

LEXEO THERAPEUTICS, INC.

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

(Adopted September 28, 2023)

PURPOSE

The purpose of the Audit Committee (the “*Committee*”) of the Board of Directors (the “*Board*”) of Lexeo Therapeutics, Inc. (the “*Company*”) is to assist the Board in fulfilling its oversight responsibilities with respect to:

- The Company’s accounting and financial reporting processes, systems of internal control over financial reporting and audits of financial statements, as well as the quality and integrity of the Company’s financial statements and reports;
- The qualifications, independence and performance of the registered public accounting firm or firms of certified public accountants engaged as the Company’s independent external auditors for the purpose of preparing or issuing an audit report or performing other audit, review or attest services (the “*Auditors*”);
- The design, implementation and performance of the Company’s internal audit function, if applicable;
- The Company’s compliance with legal and regulatory requirements, including compliance with ethical standards adopted by the Company; and
- The review and assessment of the Company’s risk management, risk assessment and major risk exposures, including financial, accounting, operational, tax, privacy and cybersecurity and information technology risks.

In furtherance of its purpose, the Committee will endeavor to maintain and foster an open avenue of communication among the Committee and the Auditors, the Company’s financial management and, if applicable, the internal auditors.

COMPOSITION

1. **Membership and Appointment.** The Committee shall consist of at least three members of the Board, subject to any available exceptions. 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 satisfy the financial literacy, independence and other qualification requirements of The Nasdaq Stock Market (“*Nasdaq*”) and the Securities and Exchange Commission (the “*SEC*”) applicable to audit committee members, as in effect from time to time, subject to any available exceptions. In addition, at least one member of the Committee shall (i) satisfy the applicable Nasdaq financial sophistication requirement and (ii) be a financial expert as defined under applicable SEC rules, in each case as in effect from time to time.

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, each as in effect from time to time. The Committee will meet at least once during each fiscal quarter or on such increased frequency as the Committee deems necessary or appropriate. The Committee will meet periodically with members of management, with the Auditors and with the internal auditors (or other personnel responsible for the design and implementation of the internal audit function), if applicable, in separate executive sessions as the Committee deems appropriate. In addition, the Committee may include in its meetings other directors, members of management, representatives of the Auditors, any other financial 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 Auditors and Advisors.** The Committee shall have authority to appoint, determine compensation for, retain and oversee the Auditors as set forth in the Securities Exchange Act of 1934, as amended, and the rules thereunder, to fulfill its responsibilities under this charter. In addition, the Committee shall have the authority to engage independent counsel and other advisors, as it determines necessary to carry out its duties. The Company shall provide appropriate funding, as determined by the Committee, for the payment of compensation to the Auditors and independent counsel and other advisors engaged by the Committee, as well as funding for the payment of ordinary administrative expenses that, as determined by the Committee, are necessary or appropriate in carrying out 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 Delegate Authority to Chairperson and Form Subcommittees** The chairperson of the Committee shall have the delegated authority to act on behalf of the Committee in connection with matters including, but not limited to, approval of the retention of outside service providers and advisors and payment of ordinary administrative and other expenses when it would be logistically difficult, if not impossible, to convene the full Committee. The Committee may form and delegate authority to one or more subcommittees to the extent allowed under applicable law, rules and regulations (“*applicable law*”). By delegating an issue to a subcommittee, the Committee does not surrender any authority over that issue. Although the Committee may act on any issue that has been delegated to a subcommittee, doing so will not limit or restrict future action by the subcommittee on any matters delegated to it. Any action or decision of the chairperson or a subcommittee will be presented to the full Committee at its next scheduled meeting or as soon thereafter as practicable.

The approval of this charter by the Board shall be construed as a delegation of authority to the Committee with respect to the responsibilities set forth herein.

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.

Financial Reporting Processes

1. **Audited Financial Statement Review.** The Committee will review and discuss with management and the Auditors, upon completion of the audit, the financial statements proposed to be included in the Company's Annual Report on Form 10-K to be filed with the Securities and Exchange Commission, including the disclosures under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations." Following this review, the Committee will recommend whether or not such financial statements should be included in the Company's Annual Report on Form 10-K.

2. **Annual Audit Results.** The Committee will review with management and the Auditors, the results of the annual audit, the opinion of the Auditors on the annual financial statements and the matters required to be communicated to the Committee by the Auditors under applicable standards adopted by the Public Company Accounting Oversight Board (the "**PCAOB**"). In addition, the Committee will review and discuss with the Auditors (a) all critical accounting policies and practices to be used in the annual audit, (b) all alternative treatments of financial information within U.S. generally accepted accounting principles ("**GAAP**") for material items that have been discussed with management, ramifications of the use of such alternative disclosures and treatments, and the treatment preferred by the Auditors and (c) other material written communications between the Auditors and management, such as any management letter or schedule of unadjusted differences.

3. **Quarterly Results Review.** The Committee will review and discuss with management and the Auditors, as appropriate, the quarterly financial statements, including the disclosures under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations," and the results of the Auditors' review of such financial statements, prior to public disclosure of quarterly financial information, if practicable, or filing with the Securities and Exchange Commission of the Company's Quarterly Report on Form 10-Q, and any other matters required to be communicated to the Committee by the Auditors under applicable PCAOB standards.

4. **Earnings Press Releases.** The Committee will discuss with management and the Auditors, as appropriate, earnings press releases as well as financial information and earnings guidance provided to analysts and rating agencies, including the use of pro forma, non-GAAP or adjusted information, which discussions may be general discussions of the type of information to be disclosed and the type of presentation to be made.

5. **Accounting Principles and Policies.** The Committee will review with management and the Auditors, as appropriate, major issues that arise regarding accounting principles and financial statement presentation, including any significant changes in the Company's selection or application of accounting principles, significant regulatory or accounting initiatives or developments, as well as off-balance sheet structures, that may have a material impact on the Company's financial statements.

6. **Management and Auditor Analyses.** The Committee will review any analyses prepared by management or the Auditors setting forth significant financial reporting issues and judgments made in connection with the preparation of the financial statements, including analyses of the effects of alternative GAAP methods on the financial statements.

7. **National Office Communications.** The Committee will review with the Auditors, as appropriate, any communications between the audit team and the Auditors' national office with respect to auditing or accounting issues presented by the engagement.

8. **Disagreements Between Auditors and Management.** The Committee will review with management and the Auditors, any disagreements between management and the Auditors, whether or not resolved, regarding financial reporting, accounting practices or policies or other matters, that individually or in the aggregate could be significant to the Company's financial statements or the Auditors' report, and management's response, if any, and will resolve any conflicts or disagreements regarding financial reporting.

9. **Management Cooperation with Audit.** The Committee will evaluate any audit problems or difficulties the Auditors encountered in the course of the audit work, including any restrictions on the scope of their activities or access to required records, data and information, and, whether or not resolved, any significant disagreements with management and management's response, if any.

10. **Management Letters.** The Committee will review with the Auditors any "management" or "internal control" letter issued, or to the extent practicable, proposed to be issued by, the Auditors and management's response, if any, to such letter, as well as any additional material written communications between the Auditors and management.

11. **Internal Control Over Financial Reporting.** The Committee will discuss and review with management and the Auditors, as appropriate, the scope, adequacy and effectiveness of the Company's internal control over financial reporting and any special audit steps adopted in the event of material control deficiencies.

Oversight of Auditors

1. **Evaluation and Retention of Auditors.** The Committee will evaluate the performance of the Auditors (taking into account, where appropriate, the views of management and the internal auditors (or other personnel responsible for the internal audit function, if applicable), assess their independence and qualifications, including the performance and qualifications of the lead partner, as appropriate, taking into account the opinions of management and the internal auditors (or other personnel responsible for the internal audit function, if applicable), determine whether to retain, or terminate, the engagement of the existing Auditors, or appoint and engage a different independent registered public accounting firm and present the Committee's conclusions on the with respect to the Auditors to the Board. The Committee will recommend the selection of the Auditor for ratification by the stockholders, if appropriate in the Committee's discretion.

2. **Communication Prior to Engagement.** Prior to engagement of any prospective Auditors, the Committee will review a written disclosure by the prospective Auditors of all relationships between the prospective Auditors, or their affiliates, and the Company, or persons in financial oversight roles at the Company, that may reasonably be thought to bear on independence, and will discuss with the prospective Auditors the potential effects of such relationships on the independence of the prospective Auditors, consistent with Ethics and Independence Rule 3526, *Communication with Audit Committees Concerning Independence* ("**Rule 3526**"), of the PCAOB.

3. **Approval of Audit Engagements.** The Committee will determine and approve engagements of the Auditors, prior to commencement of such engagements, to perform all proposed audit, review and attest services, including the scope of and plans for the audit, the adequacy of staffing, and the compensation to be paid, at the Company's expense, to the Auditors, which approval may be pursuant to

preapproval policies and procedures established by the Committee consistent with applicable laws, including the delegation of preapproval authority to one or more Committee members.

4. **Approval of Non-Audit Services.** The Committee will determine and approve engagements of the Auditors, prior to commencement of such engagements (unless in compliance with exceptions available under applicable laws related to immaterial aggregate amounts of services), to perform any proposed permissible non-audit services, including the scope of the services and the compensation to be paid, at the Company's expense, which approval may be pursuant to preapproval policies and procedures established by the Committee consistent with applicable laws, including the delegation of preapproval authority to one or more Committee members so long as any such preapproval decisions are presented to the full Committee at the next scheduled meeting.

5. **Report from Auditors.** At least annually, the Committee will obtain and review a report by the Auditors describing that firm's internal quality-control procedures, any material issues raised by the firm's most recent internal quality-control review or peer review or by any inquiry or investigation by governmental or professional authorities, within the preceding five years, with respect to one or more independent audits performed by that firm, as well as any steps taken to address the issues raised.

6. **Audit Partner Rotation.** The Committee will monitor the rotation of the partners of the Auditors on the Company's audit engagement team as required by applicable laws and will consider periodically whether to and, if deemed appropriate, adopt, a policy regarding rotation of auditing firms.

7. **Auditor Independence.** At least annually, the Committee will receive and review written disclosures from the Auditors delineating all relationships between the Auditors, or their affiliates, and the Company, or persons in financial oversight roles at the Company, that may reasonably be thought to bear on independence and a letter from the Auditors affirming their independence. The Committee will consider and discuss with the Auditors any potential effects of any such relationships on the independence of the Auditors as well as any compensation or services that could affect the Auditors' objectivity and independence, and will assess and otherwise take appropriate action to oversee the independence of the Auditors.

8. **Former Employees of Auditors.** The Committee will consider and adopt policies regarding Committee review of employment by the Company of individuals employed or formerly employed by the Auditors.

Internal Audit Function

1. **Internal Audit Function.** The Committee will review and discuss with the Auditors management's plans with respect to the responsibilities, budget and staffing of the internal audit function, if applicable, and its plans for the implementation of the internal audit function, if applicable. In addition, the Committee will review any significant reports prepared by the Company's internal auditors, if applicable, as well as management's response. If established, the Committee will review and approve the selection or dismissal of the Company's head of internal audit, who shall report directly to the Committee and administratively to the Company's chief financial officer or individual performing similar function(s), if no chief financial officer.

Legal, Regulatory and Ethical Oversight

1. **Complaint Procedures.** The Committee will establish procedures for the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls

or auditing matters and the confidential and anonymous submission by employees of concerns regarding questionable accounting or auditing matters.

2. **Correspondence with Regulators.** The Committee will consider and review with management, the Auditors, outside counsel, as appropriate, and any special counsel, separate accounting firm or other consultants and advisors as the Committee deems appropriate, any correspondence with regulators or governmental agencies and any published reports that raise material issues regarding the Company's financial statements or accounting policies.

3. **Compliance.** The Committee will review the results of management's efforts to monitor compliance with the Company's programs and policies designed to ensure adherence to applicable laws, as well as to its Code of Business Conduct and Ethics.

4. **Related Party Transactions.** The Committee will review and oversee all transactions between the Company and a related person for which review or oversight is required by applicable law or that are required to be disclosed in the Company's financial statements or SEC filings and develop and oversee policies and procedures for the Committee's review, approval and/or ratification of such transactions.

5. **Risk Assessment and Management.** The Committee will discuss with management and, as appropriate, the Auditors, the Company's guidelines and policies with respect to risk assessment and risk management, including the Company's major financial risk exposures and the steps taken by management to monitor and control these exposures.

6. **Attorneys' Reports.** The Committee will receive and, if appropriate, respond to attorneys' reports of evidence of material violations of securities laws and breaches of fiduciary duty and similar violations of U.S., state or other applicable law.

7. **Investigations.** The Committee will investigate any matter brought to the attention of the Committee within the scope of its duties if, in the judgment of the Committee, such investigation is necessary or appropriate.

8. **Investment Policy.** The Committee will review with management the Company's investment philosophy and policies, including management of investment risk and applicable policies pertinent to the Company's investment portfolio.

9. **Cybersecurity.** The Committee will periodically review and discuss with management risks relating to data privacy, technology and information security, including cybersecurity, and back-up of information systems and the steps the Company has taken to monitor and control such exposures.

Other Matters

1. **Proxy Report.** The Committee will prepare the report required by the rules of the Securities and Exchange Commission to be included in the Company's annual proxy statement.

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

3. **Committee Evaluation.** The Committee will conduct periodic evaluation of the performance of the Committee.

4. **Report to Board.** The Committee will report regularly to the Board with respect to material issues that arise regarding the quality or integrity of the Company's financial statements, the Company's compliance with legal or regulatory requirements, the performance or independence of the Auditors, the performance of the Company's internal audit function (or management's activities with respect to the design and implementation of the internal audit function), if applicable, or such other matters as the Committee deems appropriate from time to time or whenever it shall be called upon to do so.

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

The function of the Committee is primarily one of oversight. The Company's management is responsible for preparing the Company's financial statements, and the Auditor is responsible for auditing and reviewing those financial statements. The Committee is responsible for assisting the Board in overseeing the conduct of these activities by management and the independent auditor.