Genocea Biosciences, Inc. Nominating and Corporate Governance Committee Charter

STATUS

The Nominating and Corporate Governance Committee (the "Committee") is a committee of the Board of Directors (the "Board") of Genocea Biosciences, Inc., a Delaware corporation (the "Company").

STATEMENT OF PURPOSE

The purpose of the Committee is to identify individuals qualified to become members of the Board, to recommend Director nominees for each annual meeting of the stockholders and nominees for election to fill any vacancies of the Board and to address related matters. The Committee shall also review the Company's Corporate Governance Guidelines and be responsible for leading the annual review of the Board's performance.

MEMBERSHIP

The Committee shall consist of at least three members of the Board of Directors, including a Chairman, all appointed by the Board, with the Chairman and each member to serve until his or her successor is duly appointed, or until his earlier death, resignation or removal by the Board. Except to the extent the Company qualifies as a "controlled company" for purposes of the listing standards of applicable rules of The NASDAQ Global Select Market ("NASDAQ"), each Committee member shall meet the independence criteria of the rules of NASDAQ. The Committee may avail itself of any phase-in compliance periods available to the Company that are afforded by NASDAQ or applicable law. The Board shall be responsible for determining whether a member meets the independence criteria of the rules of NASDAQ.

MEETINGS

Structure and Operations

- The Committee shall meet as often as its members deem necessary to perform the Committee's responsibilities. A majority of the Committee members shall constitute a quorum and a majority of the members present shall decide any question brought before the Committee.
- The Committee shall promptly inform the Board of the actions taken or issues discussed at its meetings. This will generally take place at the Board meeting following the Committee meeting.

Agenda and Notice

The Chairman of the Committee shall establish the meeting dates and the meeting agenda The Chairman of the Committee or the Company Secretary shall send proper notice of each Committee meeting and information concerning the business to be conducted at the meeting, to the extent practical, to each member prior to each meeting. The Chairman or a majority of the members of the Committee may call a special meeting of the Committee at any time.

Holding and Recording Meetings

Committee meetings may be held in person or telephonically. The Committee shall keep written minutes of its meetings and submit such minutes to the Board.

Delegation

To the extent permitted by any applicable law, regulation or listing standard, the Board may allocate the responsibilities of the Committee to a subcommittee or another committee of the Board's denomination.

DUTIES AND RESPONSIBILITIES

The Committee's primary duties and responsibilities include:

Nominations

The Committee is responsible for:

- Recommending to the Board for its approval the criteria and qualifications for membership on the Board or a Board committee, which shall reflect at a minimum any requirements of applicable law or listing standards of NASDAQ (in the case of independent directors only), as well as any minimum qualifications that the Committee believes must be met by a nominee for a position on the Board or a Board committee or any specific qualities or skills that the Committee believes are necessary for one or more of the Directors or committee members to possess.
- In consultation with the Chair of the Board and the Chief Executive Officer, identifying, considering, recommending, recruiting and selecting, or recommending that the Board select, candidates to fill open positions on the Board consistent with the Board-approved criteria and qualifications for membership. Where the Company is legally required by contract or otherwise to provide third parties with the ability to nominate Directors, the selection and nomination of such Directors need not be subject to the Committee's process.
- Developing and periodically evaluating a policy with regard to the consideration of any Director candidates recommended by stockholders, including the procedures to be followed by stockholders in submitting such recommendations.
- Establishing a process for identifying and evaluating nominees for Director, including nominees recommended by stockholders.
- Conducting appropriate inquiries into the backgrounds and qualifications of possible candidates and such candidate's compliance with the independence and other qualification requirements established by the Committee.
- Recommending Director nominees for approval by the Board and the stockholders
- Recommending to the Board with respect to the assignment of Board members to various Board committees.

Corporate Governance

• Reviewing and recommending to the Board proposed changes to the Company's Certificate of Incorporation and By-laws.

- Developing and recommending to the Board the Company's Corporate Governance Guidelines.
- Reviewing the Company's Corporate Governance Guidelines periodically and recommending to the Board updates or modifications to them, as appropriate.
- In consultation with the Chair of the Board and the Chief Executive Officer, periodically reviewing and confirming compliance with the Company's corporate governance policies and Corporate Governance Guidelines.
- Recommending to the Board ways to enhance services to and improve communications and relations with the Company's stockholders.
- Conducting, in consultation with the Chair of the Board and the Chief Executive Officer, an annual review of the Company's Code of Business Conduct and Ethics.
- Overseeing the systems and processes put into place by the Company to ensure compliance with the Company's Code of Business Conduct and Ethics.
- Receiving, reviewing, investigating and addressing any confidential complaints made to the Committee with respect to any breach or perceived breach of the Company's Code of Business Conduct and Ethics on the part of senior management or any member of the Board.

Board Oversight

- Overseeing periodic self-evaluations by the Board of its performance.
- Overseeing periodic evaluation by the Board of management.
- Providing for new Director orientation and continuing education for existing Directors on a periodic basis.
- Articulating to each Director what is expected of them, including reference to the Corporate Governance Guidelines and Directors duties and responsibilities.
- Evaluating, in consultation with the Chair of the Board and the Chief Executive Officer the size, needs and effectiveness of the Board.
- Recommending to the Board improvements to the corporate governance of the Company, including consideration of practices and policies with respect to Directors and specific standards for the overall structure and composition of the Board.
- Reviewing and recommending to the Board the functions, duties and composition of the committees of the Board.
- Evaluating any request for a waiver of the application of the Company's Code of Business Conduct and Ethics, and reporting its findings and recommendations to the full Board.
- Monitoring the functions of the various committees of the Board and overseeing the process for self-evaluation by each committee.
- Considering and reporting questions of possible conflicts of interest of Board members and of the Company's senior executives.
- Establishing criteria for an annual performance evaluation of the Committee by the Board.

Independent Advisors

The Committee shall have authority to engage, determine funding and cause the Company to pay the compensation to obtain advice and assistance from outside legal or other advisors to carry out its responsibilities, including but not limited to the authority to engage search firms used to identify Director candidates.

Periodic Review of this Charter

The Committee shall periodically review and reassess the adequacy of this Charter and recommend any proposed changes to the Board for approval.

Committee Performance Evaluation

The Committee shall evaluate its performance on an annual basis and develop criteria for such evaluation. The Committee shall report to the full Board on the results of its assessment each year and shall make any appropriate recommendations to further enhance the Committee's performance.

Other Responsibilities

The Committee shall perform such other duties as may be required by law or requested by the Board or deemed appropriate by the Committee. The Committee shall discharge its responsibilities, and shall assess the information provided to the Committee, in accordance with its business judgment. The Committee shall have the authority to conduct or authorize investigations into any matters within the scope of its responsibilities as it shall deem appropriate.

COMPENSATION

The compensation of Committee members shall be determined by the Board of Directors.