

DICERNA PHARMACEUTICALS, INC.

CORPORATE GOVERNANCE GUIDELINES

The Board of Directors (the “*Board*”) of Dicerna Pharmaceuticals, Inc. (“*Dicerna*”) believes that effective corporate governance by a corporation’s board of directors is critical to establishing the requisite investor trust necessary to best serve the long-term interest of its stockholders.

As part of its continuing effort to develop and maintain the proper processes, structure and composition for effective management, the Board has approved the following corporate governance guidelines. These principles, Dicerna’s charter documents, and the charters of the committees of the Board provide the framework for the corporate governance of Dicerna.

The Board and its Nominating and Corporate Governance Committee (the “*Governance Committee*”) will review these principles and other aspects of governance annually, or more often if the Board or Governance Committee deems necessary.

GENERAL OPERATING PRINCIPLES OF THE BOARD

The Board believes its primary responsibilities are as follows:

- Understand and approve Dicerna’s long-term strategies;
- Identify and address the primary issues confronting Dicerna with respect to such strategies;
- Identify and address the most important risks facing Dicerna;
- Identify, review and evaluate candidates to serve as Chief Executive Officer;
- Review and evaluate the performance of the Chief Executive Officer;
- Review Chief Executive Officer succession plan on an annual basis;
- Oversee management to ensure that it acts in the best interest of the corporation and its stockholders;
- Approve acquisitions, divestitures and other major corporate actions;
- Approve Dicerna’s annual operating financial plan, including significant capital expenditures; and
- Ensure processes are in place for maintaining the integrity of Dicerna’s financial statements and complying with applicable laws and a publicly available Code of Conduct.

To fulfill such responsibilities, the Board recognizes the need for it to be vigorous and diligent with respect to corporate governance issues and maintain a membership that not only understands the central business issues critical to the success of Dicerna, but also acts objectively, independently and with the utmost integrity, with the objective of improving stockholder value.

To that end, the Board favors open discussions and encourages the presentation of differing views among the Board as a whole and its committees. Moreover, the Board encourages directors to interact with senior management and visit Dicerna's facilities on a regular basis. In addition, the Board may from time to time, need to seek objective expert advice in order to effectively fulfill its responsibilities and will retain outside advisors as appropriate to obtain such assistance.

BOARD COMPOSITION

The Board believes effective oversight requires objectivity and independence from management. At all times, the Board will be composed of not less than the legally required percentage of "independent" directors. For these purposes, the Board has determined that a director will not be deemed independent if he or she:

- Is employed by Dicerna or any of its subsidiaries for the current year or any of the past 3 years;
- Accepts or has a non-employee family member who accepts any payments from Dicerna or any of its affiliates in excess of \$60,000 during the current fiscal year or any of the past 3 years, other than compensation for service on the Board, benefits under a tax-qualified retirement plan, or non-discretionary compensation;
- Is a family member of any individual who is, or within the past 3 years was, employed by Dicerna or by any parent or subsidiary of Dicerna as an executive officer;
- Is a partner in, or a controlling shareholder or an executive officer of, any organization to which Dicerna made, or from which Dicerna received, payments (other than those arising solely from investments in Dicerna's securities) that exceed 5% of the recipient's consolidated gross revenues for that year, or \$200,000, whichever is more, in the current fiscal year or any of the past 3 fiscal years;
- Is employed as an executive officer of another entity where any of Dicerna's executive officers serve on the compensation committee of such other entity, or if such relationship existed within the past 3 years;
- Was a partner or employee of Dicerna's outside auditors, and worked on Dicerna's audit, within the past 3 years;

- Has any other relationship or affiliation that would cause such individual to not be deemed “independent” under applicable rules and regulations of the Securities and Exchange Commission (the “**SEC**”) and the Nasdaq Stock Market;
- Has accepted any consulting, advisory or other compensatory fees from Dicerna or an affiliate, other than in the member’s capacity as a Board member, for any of the past 3 years. Payments to spouses, children sharing a home and an entity (that provides accounting, consulting, legal, investment banking, financial or advisory services to Dicerna) in which a member is a partner or a member would be barred. This prohibition does not apply to payments to all stockholder, if the member is a stockholder; or
- Is an affiliated person of Dicerna or any of its subsidiaries, other than in the member’s capacity as a director.

The Governance Committee will periodically review the Board’s standards for independence and recommend to the Board such modifications and additional criteria as the Governance Committee deems necessary to maintain and augment the independence and objectivity of the Board. The Board will at all times maintain the requisite standards for independence as set forth in applicable laws and regulations.

The Board will designate an independent Lead Director if the Chairman of the Board and the Chief Executive Officer are one person.

COMMITTEES OF THE BOARD

The Board has established the following committees to assist the Board in discharging its responsibilities: (i) Audit Committee; (ii) Organization and Compensation Committee; and (iii) Nominating and Corporate Governance Committee (the “Governance Committee”). The Board will adopt a charter for each committee, which charter will set forth each committee’s roles and responsibilities. Each committee chair is expected to report the findings and conclusions of the committee to the Board following each meeting of the respective committees. The Board may add new committees or remove existing committees as it deems advisable in the fulfillment of its responsibilities.

The members of the Board’s committees will meet the independence criteria set forth above as determined by the Board. The Governance Committee will periodically review the standards for independence as set forth by the SEC and the Nasdaq Stock Market, and recommend to the Board such modifications and additional criteria as the Governance Committee deems necessary to maintain and augment the independence and objectivity of the members of the various Board committees. The committees of the Board will at all times maintain at least the requisite standards for independence as set forth in applicable laws and regulations.

BOARD AND COMMITTEE NOMINATIONS

For each meeting of stockholders to elect members of the Board, the Governance Committee will be responsible for nominating qualified candidates whom it has evaluated to stand for election to the Board. The Governance Committee will be similarly responsible for identifying and nominating any candidates to fill vacancies on the Board. The Board believes that a director should not expect to be re-nominated for election by the Governance Committee unless such director continually meets the qualifications set forth by the Board and the Governance Committee.

The Governance Committee will be responsible to recommend to the Board the members and chairperson of each committee of the Board, subject to Board approval. The Board will be responsible to appoint the members and chairperson of the Governance Committee.

The Governance Committee will consider candidates recommended by stockholders. Stockholders wishing to suggest director candidates should submit their suggestions in writing to the attention of the Corporate Secretary of Dicerna.

DIRECTORS' QUALIFICATIONS

The Governance Committee will be responsible to develop comprehensive criteria for membership on the Board, and to evaluate potential candidates in accordance with such criteria. The Board believes that each member of the Board should:

- Possess the highest personal and professional ethics, integrity and values;
- Commit to represent the long-term interests of Dicerna and its stockholders;
- Possess diverse experience at policy-making levels in business, science, and technology, and in other areas that are relevant to Dicerna's activities;
- Possess key personal characteristics such as strategic thinking, objectivity, independent judgment, intellect and the courage to speak out and actively participate in meetings;
- Devote sufficient time to carry out his or her duties and responsibilities effectively, and should be committed to serve on the Board for an extended period of time;
- Expect to offer resignation in the event of any significant change in his or her personal circumstances, including a change in his or her principal job responsibilities; and
- Ensure that there is an absence of conflict of interest with Dicerna's business.

While the Board does not prohibit interlocking director relationships, the Governance Committee will take into consideration all directorships held by each director when determining

whether to re-nominate such director and whether such director qualifies as “independent” under the applicable NASDAQ Rules.

OTHER BOARDS AND COMMITTEES

Without specific approval from the Board, no director may serve on more than six public company boards (including Dicerna’s Board) and no member of the Audit Committee may serve on more than three public company audit committees (including Dicerna’s Audit Committee). In addition, directors who also serve as CEOs or in equivalent positions generally should not serve on more than two public company boards (including Dicerna’s Board), in addition to their employer’s board. In calculating service on a public company board or audit committee, service on a board or audit committee of a parent and its substantially owned subsidiary counts as service on a single board or audit committee. Any Audit Committee member’s service on more than three public company audit committees will be subject to the Board’s determination that the member is able to effectively serve on Dicerna’s Audit Committee and the disclosure of that determination in Dicerna’s annual proxy statement. The Governance Committee and the Board will take into account the nature of and time involved in a director’s service on other boards in evaluating the suitability of individual directors and making its recommendations to Dicerna stockholders.

BOARD OF DIRECTORS COMPENSATION

Generally, the Board believes that the level of director compensation should be based on time spent carrying out Board and committee responsibilities and should be competitive with comparable companies. In addition, the Board believes that a significant portion of director compensation should align director interests with the long-term interests of stockholders. Management should report to the Board on an annual basis how Dicerna’s director compensation practices compare with those of other comparable public companies.

EVALUATION OF THE BOARD OF DIRECTORS

Subject to Board approval, the Governance Committee will be responsible for establishing a process for evaluation of the Board and each of the committees of the Board, to determine their effectiveness and opportunities for improvement.

ETHICS AND CONFLICTS OF INTEREST

The Board believes ethical conduct is a critical component to success of the enterprise and building shareholder value. The Board expects each director, officer and employee to act with integrity at all times.

The Governance Committee will have the responsibility for overseeing ethics issues. The Governance Committee will:

- Assist management in the development and enforcement of a publicly available Code of Conduct;

- Approve any waiver of the Code of Conduct to any officer or director (other than a member of the Governance Committee) (any waiver of the application of the Code of Conduct to any director that is a member of the Governance Committee will require the informed approval of a majority of the other independent directors of the Board).

If an actual or potential conflict of interest arises for a director, the director will promptly inform the Chief Executive Officer, the Chairman of the Board and the Lead Director, if designated. If a significant conflict with respect to a director exists and cannot be resolved, the director will be expected to resign. All directors will recuse themselves from any discussion or decision affecting their personal, business or professional interests.

REPORTING OF CONCERNS

Dicerna will develop and maintain whistleblower policies and procedures to provide for the reporting of concerns about Dicerna's accounting, internal accounting controls, auditing matters, financial disclosure and reporting, or other possible violations of laws, regulations, policies and procedures. The policy will ensure confidentiality to the extent possible, and prohibit retaliation against reporting.

BOARD MEETINGS - FREQUENCY

The Board will generally have at least four regularly scheduled meetings per year and hold additional special meetings as necessary. Each director is expected to attend both scheduled and special meetings, except if unusual circumstances make attendance impractical.

CONDUCT OF BOARD MEETINGS

The Chairman of the Board and the Chief Executive Officer will be responsible for preparing the agenda of any meeting of the Board. The proposed agenda for each regularly scheduled meeting of the Board, as well as all information relevant to the Board's understanding of matters to be discussed at the meeting, should be distributed in writing or electronically to all members in advance, whenever feasible and appropriate. Board members will have the opportunity to request that additional matters be placed on such agenda.

The independent directors will meet in executive session without management present in connection with each regularly scheduled meeting of the Board. The independent directors may meet in executive session without management present at such other times as are determined necessary. If the Chairman is independent, the Chairman will serve as the chairman of such meetings. In the event that the Chairman is not independent, the Lead Director will serve as the chairman of such meetings. If no Lead Director is appointed, an independent director, on a rotational basis, will serve as chairman of such meetings, commencing with the most senior member among the independent directors.

ACCESS TO INDEPENDENT ADVISORS

The Board and each of its committees will have the right and are encouraged at such times as they determine are necessary to retain independent outside financial, legal or other advisors. The selection of such advisors will be left to the discretion of the Board or the applicable committee but in all cases the Board and such committees will be cognizant of potential conflicts that may arise from engaging advisors that regularly provide service to management of Dicerna or derive material amount of revenues from Dicerna. Dicerna will provide appropriate funding, as determined by the Board or any committee, to compensate those independent outside advisors, as well as to cover the ordinary administrative expenses incurred by the Board and its committees in carrying out their duties.