispositive Power	
	150,000.00	
9	Aggregate Amount Beneficially Owned by Each Reporting Person	
	150,000.00	
10	Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)	
	☐	
11	Percent of class represented by amount in row (9)	
	0.7 %	
12	Type of Reporting Person (See Instructions)	
	PN	

SCHEDULE 13G

CUSIP No.

1	Names of Reporting Persons
	Samsara Opportunity Fund GP, LLC
2	Check the appropriate box if a member of a Group (see instructions)

		☐ (a) ☑ (b)
3		Sec Use Only
4		Citizenship or Place of Organization DELAWARE
Number of Shares Beneficially Owned by Each Reporting Person With:	5	Sole Voting Power 0.00
	6	Shared Voting Power 150,000.00
	7	Sole Dispositive Power 0.00
	8	Shared Dispositive Power 150,000.00
9		Aggregate Amount Beneficially Owned by Each Reporting Person 150,000.00
10		Check box if the aggregate amount in row (9) excludes certain shares (See Instructions) ☐
11		Percent of class represented by amount in row (9) 0.7 %
12		Type of Reporting Person (See Instructions) OO

SCHEDULE 13G

CUSIP No.

1		Names of Reporting Persons Srinivas Akkaraju
		Check the appropriate box if a member of a Group (see instructions)
2		☐ (a) ☑ (b)
3		Sec Use Only
4		Citizenship or Place of Organization UNITED STATES
Number of Shares Beneficially Owned by Each Reporting Person With:	5	Sole Voting Power 0.00
	6	Shared Voting Power 1,954,197.00
	7	Sole Dispositive Power 0.00
	8	Shared Dispositive Power

1,954,197.00

Aggregate Amount Beneficially Owned by Each Reporting Person

9

1,954,197.00

Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)

10

☐

Percent of class represented by amount in row (9)

11

9.7 %

Type of Reporting Person (See Instructions)

12

IN

SCHEDULE 13G

Item 1.

Name of issuer:

(a)

Neurogene Inc.

Address of issuer's principal executive offices:

(b)

535 W 24th Street, 5th Floor, New York, NY, 10011.

Item 2.

Name of person filing:

(a) The names of the persons filing this report (collectively, the "Reporting Persons") are: Samsara BioCapital, L.P. ("Samsara LP") Samsara BioCapital GP, LLC ("Samsara GP") Samsara Opportunity Fund, L.P. ("Samsara Opportunity Fund") Samsara Opportunity Fund GP, LLC ("Samsara Opportunity GP") Srinivas Akkaraju ("Dr. Akkaraju") The Reporting Persons expressly disclaim status as a "group" for purposes of this Schedule 13G/A.

Address or principal business office or, if none, residence:

(b)

c/o Samsara BioCapital, LLC 628 Middlefield Road Palo Alto, CA 94301

Citizenship:

(c)

All of the entities were organized in Delaware; Dr. Akkaraju is a United States citizen.

Title of class of securities:

(d)

Common Stock, $0.000001 par value per share

CUSIP No.:

(e)

Item 3. If this statement is filed pursuant to §§ 240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

(a) ☐ Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o);

(b) ☐ Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c);

(c) ☐ Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c);

(d) ☐ Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8);

(e) ☐ An investment adviser in accordance with § 240.13d-1(b)(1)(ii)(E);

(f) ☐ An employee benefit plan or endowment fund in accordance with § 240.13d-1(b)(1)(ii)(F);

(g) ☐ A parent holding company or control person in accordance with § 240.13d-1(b)(1)(ii)(G);

(h) ☐ A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);

(i) ☐ A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);

(j) ☐ A non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J). If filing as a non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J),
please specify the type of institution:

(k) ☐ Group, in accordance with Rule 240.13d-1(b)(1)(ii)(K).

Item 4. Ownership

(a) Amount beneficially owned:

Row 9 of each Reporting Person's cover page to this Schedule 13G/A sets forth the aggregate number of shares of common stock of the Issuer beneficially owned by such Reporting Person as of September 30, 2026 and is incorporated by reference. The Reporting Persons' beneficial ownership of the Issuer's securities includes: (i) 1,717,127 shares of common stock and pre-funded warrants ("Pre-Funded Warrants") immediately exercisable for up to 87,070 shares of common stock directly held by Samsara LP and (ii) 150,000 shares of common stock directly held by Samsara Opportunity Fund. Samsara GP is the sole general partner of Samsara LP and Dr. Akkaraju is the managing member of Samsara GP. Each of Samsara GP and Dr. Akkaraju possesses power to direct the voting and disposition of the securities held by Samsara LP. Samsara Opportunity GP is the sole general partner of Samsara Opportunity Fund and Dr. Akkaraju is the managing member of Samsara Opportunity GP. Each of Samsara Opportunity GP and Dr. Akkaraju possesses power to direct the voting and disposition of the securities held by Samsara Opportunity Fund.

(b) Percent of class:

Row 11 of each Reporting Person's cover page to this Schedule 13G/A sets forth the percentage of shares of common stock of the Issuer beneficially owned by such Reporting Person as of September 30, 2026 and is incorporated by reference. The percentage set forth in each row 11 is based upon 20,011,382 shares of common stock outstanding as of August 7, 2026, as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission (the "SEC") on August 11, 2026 and, with respect to Samsara LP, Samsara GP and Dr. Akkaraju, giving effect to Pre-Funded Warrants. %

(c) Number of shares as to which the person has:

(i) Sole power to vote or to direct the vote:

Row 5 of each Reporting Person's cover page to this Schedule 13G/A sets forth the sole power to vote or to direct the vote of securities of the Issuer beneficially owned by such Reporting Person as of September 30, 2026 and is incorporated by reference.

(ii) Shared power to vote or to direct the vote:

Row 6 of each Reporting Person's cover page to this Schedule 13G/A sets forth the shared power to vote or to direct the vote of securities of the Issuer beneficially owned by such Reporting Person as of September 30, 2026 and is incorporated by reference.

(iii) Sole power to dispose or to direct the disposition of:

Row 7 of each Reporting Person's cover page to this Schedule 13G/A sets forth the shared power to vote or to direct the vote of securities of the Issuer beneficially owned by such Reporting Person as of September 30, 2026 and is incorporated by reference.

(iv) Shared power to dispose or to direct the disposition of:

Row 8 of each Reporting Person's cover page to this Schedule 13G/A sets forth the shared power to vote or to direct the vote of securities of the Issuer beneficially owned by such Reporting Person as of September 30, 2026 and is incorporated by reference.

Item 5. Ownership of 5 Percent or Less of a Class.

Item 6. Ownership of more than 5 Percent on Behalf of Another Person.

Not Applicable

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company or Control Person.

Not Applicable

Item 8. Identification and Classification of Members of the Group.

Not Applicable

Item 9. Notice of Dissolution of Group.

Not Applicable

Item 10. Certifications:

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect, other than activities solely in connection with a nomination under § 240.14a-11.

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.

Samsara BioCapital, L.P.

Signature: /s/ Srinivas Akkaraju
Name/Title: By Samsara BioCapital GP, LLC, its General Partner, By Srinivas Akkaraju, Managing Member
Date: 11/16/2026

Samsara BioCapital GP, LLC

Signature: /s/ Srinivas Akkaraju
Name/Title: By Srinivas Akkaraju, Managing Member
Date: 11/16/2026

Samsara Opportunity Fund, L.P.

Signature: /s/ Srinivas Akkaraju
Name/Title: By Samsara Opportunity Fund GP, LLC, its General Partner, By Srinivas Akkaraju, Managing Member
Date: 11/16/2026

Samsara Opportunity Fund GP, LLC

Signature: /s/ Srinivas Akkaraju
Name/Title: By Srinivas Akkaraju, Managing Member
Date: 10/16/2026

Srinivas Akkaraju

Signature: /s/ Srinivas Akkaraju
Name/Title: Srinivas Akkaraju
Date: 11/16/2026

Exhibit Information

Exhibit 99.1 Joint Filing Agreement

EXHIBIT 99.1

JOINT FILING AGREEMENT

We, the undersigned, hereby express our agreement that the Schedule 13G (or any amendments thereto) relating to the common stock of Neurogene Inc. is filed on behalf of each of us.

Dated: November 16, 2026

Samsara BioCapital, L.P.

By: Samsara BioCapital GP, LLC
its General Partner

By: /s/ Srinivas Akkaraju
Name: Srinivas Akkaraju
Title: Managing Member

Samsara BioCapital GP, LLC

By: /s/ Srinivas Akkaraju
Name: Srinivas Akkaraju
Title: Managing Member

Samsara Opportunity Fund, L.P.

By: Samsara Opportunity Fund GP, LLC
its General Partner

By: /s/ Srinivas Akkaraju
Name: Srinivas Akkaraju
Title: Managing Member

Samsara Opportunity Fund GP, LLC

By: /s/ Srinivas Akkaraju
Name: Srinivas Akkaraju
Title: Managing Member

/s/ Srinivas Akkaraju
Srinivas Akkaraju