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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

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**SCHEDULE 13D**

Under the Securities Exchange Act of 1934

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**Neurogene Inc.**  
(Name of Issuer)

**Common Stock, \$0.000001 Par Value Per Share**  
(Title of Class of Securities)

**64135M105**  
(CUSIP Number)

**Christine Mikail, J.D.**  
**President and Chief Financial Officer**  
**Neurogene Inc.**  
**535 W 24th Street, 5th Floor**  
**New York, NY 10011**  
**(877) 505-3568**

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

**December 18, 2023**  
(Date of Event Which Requires Filing of this Statement)

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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.

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**Note:** Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7 for other parties to whom copies are to be sent.

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The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

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).

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1.	Names of Reporting Persons Rachel McMinn, Ph.D.	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) PF	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 1,273,351
	8.	Shared Voting Power 0
	9.	Sole Dispositive Power 1,273,351
	10.	Shared Dispositive Power 0
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,273,351	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 9.9% <sup>(1)</sup>	
14.	Type of Reporting Person (See Instructions) IN	

(1) Based on 12,823,696 shares of Common Stock (as defined in Item 1) issued and outstanding as of December 18, 2023 and 22,992 options expected to vest within 60 days of the date of this report.

**Item 1. Security and Issuer**

This statement on Schedule 13D (this “Statement”) is filed with respect to the common stock, par value \$0.000001 per share (“Common Stock”), of Neurogene Inc., a Delaware corporation (the “Issuer”). The Issuer’s principal executive offices are located at 535 W 24th Street, 5th Floor, New York, NY 10011.

**Item 2. Identity and Background**

(a) This statement is filed on behalf of Rachel McMinn, Ph.D. (the “Reporting Person”). As of the date of this Statement, Dr. McMinn beneficially owns 1,273,351 shares of Common Stock.

(b) The business address of the Reporting Person is c/o Neurogene Inc., 535 W 24th Street, 5th Floor, New York, NY 10011.

(c) The principal occupation of the Dr. McMinn is Founder, Chief Executive Officer and Chair of the board of directors (the “Board”) of the Issuer.

(d) & (e) During the last five years, the Reporting Person has not (i) been convicted in any criminal proceeding (excluding traffic violations or similar misdemeanors) or (ii) been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) Dr. McMinn is a citizen of the United States of America.

**Item 3. Source and Amount of Funds or Other Consideration**

Dr. McMinn acquired beneficial ownership of shares of the Issuer’s previously outstanding preferred stock in multiple separate private placements. Such preferred stock was converted into shares of Common Stock upon the closing of the Issuer’s merger (the “Merger”) on December 18, 2023.

The Reporting Person also previously acquired beneficial ownership of Common Stock in a private placement.

**Item 4. Purpose of Transaction**

The shares of the Issuer’s Common Stock held by the Reporting Person were acquired for investment purposes.

At the time of the filing of this Statement, the Reporting Person currently has no plans or proposals which relate to or would result in (a) the acquisition by any person of additional securities of the Issuer, or the disposition of securities of the Issuer; (b) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer; (c) a sale or transfer of a material amount of assets of the Issuer; (d) any change in the present Board or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the Board; (e) any material change in the present capitalization or dividend policy of the Issuer; (f) any other material change in the Issuer’s business or corporate structure including but not limited to, if the Issuer is a registered closed-end investment company, any plans or proposals to make any changes in its investment policy for which a vote is required by section 13 of the Investment Company Act of 1940; (g) changes in the Issuer’s charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Issuer by any person; (h) causing a class of securities of the Issuer to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association; (i) a class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Act; or (j) any action similar to any of those enumerated above. However, because Dr. McMinn is Chief Executive Officer and a member of the Board, she may, from time to time, be involved in discussions which relate to one or more of the matters described in this Item 4. The Reporting Person disclaims any obligation to report on any plans or proposals with respect to the matters described in this Item 4 that develop or occur as a result of Dr. McMinn’s role as an officer and director of the Issuer and participation in decisions regarding the Issuer’s actions.

The Reporting Person reserves the right to acquire additional securities of the Issuer in the open market, in privately negotiated transactions, in equity grants from the Issuer, or otherwise, to dispose of all or a portion of the Common Stock and/or other securities reported in this Statement, or to change their intention with respect to any or all of the matters set forth in (a) through (j) above or in Item 4 of this Statement.

**Item 5. Interest in Securities of the Issuer**

(a) & (b) See Items 7 – 11 of the cover page and Item 2 above.

(c) Except as disclosed in Item 3, the Reporting Person has not effected any transactions during the past 60 days in any shares of Common Stock.

(d) No other person has the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the securities of the Issuer reported herein.

(e) Not applicable.

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**Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer**

The information set forth, or incorporated by reference, in Items 3 – 5 of this Statement is hereby incorporated by reference in this Item 6.

In connection with the Merger, the Reporting Person entered into a lock-up agreement, pursuant to which she agreed, subject to certain exceptions, not to offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, certain shares of Neurogene's Common Stock or any securities convertible into or exercisable or exchangeable for Neurogene Common Stock, currently or thereafter owned from the effective time until 180 days after the effective time of the Merger. The above summary is qualified by reference to the full text of the lock-up agreement, a form of which is filed as Exhibit 1 to this Statement and is incorporated herein by reference.

The Issuer has entered into an indemnification agreement with each of its directors and executive officers, including Dr. McMinn. The indemnification agreements require Neurogene to indemnify its directors to the fullest extent permitted under Delaware law. The above summary is qualified by reference to the full text of the indemnification agreement, a form of which is filed as Exhibit 2 to this Statement and is incorporated herein by reference.

**Item 7. Material to Be Filed as Exhibits**

- Exhibit 1. Form of Lock-Up Agreement (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on July 18, 2023).
- Exhibit 2. Form of Indemnification Agreement (incorporated by reference to Exhibit 10.20 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on December 19, 2023)

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**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.

Dated: December 21, 2023

**Rachel McMinn, Ph.D.**

/s/ Rachel McMinn, Ph.D.

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