SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934

(Amendment No. 1)*

Neurogene Inc.

(Name of Issuer)

Common Stock

(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 BALYASNY ASSET MANAGEMENT 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 303,994.00
	6	Shared Voting Power 0.00
	7	Sole Dispositive Power 303,994.00
	8	Shared Dispositive Power 0.00
9		Aggregate Amount Beneficially Owned by Each Reporting Person 303,994.00
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) 1.52 %
12		Type of Reporting Person (See Instructions) IA, PN

SCHEDULE 13G

CUSIP No.

1		Names of Reporting Persons BAM 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 303,994.00
	6	Shared Voting Power 0.00
	7	Sole Dispositive Power 303,994.00
	8	Shared Dispositive Power 0.00
9		Aggregate Amount Beneficially Owned by Each Reporting Person 303,994.00
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) 1.52 %
12	Type of Reporting Person (See Instructions) HC, OO

SCHEDULE 13G

CUSIP No.

1	Names of Reporting Persons Balyasny Asset Management Holdings LP	
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 303,994.00
	6	Shared Voting Power 0.00
	7	Sole Dispositive Power 303,994.00
	8	Shared Dispositive Power 0.00
9	Aggregate Amount Beneficially Owned by Each Reporting Person 303,994.00	
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) 1.52 %	
12	Type of Reporting Person (See Instructions) HC, PN	

SCHEDULE 13G

CUSIP No.

1	Names of Reporting Persons Dames 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 303,994.00
	6	Shared Voting Power 0.00
	7	Sole Dispositive Power 303,994.00
	8	Shared Dispositive Power 0.00
9		Aggregate Amount Beneficially Owned by Each Reporting Person 303,994.00
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) 1.52 %
12		Type of Reporting Person (See Instructions) HC, OO

SCHEDULE 13G

CUSIP No.

1		Names of Reporting Persons Dmitry Balyasny
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 UNITED STATES
Number of Shares Beneficially Owned by Each Reporting Person With:	5	Sole Voting Power 303,994.00
	6	Shared Voting Power 0.00
	7	Sole Dispositive Power 303,994.00
	8	Shared Dispositive Power

0.00

Aggregate Amount Beneficially Owned by Each Reporting Person

9

303,994.00

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

1.52 %

Type of Reporting Person (See Instructions)

12

HC, IN

SCHEDULE 13G

Item 1.

Name of issuer:

(a)

Neurogene Inc.

Address of issuer's principal executive offices:

(b)

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

Item 2.

Name of person filing:

(a) This statement is being filed by (1) Balyasny Asset Management L.P., a Delaware limited partnership ("BAM"), (2) BAM GP LLC, a Delaware limited liability company ("BAM GP"), (3) Balyasny Asset Management Holdings LP, a Delaware limited partnership ("BAM Holdings"), (4) Dames GP LLC, a Delaware limited liability company ("Dames"), and (5) Dmitry Balyasny, a United States citizen (collectively, the "Reporting Persons"). BAM GP is the General Partner of BAM. BAM Holdings is the Sole Member of BAM GP. Dames is the General Partner of BAM Holdings. Dmitry Balyasny is the Managing Member of Dames.

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

(b) The principal business address of each of BAM, BAM GP, BAM Holdings, Dames, and Mr. Balyasny is located at 444 West Lake Street, 50th Floor, Chicago, IL 60606.

Citizenship:

(c) (1) BAM is a Delaware limited partnership, (2) BAM GP is a Delaware limited liability company, (3) BAM Holdings is a Delaware limited partnership, (4) Dames is a Delaware limited liability company, and (5) Mr. Balyasny is a United States citizen.

Title of class of securities:

(d)

Common Stock

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

Amount beneficially owned:

(a) By virtue of its position as the investment manager of Atlas Diversified Master Fund, Ltd. ("ADMF"), the direct holder of 303,994 shares of common stock, par value $0.000001 per share ("Shares"), reported herein, BAM may be deemed to exercise voting and investment power over such Shares held by ADMF and thus may be deemed to beneficially own such Shares. By virtue of its position as the General Partner of BAM, BAM GP may be deemed to exercise voting and investment power over the Shares held directly by ADMF and thus may be deemed to beneficially own such Shares. By virtue of its position as the Sole Member of BAM GP, BAM Holdings may be deemed to exercise voting and investment power over the Shares held directly by ADMF and thus may be deemed to beneficially own such Shares. By virtue of its position as the General Partner of BAM Holdings, Dames may be deemed to exercise voting and investment power over the Shares held directly by ADMF and thus may be deemed to beneficially own such Shares. By virtue of his position as the Managing Member of Dames, Mr. Balyasny may be deemed to exercise voting and investment power over the Shares held directly by ADMF and thus may be deemed to beneficially own such Shares.

Percent of class:

(b) Each of the Reporting Persons may be deemed to be the beneficial owner of approximately 1.52% of the Shares, based on 20,011,382 Shares outstanding as of Aug. 7, 2026, as reported in the Issuer's Report on Form 10-Q filed with the Securities and Exchange Commission on Aug. 11, 2026. The report amount consists of 303,994 Shares. %

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

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

Each of the Reporting Persons has the sole power to vote or to direct the vote of 303994 Shares

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

0

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

Each of the Reporting Persons has the sole power to dispose or to direct the disposition of 303994 Shares

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

0

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

☑ Ownership of 5 percent or less of a class

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

If any other person is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, such securities, a statement to that effect should be included in response to this item and, if such interest relates to more than 5 percent of the class, such person should be identified. A listing of the shareholders of an investment company registered under the Investment Company Act of 1940 or the beneficiaries of employee benefit plan, pension fund or endowment fund is not required.

ADMF, a Cayman Islands exempted company that is an investment management client of BAM, has the right to receive dividends from, or the proceeds from the sale of, the reported securities.

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 acquired and are held in the ordinary course of business and 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.

BALYASNY ASSET MANAGEMENT L.P.

Signature: /s/ Scott Schroeder
Name/Title: Scott Schroeder / Authorized Signatory
Date: 11/16/2026

BAM GP LLC

Signature: /s/ Scott Schroeder
Name/Title: Scott Schroeder / Authorized Signatory
Date: 11/16/2026

Balyasny Asset Management Holdings LP

Signature: /s/ Scott Schroeder
Name/Title: Scott Schroeder / Authorized Signatory
Date: 11/16/2026

Dames GP LLC

Signature: /s/ Scott Schroeder
Name/Title: Scott Schroeder / Authorized Signatory
Date: 11/16/2026

Dmitry Balyasny

Signature: /s/ Dmitry Balyasny
Name/Title: Dmitry Balyasny / Self
Date: 11/16/2026