

MIRNA THERAPEUTICS, INC.
CHARTER OF THE AUDIT COMMITTEE
OF THE BOARD OF DIRECTORS

I. Purpose

The purpose of the Audit Committee (the “**Committee**”) of the Board of Directors (the “**Board**”) of Mirna Therapeutics Inc. (the “**Company**”) is to oversee the Company’s accounting and financial reporting processes and the audit of the Company’s financial statements. The Committee also assists the Board in fulfilling its oversight responsibilities with respect to the Company’s compliance with accounting, regulatory and legal requirements.

The Committee will fulfill these functions primarily by carrying out the activities enumerated in Part IV of this charter. In order to fulfill these functions, the Committee members shall, within the scope of their duties, have unrestricted access to Company personnel and documents, and shall have authority to direct and supervise an investigation into any matters within the scope of the Committee’s duties. In performing its responsibilities hereunder, the Committee may consider information provided by the Company’s management and independent auditors, as appropriate.

While the Committee has the responsibilities and powers set forth in this charter, it is not the duty of the Committee to plan or conduct audits, to determine that the Company’s financial statements are complete and accurate and are in accordance with generally accepted accounting principles, or to assess the Company’s system of internal controls. Nor is it the duty of the Committee to conduct investigations, to resolve disagreements, if any, between management and the Company’s independent auditors or to assure compliance with laws and regulations and the Company’s policies and procedures. Further, auditing literature, particularly Statement of Accounting Standards No. 100, defines the term “review” to include a particular set of required procedures to be undertaken by independent auditors. The members of the Committee are not independent auditors, and the term “review” as used in this charter is not intended to have that meaning and should not be interpreted to suggest that the Committee members can or should follow the procedures required of auditors performing reviews of financial statements.

Consistent with the Board’s and Committee’s oversight roles, the Committee should encourage continuous improvement of, and should foster adherence to, the Company’s policies, procedures and practices at all levels. The Committee should encourage open communication among the independent auditors, financial and senior management and the Board.

From and after the time the Company becomes subject to the periodic and current reporting requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934 (the “**Exchange Act**”), the Committee shall engage in such activities as are necessary or appropriate (many of which are outlined in this charter) in order for it to render an annual report of the Committee that meets the requirements of the rules of the Securities and Exchange Commission (the “**SEC**”), including the actions and disclosure required by Regulation S-K, Item 407(d)(3)

under the Exchange Act regarding inclusion of the audited financial statements in the Company's Annual Reports on Form 10-K.

II. Membership

All members of the Committee will be appointed by, and shall serve at the discretion of, the Board. Unless a chairperson is elected by the full Board, the members of the Committee may designate a chairperson by majority vote of the Committee membership.

From and after the time the Company becomes subject to the periodic and current reporting requirements of Section 13 or 15(d) of the Exchange Act, (i) the Committee shall consist of at least three members of the Board; provided, that if at any time there is a vacancy on the Committee and the remaining members meet all membership requirements, then the Committee may consist of two (2) members until the earlier of the Company's next annual stockholders meeting or one (1) year from the occurrence of the vacancy, unless the next annual stockholders meeting occurs within 180 days following the occurrence of the vacancy, in which case the Committee may consist of two (2) members until the end of such 180-day period; (ii) each member of the Committee shall be independent in accordance with the independence requirements applicable to audit committees of companies listed on NASDAQ under any applicable law, rule or regulation, including the requirements set forth in Rule 10A-3 under the Exchange Act, provided, however, that for the first year after listing of the Company's Common Stock, one member of the Committee need not have been determined to meet the independence requirements; and (iii) no member of the Committee may simultaneously serve on the audit committee of more than two other public companies unless the Board determines that such service does not impair the member's ability to serve on the Committee.

Each member of the Committee (i) must not have participated in the preparation of the financial statements of the Company or any current subsidiary of the Company at any time during the past three years and (ii) must be able to read and understand fundamental financial statements, including the Company's balance sheet, income statement and cash flow statement. Members of the Committee are not required to be engaged in the accounting and auditing profession and, consequently, some members may not be expert in financial matters, or in matters involving auditing or accounting. However, at least one member of the Committee shall (a) have past employment experience in finance or accounting, requisite professional certification in accounting, or any other comparable experience or background which results in the member's financial sophistication, including being or having been a chief executive officer, chief financial officer or other senior officer with financial oversight responsibilities, and (b) qualify as an "audit committee financial expert" under Item 401(h) of Regulation S-K under the Exchange Act, in which case such member will be presumed to have such financial sophistication.

III. Meetings

The Committee shall meet at least four times a year and such other times as it deems necessary; provided, from and after the time the Company becomes subject to the periodic and current reporting requirements of Section 13 or 15(d) of the Exchange Act, such meetings of the Committee shall occur not less than once during each fiscal quarter.

Meetings can be called by the chairperson of the Committee, at the request of any member of the Committee, or any member of the Board. At all Committee meetings, a majority of the then-current members of the Committee shall constitute a quorum. If less than a quorum is available for a given meeting, the Board may, in its discretion, delegate the responsibilities of the Committee to the available members of the Committee and/or any substitute members who meet the qualifications for membership for the purposes of such meeting, including the delegation of its authority to grant pre-approvals of audit and permitted non-audit services, provided that decisions made under such authority shall be presented to the full Committee at its next meeting. Unless otherwise restricted by the Company's bylaws, any action required or permitted to be taken at any meeting of the Committee may be taken without a meeting if all members of the Committee consent thereto in writing (including by electronic transmission), and such writing (including any electronic transmission) is filed with the minutes of the Committee. The Committee may invite members of management and outside parties, including the Company's independent and internal auditors, legal counsel, and other advisors, to its meetings as it deems appropriate.

The Committee shall keep regular minutes of any meetings where actions are taken (unless such actions are taken and reported to the Committee's satisfaction in the minutes of the Board meetings). Any such minutes kept by the Committee shall be distributed to each member of the Committee and other members of the Board. The Secretary of the Company shall maintain the original signed minutes for filing with the corporate records of the Company. The Chair shall report to the Board regarding the activities of the Committee at appropriate times and as otherwise requested by the Chairperson of the Board.

IV. Responsibilities and Duties

The following processes of the Committee are designed to assist it in carrying out its oversight responsibilities. These processes are set forth as a guide with the understanding that the Committee may supplement them as appropriate and may establish policies and procedures from time to time that it deems necessary or advisable in fulfilling its responsibilities.

1. Be directly responsible, and have sole authority, to appoint, retain, evaluate, compensate, oversee and terminate, if necessary, the Company's independent auditors, who shall report to and be directly accountable to the Committee. The Committee may, in its discretion, recommend that the Board seek stockholder ratification of the independent auditor the Committee appoints.

2. Take appropriate action to oversee the independence of the outside auditors and ensure that the auditors are independent consistent with applicable laws, rules, regulations and requirements, and, when applicable, review and discuss with the independent auditors the auditors' responsibilities under generally accepted accounting standards and Public Company Accounting Oversight Board ("**PCAOB**") requirements. From and after the time the Company becomes subject to the periodic and current reporting requirements of Section 13 or 15(d) of the Exchange Act, this will include the following responsibilities:
 - a. At least annually, obtain and review (i) a report from the independent auditors describing the independent auditors' internal quality-control procedures, any material issues raised by the review, or by any inquiry or investigation by governmental or professional authorities within the preceding five years (including Peer Reviews and PCAOB inspections) and (ii) all relationships and services between the independent auditors and the Company potentially impacting the independent auditors' independence.
 - b. At least annually, obtain a formal written statement delineating all relationships between the independent auditors and the Company. Discuss with the independent auditors any disclosed relationships that may impact the objectivity and independence of the auditor. If the Committee determines that further inquiry is advisable, the Committee shall take appropriate action in response to the independent auditor's report to satisfy itself of the auditor's independence.
 - c. Ensure the regular rotation of the lead audit partner, including to the extent required by law.
 - d. Review company procedures to establish clear hiring policies for employees or former employees of the independent auditors.
 - e. Obtain from the independent auditors assurance that, to the extent applicable, Section 10A(b) of the Exchange Act (as set forth on Appendix I hereto), has not been implicated.
 - f. The Committee shall monitor whether the auditor's independence is maintained, including by reviewing the non-audit services provided to the Company by the auditor. Prohibited services under Section 10A(g) of the Exchange Act will include: (i) bookkeeping or other services related to the accounting records or financial statements of the Company; (ii) financial information systems design and implementation; (iii) appraisal or valuation services, proving fairness opinions or preparing contribution-in-kind reports; (iv) actuarial services; (v) internal audit outsourcing services; (vi) management functions or human resources; (vii) broker or dealer, investment adviser or investment banking services; (viii) legal services and expert services unrelated to the audit; and (ix) any other service that

the PCAOB prohibits through regulation.

3. The Committee must meet separately, periodically, with management, with the internal auditor, if any, and with the independent auditor.
4. Meet with management and the independent auditors before the audit to discuss the preparation and employment of the audit, including without limitation, all material scope decisions.
5. Review with management and the independent auditors the results of the independent auditors' review of the Company's quarterly financial statements, management's discussion and analysis of financial condition and results of operations ("**MD&A**") (if applicable) and any significant accounting or disclosure issues, prior to filing Quarterly Reports on Form 10-Q with the SEC, as may be applicable to the Company.
6. Review with management and the independent auditors the Company's annual audited financial statements, the results of the audit, MD&A (if applicable) and any significant accounting or disclosure issues, prior to filing Annual Reports on Form 10-K with the SEC, as may be applicable to the Company. Request that the independent auditors inform the Committee of all material issues on which the national office of the independent auditors is consulted by the Company's audit team.
7. Prepare any disclosure that may be required by Regulation S-K, Item 407(d)(3) under the Exchange Act regarding inclusion of the audited financial statements in the Company's Annual Reports on Form 10-K, as may be applicable to the Company.
8. Review and discuss with management and the independent auditors the Company's earnings releases to the public, including the use of any pro forma or adjusted non-GAAP information, as well as material financial information and earnings guidance provided to analysts and rating agencies. The Committee should be furnished with an advance copy of each earnings release for its review prior to publication.
9. Discuss significant issues, events and transactions and any significant changes regarding accounting principles, practices, judgments or estimates with management and the independent auditors, including any significant disagreements among management and the independent auditors. Review and discuss reports from the independent auditors with regard to (i) critical accounting policies and practices to be used; (ii) alternative treatments of financial information within generally accepted accounting principles that have been discussed with management, ramifications of the use of such alternative disclosures and treatments, and the treatment preferred by the independent auditors; (iii) material judgmental areas where there may have been differing views between management and the independent auditors, including with regard

to accounting, disclosure and presentation matters; (iv) the effect of regulatory and accounting pronouncements and initiatives on the financial statements of the Company, (v) off-balance sheet structures; and (vi) other material written communications between the independent auditors and management, including management letter or schedules of unadjusted differences.

10. The Committee shall, to the extent applicable, review with the independent auditors the matters required to be discussed by the Codification of Statements on Accounting Standards, AU § 380, as amended, as adopted by the PCAOB, relating to the conduct of the audit, including any audit problems or difficulties encountered in the course of the audit work, any restrictions on the scope of activities or access to requested information, management's response to the difficulties or problems, and any significant disagreements with management.
11. On a timely basis, discuss with management and the independent auditors any correspondence with regulators or governmental agencies and any published reports, if any, that raise material issues regarding, or call into question the integrity of, the Company's financial statements or accounting policies.
12. Discuss and review with the independent auditors, management and the internal auditors (if any), the adequacy and effectiveness of the Company's internal controls.
 - a. Make inquiries to confirm that controls and required approvals are in place to prevent the Company from engaging the independent auditors in any services that might impact their independence.
 - b. Review disclosures, if any, about any significant deficiencies or material weaknesses in the design or operation of the Company's system of internal controls and any fraud involving management or employees playing a significant role in the Company's system of internal controls, including, to the extent applicable, any disclosures made by the Company's chief executive officer and chief financial officer during their certification process for the Annual Report on Form 10-K and Quarterly Reports on Form 10-Q.
 - c. Review any special steps and remedial measures adopted in light of material control weaknesses or significant deficiencies, if any.
 - d. Review the Company's internal controls report and the independent auditors' internal controls report, to the extent applicable, prior to the filing of any such reports, including without limitation, any Annual Report on Form 10-K, as may be required to be filed by the Company with the SEC.
13. Pre-approve all audits and permitted non-audit and tax services that may be provided by the independent auditors, and establish policies and procedures for

the Committee's pre-approval of permitted services by the independent auditors or other registered public accounting firms.

- a. Committee pre-approval of audit and non-audit services will not be required if the engagement for the services is entered into pursuant to pre-approval policies and procedures established by the Committee regarding the Company's engagement of the independent auditor, provided the policies and procedures are detailed as to the particular service, the Committee is informed of each service provided and such policies and procedures do not include delegation of the Committee's responsibilities under the Exchange Act to the Company's management, as may be applicable to the Company. If the Committee elects to establish pre-approval policies and procedures regarding non-audit services, the Committee must be informed of each non-audit service provided by the independent auditor. Committee pre-approval of non-audit services (other than review and attest services) also will not be required if such services fall within available exceptions established for companies subject to the periodic and current reporting requirements of Section 13 or 15(d) of the Exchange Act by the SEC.
 - b. The Committee may delegate pre-approval authority to one or more of its members. The member (or members) to whom such authority is delegated must report, for informational purposes only, any pre-approval decisions to the Committee at its next regularly scheduled meeting.
14. Review and oversee the activities, organizational structure, and qualifications of the Company's internal audit function, if any, including reviewing the scope, performance and results of the internal audit and any reports to management and management's response to those reports.
 15. Oversee procedures for the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters and the confidential, anonymous submission by Company employees of concerns regarding questionable accounting or auditing matters.
 16. The Committee shall review on a periodic basis, or as appropriate, any investment policy of the Company and recommend to the Board any changes to the investment policy.
 17. The Committee shall discuss with management the Company's significant financial exposures and the actions management has taken to limit, monitor or control such exposures. The Committee shall assist the Board in its oversight of risk, which includes overseeing the management of financial risks, such as with respect to accounting matters, liquidity and credit risks, corporate tax positions, insurance coverage, and cash investment strategy and results, and risks relating to the performance of the Company's internal audit function and its independent registered public accounting firm, as well as the Company's systems of internal

controls and disclosure controls and procedures.

18. The Committee must review all related person transactions (as defined by Item 404 of Regulation S-K) on an ongoing basis and all such transactions must be approved by the Committee. The Committee may adopt and administer a policy regarding the review and approval of such transactions, if and as appropriate.
19. The Committee shall oversee the establishment of and compliance with the Company's Insider Trading Compliance Policy and shall approve any modifications or waivers of such policy.
20. The Committee shall oversee the Company's ethics and compliance functions, including any Code of Business Ethics and/or Code of Ethics the Company may adopt, and other procedures established by the Company with regard to ethical behavior, avoidance of conflicts of interest, and other related matters. The Committee shall oversee the appropriate investigation of any reports received through the ethics helpline, if any, and report to the Board periodically with respect to the information received through the ethics helpline and any related investigations.
21. The Committee shall review and request assurances from management that the Company is complying with the appropriate legal and audit requirements for any Company sponsored retirement plans, including the Company's 401(k) plan.
22. The Committee shall confer with the Company's internal legal counsel, if any, or outside counsel about legal matters that may have a material impact on the financial statements or the Company's compliance policies. The Committee also shall: (a) at least annually, receive a presentation by management summarizing the Company's programs and control for compliance with legal and regulatory requirements; and (b) review and discuss with management and the internal auditor (or other personnel responsible for the internal audit function) the Company's procedures and practices designed to provide reasonable assurance that: (i) the Company's books, records, accounts and internal accounting controls are established and maintained in compliance with the Foreign Corrupt Practices Act of 1977, the UK Bribery Act 2010 and similar laws and regulations to which the Company is subject, and (ii) there are adequate company level controls in place to prevent or detect (A) any improper or illegal disbursement of corporate funds or property of value or (B) the making of any arrangement on behalf of the Company which may provide for or result in the improper or illegal disbursement of funds or property of value.
23. The Committee shall oversee the integrity of the Company's information technology systems, processes and data, and shall periodically (but no less than annually), at its discretion, (a) review and assess with management and the internal auditor (or other personnel responsible for the internal audit function), the adequacy of controls and security for the Company's information technology systems, processes and data, and (b) the Company's contingency plans in the

event of a breakdown or security breach affecting the Company's information technology systems.

24. Annually conduct an evaluation of the performance of its duties under this charter.
25. Perform any other activities that are consistent with this charter, the Company's Bylaws and governing laws, as the committee or the Board deems necessary or appropriate.
26. Review the provisions of this charter at least annually and, if appropriate, recommend changes for approval by the Board.

V. Authority to Retain Outside Advisors

The Committee shall have authority, to the extent it deems necessary or appropriate, to retain legal counsel and other advisors. The Committee shall have the sole discretion to retain, oversee, compensate and terminate such advisors. The Company will provide for appropriate funding, as determined by the Committee in its sole discretion, for payment of compensation to any advisors retained by the Committee. Any communications between the Committee and legal counsel in the course of obtaining legal advice will be considered privileged communications of the Company, and the Committee will take necessary steps to preserve the privileged nature of those communications. The Company shall provide for appropriate funding, as determined by the Committee, for payment of compensation to the independent auditor for the purpose of rendering or issuing an audit report or performing other audit, review or attestation services, for payment of compensation to any advisors employed by the Committee and for ordinary administrative expenses of the Committee that are necessary or appropriate in carrying out its duties.

VI. Delegation

The Committee shall have the authority to delegate any of its responsibilities to one or more subcommittees as the Committee deems appropriate.

VII. Reliance

To the fullest extent permissible under applicable law, each member of the Committee is entitled to rely in good faith upon the records of the Company and upon such information, opinions, reports or statements presented to the Committee by any of the Company's officers, employees, or committees, the independent auditors or any other person as to matters the member reasonably believes are within such other person's professional or expert competence and who has been selected with reasonable care by or on behalf of the Company.

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It is acknowledged that all of the above listed tasks and focus areas may not be relevant to all of the matters and tasks that the Committee may consider and act upon from time to time, and the members of the Committee in their judgment may determine the relevance thereof and the attention such items shall receive in any particular context.

Appendix I

Section 10A(b) of the Securities Exchange Act of 1934 (b)

Required response to audit discoveries

1. Investigation and report to management

If, in the course of conducting an audit pursuant to this title to which subsection (a) of this section applies, the registered public accounting firm detects or otherwise becomes aware of information indicating that an illegal act (whether or not perceived to have a material effect on the financial statements of the issuer) has or may have occurred, the firm shall, in accordance with generally accepted auditing standards, as may be modified or supplemented from time to time by the Commission--

- A. (i) determine whether it is likely that an illegal act has occurred; and (ii) if so, determine and consider the possible effect of the illegal act on the financial statements of the issuer, including any contingent monetary effects, such as fines, penalties, and damages; and
- B. as soon as practicable, inform the appropriate level of the management of the issuer and assure that the audit committee of the issuer, or the board of directors of the issuer in the absence of such a committee, is adequately informed with respect to illegal acts that have been detected or have otherwise come to the attention of such firm in the course of the audit, unless the illegal act is clearly inconsequential.

2. Response to failure to take remedial action

If, after determining that the audit committee of the board of directors of the issuer, or the board of directors of the issuer in the absence of an audit committee, is adequately informed with respect to illegal acts that have been detected or have otherwise come to the attention of the firm in the course of the audit of such firm, the registered public accounting firm concludes that--

- A. the illegal act has a material effect on the financial statements of the issuer;
- B. the senior management has not taken, and the board of directors has not caused senior management to take, timely and appropriate remedial actions with respect to the illegal act; and
- C. the failure to take remedial action is reasonably expected to warrant departure from a standard report of the auditor, when made, or warrant resignation from the audit engagement;

the registered public accounting firm shall, as soon as practicable, directly report its conclusions to the board of directors.

3. Notice to Commission; response to failure to notify

An issuer whose board of directors receives a report under paragraph (2) shall inform the Commission by notice not later than one business day after the receipt of such report and shall furnish the registered public accounting firm making such report with a copy of the notice furnished to the Commission. If the registered public accounting firm fails to receive a copy of the notice before the expiration of the required one-business-day period, the registered public accounting firm shall--

- A. resign from the engagement; or
- B. furnish to the Commission a copy of its report (or the documentation of any oral report given) not later than one business day following such failure to receive notice.

4. Report after resignation

If a registered public accounting firm resigns from an engagement under paragraph (3)(A), the firm shall, not later than one business day following the failure by the issuer to notify the Commission under paragraph (3), furnish to the Commission a copy of the report of the firm (or the documentation of any oral report given).