

VOR BIOPHARMA INC.

CHARTER OF THE NOMINATING AND CORPORATE GOVERNANCE COMMITTEE OF THE BOARD OF DIRECTORS

I. PURPOSE

The primary purpose of the Nominating and Corporate Governance Committee (the “**Committee**”) of the Board of Directors (the “**Board**”) of Vor Biopharma Inc. (the “**Company**”) shall be to: (i) oversee aspects of the Company’s corporate governance functions on behalf of the Board; (ii) make recommendations to the Board regarding corporate governance issues; (iii) identify and evaluate candidates to serve as directors of the Company, consistent with the criteria approved by the Board, (iv) review and evaluate the performance of the Board; (v) serve as a focal point for communication between director candidates, non-committee directors and the Company’s management; (vi) make recommendations to the Board regarding the selection and approval of candidates to serve as nominees for director to be submitted to a stockholder vote at the annual meeting of stockholders; and (vii) make other recommendations to the Board regarding affairs relating to the directors of the Company.

II. COMPOSITION

The Committee shall consist of at least two (2) members of the Board. The members of the Committee shall satisfy the independence requirements imposed by any stock exchange on which any of the Company’s capital stock is listed, including any phase-in periods permitted by such requirements. The members of the Committee shall be appointed by and serve at the discretion of the Board. Vacancies occurring on the Committee shall be filled by the Board. The Committee’s chairperson shall be appointed by the Board, or if the Board does not do so, the Committee members shall designate a chairperson by vote of a majority of the full Committee.

III. MEETINGS AND MINUTES

The Committee shall hold such regular or special meetings as its members shall deem necessary or appropriate, but in no event shall it meet less than annually. Any member of the Committee or the Board may call a meeting of the Committee.

A majority of the members of the Committee shall constitute a quorum for the transaction of business. The Committee shall act on the affirmative vote of a majority of members present at a meeting at which a quorum is present. The Committee may also act by unanimous written consent in lieu of a meeting. The Committee shall have the authority to exclude from its meetings any person it deems appropriate in order to carry out its responsibilities.

Minutes of each meeting of the Committee shall be prepared and distributed to each director of the Company and the Secretary of the Company after each meeting. The chairperson of the Committee shall report to the Board from time to time or whenever so requested by the Board.

IV. AUTHORITY

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 his or her responsibilities hereunder. The Committee shall have access to and shall communicate with the Board, chairpersons of the committees of the Board, members of senior management and independent professional advisors to the Board and its various committees, as applicable. The Committee shall have the authority to obtain, at the expense of the Company, advice and assistance from internal or external legal, accounting or other advisors, experts and consultants as the Committee deems necessary or appropriate for carrying out its duties under this charter. The Committee shall have the authority to retain and terminate executive search firms to help identify director candidates. The Committee shall have the authority to approve fees, costs and other terms of engagement of such outside resources and shall be directly responsible for the oversight of such outside resources. The Committee shall also have authority to pay, at the expense of the Company, ordinary administrative expenses that, as determined by the Committee, are necessary or appropriate in carrying out its duties, unless prohibited by Nasdaq listing rules or applicable law. The Committee shall have authority to request that any of the Company's personnel, counsel, accountants or investment bankers, or any other consultant or advisor to the Company, attend any meeting of the Committee or meet with any member of the Committee or any of its special, outside legal, accounting or other, advisors or consultants.

The Committee may form and delegate authority to one or more subcommittees as appropriate, but only to the extent consistent with the Company's amended and restated certificate of incorporation, amended and restated bylaws (the "*Bylaws*"), Corporate Governance Guidelines (as defined below), rules of The Nasdaq Stock Market LLC and other applicable law. Delegation by the Committee to any subcommittee shall not limit or restrict the Committee on any matter so delegated, and, unless the Committee alters or terminates such delegation, any action by the Committee on any matter so delegated shall not limit or restrict future action by such subcommittee on such matters. The operation of the Committee shall be subject to the Bylaws as in effect from time to time and Section 141 of the Delaware General Corporation Law (or any successor section). The approval of this charter shall be construed as a delegation of authority to the Committee with respect to the responsibilities set forth herein.

V. RESPONSIBILITIES

To implement the Committee's purpose, the Committee shall have the following responsibilities. The Committee may supplement and deviate from these activities as appropriate under the circumstances (except as otherwise required by applicable law or the requirements of any stock exchange on which any of the Company's capital stock is then listed):

A. Director Nominations. The Committee shall identify and evaluate candidates to serve on the Company's Board consistent with the criteria approved by the Board, including consideration of the potential conflicts of interest as well as applicable independence and other requirements. The Committee shall also have responsibility for reviewing, evaluating and considering the recommendation for nomination of incumbent directors for re-election to the Board, as well as monitoring the size of the Board. The Committee shall also recommend to the Board for selection, candidates to the Board to serve as nominees for director for the annual meeting of stockholders. The Committee shall also have the power and authority to consider

recommendations for Board nominees and proposals submitted by the Company's stockholders, to recommend to the Board appropriate action on any such proposal or recommendation and to make any disclosures required by Nasdaq listing rules and applicable law in the course of exercising its authority. The Committee shall recommend nominees to the Board at an appropriate time: (a) prior to each annual meeting of stockholders at which directors are to be elected or re-elected; and (b) after a vacancy arises on the Board or a director advises the Board of his or her intention to resign.

B. Board Assessment. The Committee shall periodically review, discuss and assess the performance of the Board, including Board committees, seeking input from senior management, the full Board and others. The assessment shall include evaluation of the Board's contribution as a whole and the Board's effectiveness in serving the best interests of the Company and its stockholders, specific areas in which the Board and/or management believe contributions could be improved, and overall Board composition and makeup. The factors to be considered shall include whether the directors, both individually and collectively, can and do provide the integrity, experience, judgment, commitment, skills, diversity and expertise appropriate for the Company. The Committee shall also consider and assess the independence of directors, including whether a majority of the Board continue to be independent from management in both fact and appearance, as well as within the meaning prescribed by any stock exchange on which any of the Company's capital stock is then listed. The results of these reviews shall be provided to the Board for further discussion as appropriate.

C. Board Committee Membership. The Committee oversees the Board's committee structure and operations. The 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 the Company's capital stock is listed, the rules and regulations of the Securities and Exchange Commission and applicable law, shall make recommendations to the entire Board regarding the appointment of directors to serve as members of each committee and committee chairmen.

D. Stockholder Communications. The Committee shall periodically review and make recommendations to the Board regarding the Company's process for stockholder communications with the Board, and make such recommendations to the Board with respect thereto as the Committee deems appropriate.

E. Governance Developments and Stockholder Engagement. The Committee shall monitor significant developments in the law and practice of corporate governance and of the duties and responsibilities of directors of public companies. The Committee shall also oversee the Company's engagement with stockholders on corporate governance topics, and shall review and consider any corporate governance proposals or other matters raised by stockholders.

F. Director Education. The 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 Committee shall also recommend to the Board such plan or program as it may deem appropriate for the continuing education of directors.

G. Corporate Governance Guidelines and Principles. The Committee shall develop a set of corporate governance guidelines and principles (the “*Corporate Governance Guidelines*”) to be applicable to the Company and shall periodically review and assess the Corporate Governance Guidelines and the Code of Business Conduct and Ethics, and shall recommend any changes deemed appropriate to the Board for its consideration.

H. Certificate of Incorporation and Bylaws Review. The Committee shall periodically review the Company's amended and restated certificate of incorporation and the Bylaws and shall recommend to the Board any changes deemed appropriate for its consideration.

I. Management Succession. The Committee shall develop and periodically review with the Company's 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 these positions.

J. Procedures for Information Dissemination. The Committee shall periodically review the processes and procedures used by the Company to provide information to the Board and its committees and make recommendations to the Board and management for improvement as appropriate. The Committee should consider, among other factors, the reporting channels through which the Board and its committees receive information and the level of access to outside advisors where necessary or appropriate, as well as the procedures for providing accurate, relevant and appropriately detailed information to the Board and its committees on a timely basis.

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

L. Insider Trading Policy and Risk Assessment. The Committee shall review, and recommend that the Board consider and approve, any changes to the Company's Insider Trading Policy. The Committee shall also oversee and review with management the Company's major legal compliance risk exposures and the steps management has taken to monitor or mitigate such exposures, including the Company's procedures and any related policies with respect to risk assessment and risk management.

M. Leadership Structure. The Committee shall consider the Board's leadership structure, including the separation of the chairperson and Chief Executive Officer roles and/or appointment of a lead independent director of the Board, either permanently or for specific purposes, and make such recommendations to the Board with respect thereto as the Committee deems appropriate. The Committee shall also review and discuss the narrative disclosure regarding the Board leadership structure and role in risk oversight to be included in any public filing in response to the requirements of Item 407(h) of Regulation S-K (or any successor disclosure item).

N. Lead Independent Director. The Committee shall, when appropriate, recommend to the Board a director to serve as lead independent director of the Board, and shall periodically review and make recommendations to the Board regarding the role and responsibilities of the lead independent director

O. Committee Self-Assessment; Charter. The Committee shall review, discuss and assess its own performance at least annually. The Committee shall also review and assess the adequacy of this charter annually, including the Committee's role and responsibilities outlined herein, and shall recommend any proposed changes to the Board for its consideration.

P. Report to the Board. The Committee, through the Committee's chairperson, shall regularly report to the Board regarding the Committee's actions, or whenever so requested by the Board.

Q. General Authority. The Committee shall perform such other functions and have such other powers as may be necessary or appropriate in the discharge of the foregoing.

VI. PUBLICATION

The Company shall make this charter freely available to stockholders on request and, provided that the Company is subject to the periodic reporting requirements of the Securities Exchange Act of 1934, as amended, shall publish it on the Company's website.

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