REPARE THERAPEUTICS INC.

CORPORATE GOVERNANCE GUIDELINES

The Board of Directors (the "*Board*") of Repare Therapeutics Inc. (the "*Company*") has established the following corporate governance guidelines (these "*Guidelines*") for the conduct and operation of the Board. These Guidelines are designed to give the Company's directors and management a flexible framework for effectively pursuing the Company's objectives for the benefit of its shareholders. These Guidelines should be interpreted in the context of all applicable laws and the Company's charter documents and other policies.

I. BOARD COMPOSITION AND SELECTION

1. Size of the Board

The Board shall establish the number of directors in accordance with the Company's articles of continuance, and the Company's amended and restated bylaws (as may be amended from time to time, the "*Bylaws*"). The Nominating and Corporate Governance Committee of the Board (the "*Nominating Committee*") periodically reviews the appropriate size of the Board, which may vary to accommodate the availability of suitable candidates and the Company's needs. The Board is divided into three classes that serve staggered three-year terms and are as nearly as equal as possible.

2. Independence of Directors

The Board will be composed of not less than a majority of independent directors, subject to any exceptions permitted by the applicable listing standards and rules of The Nasdaq Stock Market LLC ("*Nasdaq*") and the Securities Exchange Act of 1934, as amended (the "*Exchange Act*"), together with the rules promulgated thereunder. In determining independence, the Board will consider the definition of independence set forth in such listing standards, rules and regulations, as well as under Canadian securities laws and other factors that will contribute to effective oversight and decision-making by the Board.

At times required by the rules of the Securities and Exchange Commission (the "SEC"), Canadian securities laws or Nasdaq listing rules and based on information provided by Board members and advice of counsel, the Board or the Nominating Committee shall affirmatively determine director independence. In accordance with applicable rules and Company policies, the Board shall confirm that each director has no relationship which, in the opinion of the Board, would interfere with the exercise of their independence in carrying out the responsibilities of a director. Directors may be asked from time to time to leave a Board meeting when the Board is considering a transaction in which the director (or another organization with which the director is affiliated) has a financial or other interest. The Audit Committee of the Board (the "Audit Committee") or such other committee of the Board as the Board shall deem appropriate shall review and approve any proposed related party transactions in compliance with the Company's policies and Nasdaq rules.

3. Management Directors

The Board anticipates that the Company's Chief Executive Officer will serve on the Board. The Board also may appoint or nominate other members of the Company's management, who can assist the Board in fulfilling its responsibilities based on their experience and role at the Company.

4. Selection of Chief Executive Officer and Chairperson of the Board; Lead Independent Director

The Board will select the Company's Chief Executive Officer and Chairperson of the Board (the "*Chairperson*") in the manner that it determines to be in the best interests of the Company's shareholders. The Company does not believe there should be a fixed rule regarding the positions of Chief Executive Officer and Chairperson being held by different individuals, or whether the Chairperson should be an employee of the Company or should be elected from among the non-employee directors. The needs of the Company and the individuals available to assume these roles may require different outcomes at different times, and the Board believes that retaining flexibility in these decisions is in the best interests of the Company. The Nominating Committee will periodically review this matter and make recommendations to the Board.

In the event the Board elects as its Chairperson a director who is not independent, the Board shall also designate a lead director who is independent. The lead independent director's duties shall include: (i) presiding at all meetings of the Board at which the Chairperson is not present, including executive sessions of the independent directors; (ii) acting as liaison between the independent directors and the Chief Executive Officer and Chairperson; (iii) presiding over meetings of the independent directors; (iv) consulting with the Chairperson in planning and setting schedules and agendas for Board meetings to be held during the year; and (v) performing such other functions as the Board may delegate.

5. Selection of Directors

The Board will be responsible for nominating members for election to the Board by the Company's shareholders at the annual meeting of shareholders. The Board is also responsible for filling any vacancies on the Board that may occur between annual meetings of shareholders. The Nominating Committee is responsible for identifying, reviewing, evaluating and recommending to the Board candidates to serve as directors of the Company in accordance with the Nominating and Governance Committee's charter and consistent with the criteria listed below. The Chairperson of the Board will extend the invitation to join the Board.

The Company's Secretary shall be notified of all persons proposed to serve as potential candidates for nomination to the Board. For nominations of potential candidates made other than by the Nominating and Governance Committee, the shareholder or other person making such nomination shall comply with the Company's Bylaws, including without limitation, submission of the information or other materials required with respect to proposed nominees. Each potential candidate must provide a list of references and agree (i) to be interviewed by members of the Nominating Committee or other directors in the discretion of the Nominating and Governance Committee, and (ii) to a background check or other review of the qualifications of the proposed nominee by the Company. Prior to appointment of any potential candidate to, or nomination of any potential candidate by, the Board, each member of the Board shall, if desired, have an opportunity to meet with the candidate. Upon request, any candidate nominated shall agree in writing to comply with these Guidelines and all other Company policies and procedures applicable to the Board.

6. Shareholder Recommendations of Director Nominees

The Nominating Committee will consider director candidates recommended by Company shareholders. The Nominating Committee does not intend to alter the manner in which it evaluates a candidate for nomination to the Board based on whether or not the candidate was recommended by a Company shareholder.

Company shareholders who wish to recommend individuals for consideration by the Nominating Committee to become nominees for election to the Board at an annual meeting of shareholders must do so pursuant to the terms of and procedures specified in the Company's Bylaws.

7. Process for Identifying and Evaluating Nominees for Director

i. The Nominating Committee will evaluate director nominees in the context of the current composition of the Board, the operating requirements of the Company and the long-term interests of shareholders.

ii. In conducting this assessment, the Nominating Committee will consider the minimum board membership criteria set forth below, as well as diversity, age, skills and such other factors as it deems appropriate given the current needs of the Board and the Company to maintain a balance of knowledge, experience and capability.

iii. In the case of incumbent directors whose terms of office are set to expire, the Nominating Committee will review such directors' overall service to the Company during their term, including the number of meetings attended, level of participation, quality of performance, and any other relationships and transactions that might impair such directors' independence.

iv. In the case of new director candidates, the Nominating Committee will also determine whether the potential candidates satisfy the independence requirements of Nasdaq, which determination will be based upon applicable rules of such exchange, the applicable rules and regulations of the SEC and of Canadian securities laws and the advice of counsel, if necessary.

v. The Nominating Committee will then use its network of contacts to compile a list of potential candidates, but may also engage, if it deems appropriate, a professional search firm.

vi. The Nominating Committee will conduct any appropriate and necessary inquiries into the backgrounds and qualifications of possible candidates after considering the function and needs of the Board.

vii. The Nominating Committee will meet to discuss and consider such candidates' qualifications and then select a nominee for recommendation to the Board by majority vote.

8. Board Membership Criteria

The Board will determine the appropriate characteristics, skills and experience for the Board as a whole and for its individual members. The Board considers director nominee recommendations from the Nominating and Governance Committee. The Board will consider the minimum general criteria set forth below, and may add any specific additional criteria with respect to specific searches, in selecting candidates and existing directors for service on the Board. An acceptable candidate may not fully satisfy all of the criteria, but is expected to satisfy nearly all of them. The Board believes that director candidates should have certain minimum qualifications, including the highest personal integrity and ethics, the ability to read and understand basic financial statements, ability to understand the industry of the Company and being older than 21.

In considering candidates recommended by the Nominating and Governance Committee, the Board intends to consider such factors as: (i) possessing relevant expertise upon which to be able to offer advice and guidance to management; (ii) having sufficient time to devote to the affairs of the Company; (iii) demonstrating excellence in his or her field; (iv) having the ability to exercise sound business judgment; (v) experience as a board member or executive officer of another publicly held company; (vi) having a diverse personal background, perspective and experience; and (vii) having the commitment to rigorously represent the long-term interests of the Company's shareholders.

The Board reviews candidates for director nomination in the context of the current composition of the Board, the operating requirements of the Company and the long-term interests of the Company's shareholders. In conducting this assessment, the Board considers diversity, age, skills and such other factors as it deems appropriate given the current needs of the Board and the Company to maintain a balance of knowledge, experience and capability. The Board and the Nominating and Governance Committee actively seek to achieve a diversity of professional and personal backgrounds on the Board, including diversity with respect to demographics such as gender, race, ethnic and national background, geography, age and sexual orientation.

In the case of incumbent directors whose terms of office are set to expire, the Board reviews such directors' overall service to the Company during their term, including the number of meetings attended, level of participation, quality of performance and any other relationships and transactions that might impair such directors' independence. In the case of new director candidates, the Board also determines whether the nominee must be independent for purposes of satisfying applicable Nasdaq listing requirements.

9. Board Diversity

The Company believes in diversity and values the benefits diversity can bring to its Board. Diversity includes gender, sexual preference, disability, age, ethnicity, business experience, functional expertise, stakeholder expectations, culture and geography. The Company seeks to maintain a Board comprised of talented and dedicated directors whose skills and backgrounds reflect the diverse nature of the business environment in which the Company operates. Accordingly, the composition of the Board is intended to reflect a diverse mix of skills, experience, knowledge, backgrounds and personal qualities, including an appropriate number of women directors. Board diversity promotes the inclusion of different perspectives and ideas, and ensures that the Company has the opportunity to benefit from all available talent. The promotion of a diverse Board makes prudent business sense, helps maintain a competitive advantage and makes for better corporate governance.

The Company will periodically assess the skills, experience, knowledge and backgrounds of its directors in light of the needs of the Board, including the extent to which the current composition of the Board reflects a diverse mix of skills, experience, knowledge and backgrounds, including an appropriate number of women directors.

The Company is committed to a merit-based system for Board composition, which requires a diverse and inclusive culture where directors believe that their views are heard, their concerns are attended to and they serve in an environment where bias, discrimination and harassment on any matter are not tolerated. When identifying suitable candidates for appointment to the Board, the Company will consider candidates on merit against objective criteria having due regard to the benefits of diversity and the needs of the Board. Any search firm engaged to assist the Board or the Nominating Committee in identifying candidates for appointment to the Board shall be directed to include women candidates and women candidates will be included in the Board's evergreen list of potential Board nominees.

10. Changes in Board Member Criteria

The Board and the Company wish to maintain a Board composed of members who can productively contribute to the success of the Company. From time to time, the Board, in its discretion, may change the criteria for Board membership to maximize the opportunity to achieve success. When this occurs, the Board will evaluate existing members according to the new criteria. The Board may ask a director who no longer meets the complete criteria for board membership to adjust his or her committee assignments or resign from the Board.

11. Term Limits

The Board does not believe it should limit the number of terms for which an individual may serve as a director. Directors who have served on the Board for an extended period of time are able to provide continuity and valuable insight into the Company, the Company's operations and prospects based on their experience with, and understanding of, the Company's history, policies and objectives. The Board believes that, as an alternative to term limits, the director evaluation and board renewal process described in these Guidelines can ensure that the Board continues to evolve and adopt new ideas and viewpoints.

12. Limits on Board Memberships

Directors should advise the Chairperson of the Board and the Chairperson of the Nominating Committee in advance of accepting an invitation to serve on the board or committee of another company. The Board recognizes that a director's ability to fulfill his or her responsibilities as a member of the Board can be impaired if he or she serves on a large number of other boards or board committees. Service on boards and board committees of other companies should be consistent with the Company's conflict-of-interest policies. Without the prior approval of the Board, non-employee directors should generally serve on no more than four (4) other public company boards and on no more than two (2) other public company audit committees, unless the audit committee member is a retired CPA, CFO, controller or has similar experience, in which case the limit is three (3) other audit committees. In addition, non-employee directors who are executive officers of other public companies should generally serve on no more than one other public company board, without the approval of the Board. In selecting nominees for membership, the Board shall take into account the other demands on the time of a candidate.

13. Retirement Age

The Board does not believe that a fixed retirement age for directors is appropriate.

14. Directors Who Change Their Job Responsibility

A director who retires from his or her present employment or who experiences a significant change in his or her professional position (other than an ordinary course promotion) and/or any material litigation to which he or she is a party should promptly notify the Board and the Nominating and Governance Committee. The Board does not believe any director who retires from his or her present employment, or who experiences a significant change in his or her professional position and/or is a party to material litigation, should necessarily leave the Board. However, there should be an opportunity for the Board, through the Nominating and Governance Committee, to review the continued appropriateness of Board membership under these changed circumstances.

I. ROLE OF THE BOARD OF DIRECTORS

The Company's shareholders select the Board to provide oversight of, and strategic guidance to, senior management. The fundamental responsibility of a Board member is to fulfill his or her fiduciary duties of care and loyalty and otherwise to exercise his or her business judgment in the best interests of the Company and the Company's shareholders. Service on the Board requires significant time and attention on the part of directors. More specifically, the Board has responsibilities to (i) review, approve

and monitor fundamental financial and business strategies and major corporate actions, (ii) assess major risks facing the Company and consider ways to address those risks, (iii) select and oversee management and determine its composition and (iv) oversee the establishment and maintenance of processes and conditions to maintain the integrity of the Company. Directors must participate in Board meetings, review relevant materials, and prepare for meetings and discussions with management. The Company expects directors to maintain an attitude of constructive involvement and oversight, to ask relevant, incisive and probing questions and to require honest and accurate answers. Directors must act with integrity, and the Company expects them to demonstrate a commitment to the Company, the Company's values, the Company's business and to long-term shareholder value.

Each director is expected to disclose promptly to the Board and respond promptly and accurately to periodic questionnaires or other inquiries from the Company regarding any existing or proposed relationships with the Company, including compensation and stock ownership, which could affect the independence of the director. Each director shall also promptly inform the Board of any material changes in such information, to the extent not already known by the Board.

Board members are expected to devote sufficient time and attention to prepare for, attend and participate in Board meetings and meetings of committees on which they serve, including advance review of meeting materials that may be circulated prior to each meeting.

Directors have an obligation to protect and keep confidential all non-public information relating to the Company unless the Company has authorized public disclosure or unless otherwise required by applicable law. Confidential information includes all non-public information entrusted to or obtained by a director by reason of his or her position on the Board. This includes information regarding the Company's strategy, business, finances, and operations, and will include minutes, reports, and materials of the Board and committees, and other documents identified as confidential by the Company.

Directors may not use such confidential information for personal benefit or to benefit other persons or entities other than the Company. Unless authorized by the Company or applicable law, directors will refrain from disclosing confidential information to anyone outside the Company, especially anyone affiliated with any entity or person that employs the director or has sponsored the director's election to the Board. These obligations continue even after service on the Board has ended. Any questions or concerns about potential disclosures should be directed to the Company's Chief Financial Officer, who then may communicate with the Chief Executive Officer or the Nominating Committee regarding potential disclosures.

II. DIRECTOR ORIENTATION AND EDUCATION

The Nominating Committee may implement an orientation process for directors that includes background material on the Company's policies and procedures and expectations as to directors and committee member duties and responsibilities, meetings with senior management and visits to the Company's facilities. The Company may offer continuing education programs to assist the directors in maintaining the level of expertise required to perform his or her duties as a director.

Each director is encouraged to be involved in continuing director education on an ongoing basis to enable him or her to better perform his or her duties and to recognize and appropriately address issues that arise. Board members are encouraged to attend seminars, conferences and other continuing education programs designed especially for directors of public companies, including but not limited to, accredited director education programs. The Company shall pay all reasonable expenses related to continuing director education.

III. DIRECTOR COMPENSATION

The Compensation Committee of the Board (the "Compensation Committee") shall review and recommend to the Board for approval the form and amount of director compensation for Board and committee service for non-employee directors in accordance with the principles set forth in its charter, applicable legal and regulatory guidelines. The amount of compensation for non-employee directors and committee members should be designed to be aligned with the long-term interests of shareholders and consistent with market practices of similarly situated companies. In determining compensation, the Board will consider the impact of such compensation on the director's independence and objectivity. Directors who are officers or employees shall not receive any additional compensation for serving on the Board. To assist in setting compensation, the Compensation Committee or the Board may request compensation information from the Company or from independent consultants. In determining compensation, the Board will consider the impact on the director's independence and objectivity. The Company will pay all reasonable expenses related to continuing director education.

IV. BOARD MEETINGS

1. Number of Meetings

The Board expects to have at least four (4) regular Board meetings each year.

2. Attendance

Board members are expected to prepare for, attend and participate in all meetings of the Board and committees on which they serve. Directors must notify the Chairperson of the Board of circumstances preventing attendance at a meeting. All Board members are encouraged, but not required, to attend the Company's Annual Meeting of Shareholders.

3. Preparation and Commitment

The Company will provide directors with appropriate preparatory materials in advance of each meeting, except in unusual or exigent circumstances. The Company expects the Company's directors to rigorously prepare for, attend and participate in all Board and committee meetings. Each director should ensure that other existing and planned future commitments do not materially interfere with the member's service as director.

4. Agenda

The Chairperson of the Board, or lead independent director, if any, together with the Chief Executive Officer, will establish a schedule of subjects to be discussed during the year (to the extent this can be foreseen) and an agenda for each Board meeting. Each Board member is encouraged to suggest the inclusion of items on the agenda at any time and each Board member is free to raise subjects that are not on the agenda.

5. Executive Session

The independent, non-employee directors of the Board will meet periodically in executive session without management and any non-independent directors, but no less than two (2) times per year or such greater number as may be required by Nasdaq listing standards from time to time. Executive session discussions may include such topics as the independent directors determine. The directors generally shall not take formal action at these sessions, but may make recommendations for consideration by the full

Board. The lead independent director, if any, will preside over the executive sessions and serve as the liaison between the independent directors and the Chief Executive Officer and Board Chairperson.

6. Committee Reports

At each regular Board meeting, each committee that held a meeting subsequent to the last Board meeting and prior to the current Board meeting will present a brief summary of its committee meeting to the Board, including the principal subjects discussed and the conclusions and actions of the committee. In general, the Chairperson of the appropriate committee will present such report.

V. BOARD COMMITTEES

1. Number of Committees; Independence of Members

The committee structure of the Board will consist of at least the following standing committees: (a) an Audit Committee; (b) a Compensation Committee; and (c) a Nominating and Governance Committee. The Board may form, merge or dissolve committees as it deems appropriate from time to time, in accordance with applicable law. The Audit Committee, the Compensation Committee and the Nominating Committee shall be composed entirely of independent directors, except to the extent allowed under applicable Nasdaq listing standards and Exchange Act rules.

2. Committee Functions and Charters

All standing committees will operate pursuant to a written charter, which sets forth the responsibilities of the committee and procedures that the committee will follow. Unless otherwise directed by the Board, the Board will develop and approve a written charter delineating each committee's responsibilities. The charters of all committees will be subject to periodic review and assessment by each committee and each committee shall recommend any proposed charter changes to the Board.

3. Board Committee Membership

The Nominating Committee oversees the Board's committee structure and operations, including authority to delegate to subcommittees and committee reporting to the Board. The Nominating and Governance Committee, after due consideration of the interests, independence and experience of the individual directors and the independence and experience requirements set forth in the listing standards of any stock exchange on which any of the Company's share capital is listed, the rules and regulations of the SEC and any applicable laws, shall make recommendations to the entire Board regarding the appointment of directors to serve as members of each committee and committee chairperson.

4. Committee Meetings and Agenda

The committee chairperson, in consultation with committee members, will determine the frequency and length of the meetings of the committee, consistent with any requirements set forth in the committee's charter. The chairperson of each committee, in consultation with the appropriate members of the committee and management and the lead independent director, if applicable, will develop the committee's agenda.

VI. BOARD ACCESS TO MANAGEMENT; USE OF OUTSIDE ADVISORS

Board members shall have complete and open access to the Company's management, subject to such processes as deemed appropriate by the Nominating and Governance Committee. The Company

expects the Company's Board members to use their judgment to ensure that this contact is not distracting to the operations of the Company or to management's duties and responsibilities and that such contact, to the extent reasonably practical or appropriate, will be coordinated with the Chief Executive Officer. Board members should copy the Chief Executive Officer on written communications to management whenever appropriate.

The Board and each committee shall have the power to hire, at the expense of the Company, independent legal, financial or other advisors as they may deem necessary, without consulting or obtaining the approval of any officer of the Company in advance.

VII. CHIEF EXECUTIVE OFFICER EVALUATION

The Board, based on recommendations from the Compensation Committee, shall conduct an annual review of the Chief Executive Officer's performance. The Board will evaluate performance based on objective criteria including the performance of the business, accomplishment of long-term strategic objectives and the development of management. The Compensation Committee and Board, as applicable, will use the evaluation in the course of their deliberations when considering the compensation of the Chief Executive Officer.

VIII. SUCCESSION PLANNING

The Nominating Committee should develop and periodically review with the Chief Executive Officer the plans for succession for the Company's executive officers, as it sees fit, and make recommendations to the Board with respect to the selection of appropriate individuals to succeed to such positions. The Chief Executive Officer should at all times make available his or her recommendations and evaluations of potential successors, along with a review of any development plans recommended for such individuals.

IX. BOARD ASSESSMENT

The Nominating Committee will oversee an annual assessment of the performance of the Board, including Board committees, the Board Chairperson, the chairperson of each committee and individual directors including a peer review. The Nominating Committee may also consider and assess the independence of directors. The Nominating Committee should provide the results of these evaluations to the Board for further discussion as appropriate.

X. SHAREHOLDER COMMUNICATIONS WITH THE BOARD

Shareholders of the Company wishing to communicate with the Board or an individual director may send a written communication to the Board or to such respective director c/o Repare Therapeutics Inc., 7210 Frederick-Banting, Suite 100, St-Laurent, Québec, Canada H4S 2A1, Attn: Secretary. The Secretary will review each communication. The Secretary will forward such communication to the Board or to any individual director to whom the communication is addressed unless the communication contains advertisements or solicitations or is unduly hostile, threatening or similarly inappropriate, in which case the Secretary shall discard the communication.

XI. REVIEW OF GOVERNANCE GUIDELINES

The Nominating Committee will review and assess the adequacy of these Guidelines at least annually and recommend any proposed changes to the Board for approval.

Approved: May 8, 2020 Effective: June 18, 2020 Last Updated: November 9, 2022