
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM S-8
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

INTREXON CORPORATION
(Exact name of Registrant as specified in its charter)

Virginia
(State or other jurisdiction of
incorporation or organization)

26-0084895
(I.R.S. Employer
Identification No.)

**20374 Seneca Meadows Parkway,
Germantown, Maryland**
(Address of Principal Executive Offices)

20876
(Zip Code)

Intrexon Corporation Amended and Restated 2013 Omnibus Incentive Plan
(Full title of the plan)

Randal J. Kirk
Chairman of the Board and Chief Executive Officer
Intrexon Corporation
222 Lakeview Avenue, Suite 1400,
Palm Beach, Florida 33401
(Name and address of agent for service)

(561) 410-7000
(Telephone number, including area code, of agent for service)

Copies of all correspondence to:

William I. Intner
Hogan Lovells US LLP
100 International Drive
Suite 2000
Baltimore Maryland 21202
(410) 659-2700

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer
 Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company
 Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share(2)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, no par value	2,000,000	\$14.36	\$28,720,000	\$3,575.64

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the “Securities Act”), this Registration Statement also covers such indeterminable number of additional shares of the Registrant’s common stock, no par value (the “Common Stock”), as may become issuable to prevent dilution in the event of stock splits, stock dividends, recapitalizations or similar transactions.
- (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) and (h) under the Securities Act, and is based upon the average of high and low sales prices of the Common Stock on The New York Stock Exchange on August 10, 2018.

REGISTRATION OF ADDITIONAL SECURITIES

Intrexon Corporation (the “Company”) is hereby registering 2,000,000 additional shares of its common stock, no par value per share (the “Common Stock”), for issuance under the Intrexon Corporation Amended and Restated 2013 Omnibus Incentive Plan (the “2013 Plan”). The registration statements on Form S-8 (Registration Nos. 333-190614, 333-196840, 333-205642, 333-213065 and 333-219874, collectively, the “Prior 2013 Plan Registration Statements”), as filed with the Securities and Exchange Commission on August 14, 2013, June 17, 2014, July 13, 2015, August 10, 2016 and August 10, 2017, respectively, relating to the same class of securities and the same benefit plan are currently effective and, in accordance with Instruction E of the General Instructions to Form S-8, the contents of the Prior 2013 Plan Registration Statements, to the extent they relate to the 2013 Plan and the shares of Common Stock issuable thereunder, are incorporated herein by reference.

ITEM 8 Exhibits.

<u>Exhibit Number</u>	<u>Description</u>
4.1	<u>Specimen common stock certificate (incorporated by reference to Exhibit 4.1 to the Registrant’s Registration Statement on Form S-1, as amended (File No. 333-189853)).</u>
5.1	<u>Opinion of Hogan Lovells US LLP.</u>
10.1	<u>Intrexon Corporation Amended and Restated 2013 Omnibus Incentive Plan, as amended (the “Plan”)(incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K, as filed with the Securities and Exchange Commission on June 13, 2014, to the amendment to the Plan filed as Exhibit 10.1 to the Registrant’s Current Report on Form 8-K, as filed with the Securities and Exchange Commission on June 17, 2015, to the amendment to the Plan filed as Exhibit 10.1 to the Registrant’s Current Report on Form 8-K, as filed with the Securities and Exchange Commission on June 13, 2016, to the amendment to the Plan filed as Exhibit 10.1 to the Registrant’s Current Report on Form 8-K, as filed with the Securities and Exchange Commission on June 30, 2017, to the amendment to the Plan filed as Exhibit 10.1 to the Registrant’s Current Report on Form 8-K, as filed with the Securities and Exchange Commission on April 5, 2018, and to the amendment to the Plan filed as Exhibit 10.1 to the Registrant’s Current Report on Form 8-K, as filed with the Securities and Exchange Commission on June 8, 2018).</u>
23.1	<u>Consent of PricewaterhouseCoopers LLP.</u>
23.2	<u>Consent of RSM US LLP.</u>
23.3	<u>Consent of Hogan Lovells US LLP (included in Exhibit 5.1).</u>
24.1	<u>Power of Attorney (included on signature page).</u>

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Palm Beach, State of Florida, on August 13, 2018.

INTREXON CORPORATION

By: /s/ Randal J. Kirk

Randal J. Kirk
Chief Executive Officer and
Chairman of the Board of Directors

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Randal J. Kirk, Rick Sterling and Donald P. Lehr, and each of them, as his true and lawful attorney-in-fact and agent, upon the action of such appointee, with full power of substitution and resubstitution, to do any and all acts and things and execute, in the name of the undersigned, any and all instruments which each of said attorneys-in-fact and agents may deem necessary or advisable in order to enable Intrexon Corporation to comply with the Securities Act of 1933, as amended (the "Securities Act"), and any requirements of the Securities and Exchange Commission (the "Commission") in respect thereof, in connection with the filing with the Commission of this Registration Statement on Form S-8 under the Securities Act, including specifically but without limitation, power and authority to sign the name of the undersigned to such Registration Statement, and any amendments to such Registration Statement (including post-effective amendments), and to file the same with all exhibits thereto and other documents in connection therewith, with the Commission, to sign any and all applications, Registration Statements, notices or other documents necessary or advisable to comply with applicable state securities laws, and to file the same, together with other documents in connection therewith with the appropriate state securities authorities, granting unto each of said attorneys-in-fact and agents full power and authority to do and to perform each and every act and thing requisite or necessary to be done in and about the premises, as fully and to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Randal J. Kirk</u> Randal J. Kirk	Chief Executive Officer and Chairman of the Board of Directors (Principal Executive Officer)	August 13, 2018
<u>/s/ Rick L. Sterling</u> Rick L. Sterling	Chief Financial Officer (Principal Accounting and Financial Officer)	August 13, 2018
<u>/s/ Cesar L. Alvarez</u> Cesar L. Alvarez	Director	August 13, 2018
<u>/s/ Steven R. Frank</u> Steven R. Frank	Director	August 13, 2018
<u>/s/ Vinita D. Gupta</u> Vinita D. Gupta	Director	August 13, 2018
<u>/s/ Fred Hassan</u> Fred Hassan	Director	August 13, 2018
<u>/s/ Jeffrey B. Kindler</u> Jeffrey B. Kindler	Director	August 13, 2018
<u>/s/ Dean J. Mitchell</u> Dean J. Mitchell	Director	August 13, 2018
<u>/s/ Robert B. Shapiro</u> Robert B. Shapiro	Director	August 13, 2018
<u>/s/ James S. Turley</u> James S. Turley	Director	August 13, 2018



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Exhibit 5.1

August 13, 2018

Board of Directors
Intrexon Corporation
20374 Seneca Meadows Parkway
Germantown, Maryland 20876

Ladies and Gentlemen:

We are acting as counsel to Intrexon Corporation, a Virginia corporation (the “Company”), in connection with its registration statement on Form S-8 (the “Registration Statement”), filed with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the “Act”) relating to the proposed offering of up to 2,000,000 newly issued shares of common stock, no par value per share (the “Common Stock”) of the Company (the “Shares”), all of which shares are issuable pursuant to the Intrexon Corporation Amended and Restated 2013 Omnibus Incentive Plan (the “Plan”). This opinion letter is furnished to you at your request to enable you to fulfill the requirements of Item 601(b)(5) of Regulation S-K, 17 C.F.R. § 229.601(b)(5), in connection with the Registration Statement.

For purposes of this opinion letter, we have examined copies of such agreements, instruments and documents as we have deemed an appropriate basis on which to render the opinions hereinafter expressed. In our examination of the aforesaid documents, we have assumed the genuineness of all signatures, the legal capacity of all natural persons, the accuracy and completeness of all documents submitted to us, the authenticity of all original documents, and the conformity to authentic original documents of all documents submitted to us as copies (including pdfs). As to all matters of fact, we have relied on the representations and statements of fact made in the documents so reviewed, and we have not independently established the facts so relied on. This opinion letter is given, and all statements herein are made, in the context of the foregoing.

This opinion letter is based as to matters of law solely on the Virginia Stock Corporation Act, as amended. We express no opinion herein as to any other statutes, rules or regulations.

Based upon, subject to and limited by the foregoing, we are of the opinion that following (i) effectiveness of the Registration Statement, (ii) issuance of the Shares pursuant to the terms of the Plan, and (iii) receipt by the Company of the consideration for the Shares specified in the applicable resolutions of the Board of Directors and in accordance with the Plan, the Shares will be validly issued, fully paid, and nonassessable.

This opinion letter has been prepared for use in connection with the Registration Statement. We assume no obligation to advise of any changes in the foregoing subsequent to the effective date of the Registration Statement.

Hogan Lovells US LLP is a limited liability partnership registered in the District of Columbia. “Hogan Lovells” is an international legal practice that includes Hogan Lovells US LLP and Hogan Lovells International LLP, with offices in: Alicante Amsterdam Baltimore Beijing Birmingham Boston Brussels Colorado Springs Denver Dubai Dusseldorf Frankfurt Hamburg Hanoi Ho Chi Minh City Hong Kong Houston Johannesburg London Los Angeles Luxembourg Madrid Mexico City Miami Milan Minneapolis Monterrey Moscow Munich New York Northern Virginia Paris Perth Philadelphia Rio de Janeiro Rome San Francisco São Paulo Shanghai Silicon Valley Singapore Sydney Tokyo Warsaw Washington DC Associated offices: Budapest Jakarta Shanghai FTZ Ulaanbaatar Zagreb. Business Service Centers: Johannesburg Louisville. For more information see www.hoganlovells.com

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement. In giving this consent, we do not thereby admit that we are an “expert” within the meaning of the Securities Act of 1933, as amended.

Very truly yours,

/s/ Hogan Lovells US LLP

Hogan Lovells US LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of Intrexon Corporation of our report dated March 1, 2018 relating to the consolidated financial statements, and the effectiveness of internal control over financial reporting, which appears in Intrexon Corporation's Annual Report on Form 10-K for the year ended December 31, 2017.

/s/ PricewaterhouseCoopers LLP

Raleigh, North Carolina
August 13, 2018

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 of Intrexon Corporation of our report dated February 24, 2016, relating to the financial statements of ZIOPHARM Oncology, Inc. for the year ended December 31, 2015, appearing in Intrexon Corporation's Annual Report on Form 10-K for the year ended December 31, 2017.

/s/ RSM US LLP

Boston, Massachusetts
August 13, 2018