COMPENSATION COMMITTEE

THIS CHARTER WAS APPROVED BY THE BOARD ON SEPTEMBER 2, 2020

PURPOSE

The purpose of the Compensation Committee (the "*Committee*") of the Board of Directors (the "*Board*") of Prelude Therapeutics Incorporated ("*Prelude*") is to assist the Board with compensation and other human resource matters, including:

- evaluating, recommending, approving and reviewing executive officer and director compensation arrangements, plans, policies and programs maintained by Prelude;
- administering Prelude's cash- and equity-based compensation plans; and
- reviewing with management Prelude's human resource activities.
- This charter (the "*Charter*") sets forth the authority and responsibility of the Committee in fulfilling its purpose.

MEMBERSHIP

Size and Appointment

The Committee will consist of two or more members of the Board, with the exact number determined by the Board. All members of the Committee will be appointed by the Board and will serve at the Board's discretion. Members of the Committee may be replaced or removed by the Board at any time, with or without cause. Resignation or removal of a director from the Board, for whatever reason, shall automatically constitute resignation or removal, as applicable, from the Committee.

Qualifications

Members of the Committee must meet the following criteria as well as any additional criteria required by applicable law, the rules and regulations of the U.S. Securities and Exchange Commission (the "*Commission Rules*") or of the securities exchange on which Prelude's securities are listed (the "*Exchange Rules*") or such other qualifications as are established by the Board from time to time:

- Each member of the Committee must meet the independence requirements of the Commission Rules and of the listing standards of the securities exchange on which Prelude's securities are listed; and
- Unless determined otherwise by the Board, each member of the Committee will be a "non-employee director" as defined in Rule 16b-3 promulgated under Section 16 of the Securities Exchange Act of 1934, as amended (the "*Exchange Act*").

• Notwithstanding the foregoing, Prelude may avail itself of any phase-in rules or interpretations applicable to newly-listed companies in connection with an initial public offering.

Chairperson

The Board may appoint a member of the Committee to serve as the chairperson of the Committee (the "*Chair*"). If the Board does not appoint a Chair, the Committee members may designate a Chair by majority vote. In the event that the Committee has a Chair, the Chair will set the agenda for, preside over and conduct the proceedings of, Committee meetings.

RESPONSIBILITIES AND DUTIES

The principal responsibilities and duties of the Committee are set forth below. These responsibilities and duties are set forth as a guide, with the understanding that the Committee will carry them out in a manner that is appropriate given Prelude's needs and circumstances. The Committee may perform such other functions as are consistent with its purpose and applicable law, rules and regulations, as the Board may request or prescribe, or as the Committee deems necessary or appropriate consistent with its purpose.

Determine Compensation

The Committee will:

1. Review Prelude's overall compensation strategy.

2. Review and approve the selection of Prelude's peer companies for compensationassessment purposes.

3. Review and approve the goals and objectives to be considered in determining the compensation of Prelude's Chief Executive Officer (the "CEO") and all other "executive officers" as defined under Rule 3b-7 and "officers" as defined under Rule 16a-1(f) promulgated under the Exchange Act (collectively with the CEO, the "*Executive Officers*"), and evaluate their performance at least annually in light of these goals and objectives.

4. Review and approve all forms of compensation for the CEO and other Executive Officers. The Committee may also make similar compensation related decisions with respect to other service providers of Prelude if Board or Committee approval is required or desirable as determined by legal counsel. In evaluating and determining the compensation of Prelude's CEO and other Executive Officers, the Committee shall, if applicable, consider the results of the most recent stockholder advisory vote on executive compensation required by the Exchange Act ("Say on Pay"). The CEO may not be present during voting or deliberations regarding the CEO's compensation.

5. Review, approve, amend or terminate any compensatory contracts or similar transactions or arrangements with Prelude's current or former Executive Officers.

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6. Recommend to the Board, for determination by the Board, the form and amount of cash-based and equity-based compensation to be paid or awarded to Prelude's non-employee directors, including compensation for service on the Board or on committees of the Board.

Compensation Plans and Programs

The Committee will:

1. Review and approve, or make recommendations to the Board with respect to adoption and approval of, or amendments to, Prelude's cash- and equity-based incentive compensation plans and arrangements, and the cash amounts and aggregate numbers of shares reserved for issuance thereunder, respectively.

2. Administer and interpret Prelude's cash- and equity-based compensation plans and agreements thereunder and in that capacity:

- approve all cash or equity awards thereunder (other than as delegated in the manners described in this Charter);
- approve or recommend to the Board amendments to such plans (subject to stockholder approval when required) as may be necessary or appropriate to carry out Prelude's compensation strategy;
- determine whether awards granted under the plans that have performance-related criteria have been earned;
- correct any defect, supply any omission or reconcile any inconsistency in any cash- or equity-based compensation plan, award, exercise agreement or other arrangement;
- when appropriate, modify existing awards (with the consent of the grantees when necessary) and approve authorized exceptions to provisions of the plans; and
- adopt any required or appropriate equity award timing policy.

In addition to the authority to delegate to a subcommittee as set forth below, the Committee may delegate to the CEO (either alone or acting together with one or more officers of Prelude), within the limits imposed by applicable law and the Exchange Rules, the authority to make equity grants to service providers of Prelude or of any subsidiary of Prelude who are not the Executive Officers or directors of Prelude, subject to guidelines or limits specified by the Committee; provided that, in the case of grants of stock options and stock appreciation rights, the price per share of any grant made pursuant to this delegated authority is no less than the fair market value of Prelude's common stock on the date of grant.

Administer and, if deemed necessary, amend Prelude's 401(k) plan and any deferred compensation plans (collectively, the "*Designated Plans*") and, if desired, delegate the routine administration of the Designated Plans to an administrative committee consisting of employees of Prelude appointed by the Committee.

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Human Resources

The Committee will review with management human resource activities, which include, among other things, matters relating to Prelude's demographics; employee management and development; employee acquisition; employee engagement, retention and attrition; pay equity and diversity and inclusion.

Compliance and Governance

The Committee will:

1. Review any disclosure in the annual reports or the proxy statements for Prelude's annual meetings including, if applicable, the Compensation Discussion and Analysis ("CD&A"), regarding Prelude's compensation policies and practices.

2. To the extent required by the Commission Rules, prepare a report (to be included in Prelude's proxy statement) confirming: (i) that the Committee has reviewed and discussed the CD&A disclosure with management, and (ii) that based on such review and discussions, the Committee recommended to the Board that the Compensation Discussion and Analysis be included in Prelude's annual filings.

3. Oversee Prelude's submissions to stockholders on executive compensation matters, including advisory votes on executive compensation and the frequency of such votes, incentive and other executive compensation plans, and amendments to such plans (to the extent required under the listing standards of the securities exchange on which Prelude's securities are listed).

4. Review with management Prelude's major compensation-related risk exposures and the steps management has taken to monitor or mitigate such exposures.

5. Periodically review Prelude's procedures with respect to employee loans. The Committee will not approve any arrangement in which Prelude, directly or indirectly, extends or maintains credit, arranges for the extension of credit or renews an extension of credit, in the form of a personal loan to or for any director or Executive Officer.

6. Discharge the responsibilities as set forth in such policies, codes and guidelines approved by the Board.

STUDIES AND ADVISORS

The Committee has the sole authority and right, at Prelude's expense, to retain compensation advisors and other compensation consultants, accountants, legal counsel, experts, search firms and other advisors of its choice to assist the Committee in connection with its functions, including any studies or investigations, and shall have direct oversight of the work performed by such advisors and the right to terminate their services. In connection with the retention of such advisors (other than in-house legal counsel), the Committee will consider all factors related to the independence of such advisors under the Commission Rules and the Exchange Rules. Nothing herein requires that such advisors must be independent, only that the Committee consider the enumerated independence factors before selecting or otherwise receiving

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advice from such advisors. The Committee will have the sole authority to approve the fees and other retention terms of such advisors.

Prelude will provide for appropriate funding, as determined by the Committee, for:

- payment of compensation to any compensation advisors and other compensation consultants, accountants, legal counsel, experts, search firms and other advisors retained by the Committee; and
- ordinary administrative expenses of the Committee that are necessary and appropriate in carrying out its functions.

MEETINGS AND ACTIONS WITHOUT A MEETING

Meetings of the Committee will be held from time to time, as determined by the Committee. A quorum of the Committee for the transaction of business will be a majority of its members. The Committee also may act by unanimous written consent in lieu of a meeting in accordance with Prelude's Bylaws.

MINUTES AND REPORTS

The Committee will maintain written minutes of its meetings and copies of its actions by written consent, and will file such minutes and copies of written consents with the minutes of the meetings of the Board. The Committee will regularly report to the Board on its activities.

DELEGATION OF AUTHORITY

The Committee may from time to time, as it deems appropriate and to the extent permitted under applicable law, the Exchange Rules, the Commission Rules and Prelude's Certificate of Incorporation and Bylaws, form and delegate, either exclusively or non-exclusively, authority to subcommittees. Subcommittees of the Committee will consist of one or more members of the Committee who will regularly report on their activities to the Committee.

REVIEW OF COMMITTEE COMPOSITION, PERFORMANCE AND CHARTER

The Committee will evaluate on an annual basis the Committee's composition and performance. The Committee also will review and reassess the adequacy of this Charter annually, and recommend to the Board any changes the Committee determines appropriate.