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

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**SCHEDULE 13G**

Under the Securities Exchange Act of 1934  
(Amendment No. )\*

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**Lexeo Therapeutics, Inc.**  
(Name of Issuer)

**Common Stock, \$0.0001 par value per share**  
(Title of Class of Securities)

**52886X107**  
(CUSIP Number)

**December 31, 2023**  
(Date of Event which Requires Filing of this Statement)

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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)

\* 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 in 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 Longitude Capital Partners IV, LLC	
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
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
	6.	SHARED VOTING POWER 2,567,100 (1)
	7.	SOLE DISPOSITIVE POWER 0
	8.	SHARED DISPOSITIVE POWER 2,567,100 (1)
9.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 2,567,100 (1)	
10.	CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (see instructions) <input type="checkbox"/>	
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 9.6% (2)	
12.	TYPE OF REPORTING PERSON (see instructions) OO	

- (1) All such shares are held of record by LVPIV (as defined in Item 2(a) below). LCPIV (as defined in Item 2(a) below) is the general partner of LVPIV and may be deemed to have voting, investment and dispositive power with respect to these securities. Patrick G. Enright and Juliet Tammenoms Bakker are the managing members of LCPIV and may each be deemed to share voting, investment and dispositive power with respect to these securities.
- (2) Based on 26,645,538 shares of Common Stock (as defined in Item 2(d) below) outstanding as of December 7, 2023, as reported by the Issuer (as defined in Item 1(a) below) in its Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission (the "Commission") on December 11, 2023 (the "Form 10-Q").

1.	NAMES OF REPORTING PERSONS Longitude Venture Partners IV, L.P.	
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
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
	6.	SHARED VOTING POWER  2,567,100 (1)
	7.	SOLE DISPOSITIVE POWER  0
	8.	SHARED DISPOSITIVE POWER  2,567,100 (1)
9.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  2,567,100 (1)	
10.	CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (see instructions)  <input type="checkbox"/>	
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  9.6% (2)	
12.	TYPE OF REPORTING PERSON (see instructions)  PN	

- (1) All such shares are held of record by LVPIV. LCPIV is the general partner of LVPIV and may be deemed to have voting, investment and dispositive power with respect to these securities. Patrick G. Enright and Juliet Tammenoms Bakker are the managing members of LCPIV and may each be deemed to share voting, investment and dispositive power with respect to these securities.
- (2) Based on 26,645,538 shares of Common Stock outstanding as of December 7, 2023, as reported by the Issuer in its Form 10-Q.

1.	NAMES OF REPORTING PERSONS  Patrick G. Enright	
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC USE ONLY	
4.	CITIZENSHIP OR PLACE OF ORGANIZATION  United States of America	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5.	SOLE VOTING POWER  0
	6.	SHARED VOTING POWER  2,567,100 (1)
	7.	SOLE DISPOSITIVE POWER  0
	8.	SHARED DISPOSITIVE POWER  2,567,100 (1)
9.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  2,567,100 (1)	
10.	CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (see instructions)  <input type="checkbox"/>	
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  9.6% (2)	
12.	TYPE OF REPORTING PERSON (see instructions)  IN	

- (1) All such shares are held of record by LVPIV. LCPIV is the general partner of LVPIV and may be deemed to have voting, investment and dispositive power with respect to the securities held by LVPIV. Mr. Enright is a managing member of LCPIV and may be deemed to share voting, investment and dispositive power with respect to these securities.
- (2) Based on 26,645,538 shares of Common Stock outstanding as of December 7, 2023, as reported by the Issuer in its Form 10-Q.

1.	NAMES OF REPORTING PERSONS Juliet Tammenoms Bakker	
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC USE ONLY	
4.	CITIZENSHIP OR PLACE OF ORGANIZATION United States of America	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5.	SOLE VOTING POWER 0
	6.	SHARED VOTING POWER 2,567,100 (1)
	7.	SOLE DISPOSITIVE POWER 0
	8.	SHARED DISPOSITIVE POWER 2,567,100 (1)
9.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 2,567,100 (1)	
10.	CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (see instructions) <input type="checkbox"/>	
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 9.6% (2)	
12.	TYPE OF REPORTING PERSON (see instructions) IN	

- (1) All such shares are held of record by LVPIV. LCPIV is the general partner of LVPIV and may be deemed to have voting, investment and dispositive power with respect to the securities held by LVPIV. Ms. Bakker is a managing member of LCPIV and may be deemed to share voting, investment and dispositive power with respect to these securities.
- (2) Based on 26,645,538 shares of Common Stock outstanding as of December 7, 2023, as reported by the Issuer in its Form 10-Q.

**Item 1(a). Name of Issuer:**

Lexeo Therapeutics, Inc. (the "Issuer").

**Item 1(b). Address of Issuer's Principal Executive Offices:**

345 Park Avenue South, Floor 6  
New York, NY 10010

**Item 2(a). Name of Person Filing:**

This joint statement on Schedule 13G is being filed by Longitude Capital Partners IV, LLC ("LCPIV"), Longitude Venture Partners IV, L.P. ("LVPIV") and together with LCPIV, the "Reporting Entities") and Patrick G. Enright and Juliet Tammenoms Bakker (together, the "Reporting Individuals"). The Reporting Entities and the Reporting Individuals are collectively referred to as the "Reporting Persons."

**Item 2(b). Address of Principal Business Office, or if None, Residence:**

The address of the principal business office of each Reporting Person is 2740 Sand Hill Road, 2<sup>nd</sup> Floor, Menlo Park, CA 94025.

**Item 2(c). Citizenship:**

LCPIV is a limited liability company organized under the laws of the State of Delaware. LVPIV is a limited partnership organized under the laws of the State of Delaware. Each of the Reporting Individuals is a citizen of the United States of America.

**Item 2(d). Title of Class of Securities:**

Common Stock, \$0.0001 par value per share ("Common Stock").

**Item 2(e). CUSIP Number:**

52886X107

**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:**

Not applicable.

**Item 4. Ownership.**

(a) Amount beneficially owned:

See Row 9 of the cover page for each Reporting Person.

LVPIV is the record owner of 2,567,100 shares of Common Stock (the "LVPIV Shares"). As general partner of LVPIV, LCPIV may be deemed to beneficially own the LVPIV Shares. Patrick G. Enright and Juliet Tammenoms Bakker are the managing members of LCPIV and may be deemed to share voting, investment and dispositive power with respect to the LVPIV Shares.

(b) Percent of class:

See Row 11 of the cover page for each Reporting Person and the corresponding footnotes.\*

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

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

See Row 5 of the cover page for each Reporting Person and the corresponding footnotes.\*

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

See Row 6 of the cover page for each Reporting Person and the corresponding footnotes.\*

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

See Row 7 of the cover page for each Reporting Person and the corresponding footnotes.\*

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

See Row 8 of the cover page for each Reporting Person and the corresponding footnotes.\*

\* Except to the extent of his, hers, or its pecuniary interest therein, each Reporting Person disclaims beneficial ownership of such shares of Common Stock, except for the shares, if any, such Reporting Person holds of record.

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

Not applicable.

**Item 6. Ownership of More Than Five Percent on Behalf of Another Person.**

Under certain circumstances set forth in the limited partnership agreements of LVPIV and the limited liability company agreement of LCPIV, the general and limited partners or members, as the case may be, of each of such entities may be deemed to have the right to receive dividends from, or the proceeds from, the sale of securities of the Issuer owned by each such entity of which they are a partner or member, as the case may be.

**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 the Group.**

Not applicable.

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**Item 10. Certifications.**

Not Applicable

Material to be Filed as Exhibits.

Exhibit 1 – Joint Filing Agreement.

**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: February 13, 2024

LONGITUDE CAPITAL PARTNERS IV, LLC

By: /s/ Cristiana Blauth Oliveira

Cristiana Blauth Oliveira

Its: Authorized Signatory

LONGITUDE VENTURE PARTNERS IV, L.P.

By: Longitude Capital Partners IV, LLC

Its: General Partner

By: /s/ Cristiana Blauth Oliveira

Cristiana Blauth Oliveira

Its: Authorized Signatory

/s/ Cristiana Blauth Oliveira, as attorney-in-fact for

Patrick G. Enright

Patrick G. Enright

/s/ Cristiana Blauth Oliveira, as attorney-in-fact for

Juliet Tammenoms Bakker

Juliet Tammenoms Bakker

**JOINT FILING AGREEMENT**

The undersigned hereby agree that the foregoing statement on Schedule 13G is filed on behalf of each of the undersigned, and any amendments thereto executed by the undersigned shall be filed on behalf of each of the undersigned without the necessity of filing any additional joint filing agreement. The undersigned acknowledge that each is responsible for the timely filing of such statement on Schedule 13G and any amendments thereto, and for the completeness and accuracy of the information concerning him, her or it contained therein, but shall not be responsible for the completeness or accuracy of the information concerning the others of the undersigned, except to the extent that he, she or it knows or has reason to believe that such information is inaccurate or incomplete. This Joint Filing Agreement may be executed in any number of counterparts, all of which taken together shall constitute one and the same instrument.

Dated: February 13, 2024

LONGITUDE CAPITAL PARTNERS IV, LLC

By: /s/ Cristiana Blauth Oliveira  
Cristiana Blauth Oliveira  
Its: Authorized Signatory

LONGITUDE VENTURE PARTNERS IV, L.P.

By: Longitude Capital Partners IV, LLC  
Its: General Partner  
By: /s/ Cristiana Blauth Oliveira  
Cristiana Blauth Oliveira  
Its: Authorized Signatory

/s/ Cristiana Blauth Oliveira, as attorney-in-fact for  
Patrick G. Enright  
Patrick G. Enright

/s/ Cristiana Blauth Oliveira, as attorney-in-fact for  
Juliet Tammenoms Bakker  
Juliet Tammenoms Bakker