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Via EDGAR

FOIA Confidential Treatment Request
Confidential Treatment Requested by Lexeo Therapeutics, Inc.
In Connection with Registration Statement on Form S-1 (File No. 377-05985)

October 5, 2023

U.S. Securities and Exchange Commission
Division of Corporation Finance
Office of Life Sciences
100 F Street, N.E.
Washington, D.C. 20549

Attention: Eric Atallah
Lynn Dicker
Jason Drory
Tim Buchmiller

Re: Lexeo Therapeutics, Inc.
Registration Statement on Form S-1
Filed September 29, 2023
File No. 333-274777

Ladies and Gentlemen:

On behalf of Lexeo Therapeutics, Inc. (the "**Company**"), we are submitting this supplemental letter in further response to comment 14 received from the staff (the "**Staff**") of the U.S. Securities and Exchange Commission (the "**Commission**") by letter dated March 3, 2022 with respect to the Company's Confidential Draft Registration Statement on Form S-1 originally submitted to the Commission on February 4, 2022, resubmitted to the Commission on May 5, 2022, May 17, 2023, August 16, 2023 and September 18, 2023 and subsequently filed with the Commission on September 29, 2023 (the "**Registration Statement**").

Due to the commercially sensitive nature of information contained in this letter, this submission is accompanied by the Company's request for confidential treatment for selected portions of this letter. The Company has filed a separate letter with the Office of Freedom of Information and Privacy Act Operations in connection with the confidential treatment request pursuant to Rule 83 of the Commission's Rules on Information and Requests, 17 C.F.R. § 200.83. For the Staff's reference, we have enclosed a copy of this letter marked to show the portions redacted from the version filed via EDGAR and for which the Company is requesting confidential treatment.

For the convenience of the Staff, we have recited the prior comment from the Staff in italicized type and have followed the comment with the Company's response.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Critical Accounting Policies and Significant Judgements and Estimates

Determination of Fair Value of Common Stock, page 115

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6. *Once you have an estimated offering price or range, please explain to us how you determined the fair value of the common stock underlying your equity issuances and the reasons for any differences between the recent valuations of your common stock leading up to the initial public offering and the estimated offering price. This information will help facilitate our review of your accounting for equity issuances. Please discuss with the staff how to submit your response.*

The Company's discussion of its accounting for stock-based compensation is primarily contained within the section of the Registration Statement entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical accounting policies and significant judgments and estimates—Determination of fair value of common stock," appearing on pages 116 through 118 of the Registration Statement.

The Company submits the below additional information to assist the Staff in its review of the Company's position with respect to its determination of the fair value of the shares of common stock underlying its outstanding equity awards and the reasons for the difference between the recent valuations of the common stock and the estimated offering price for the common stock in its initial public offering ("**IPO**").

Preliminary IPO Price Range

The Company advises the Staff that the Company preliminarily estimates a price range of \$[***] to \$[***] per share of common stock (the "**Preliminary Price Range**") for its IPO, which does not reflect an expected reverse stock split of the Company's capital stock that the Company expects to effect prior to the filing of a preliminary prospectus with a bona fide price range. The share and per-share numbers in this letter are presented on a pre-split basis.

The Preliminary Price Range is based in part upon the Company's financial position and prospects; prospects for the biopharmaceutical industry; the general condition of the securities markets and the recent market prices of, and the demand for, publicly traded shares of generally comparable companies in the biopharmaceutical industry; as well as feedback from potential investors following "testing the waters" meetings, which suggested there was investor interest in the Company at a step-up in valuation from the most recent valuation of the Company; and input received from J.P. Morgan Securities, LLC, Leerink Partners LLC, Stifel, Nicolaus & Company, Incorporated, RBC Capital Markets, LLC and Chardan Capital Markets, LLC, the representatives of the underwriters (the "**Representatives**") for the IPO. The Company notes that, as is typical in initial public offerings, the Preliminary Price Range for the IPO was not derived using a formal determination of fair value, but was determined by discussions among the board of directors of the Company (the "**Board**"), senior management of the Company and the Representatives based on their respective assessments of the foregoing factors.

The Company will include a bona fide price range of the common stock in an amendment to the Registration Statement that will precede the commencement of the Company's road show, which the Company expects to be a [***]-dollar range (on a post-split basis) within the Preliminary Price Range. The parameters of the bona fide price range will be subject to then-current market conditions, continuing discussions with the Representatives, and volatility in the securities markets, including, in particular, the volatility experienced in the market by issuers with recent initial public offerings. In any event, the Company confirms to the Staff that the bona fide price range will comply with Item 501(b)(3) of Regulation S-K and CD&I 134.04.

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Common Stock Valuation Methodologies

As there has been no public market for the Company's common stock to date, the estimated fair value of the common stock for purposes of granting equity awards has been determined by the Board, as of the date of each option grant, with input from management, considering the Company's most recent arm's-length sales of its convertible preferred shares, and the most recent third-party valuation of its common stock, as well as the Board's assessment of additional objective and subjective factors that the Board believed were relevant and which may have changed from the date of the most recent third-party valuation through the date of the grant. The Board considered various objective and subjective factors to determine the estimated fair value of the common stock as of each grant date including:

- the prices at which the Company sold shares of convertible preferred stock to outside investors in arm's-length transactions and the rights, preferences and privileges of the Company's convertible preferred stock, relative to those of the Company's common stock;
- lack of an active public market for the common stock;
- the Company's stage of development and business strategy, and material risks related to the Company's business;
- the Company's financial condition and the Company's historical and forecasted performance and operating results, including the Company's levels of available capital resources;
- the progress of the Company's research and development efforts and the progress of its clinical trials;
- the hiring of key personnel and the experience of management;
- the likelihood of achieving a liquidity event, such as an initial public offering, in light of prevailing market conditions;
- external market conditions affecting the biopharmaceutical industry and trends within the life sciences sector; and
- the analysis of initial public offerings and the market performance of similar companies in the biopharmaceutical industry.

The third-party valuations of the common stock that the Board considered in making its determinations were prepared in accordance with the American Institute of Certified Public Accountants' Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation* (the "***AICPA Practice Aid***"), which prescribes several valuation approaches for determining the value of an enterprise, such as the cost, market and income approaches, and various methodologies for allocating the value of an enterprise to its capital structure and specifically the common stock.

In accordance with the Practice Aid, the Company considered the following methods for allocating the enterprise value across its classes of capital shares to determine the estimated fair value of the common stock at each valuation date.

- *Market Approach* (the "***Market Approach***"). Under this valuation method, the Company estimates the value based upon the Company's prior sales of preferred shares to unrelated third parties.

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- *Black-Scholes Option Pricing Method (“OPM”).* This valuation method estimates the value of the common stock using the various inputs in the Black-Scholes option pricing model. The OPM treats the rights of the holders of common stock as equivalent to that of call options on any value of the enterprise above certain break points of value based upon the liquidation preferences of the holders of the Company’s convertible preferred shares, as well as their rights to participation, and the share prices of the outstanding options. Thus, the value of the common stock can be determined by estimating the value of its portion of each of these call option rights. Under this method, the common stock has value only if the funds available for distribution to shareholders exceed the value of the liquidation preference at the time of a liquidity event, such as a merger or sale.
- *Probability-Weighted Expected Return Method (“PWERM”).* The PWERM is a scenario-based analysis that estimates the value per share based on the probability-weighted present value of expected future investment returns, considering each of the possible outcomes considered by the Company.
- *Hybrid Method.* The hybrid method is a weighted-average method that combines both OPM and PWERM. Weighting allocations are assigned to the OPM and PWERM methods factoring in possible future liquidity events.

Since January 1, 2022, the Board has granted options to purchase an aggregate of 13,746,349 common stock under the Company’s 2021 Equity Incentive Plan, comprised of options issued to employees, consultants and non-employee directors. The Board made the option grants on nine dates during 2022 and 2023, as follows:

<u>Date of Grant</u>	<u>Number of common stock Subject to Options Granted</u>	<u>Exercise Price of Options Granted per Ordinary Share</u>
January 26, 2022	449,060	\$1.38
March 7, 2022	15,000	\$1.43
May 6, 2022	850,786	\$1.43
July 20, 2022	388,542	\$1.43
December 2, 2022	25,250	\$1.43
March 14, 2023	4,922,272	\$1.66
July 23, 2023	1,549,339	\$1.04
August 22, 2023	4,871,569	\$1.04
September 17, 2023	674,531	\$1.04

Determinations of Fair Value of Common Stock on Date of Grant

As described in the Registration Statement, as there has been no public market for the Company’s common stock to date, the estimated fair value of its common stock historically has been determined by the Board, as of the date of each option grant, with input from management, considering the Company’s third-party valuations of its common stock as well as the Board’s assessment of additional objective and subjective factors that the Board believed were relevant and which may have changed from the date of the most recent third-party valuation through the date of the grant. The third-party valuations of the Company’s common stock that the Board considered in making its determinations were prepared in accordance with the AICPA Practice Aid.

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In order for the Board to determine the estimated fair value of the Company's common stock, the Hybrid Method was utilized for the independent third-party valuations of the common stock as of December 17, 2021 (the "**December 17, 2021 Valuation**"), as of February 15, 2022 (the "**February 15, 2022 Valuation**"), as of February 14, 2023 (the "**February 14, 2023 Valuation**"), and as of June 23, 2023 (the "**June 2023 Valuation**"), each as discussed below, as the Company had some visibility into the timing of a potential IPO. Equity value for each liquidity event scenario utilized in each of the valuations was weighted based on a probability of each liquidity event's occurrence. The Hybrid Method is commonly used in these situations and is consistent with guidance from the AICPA Practice Aid. In each of the IPO scenarios discussed below, the Company assumed that all outstanding shares of the Company's convertible preferred shares will convert to common stock and all outstanding in the money options, and warrants will be exercised. Given the common stock represent a non-marketable equity interest in a private enterprise, an adjustment to the preliminary value estimates had to be made to account for the lack of liquidity that a shareholder experiences. This adjustment is commonly referred to as a discount for lack of marketability ("**DLOM**").

At each grant date, the Board evaluated any recent events and their potential impact on the estimated fair value per share. For grants of equity awards made on dates for which there was no contemporaneous independent third-party valuation, the Board determined the estimated fair value of the common stock on the date of grant taking into consideration the immediately preceding valuation report as well as other pertinent information available to it at the time of the grant.

December 17, 2021 Valuation (Used to Determine Fair Value of Common Stock on Date of Grant for Options Granted on January 26, 2022):

The Company completed its Series B preferred stock financing on August 10, 2021 (the "**Series B Financing**") and held an organizational meeting for the IPO on [***]. In connection with these events, the Company obtained the December 17, 2021 Valuation. The December 17, 2021 Valuation utilized a Hybrid Method, in which both a staying private scenario and a going public scenario were considered, resulting in a fair value of \$[***] per share, as described below.

For the staying private scenario, the December 17, 2021 Valuation used the Market Approach, utilizing the subject company method (the "**Subject Company Method**") at a trended growth rate of [***]%, based on the Company's Series B Financing value (the "**Series B Value**") and the OPM to allocate equity value to the different classes of shares. In the IPO scenario, the December 17, 2021 Valuation projected, based on management estimates, Company value and applied certain adjustments to that value, including a discount to present value, a discount for the cost of equity and the addition of cash to account for the exercise of stock options. The IPO scenario allocated the equity value on a fully-diluted basis assuming conversion of all shares of preferred stock into shares of common stock. A DLOM was applied to the values in both the staying private and IPO scenarios, of [***]% and [***]%, respectively.

Based on conversations with management, the values for the staying private and IPO scenarios were assigned probability weights of [***]% and [***]%, respectively, resulting in the estimated fair value of \$1.38 per share of common stock as of December 17, 2021.

For the period from the date of the December 17, 2021 Valuation to January 26, 2022, the Board determined there were no internal or external developments since the date of the December 17, 2021 Valuation that warranted a change in the estimated fair value of the common stock. As a result, the Board determined that the estimated fair value of the common stock was \$1.38 per share for the option grants made on January 26, 2022.

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February 15, 2022 Valuation (Used to Determine Fair Value of Common Stock on Date of Grant for Options Granted on March 7, 2022, May 6, 2022, July 20, 2022 and December 2, 2022):

After the initial submission of the Company's draft registration statement to the Commission on February 4, 2022, the Company obtained the February 15, 2022 Valuation, which utilized the same valuation methodology as the December 17, 2021 Valuation, except that the Subject Company Method was adjusted with a trended growth rate of [***]% to account for the macroeconomic difficulties experienced in the period of time between the Series B Financing and the valuation date. The February 15, 2022 Valuation used the same methodology as the December 17, 2021 Valuation for the IPO scenario.

The DLOMs for the staying private and IPO scenarios were [***]% and [***]%, respectively. Despite having recently submitted its initial confidential draft registration statement, given the challenging capital markets, the Company determined that probability weightings of the staying private and IPO scenarios were [***]% and [***]%, respectively, which resulted in an estimated fair value of \$1.43 per share of common stock as of the date of the valuation.

For the period from the date of the February 15, 2022 Valuation to February 14, 2023, the Board determined there were no internal or external developments since the date of the February 14, 2022 Valuation that warranted a change in the estimated fair value of the common stock. As a result, the Board determined that the estimated fair value of the common stock was \$1.43 per share for the option grants made on March 7, 2022, May 6, 2022, July 20, 2022 and December 2, 2022.

February 14, 2023 Valuation (Used to Determine Fair Value of Common Stock on Date of Grant for Options Granted on March 14, 2023):

After meaningful progress by the Company across all lead programs, including announcement of positive initial data from the Phase 1/2 clinical trial of LX1001 and preparations for the initiation of the Phase 1/2 clinical trial of LX2006, the Company obtained the February 14, 2023 Valuation. The February 14, 2023 Valuation utilized the same valuation methodology as the December 17, 2021 Valuation and the February 15, 2022 Valuation. The February 14, 2023 Valuation, utilizing the Subject Company Method, estimated that the Company's value had increased by [***]% since the Series B Financing, based on management estimates and after a review of market adjustments to a group of comparable public companies and considering the lapse of time between the date of the Series B Financing and the date of the valuation. The OPM was then used to derive a fully marketable value of the common stock for the staying private scenario. In the IPO scenario, the estimated equity value was based on a management estimate and adjusted for the discount to present value and the discount for the cost of equity. The respective DLOMs of [***]% and [***]% were then applied to the staying private and IPO scenarios, respectively. Based on management's estimates, the staying private scenario was assigned a weight of [***]% and the IPO scenario was assigned a weight of [***]%, resulting in a fair value of the common stock as of February 14, 2023 of \$1.66 per share.

For the period from the date of the February 14, 2023 Valuation to March 14, 2023, the Board determined there were no internal or external developments since the date of the February 14, 2023 Valuation that warranted a change in the estimated fair value of the common stock. As a result, the Board determined that the estimated fair value of the common stock was \$1.66 per share for the option grants made on March 14, 2023.

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June 23, 2023 Valuation (Used to Determine Fair Value of Common Stock on Date of Grant for Options Granted on July 24, 2023, August 22, 2023 and September 17, 2023):

The Company submitted an amendment to the draft registration statement in May 2023 and obtained the June 23, 2023 Valuation. Utilizing the Subject Company Method, the June 23, 2023 Valuation considered the value ascribed to the Company in a term sheet (the “*Term Sheet Value*”) for a Series C Preferred Stock financing that was ultimately not completed. To account for the change in the life sciences sector that had occurred between the time of the closing of the Series B Financing and the valuation date, a [***]% trended growth rate was applied to the Series B Value. The growth rate was based on a review of market and peer group trended growth rates that ranged from [***]% to [***]% (excluding outliers), with a median of [***]% for the indices and [***]% for the peer group. Equal weighting was then applied to both the adjusted Series B Value and the Term Sheet Value, and the OPM analysis was conducted.

In the IPO scenario, an estimated equity value was determined based on management estimates and adjusted for discounts to present value and for the cost of equity, and for additional estimated cash from the exercise of stock options.

A DLOM was then applied to each value, with the staying private scenario assigned a DLOM of [***]% and the IPO scenario assigned a DLOM of [***]%. Based on management’s estimates, the staying private scenario was assigned a weight of [***]% and the IPO scenario was assigned a weight of [***]%. In selecting these probabilities, consideration was given to the fact that the Company had reinitiated preparations for the IPO (after having paused preparations in 2022 due to unfavorable market conditions, among other things) and confidentially submitted an amendment to the Registration Statement in May 2023, and that it had not completed the contemplated private Series C financing. These weightings were applied to the respective fair values under each scenario to determine a fair value of the common stock as of June 23, 2023 of \$1.04 per share.

On August 22, 2023, the Board determined that the estimated fair value of the Company’s common stock was \$1.04 per share after considering the June 23, 2023 Valuation and other objective and subjective factors as appropriate. As part of this determination, the Board concluded that no significant value-affecting events had taken place between the June 23, 2023 Valuation and the August 22, 2023 grant date that were not anticipated in the June 23, 2023 Valuation. On September 17, 2023, the Board again determined that the estimated fair value of the Company’s common stock was \$1.04 per share (the “*Estimated Fair Value*”) after considering the June 23, 2023 Valuation and other objective and subjective factors as appropriate. As part of this determination, the Board concluded that no significant value-affecting events had taken place between the June 23, 2023 Valuation and the September 17, 2023 grant date that were not anticipated in the June 23, 2023 Valuation.

Explanation of Difference Between the Estimated Fair Value and the Midpoint of the Preliminary Price Range

The Company believes that the potential future liquidity events used in each of its analyses and the probability weighting of each event was reasonable at the times of all the valuations noted above, in light of the Company’s stage of clinical development, industry clinical success rates, its expected near-term and long-term funding requirements, an assessment of the current financing environment for the pharmaceutical and biotechnology industry, external market conditions affecting the pharmaceutical and biotechnology industries, especially with respect to initial public offerings, and the relative likelihood of achieving a liquidity event such as an initial public offering or sale of the Company in light of prevailing market conditions.

The increase from our June 23, 2023 Valuation and the bottom end of the Preliminary Price Range is approximately [***]%, which the Company believes is reasonable in light of the changes discussed below and the lack of a marketability discount. The Company believes that the difference in value reflected between the Estimated Fair Value and the Preliminary Price Range is the result of the following key factors, among others:

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- The Subject Company Method used by the Company to determine the Estimated Fair Value reflects the potential that the Company might remain a privately held company, which inherently decreases the Estimated Fair Value of the Company's common stock due to the combination of (i) the valuation of the Company's equity in the staying private scenario that was significantly lower than in the IPO scenario, (ii) the discounting to present value and (iii) the application of a higher discount for lack of marketability. Conversely, the midpoint of the Preliminary Price Range necessarily assumes only a single potential liquidity event, the IPO, and does not include a discount for present value or a discount for lack of marketability, as an active trading market for the Company's common stock will exist following the IPO. As a result, the midpoint of the Preliminary Price Range was neither reduced by the expected equity value from other potential future outcome events nor discounted for lack of marketability.
- The holders of the Company's convertible preferred stock currently enjoy substantial economic rights and preferences over the holders of its common stock, including the right to receive dividends prior to any dividends declared or paid on any shares of the Company's common stock and liquidation payments in preference to holders of common stock. The Preliminary Price Range described assumes the conversion of all of the Company's convertible preferred stock upon the completion of its IPO. The corresponding elimination of the preferences and rights enjoyed by the holders of such convertible preferred stock results in a higher valuation of the common stock.
- The successful completion of an IPO would strengthen the Company's balance sheet, provide access to public equity and debt markets and provide a "currency" of publicly tradeable securities to enable the Company to make strategic acquisitions and enter into strategic partnerships as the Board may deem appropriate, providing enhanced operational flexibility.
- The Company conducted additional "testing the waters" meetings after the determination of the Estimated Fair Value and received additional feedback regarding potential demand for a biopharmaceutical company with two lead assets in Phase 1/2 clinical trials.
- The Company received initial positive data from a patient in the Phase 1/2 clinical trial of LX2006.
- The Company filed the Registration Statement with the Commission on September 29, 2023.
- Updated market conditions used in the determination of the Preliminary Price Range based on the current market environment and the supply and demand for such investment opportunities in the marketplace. The bottom end of the Preliminary Price Range may result in an overestimation of the Company's value given the performance of other issuers in the life sciences sector with an initial public offering in 2023. Most of these companies are currently trading below the respective prices per share in their initial public offerings despite demonstrated progress including meeting key milestones and in some instances even though several of these companies priced at the bottom ends of their respective estimated offering price ranges.

Based on the Preliminary Price Range, the current status of the financial markets and continued uncertainty as to whether the Company will be able to complete its planned IPO within the Preliminary Price Range, or at all, the Company respectfully submits that the Estimated Fair Value is consistent with the Company's and the underwriters' estimates of the Preliminary Price Range.

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Moreover, the Company advises the Staff that it does not currently anticipate issuing any additional options prior to the pricing of its IPO.

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Please contact me at (212) 479-6565 or Dayne Brown at (212) 479-6712 with any questions or further comments regarding our response to the Staff's comment. Thank you for your assistance.

Sincerely,

/s/ Eric Blanchard

Eric Blanchard
of Cooley LLP

cc: R. Nolan Townsend, Lexeo Therapeutics, Inc.
Jenny R. Robertson, Lexeo Therapeutics, Inc.
Divakar Gupta, Cooley LLP
Peter Byrne, Cooley LLP
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