

LEXEO THERAPEUTICS, INC.

AMENDED AND RESTATED CHARTER OF THE COMPENSATION COMMITTEE OF THE BOARD OF DIRECTORS

PURPOSE

The purpose of the Compensation Committee (the “*Committee*”) of the Board of Directors (the “*Board*”) of Lexeo Therapeutics, Inc. (the “*Company*”) is to:

- Assist the Board in its oversight of the Company’s compensation policies, plans and programs, and overall compensation philosophy;
- Review and approve (or recommend to the Board for approval) the compensation to be paid to the Company’s Chief Executive Officer, other executive officers and other members of senior management (in the Committee’s discretion), and the Company’s directors;
- Administer the Company’s incentive compensation plans, to the extent provided for thereunder, equity-based plans and such other benefit plans as designated from time to time by the Board, in each case in accordance with the terms of such plans; and
- Assist the Board in its oversight of the Company’s policies and strategies relating to human capital management.

The term “*compensation*” includes salary, long-term incentives, bonuses, perquisites, equity incentives, retirement benefits and other related benefits and benefit plans. The term “*executive officer*” means the individuals designated by the Company as officers for purposes of Section 16 of the Securities Exchange Act of 1934, as amended from time to time (the “*Exchange Act*”).

COMPOSITION

1. Membership and Appointment. The Committee shall consist of at least two members of the Board, subject to any available exception. The members of the Committee shall be appointed by and shall serve at the discretion of the Board. Vacancies occurring on the Committee shall be filled by the Board.

2. Qualifications. Each member of the Committee shall (a) satisfy the independence requirements of the Securities and Exchange Commission and The Nasdaq Stock Market (“*Nasdaq*”) applicable to compensation committee members, as in effect from time to time, subject to any available exceptions, (b) satisfy the “non-employee director” standard within the meaning of Rule 16b-3 promulgated under the Exchange Act and (c) meet any other requirements imposed by applicable law, rules and regulations (“*applicable law*”) and stock exchange requirements, subject to any available exceptions. A director shall not serve as a member of the Committee if the Chief Executive Officer or another executive officer of the Company serves on the compensation committee of another company that employs that director as an executive officer.

3. Chairperson. The Board may designate a chairperson of the Committee. In the absence of that designation, the Committee may designate a chairperson by majority vote of the Committee members, provided that the Board may replace any chairperson designated by the Committee at any time.

MEETINGS AND MINUTES

The operation of the Committee will be subject to the bylaws of the Company and the Delaware General Corporation Law (“**DGCL**”), each as in effect from time to time. The Committee will hold such regular or special meetings as its members shall deem necessary or appropriate. The Committee may include in its meetings other directors, members of management, representatives of any advisors (as defined below) retained by the Committee, any other human resources or legal personnel employed or retained by the Company or any other person whose presence the Committee believes to be necessary or appropriate in order to carry out its responsibilities. Notwithstanding the foregoing, the Committee may, as it deems appropriate in order to carry out its responsibilities, exclude from its meetings any persons, including but not limited to, any non-management director who is not a member of the Committee. The Committee will maintain written minutes of its meetings. The Committee may also act by written consent (which may include electronic consent) in lieu of a meeting.

AUTHORITY

1. Authority to Retain Advisors. The Committee has the authority, in its sole discretion, to retain and/or obtain the advice of any compensation consultant, legal counsel or other advisors (referred to collectively as “**advisors**”) to assist the Committee in fulfilling its responsibilities under this charter but only after taking into consideration the factors specified in Nasdaq Listing Rule 5605(d)(3) or any successor provision applicable to the Company. However, nothing in this provision requires that any advisors be independent. The Committee shall have sole authority to approve the reasonable fees and the other terms and conditions of such engagement, including authority to terminate the engagement of advisors. The Company must provide for appropriate funding, as determined by the Committee, for payment of reasonable compensation to any such advisor retained by the Committee. Nothing in this provision requires the Committee to implement or act consistently with the advice or recommendations of any advisor or affects the ability or obligation of the Committee to exercise its own judgment in fulfillment of its duties.

2. Access to Company Resources. Each member of the Committee shall have full access to all books, records, facilities and personnel of the Company as deemed necessary or appropriate by any member of the Committee to discharge such member’s responsibilities hereunder.

3. Authority to Form Subcommittees. The Committee may form and delegate authority to one or more subcommittees to the extent allowed under applicable law. Any action or decision of a subcommittee will be presented to the full Committee at its next scheduled meeting, or as soon thereafter as practicable.

RESPONSIBILITIES

The following are the principal responsibilities of the Committee. The Committee may perform such other functions as are consistent with its purpose and applicable law. The Committee may also carry out any other responsibilities delegated to it by the Board from time to time.

1. Compensation Philosophy. The Committee will establish and approve (or recommend to the Board for approval) the compensation philosophy for executive officers and directors of the Company.

2. Compensation of Chief Executive Officer. The Committee will review and approve annually (or recommend to the Board for approval) any individual and corporate goals and objectives that may be established for the Company’s Chief Executive Officer. The Committee will evaluate annually the

Chief Executive Officer's performance in light of those goals and objectives. Based on its evaluation, the Committee will determine and approve (or recommend to the Board for determination and approval) the compensation of the Company's Chief Executive Officer. The Chief Executive Officer may not be present during the voting or deliberations regarding the Chief Executive Officer's compensation.

3. Compensation of Other Executive Officers and Senior Management. The Committee will review and approve annually (or recommend to the Board for approval) any individual and corporate performance goals and objectives that may be established for the Company's executive officers other than the Chief Executive Officer (and other members of senior management in the Committee's discretion). The Committee will determine and approve (or recommend to the Board for approval) the compensation of the executive officers other than the Chief Executive Officer (and other members of senior management in the Committee's discretion), taking into consideration the individual's performance goals and objectives, as well as any recommendations by the Chief Executive Officer.

4. Compensatory Arrangements. The Committee will review and approve (or recommend to the Board for approval) employment agreements, severance or termination arrangements, change-in-control protections and other compensatory contracts or arrangements, including any material modifications thereto, with the Chief Executive Officer and the other executive officers (and other members of senior management in the Committee's discretion).

5. Compensation of Directors. The Committee will periodically review the compensation paid to non-employee directors for their service on the Board and its committees and approve (or recommend to the Board for approval) any changes considered appropriate to the type and amount of compensation (including consulting, retainer, meeting, committee and committee chair fees, as well as any equity awards) to be paid or awarded.

6. Administration of Equity-Based Plans. The Committee will have full power and authority to adopt, amend and terminate, as appropriate, the Company's stock option plans, stock appreciation rights plans, stock bonus plans, stock purchase plans and similar equity-based programs. The Committee will have full power and authority to administer these plans, establish guidelines, interpret plan documents, select participants, approve grants and awards and exercise such other power and authority as may be permitted or required under such plans, including the ability of the Committee to delegate authority pursuant to the Authority section of this charter. The Board will retain the right to act on all such matters without limiting the Committee's authority, subject to compliance with applicable law.

7. Administration of Other Benefit Plans. The Committee will have full power and authority to adopt, amend and terminate, as appropriate, the Company's pension and profit sharing plans, incentive plans, deferred compensation plans and similar programs, including perquisites pertaining to executive officers, as the Committee deems appropriate or as otherwise required under such plans. The Committee will have full power and authority to administer these plans, establish guidelines, interpret plan documents, select participants, approve grants and awards and exercise such other power and authority as may be permitted or required under such plans. The Board will retain the right to act on all such matters without limiting the Committee's authority, subject to compliance with applicable law.

8. Compensation Proposals. The Committee will provide recommendations to the Board on compensation-related proposals to be considered at the Company's annual meeting of stockholders, including advisory votes on executive compensation, and on the frequency of such votes, when required by the Exchange Act and the rules and regulations promulgated thereunder. The Committee will review and consider the results of any advisory vote on executive compensation or on the frequency of such votes.

9. Compensation Discussion and Analysis. When required, the Committee will review and discuss with management the disclosures under the caption “Compensation Discussion and Analysis” (“*CD&A*”) and recommend to the Board whether the CD&A should be approved for inclusion in the appropriate filing or report.

10. Committee Report. When required, the Committee will prepare and review the Committee report on executive compensation for inclusion in the appropriate filing or report in accordance with applicable SEC rules and regulations.

11. Risk Assessment. When required, the Committee will review the Company’s practices and policies of employee compensation as they relate to risk management and risk-taking incentives, to determine if such compensation policies and practices are reasonably likely to have a material adverse effect on the Company.

12. Review of Compensation Advisor Independence. The Committee will review and discuss with management, if appropriate, the independence of any compensation consultant, outside legal counsel or any such other advisor engaged by the Committee and how such conflict is being addressed for disclosure in the appropriate filing or report in accordance with applicable law and stock exchange requirements.

13. Management Succession. The Committee will periodically review the plans for succession to the offices of (i) the Company’s Chief Executive Officer and (ii) other executive officers, together with the Board and the Chief Executive Officer, in the Committee’s discretion.

14. Clawback and Recoupment. The Committee will review, approve (or recommend to the Board for approval) and administer, including the adoption, amendment, or termination of, any clawback policies allowing the Company to recoup compensation paid to employees in accordance with applicable law and stock exchange requirements.

15. Human Capital Management. The Committee will periodically review matters relating to human capital management, including the Company’s policies and strategies regarding recruiting, retention, career development and progression, diversity and inclusion, and other employment practices. If and as the Committee determines to be necessary or appropriate, the Committee will make recommendations to the Board regarding the Company’s human capital management policies and strategies.

16. Charter Review. The Committee will review and assess the adequacy of this charter annually and recommend any proposed changes to the Board for approval.

17. Committee Evaluation. The Committee will conduct period evaluations of the performance of the Committee.

18. Report to Board. The Committee will report to the Board with respect to material issues that arise in the course of carrying out its responsibilities or such other matters as the Committee deems appropriate from time to time or whenever it shall be called upon to do so.

19. General Authority. The Committee may perform such other functions and will have such powers as may be necessary or appropriate in the efficient and lawful discharge of the foregoing.