

6,974,248 Shares of Common Stock



This prospectus supplement is being filed to update and supplement the information contained in the prospectus dated April 12, 2024 (as supplemented from time to time, the “Prospectus”), which forms a part of our registration statement on Form S-1 (No. 333-278566), with the information contained in our Current Report on Form 8-K filed with the Securities and Exchange Commission on June 28, 2024 (the “Current Report”). Accordingly, we have attached the Current Report to this prospectus supplement. This prospectus relates to the offer and resale from time to time of up to 6,974,248 shares (the “Shares”) of common stock, par value \$0.0001 per share (“Common Stock”), of Lexeo Therapeutics, Inc., a Delaware corporation (the “Company”), by the selling stockholders identified in this prospectus, including their transferees, pledgees or donees or their respective successors (the “Selling Stockholders”). The Shares consist of (i) 6,278,905 shares which were issued and sold to the Selling Stockholders on March 13, 2024 (the “Closing Date”) in a private placement (the “Private Placement”) pursuant to a common stock purchase agreement among us and such Selling Stockholders dated March 11, 2024 (the “Purchase Agreement”) and (ii) 695,343 shares of Common Stock held by the Selling Stockholders as of March 11, 2024. Concurrently with the Purchase Agreement, we entered into a registration rights agreement (the “Registration Rights Agreement”) with the Selling Stockholders, and we are registering the Shares being offered hereunder pursuant to such registration rights agreement on behalf of the Selling Stockholders, to be offered and sold by them from time to time.

This prospectus supplement updates and supplements the information in the Prospectus and is not complete without, and may not be delivered or utilized except in combination with, the Prospectus, including any amendments or supplements thereto. This prospectus supplement should be read in conjunction with the Prospectus and if there is any inconsistency between the information in the Prospectus and this prospectus supplement, you should rely on the information in this prospectus supplement.

Our Common Stock is listed on The Nasdaq Global Market (“Nasdaq”) under the symbol “LXEO”. On June 27, 2024, the last quoted sale price for our Common Stock as reported on Nasdaq was \$14.86 per share.

We are an “emerging growth company” and a “smaller reporting company” as defined under the federal securities laws, and, as such, may elect to comply with certain reduced public company reporting requirements for this prospectus and for future filings.

Investing in our securities involves a high degree of risk. Before buying any securities, you should carefully read the discussion of the risks of investing in our securities in “Risk Factors” beginning on page 13 of the Prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Prospectus supplement dated June 28, 2024

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): June 28, 2024

Lexeo Therapeutics, Inc.

(Exact name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction
of Incorporation)

001-41855
(Commission File Number)

85-4012572
(IRS Employer
Identification No.)

345 Park Avenue South, Floor 6
New York, New York
(Address of Principal Executive Offices)

10010
(Zip Code)

Registrant's Telephone Number, Including Area Code: 212 547-9879

N/A

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.0001 par value per share	LXEO	Nasdaq Global Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 5.07 Submission of Matters to a Vote of Security Holders.

On June 25, 2024, Lexeo Therapeutics, Inc. (the “Company”) held its virtual 2024 Annual Meeting of Stockholders (the “Annual Meeting”) exclusively online via live webcast. The stockholders voted on the following proposals at the Annual Meeting:

Proposal 1. Election of Class I Director

The Company’s stockholders elected the person listed below as the Class I Director, to serve until the Company’s 2027 Annual Meeting of Stockholders and until her successor is elected and qualified, or until her earlier death, resignation or removal. The final voting results are as follows:

	FOR	WITHHELD	BROKER NON-VOTE
Mette Kirstine Agger	14,499,254	7,450,057	1,249,160

Proposal 2. Ratification of Appointment of Independent Registered Public Accounting Firm

The Company’s stockholders ratified the selection by the Audit Committee of the Company’s Board of Directors of KPMG LLP as the Company’s independent registered public accounting firm for the fiscal year ending December 31, 2024. The final voting results are as follows:

	FOR	AGAINST	ABSTAIN
	23,194,982	3,088	401

For more information about the foregoing proposals, see the Proxy Statement as filed with the Securities and Exchange Commission on April 26, 2024.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Lexeo Therapeutics, Inc.

Date: June 28, 2024

By: /s/ R. Nolan Townsend
R. Nolan Townsend, Chief Executive Officer
