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

SCHEDULE 13G

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

Lexeo Therapeutics, Inc.
(Name of Issuer)

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

52886X107
(CUSIP Number)

November 15, 2023
(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)

* 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 the 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).

1.	Name of Reporting Person: Novo Holdings A/S	
2.	Check the Appropriate Box if a Member of Group (See Instructions): (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC Use Only:	
4.	Citizenship or Place of Organization: Denmark	
Number of Shares Beneficially Owned By Each Reporting Person With:	5.	Sole Voting Power: 1,294,053
	6.	Shared Voting Power: 0
	7.	Sole Dispositive Power: 1,294,053
	8.	Shared Dispositive Power: 0
9.	Aggregate Amount Beneficially Owned by Each Reporting Person: 1,294,053	
10.	Check if the Aggregate Amount in Row (9) Excludes Certain Shares: <input type="checkbox"/>	
11.	Percent of Class Represented By Amount In Row (9): 5.1 %(1)	
12.	Type of Reporting Person: CO	

- (1) Based upon 25,169,328 shares of the Issuer's Common Stock outstanding after the Issuer's Initial Public Offering, assuming no exercise of the underwriters' over-allotment option in connection with the IPO, as reported in the Issuer's prospectus pursuant to rule 424(b)(4) filed with the Securities and Exchange Commission ("SEC") on November 6, 2023.

- Item 1. (a) Name of Issuer:**
Lexeo Therapeutics, Inc.
- (b) Address of Issuer’s Principal Executive Offices:**
345 Park Avenue South, Floor 6
New York, New York, 10010

- Item 2. (a) Name of Person Filing:**
Novo Holdings A/S, a Danish corporation, is an investment firm focused on life sciences and finance that is wholly owned by Novo Nordisk Foundation (the “Foundation”), a Danish commercial foundation. Novo Holdings A/S is the holding company in the group of Novo companies (currently comprised of Novo Nordisk A/S and Novozymes A/S) and is responsible for managing the Foundation’s assets, including its financial assets. Based on the governance structure of Novo Holdings A/S and the Foundation, the Foundation is not deemed to have any beneficial ownership of the securities of the Issuer held by Novo Holdings A/S.
- (b) Address or Principal Business Office or, if none, Residence:**
Tuborg Havnevej 19
2900 Hellerup, Denmark
- (c) Citizenship or Place of Organization:**
Denmark
- (d) Title of Class of Securities:**
Common Stock
- (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:

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

(a) Amount beneficially owned:	1,294,053	(1)
(b) Percent of class:	5.1%	(2)
(c) Number of shares as to which such person has:		
(i) Sole power to vote or to direct the vote:	1,294,053	(1)
(ii) Shared power to vote or to direct the vote:	0	
(iii) Sole power to dispose or to direct the disposition of:	1,294,053	(1)
(iv) Shared power to dispose or to direct the disposition of:	0	

- (1) Novo Holdings A/S has the sole power to vote and dispose of the shares, and no individual or other entity is deemed to hold any beneficial ownership in the shares.
- (2) Based upon 25,169,328 shares of the Issuer’s Common Stock outstanding after the Issuer’s Initial Public Offering, assuming no exercise of the underwriters’ over-allotment option in connection with the IPO, as reported in the Issuer’s prospectus pursuant to rule 424(b)(4) filed with the SEC on November 6, 2023.

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:

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.

Dated: November 24, 2023

Novo Holdings A/S

/s/ Barbara Fiorini Due

By: Barbara Fiorini Due

Its: General Counsel, Finance & Operations