

INTREXON CORPORATION
Audit Committee Charter

I. Introduction.

The Board of Directors of Intrexon Corporation (the “Company”) has constituted an Audit Committee (the “Committee”). The Committee shall have the purpose of and responsibility for assisting the Board of Directors in its oversight of, and shall regularly report to the Board of Directors any issues regarding, the following:

- the accounting and financial reporting processes of the Company;
- the integrity of the Company’s consolidated financial statements;
- the Company’s compliance with legal and regulatory requirements;
- the independent auditor’s qualifications and independence; and
- the performance of the Company’s internal audit function and independent auditors.

In addition, the Committee shall prepare the audit committee report that Securities and Exchange Commission (“SEC”) rules require to be included in the Company’s annual proxy statement. The Committee shall preserve open avenues of communication among the independent auditors, internal auditors, financial management, senior management, the Committee and the Board of Directors.

This Charter sets out the specific responsibilities delegated by the Board of Directors to the Committee and details the manner in which the Committee shall operate.

In the exercise of its oversight responsibilities, it is not the duty of the Committee to plan or conduct audits or to determine that the Company’s consolidated financial statements fairly present the Company’s financial position and results of operation and are in accordance with generally accepted accounting principles. Management is responsible for the preparation, presentation, and integrity of the Company’s consolidated financial statements and for the appropriateness of the accounting principles and reporting policies that are used by the Company. The independent auditors are responsible for auditing the Company’s consolidated financial statements and for reviewing the Company’s unaudited interim consolidated financial statements.

While the fundamental responsibility for the Company’s financial statements and disclosures rests with management and the independent auditor, the Committee must review: (A) major issues regarding accounting principles and financial statement presentations, including any significant changes in the Company’s selection or application of accounting principles, and major issues as to the adequacy of the Company’s internal controls and any special audit steps adopted in light of material control deficiencies; (B) analyses prepared by management and/or the independent auditor setting forth significant financial reporting issues and judgments made in connection with the preparation of the financial statements, including analyses of the effects of

alternative generally accepted accounting principles methods on the financial statements; (C) the effect of regulatory and accounting initiatives, as well as off-balance sheet structures, on the financial statements of the Company; and (D) the type and presentation of information to be included in earnings press releases (paying particular attention to any use of “pro forma,” or “adjusted” non-GAAP, information), as well as review any financial information and earnings guidance provided to analysts and rating agencies.

Nothing contained in this charter is intended to alter or impair the operation of the Virginia statutory standard of conduct as set forth in Section 13.1-690 of the Virginia Stock Corporation Act. Further, nothing contained in this charter is intended to alter or impair the right of the members of the Committee under the Virginia Stock Corporation Act to rely, in discharging their responsibilities, on the records of the Company and on other information presented to the Committee, Board or the Company by its officers or employees or by outside experts.

II. Composition of the Committee.

The Committee shall consist of at least three directors all of whom the Board of Directors shall determine meet the “independence” requirements for audit committee membership of Rule 10A-3 of the Securities and Exchange Act of 1934, as amended, and The Nasdaq Stock Market (“NASDAQ”) and any other applicable laws, rules and regulations and all of whom must not have participated in the preparation of the financial statements of the Company or any of its subsidiaries during the past three years. In addition, as determined by the Board in its business judgment, all members of the Committee shall be able to read and understand fundamental financial statements.

At least one member shall be an “audit committee financial expert” in accordance with the rules and regulations of the SEC, and at least one member (who may also serve as an audit committee financial expert) shall have accounting or related financial management expertise or experience in accordance with the NASDAQ listing standards. Based on the recommendation of the Nominating and Corporate Governance Committee, the Board of Directors shall elect the members and the Chair of the Committee at its organizational meeting following the Annual Meeting of Shareholders. The members of the Committee may be removed by the Board.

No Committee member shall serve simultaneously on the audit committees of more than two other public companies unless the Board determines that such simultaneous service would not impair the ability of the Committee member to serve on the Committee effectively.

III. Responsibilities.

A. Effective Management of Financial Risks.

The Committee shall review and discuss policies with respect to risk assessment and risk management.

- The Committee shall discuss with management the Company’s major financial risk exposures and the steps management has taken to monitor and control such exposures, including the Company’s risk assessment and risk management policies.

- The Committee shall review and discuss with management and the independent auditors the establishment and maintenance of systems of accounting and internal control to manage and assess financial risk. The Committee shall periodically consult with the independent auditor out of the presence of the Company's management regarding internal control over financial reporting, the fullness and accuracy of the Company's consolidated financial statements and any significant risks identified during the auditors' risk assessment procedures.
- The Committee shall review and discuss with management and the independent auditors the integrity and prudence of the Company's internal control systems, including periodic review of policies and/or practices.
- The Committee shall review and discuss with management and the independent auditors the establishment and maintenance of disclosure controls to promote timely, accurate, compliant and meaningful disclosure in the Company's periodic reports to the SEC.
- The Committee shall make the Board of Directors aware of any matters that have come to its attention that may significantly impact the financial condition or affairs of the Company, and help assess the related risks and planned actions to manage those risks.

B. The Reliability and Integrity of the Company's Consolidated Financial Statements.

The Committee shall assist the Board of Directors' oversight of the integrity of the Company's consolidated financial statements.

- The Committee shall meet to review and discuss with the independent auditors and with management the results of the annual audit of the Company's consolidated financial statements prior to the filing or distribution thereof, including (i) the Company's disclosures under "Management's Discussion and Analysis of Financial Condition and Results of Operations" and (ii) any appropriate matters regarding accounting principles, practices and judgments and the independent auditors' opinion as to the quality thereof and any items required to be communicated to the Committee by the independent auditors in accordance with standards established and amended from time to time by the Public Company Accounting Oversight Board ("PCAOB") and the American Institute of Certified Public Accountants ("AICPA").
- The Committee shall meet to review and discuss with management and the independent auditors the Company's interim financial results to be included in the Company's quarterly reports to be filed with the SEC, including the Company's disclosures under "Management's Discussion and Analysis of Financial Condition and Results of Operations" and any items required to be communicated to the Committee by the independent auditors in accordance with existing PCAOB and AICPA guidance.

- Quarterly, the independent auditors shall provide to the Committee, if requested by management or the Committee, a review letter as contemplated by the PCAOB or AICPA.
- Periodically during the fiscal year, if requested by management or the Committee, the independent auditors shall review with the Committee their assessment as to the adequacy of the Company's structure of internal controls over financial accounting and reporting, and their qualitative judgments as to accounting principles employed and related disclosures by the Company and the conclusions expressed in the Company's financial reports.
- The independent auditors and the Company's management shall review with the Committee business and financial issues that may significantly impact the Company's consolidated financial statements and internal control systems.
- Legal counsel shall review with the Committee legal issues that may significantly impact such consolidated financial statements and systems. At least annually, legal counsel shall report to the Committee as to all significant litigation, threatened litigation or potential litigation in which the Company and its subsidiaries are or may be engaged, as well as the anticipated or potential impact of such litigation, threatened litigation or potential litigation on the Company.
- The Committee shall meet to review and discuss with management, the independent auditors, and the internal auditors the quality, adequacy and effectiveness of the Company's financial reporting processes, internal controls and disclosure controls and procedures, including whether there are any significant deficiencies or material changes in the design or operation of such processes, controls and procedures, material weaknesses in such processes, controls and procedures, any corrective actions taken with regard to such deficiencies and weaknesses and any fraud involving management or other employees with a significant role in such processes, controls and procedures. Both management and the independent auditors shall report promptly to the Committee any material weaknesses, material changes or significant deficiencies in internal control systems.
- The independent auditors shall promptly identify to the Committee any audit problems or difficulties, including any areas of disagreement with management in the preparation of consolidated financial statements. The Committee also shall consider any response by management.
- The Committee shall review the Company's accounting policies and practices in the light of the requirements of the Financial Accounting Standards Board (FASB), the SEC, the PCAOB and the AICPA. The Committee shall review at least annually the Company's description of its critical accounting policies. Any significant changes in those policies must be approved in advance by the Committee. The Committee shall review and discuss with the Company's independent auditors all alternative treatments of financial information within generally accepted accounting principles that have been discussed with management, the ramifications of the use of such alternative treatments and the

treatment preferred by the auditors and other material written communications between the auditors and management.

C. Compliance with Laws and Regulations.

The Committee shall assist in the Board of Directors' oversight of the Company's compliance with legal and regulatory compliance.

- Legal counsel shall periodically update the Committee regarding (A) developments in the law relating to the responsibilities and liabilities of directors, and (B) any significant changes in the various rules, regulations and laws that relate generally to the Company's business operations and the extent to which the Company is complying with such laws.
- Management shall report as soon as possible to the Chairman of the Committee any material violation of laws or governmental regulations.
- At least annually, management shall review with the Committee the Company's monitoring efforts and procedures to ensure compliance with laws and governmental regulations.

D. Maintenance of Effective and Efficient Audit Processes.

The Committee shall have the sole authority for appointing, compensating, retaining and overseeing the work of the independent auditors of the Company (subject, if applicable, to shareholder ratification), and shall have the sole authority to approve all engagement fees and terms and all permissible non-audit and tax services to be provided by the independent auditors. The Committee shall pre-approve each such audit, non-audit and tax service to be provided by the Company's independent auditors. The Committee may, from time to time, delegate its authority to pre-approve such services to one or more Committee members, provided that such designees present any such approvals to the full Committee at the next Committee meeting;

- The Committee, as the Board of Directors' representative, shall have the sole authority to appoint and determine funding for the independent auditors.
 - Each year the Committee shall appoint the independent auditors, if the Committee deems appropriate, subject to shareholder ratification at the annual meeting.
 - The independent auditors must report directly to the Committee.
 - The Company must provide appropriate funding, as determined by the Committee, for payment of compensation to any independent auditor or other advisers employed by the Committee and for ordinary administrative expenses of the Committee that are necessary or appropriate in carrying out its duties.
- The Committee shall evaluate the independent auditors' qualifications, performance and independence, and shall present its conclusions and recommendations with respect to the independent auditors to the Board on at least an annual basis. As part of such evaluation, the Committee shall:

- At least annually obtain and review a report or reports from the independent auditors describing (A) the independent auditors' internal quality control procedures, (B) any material issues raised by (i) the most recent internal quality control review, or peer review, of the independent auditors, or (ii) any inquiry or investigation by governmental or professional authorities, within the preceding five years, respecting one or more independent audits carried out by the independent auditors, and any steps taken to deal with such issues and (C) (to assess the independent auditor's independence) all relationships between the independent auditors and the Company.
- The Committee shall review this report, the independent auditor's work throughout the year and opinions of management and the internal auditors and evaluate the auditor's qualifications performance and independence, including a review and evaluation of the lead partner. The Committee should present its conclusions with respect to such evaluations to the Board of Directors.
- The Committee shall pre-approve all audit services and all permissible non-audit or tax services to be provided by the independent auditor.
- The Committee is responsible for actively engaging in a dialogue with the independent auditors with respect to any disclosed relationships or services that may impact the objectivity and independence of the independent auditors.
- With respect to each fiscal year, the Committee shall meet separately with the independent auditors to review the scope and methodology of the proposed audits for such fiscal year, including the auditors' responsibilities under generally accepted auditing standards and the responsibilities of management in the audit process. The independent auditors shall provide regular reports to the Committee during the fiscal year on the underlying process and status of their audits and any findings or preliminary conclusions that have been reached.
- The Committee shall monitor the regular rotation of the lead and concurring audit partners as required by the rules and regulations of the SEC and NASDAQ in order to assure continuing independence of the independent auditor. The Committee should also consider whether there should be regular rotation of the audit firm itself. The Committee's conclusions with respect to this rotation should be presented to the Board of Directors.
- The Committee shall review with the independent auditor any audit problems or difficulties raised by the independent auditor and management's response. Such review shall include any restrictions on the scope of the independent auditor's activities or on access to requested information, as well as any significant disagreements with management, including any accounting adjustments that were noted or proposed by the auditor but were "passed" (as immaterial or otherwise). The review should also include discussion of the responsibilities, budget and staffing of the Company's internal audit function.
- Both management and the independent auditor shall report promptly to the Committee any material weaknesses in internal control systems.

- The Committee shall review any “management” or “internal control” letters issued, or proposed to be issued, by the audit firm to the Company and any discussions with the independent auditor’s national office respecting auditing or accounting issues presented by the engagement.
- The Committee shall review and discuss with the independent auditors any audit problems or difficulties and management’s response thereto, including those matters required to be discussed with the Committee by the independent auditors pursuant to existing PCAOB and AICPA guidance.

E. Internal Audit

The Committee shall assist in the Board of Directors’ oversight of the performance of the Company’s internal audit function.

- The Committee shall meet periodically with the internal auditors.
- The Committee shall, at least annually, evaluate the performance of the Company’s internal audit function and review and discuss with the internal auditors the internal audit plan, activities, responsibilities and staffing of the internal audit organization.
- With respect to each fiscal year, the Committee shall meet separately with the internal auditors and the senior management to review the scope and methodology of the proposed audits for such fiscal year. The internal auditors shall provide any reports to the Committee during the fiscal year on the underlying process and status of their audits and any findings or preliminary conclusions that have been reached.

F. Other Responsibilities.

- Management shall report to the Committee any proposed related party transaction that might be considered material to the Company or the related party, or required to be disclosed pursuant to SEC Regulation S-K, Item 404, and the Committee shall be responsible for the review and oversight contemplated by NASDAQ with respect to any such reported transactions.
- The Committee shall keep the independent auditors informed of the Committee’s understanding of the Company’s related party transactions that are significant to the Company, and review and discuss with the Company’s independent auditors the auditors’ evaluation of the Company’s identification of, accounting for, and disclosure of, its related party transactions, including any significant matters arising from the audit regarding the Company’s related party transactions.
- The Committee shall review periodically the Company’s Code of Business Conduct and Ethics. The Committee is responsible for evaluating periodically the adequacy of the policies included in the Code of Business Conduct and Ethics, and shall have management confirm periodically that these policies are understood and implemented.

- The Committee shall establish procedures to ensure timely and current disclosures of material changes in financial condition or operations.
- The Committee shall discuss with management the Company's policies and practices regarding earnings press releases, as well as any financial information and earnings guidelines provided to analysts and rating agencies.
- The Committee shall prepare the Audit Committee Report required by SEC Regulation S-K Item 704(d)(3)(i) to be included in the Company's annual proxy statement.
- The Committee shall set clear hiring policies with respect to any current or former employees of the independent auditors in accordance with rules and regulations of the SEC and NASDAQ.
- The Committee shall have the exclusive authority to oversee, investigate and take remedial action with respect to any and all complaints regarding accounting, internal accounting controls or auditing matters.
 - The Committee shall establish procedures for (A) the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters, and (B) the confidential, anonymous submission by employees of concerns regarding questionable accounting or auditing matters.
 - At least annually, the Committee shall report to the Board of Directors as to the status of all complaints relating to material accounting, internal accounting controls or auditing matters of which the Committee is aware.
- When, and if, required by the rules of the SEC and NASDAQ, the Committee shall review the reports of management and the independent auditors to be included in the Company's Annual Reports on Form 10-K in compliance with Section 404 of the Sarbanes-Oxley Act of 2002 relating to (A) management's assessment of the effectiveness of internal control over financial reporting and (B) the effectiveness of internal control over financial reporting.
 - The Committee shall receive periodic updates from management and the independent auditors at each regularly scheduled Committee meeting as to the status of management's review of the effectiveness of internal control over financial reporting.
- The Committee shall perform or undertake on behalf of the Board of Directors any such other tasks or actions as the Board of Directors may from time to time authorize.

IV. Administration of the Committee.

The Chairman of the Committee shall be appointed by the Board of Directors. The Secretary of the Committee shall be the Corporate Secretary or his or her designee. The proceedings of all Committee meetings shall be documented in minutes.

Regular meetings of the Committee shall be held at least four times a year. Special meetings of the Committee may be convened by the Chairman or a majority of the Committee members. The internal or external auditors may request a meeting if they consider that one is necessary. A majority of the members of the Committee shall constitute a quorum for the transaction of business.

As an element of its duties to encourage and facilitate open communication, the Committee should meet as often as it deems advisable with representatives from the Company's executive management, internal auditing department and its independent auditor in separate sessions to discuss any matters that the Committee or any of these groups believe should be discussed. In addition, the Committee should meet with the Company's independent auditor and a representative(s) of the Company's management at least quarterly to review the Company's consolidated financial statements.

The Committee may, from time to time and at its sole discretion, invite additional members of the Board of Directors to attend meetings of the Committee in an advisory capacity. Such directors will have no voting authority in such meetings.

The Committee shall have the authority to engage independent counsel and other advisors, as it deems necessary to carry out its duties. The Committee shall have sole authority to agree to fees and other terms of engagement of any such independent counsel and other advisors.

V. Board Reporting.

The Chairman of the Committee shall report the results of each Committee meeting at the next regular meeting of the Board of Directors.

VI. Other Matters.

Each year the Chairman of the Committee shall discuss the Committee's performance with each Committee member, following which discussions the Chairman shall lead the Committee in a review of its performance. The annual evaluation shall include a review of the Committee's charter.

The Committee shall cause to be provided to NASDAQ appropriate written confirmation of any of the foregoing matters as NASDAQ may from time to time require.

This Audit Committee Charter was duly approved and adopted by the Board of Directors of the Company as of the 11th day of September, 2018.