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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549**

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**SCHEDULE 13D**

(Amendment No. 2)\*

Under the Securities Exchange Act of 1934

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**ORAGENICS, INC.**

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(Name of Issuer)

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**Common Stock, par value \$0.001 per share**

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(Title of Class of Securities)

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**684023-10 4**

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(CUSIP Number)

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**Third Security, LLC  
1881 Grove Avenue  
Radford, Virginia 24141  
Attention: Marcus E. Smith, Esq.  
(540) 633-7900**

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(Name, Address and Telephone Number of Person  
Authorized to Receive Notices and Communications)

Copy to:

**Intrexon Corporation  
Attention: Legal  
20374 Seneca Meadows Parkway  
Germantown, Maryland 20876  
(301) 556-9809**

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**September 30, 2013**

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(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition which is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(b)(3) or (4), check the following box .

**NOTE:** Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for other parties to whom copies are to be sent.

\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

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|---|---|--|
| 1   | NAMES OF REPORTING PERSONS<br>I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS<br><b>Randal J. Kirk</b>                        |  |
| 2   | CHECK THE APPROPRIATE BOX IF A MEMBER OF GROUP<br>(a) <input type="checkbox"/><br>(b) <input checked="" type="checkbox"/> |  |
| 3   | SEC USE ONLY  |  |
| 4   | SOURCE OF FUNDS<br><b>PF</b>  |  |
| 5   | CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>               |  |
| 6   | CITIZENSHIP OR PLACE OF ORGANIZATION<br><b>United States</b>  |  |
| NUMBER OF<br>SHARES<br>BENEFICIALLY<br>OWNED BY<br>EACH<br>REPORTING<br>PERSON WITH | 7   | SOLE VOTING POWER<br><b>857,555</b>          |
|   | 8   | SHARED VOTING POWER<br><b>7,040,935</b>      |
|   | 9   | SOLE DISPOSITIVE POWER<br><b>857,555</b>     |
|   | 10  | SHARED DISPOSITIVE POWER<br><b>7,040,935</b> |
| 11  | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON<br><b>7,898,490</b>  |  |
| 12  | CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>                                |  |
| 13  | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)<br><b>26.2%</b>  |  |
| 14  | TYPE OF REPORTING PERSON<br><b>IN</b>   |  |

|   |  |  |
|---|--|--|
| 1   | NAMES OF REPORTING PERSONS<br>I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS<br><b>Intrexon Corporation</b><br><b>I.R.S. IDENTIFICATION NO.: 26-0084895</b> |  |
| 2   | CHECK THE APPROPRIATE BOX IF A MEMBER OF GROUP<br>(a) <input type="checkbox"/><br>(b) <input checked="" type="checkbox"/>                                |  |
| 3   | SEC USE ONLY   |  |
| 4   | SOURCE OF FUNDS<br><br><b>WC</b>   |  |
| 5   | CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>  |  |
| 6   | CITIZENSHIP OR PLACE OF ORGANIZATION<br><br><b>Virginia</b>  |  |
| NUMBER OF<br>SHARES<br>BENEFICIALLY<br>OWNED BY<br>EACH<br>REPORTING<br>PERSON WITH | 7  | SOLE VOTING POWER<br><b>0</b>                |
|   | 8  | SHARED VOTING POWER<br><b>7,040,935</b>      |
|   | 9  | SOLE DISPOSITIVE POWER<br><b>0</b>           |
|   | 10   | SHARED DISPOSITIVE POWER<br><b>7,040,935</b> |
| 11  | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON<br><b>7,040,935</b>   |  |
| 12  | CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>   |  |
| 13  | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)<br><b>23.3%</b>   |  |
| 14  | TYPE OF REPORTING PERSON<br><b>CO</b>  |  |

Amendment No. 2 (the "Amendment") amends and supplements the Statement on Schedule 13D, dated June 5, 2012 and filed on June 12, 2012, as amended by Amendment No. 1, dated July 31, 2012, and filed on August 3, 2013 (the "Original Schedule 13D"), relating to the Common Stock, par value \$0.001 per share (the "Common Stock"), of Oragenics, Inc., a Florida corporation (the "Company"). Mr. Randal J. Kirk ("Mr. Kirk") and Intrexon Corporation, a Virginia corporation ("Intrexon" and, together with Mr. Kirk, the "Reporting Persons"), are filing this Amendment to disclose the acquisition by Intrexon of 2,628,510 shares of Common Stock received in connection with a Stock Issuance and Purchase Agreement, dated September 30, 2013 between the Company and Intrexon (as further described below). Mr. Kirk could be deemed to have indirect beneficial ownership of the shares of Common Stock directly beneficially owned by Intrexon.

Except as set forth below, there are no changes to the information set forth in the Original Schedule 13D.

**Item 2. Identity and Background.**

Item 2 of the Original Schedule 13D is hereby amended and restated as follows:

This Statement is being filed on behalf of the Reporting Persons.

(a)-(c) The address of the principal business office of Mr. Kirk is The Governor Tyler, 1881 Grove Avenue, Radford, Virginia 24141. The address of the principal business office of Intrexon is 20374 Seneca Meadows Parkway, Germantown, Maryland 20876. The present principal occupation/employment of Mr. Kirk is Chief Executive Officer and Senior Managing Director of Third Security, LLC, an investment management firm founded by Mr. Kirk. Mr. Kirk also serves as the Chairman and Chief Executive Officer of Intrexon. The principal business of Intrexon is employing modular DNA control systems to enhance capabilities, improve safety and lower cost in human therapeutics, protein production, industrial products and agricultural biotechnology.

(d)-(e) During the last five years, none of the Reporting Persons has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors) or been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding is or was subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) Mr. Kirk is a citizen of the United States. Intrexon is a corporation organized under the laws of the Commonwealth of Virginia.

**Item 3. Source and Amount of Funds or Other Consideration.**

Item 3 of the Original Schedule 13D is hereby amended and supplemented as follows:

On September 30, 2013, the Company entered into a worldwide Exclusive Channel Collaboration Agreement (the "ECC") with Intrexon through which the Company intends to develop and commercialize probiotics, specifically the direct administration to humans of genetically modified probiotics for the treatment of diseases of the oral cavity, throat, sinus and esophagus, including, but not limited to, aphthous stomatitis and Behcet's disease. Contemporaneously with the ECC, the Company and Intrexon also entered into a Stock Purchase and Issuance Agreement and a First Amendment to the Stock Purchase and Issuance Agreement (collectively the "SPIA") which authorized the issuance of the Technology Access Shares (as defined below) and the future stock issuance of the Company's common stock to Intrexon upon the achievement of designated milestones, as well as provided for the purchase by Intrexon of shares of the Company's Common Stock in a private placement. Pursuant to the SPIA, the Company issued to Intrexon 1,348,510 shares of the Company common stock (the "Technology Access Shares"), in consideration for the execution and delivery of the ECC, and the Company sold to Intrexon 1,300,000 shares of the Company's Common Stock at a price per share of \$3.00 for gross proceeds of \$3.9 Million. The Company intends to use the proceeds from the sale of Common Stock towards development of the Company's key initiatives relating to the probiotic program, and general corporate purposes.

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The Company also issued a Convertible Promissory Note to Intrexon in the principal amount of \$1,956,000, which is payable at the Company's option in cash or shares of Company Common Stock (the "Convertible Note"). The Convertible Note matures on December 31, 2013 and requires the Company to obtain shareholder approval prior to conversion. The conversion price is equal to the closing price of the Company's Common Stock on the last trading day immediately prior to the date of conversion.

**Item 4. Purpose of Transaction.**

Item 4 of the Original Schedule 13D is hereby amended and supplemented to read in its entirety as follows:

The information set forth in Items 3 and 6 is incorporated herein by reference.

The Reporting Persons acquired the shares disclosed hereunder pursuant to the SPIA for investment purposes. Subject to the standstill provision described in Item 6, the Reporting Persons may, from time to time, depending upon market conditions and other factors deemed relevant by the Reporting Persons, acquire shares of Common Stock or other capital stock of the Company outside of those contemplated by the SPIA. The Reporting Persons reserve the right to, and may in the future choose to, change their purpose with respect to the investment and take such actions as they deem appropriate in light of the circumstances including, without limitation, to dispose of, in the open market, in a privately negotiated transaction, by transfer, by exchange or by gift, all or a portion of the shares of Common Stock or other securities of the Company that they now own or may hereafter acquire. Any decision of the Reporting Persons to increase their holdings in Common Stock or securities convertible into Common Stock, will depend, however, on numerous factors including, without limitation, the price of shares of Common Stock, the terms and conditions related to their purchase and sale, the prospects and profitability of the Company, other business and investment alternatives of the Reporting Persons, tax considerations and general economic and market conditions. At any time, the Reporting Persons, or any of them, may determine to dispose of some or all of their holdings of Common Stock depending on those and other considerations.

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At the date of this Statement, the Reporting Persons have plans or proposals which would result in:

- (a) The acquisition of additional securities of the Company.

Intrexon may acquire additional shares of Common Stock as set forth in Item 3 above.

Except as described above, at the date of this Statement, each of the Reporting Persons has no present plans or proposals which would result in:

- (a) The acquisition by any person of additional securities of the Company, or the disposition of securities of the Company;
- (b) An extraordinary corporate transaction involving the Company or any of its subsidiaries;
- (c) A sale or transfer of a material amount of assets of the Company or any of its subsidiaries;
- (d) Any change in the present board of directors or management of the Company, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board;
- (e) Any material change in the present capitalization or dividend policy of the Company;
- (f) Any other material change in the Company's business or corporate structure, including but not limited to, if the Company is a registered closed-end investment company, any plans or proposals to make any changes in its investment policy for which a vote is required by Section 13 of the Investment Company Act of 1940;
- (g) Changes in the Company's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Company by any person;
- (h) Causing a class of securities of the Company to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association;
- (i) A class of equity securities of the Company becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Securities Exchange Act of 1934; or
- (j) Any action similar to any of those actions enumerated above.

**Item 5. Interest in Securities of the Issuer.**

Item 5 of the Original Schedule 13D is hereby amended and restated to read in its entirety as follows:

The information contained on the cover pages to this Statement and the information set forth or incorporated in Items 2, 3, 4 and 6 is incorporated herein by reference.

(a) and (b) See Items 11 and 13 of the cover pages to this Statement for the aggregate number of shares and percentage of issued and outstanding shares of Common Stock of the Company owned by the Reporting Persons. The percentage ownership is calculated based on 27,514,080 shares of Common Stock issued and outstanding as of August 9, 2013, as disclosed in the Company's Current Report on Form 10-Q dated June 30, 2013, and filed on August 12, 2013, increased by the number of shares issued to and purchased by Intrexon as described in Item 3.

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| <b>Reporting Person</b> | <b>Amount of<br/>Common Stock<br/>Beneficially<br/>Owned</b> | <b>Percent<br/>of Class</b> | <b>Sole Power<br/>to Vote or<br/>Direct<br/>the Vote</b> | <b>Shared<br/>Power to<br/>Vote or<br/>Direct<br/>the Vote</b> | <b>Sole Power to<br/>Dispose or to<br/>Direct the<br/>Disposition</b> | <b>Shared Power to<br/>Dispose or to<br/>Direct the<br/>Disposition</b> |
|-------------------------|--|-----------------------------|--|--|---|---|
| Randal J. Kirk          | 7,898,490  | 26.2%                       | 857,555  | 7,040,935  | 857,555   | 7,040,935   |
| Intrexon Corporation    | 7,404,935  | 23.3%                       | —  | 7,040,935  | —   | 7,040,935   |

Mr. Kirk could be deemed to have indirect beneficial ownership of the shares of Common Stock directly beneficially owned by Intrexon.

**Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.**

Item 6 of the Original Schedule 13D is hereby amended and restated to read in its entirety as follows:

The Reporting Persons' responses to Items 3 and 4 are incorporated herein by reference.

The SPIA contains a standstill provision pursuant to which, among other things, Intrexon has agreed that, for a period of three years, subject to certain exceptions and unless invited in writing by the Company to do so, neither Intrexon nor its affiliates will, directly or indirectly: (i) effect or seek, initiate, offer or propose to effect, or cause or participate in any acquisition of securities or assets of the Company; any tender or exchange offer, merger, consolidation or other business combination involving the Company; any recapitalization, restructuring, liquidation, dissolution or other extraordinary transaction with respect to the Company; or any "solicitation" of "proxies" or consents to vote any voting securities of the Company, or in any way advise or, assist any other person in doing so; (ii) form, join or in any way participate in a "group" with respect to any securities of the Company; (iii) otherwise act to seek to control or influence the management, Board of Directors or policies of the Company; (iv) take any action reasonably expected to force the Company to make a public announcement regarding any such matters; or (v) enter into any agreements, discussions or arrangements with any third party with respect to any of the foregoing.

Except as set forth herein, there are no contracts, arrangements, understandings or relationships (legal or otherwise), including, but not limited to, transfer or voting of any of the securities, finder's fees, joint ventures, loan or option arrangements, puts or calls, guarantees of profits, division of profits or loss, or the giving or withholding of proxies, between the Reporting Persons, and any other person, with respect to any securities of the Company, including any securities pledged or otherwise subject to a contingency the occurrence of which would give another person voting power or investment power over such securities other than standard default and similar provisions contained in loan agreements.

**Item 7. Material to be Filed as Exhibits.**

- Exhibit 1 Stock Purchase and Issuance Agreement dated as of September 30, 2013 (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K, dated September 30, 2013 and filed October 1, 2013, and incorporated herein by reference)
- Exhibit 2 First Amendment to the Stock Purchase and Issuance Agreement dated as of September 30, 2013 (filed as Exhibit 10.3 to the Company's Current Report on Form 8-K, dated September 30, 2013 and filed October 1, 2013, and incorporated herein by reference)
- Exhibit 3 Convertible Promissory Note dated as of September 30, 2013 (filed as Exhibit 10.4 to the Company's Current Report on Form 8-K, dated September 30, 2013 and filed October 1, 2013, and incorporated herein by reference)
- Exhibit 4 Joint Filing Agreement, dated as of October 2, 2013, by and between Mr. Kirk and Intrexon
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**SIGNATURES**

After reasonable inquiry and to the best of their knowledge and belief, the undersigned certify that the information set forth in this statement is true, complete and correct.

Date: October 2, 2013

/s/ Randal J. Kirk

Randal J. Kirk

**INTREXON CORPORATION**

By: /s/ Randal J. Kirk

Randal J. Kirk

Chief Executive Officer

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## EXHIBIT INDEX

- Exhibit 1      Stock Purchase and Issuance Agreement dated as of September 30, 2013 (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K, dated September 30, 2013 and filed October 1, 2013, and incorporated herein by reference)
- Exhibit 2      First Amendment to the Stock Purchase and Issuance Agreement dated as of September 30, 2013 (filed as Exhibit 10.3 to the Company's Current Report on Form 8-K, dated September 30, 2013 and filed October 1, 2013, and incorporated herein by reference)
- Exhibit 3      Convertible Promissory Note dated as of September 30, 2013 (filed as Exhibit 10.4 to the Company's Current Report on Form 8-K, dated September 30, 2013 and filed October 1, 2013, and incorporated herein by reference)
- Exhibit 4      Joint Filing Agreement, dated as of October 2, 2013, by and between Mr. Kirk and Intrexon
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**Exhibit 4**

**Joint Filing Agreement**

In accordance with Rule 13d-1(k) promulgated under the Securities Exchange Act of 1934, as amended, the persons named below agree to the joint filing on behalf of each of them a Statement on Schedule 13D (including amendments thereto) with regard to the common stock of Orogenics, Inc., and further agree that this Joint Filing Agreement be included as an exhibit to such joint filings. In evidence thereof, the undersigned, being duly authorized, hereby execute this agreement as of the 2<sup>nd</sup> day of October, 2013.

/s/ Randal J. Kirk

Randal J. Kirk

**INTREXON CORPORATION**

By: /s/ Randal J. Kirk

Randal J. Kirk

Chief Executive Officer

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