

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

**SCHEDULE 13D**  
(Amendment No. \_\_)\*  
Under the Securities Exchange Act of 1934

**AQUABOUNTY TECHNOLOGIES, INC.**

(Name of Issuer)

**Common Stock, par value \$0.01 per share**  
(Title of Class of Securities)

**UO387J108**  
(CUSIP Number)

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

**January 18, 2017**  
(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).

<b>1</b>	<b>NAMES OF REPORTING PERSONS</b> <b>I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS</b> RANDAL J. KIRK	
<b>2</b>	<b>CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP</b> (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
<b>3</b>	<b>SEC USE ONLY</b>	
<b>4</b>	<b>SOURCE OF FUNDS</b> PF	
<b>5</b>	<b>CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E)</b> <input type="checkbox"/>	
<b>6</b>	<b>CITIZENSHIP OR PLACE OF ORGANIZATION</b> United States	
<b>NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH</b>	<b>7</b>	<b>SOLE VOTING POWER</b> 930,530
	<b>8</b>	<b>SHARED VOTING POWER</b> 5,161,247
	<b>9</b>	<b>SOLE DISPOSITIVE POWER</b> 930,530
	<b>10</b>	<b>SHARED DISPOSITIVE POWER</b> 5,161,247
<b>11</b>	<b>AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON</b> 6,091,777	
<b>12</b>	<b>CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES</b> <input type="checkbox"/>	
<b>13</b>	<b>PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)</b> 68.6%	
<b>14</b>	<b>TYPE OF REPORTING PERSON</b> IN	

<b>1</b>	<b>NAMES OF REPORTING PERSONS</b> <b>I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS</b> INTREXON CORPORATION <b>I.R.S. IDENTIFICATION NO.: 26-0084895</b>	
<b>2</b>	<b>CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP</b> (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
<b>3</b>	SEC USE ONLY	
<b>4</b>	<b>SOURCE OF FUNDS</b> WC	
<b>5</b>	<b>CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E)</b> <input type="checkbox"/>	
<b>6</b>	<b>CITIZENSHIP OR PLACE OF ORGANIZATION</b> Virginia	
<b>NUMBER OF SHARES          BENEFICIALLY          OWNED BY EACH          REPORTING PERSON          WITH</b>	<b>7</b>	<b>SOLE VOTING POWER</b> 0
	<b>8</b>	<b>SHARED VOTING POWER</b> 5,161,247
	<b>9</b>	<b>SOLE DISPOSITIVE POWER</b> 0
	<b>10</b>	<b>SHARED DISPOSITIVE POWER</b> 5,161,247
<b>11</b>	<b>AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON</b> 5,161,247	
<b>12</b>	<b>CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES</b> <input type="checkbox"/>	
<b>13</b>	<b>PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)</b> 58.1%	
<b>14</b>	<b>TYPE OF REPORTING PERSON</b> CO	

<b>1</b>	<b>NAMES OF REPORTING PERSONS</b> <b>I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS</b> <b>THIRD SECURITY, LLC</b> <b>I.R.S. IDENTIFICATION NO.: 54-1923091</b>	
<b>2</b>	<b>CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP</b> (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
<b>3</b>	<b>SEC USE ONLY</b>	
<b>4</b>	<b>SOURCE OF FUNDS</b> WC	
<b>5</b>	<b>CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E)</b> <input type="checkbox"/>	
<b>6</b>	<b>CITIZENSHIP OR PLACE OF ORGANIZATION</b> Virginia	
<b>NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH</b>	<b>7</b>	<b>SOLE VOTING POWER</b> 849,201
	<b>8</b>	<b>SHARED VOTING POWER</b> 0
	<b>9</b>	<b>SOLE DISPOSITIVE POWER</b> 849,201
	<b>10</b>	<b>SHARED DISPOSITIVE POWER</b> 0
<b>11</b>	<b>AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON</b> 849,201	
<b>12</b>	<b>CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES</b> <input type="checkbox"/>	
<b>13</b>	<b>PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)</b> 9.6%	
<b>14</b>	<b>TYPE OF REPORTING PERSON</b> OO – limited liability company	

**Item 1. Security and Issuer.**

The class of equity securities to which this Statement on Schedule 13D (the “Statement”), relates is the common stock, par value \$0.001 per share (the “Common Stock”), of AquaBounty Technologies, Inc., a Delaware corporation (the “Company”), whose principal executive offices are located at 2 Mill and Main Place, Suite 395, Maynard, Massachusetts 01754.

**Item 2. Identity and Background.**

This Statement is being filed on behalf of Mr. Randal J. Kirk (“Mr. Kirk”), Intrexon Corporation, a Virginia corporation that is controlled by Mr. Kirk (“Intrexon”), and Third Security, LLC, a Virginia limited liability company that is managed by Mr. Kirk (“Third Security” and, together with Mr. Kirk and Intrexon, the “Reporting Persons”).

(a)-(c) The address of the principal business office of Mr. Kirk and Third Security 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. Mr. Kirk also serves as the Chairman and Chief Executive Officer of Intrexon. The principal business of Third Security is venture capital investment management. The principal business of Intrexon is to create biologically based products that improve the quality of life and the health of the planet utilizing the company's integrated technology suite, which provides its partners across diverse markets with industrial-scale design and development of complex biological systems delivering unprecedented control, quality, function, and performance of living cells.

(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. Third Security is a limited liability company organized under the laws of the Commonwealth of Virginia.

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

On December 29, 2016, Intrexon announced a special stock dividend of Common Stock to all Intrexon shareholders of record as of January 9, 2017 (the “Record Date”). The distribution of the special stock dividend (the “Distribution”) occurred on January 18, 2017 (the “Distribution Date”) by way of a pro rata dividend on shares of Intrexon common stock outstanding at the close of business on the Record Date for no consideration.

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**Item 4. Purpose of Transaction.**

The information set forth in Item 3 is incorporated herein by reference.

On December 29, 2016, Intrexon announced a special stock dividend of 53,296,710 shares of Common Stock (1,776,557 on a post-split basis) to all Intrexon shareholders of record as of the Record Date. The Distribution was made on January 18, 2017 and occurred by way of a pro rata dividend on shares of Intrexon common stock outstanding at the close of business on the Record Date. On the Distribution Date, each of Intrexon's shareholders who held shares on the Record Date received approximately 0.014968 shares of Common Stock for every share of Intrexon's common stock held by the shareholder. The number of shares of Common Stock that each Intrexon shareholder of record received was calculated by dividing the total number of shares of Common Stock that were distributed by the total number of shares of Intrexon common stock outstanding at the close of business on the Record Date, multiplied by the total number of shares of Intrexon common stock the Intrexon shareholder held at the close of business on the Record Date. The shares of Common Stock were issued to non-affiliates in book-entry form only and fractional shares were not issued in the Distribution. Shareholders instead received an amount in cash for such fractional interest.

On November 7, 2016, Intrexon entered into a Stock Purchase Agreement (the "Purchase Agreement"), pursuant to which Intrexon agreed to purchase 72,632,190 shares of Common Stock at a price per share of \$0.3442 for an aggregate purchase price of \$24,999,999.80 (the "Purchase"). This Purchase was subject to customary closing conditions and appropriate adjustment to the number of shares and purchase price per share in the event of any stock dividend, stock split, combination or other similar recapitalization prior to closing on the Distribution Date. On the Distribution Date and pursuant to the terms of the Purchase Agreement, Intrexon purchased 2,421,073 shares of Common Stock at a price per share of \$10.326, which is reflective of the 1:30 reverse stock split effected by the Company on January 5, 2017. The terms of the Stock Purchase Agreement are set forth in the Stock Purchase Agreement included as Exhibit 1.

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.

At the date of this Statement, other than as disclosed herein, none of the Reporting Persons have 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 such as a merger, reorganization or disposition, involving the Company or any of its subsidiaries;
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- (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.**

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 owned by the Reporting Persons. The percentage ownership is calculated based on 6,463,935 shares of Common Stock issued and outstanding as of January 5, 2017, as disclosed by the Company in its Press Release dated and issued on January 5, 2017, increased by 2,421,073 shares issued to Intrexon pursuant to the Purchase Agreement.

<b>Reporting Person</b>	<b>Amount of Common Stock Beneficially Owned</b>	<b>Percent of Class</b>	<b>Sole Power to Vote or Direct the Vote<sup>(1)</sup></b>	<b>Shared Power to Vote or Direct the Vote</b>	<b>Sole Power to Dispose or to Direct the Disposition<sup>(1)</sup></b>	<b>Shared Power to Dispose or to Direct the Disposition</b>
Randal J. Kirk	6,091,777	68.6%	930,530	5,161,247	930,530	5,161,247
Intrexon Corporation	5,161,247	58.1%	--	5,161,247	--	5,161,247
Third Security, LLC <sup>(1)</sup>	849,201	9.6%	849,201	--	849,201	--

<sup>(1)</sup> The indicated shares are owned by various entities managed by Third Security, none of which beneficially owns more than 5.0% individually.

Mr. Kirk could be deemed to have indirect beneficial ownership of the shares of Common Stock directly beneficially owned by Intrexon and those shares held by entities managed by Third Security.

(c) On December 16, 2016, Intrexon converted \$10.0 million in principal, plus approximately \$395,833 in accrued interest outstanding on its convertible loan with the Company into 36,387,236 shares of Common Stock as per the terms of the Convertible Promissory Note entered into by and between Intrexon and the Company on February 26, 2016 (the "Conversion"). On January 5, 2017, the Company announced a 1:30 reverse stock split; resulting in a total of 1,212,910 shares of Common Stock issued pursuant to the Conversion on a post-split basis. The Terms of the Convertible Promissory Note are set forth in the Promissory Note Purchase Agreement included as Exhibit 2.

Except as set forth in this Statement, none of the Reporting Persons have engaged in any transactions in the Common Stock in the past 60 days.

(d)-(e) Not Applicable

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

The Reporting Persons' responses to Items 3, 4 and 5 are incorporated herein by reference.

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

- Exhibit 1 Stock Purchase Agreement by and between the Company and Intrexon dated November 7, 2016 (filed as Exhibit 10.1 to the Company's Form 10 General Form 10 for Registration of Securities, filed on November 7, 2016, which document is incorporated herein by reference)
- Exhibit 2 Convertible Promissory Note of the Company issued to Intrexon dated February 26, 2016 (contained within the Promissory Note Purchase Agreement filed as Exhibit 10.12 to the Company's Form 10 General Form for Registration of Securities, filed on November 7, 2016, which document is incorporated herein by reference)
- Exhibit 3 Joint Filing Agreement, dated as of January 20, 2017, by and among Mr. Kirk, Intrexon and Third Security
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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: January 20, 2017

/s/ Randal J. Kirk

Randal J. Kirk

**INTREXON CORPORATION**

By: /s/ Randal J. Kirk

Randal J. Kirk

Chief Executive Officer

**THIRD SECURITY, LLC**

By: /s/ Randal J. Kirk

Randal J. Kirk

Manager

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## **EXHIBIT INDEX**

- Exhibit 1 Stock Purchase Agreement by and between the Company and Intrexon dated November 7, 2016 (filed as Exhibit 10.1 to the Company's Form 10 General Form for Registration of Securities, filed on November 7, 2016, which document is incorporated herein by reference)
- Exhibit 2 Convertible Promissory Note of the Company issued to Intrexon dated February 26, 2016 (contained within the Promissory Note Purchase Agreement filed as Exhibit 10.12 to the Company's Form 10 General Form for Registration of Securities, filed on November 7, 2016, which document is incorporated herein by reference)
- [Exhibit 3](#) Joint Filing Agreement, dated as of January 20, 2017, by and among Mr. Kirk, Intrexon and Third Security
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**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 AquaBounty Technologies, 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 20<sup>th</sup> day of January, 2017.

/s/ Randal J. Kirk

Randal J. Kirk

**INTREXON CORPORATION**

By: /s/ Randal J. Kirk

Randal J. Kirk

Chief Executive Officer

**THIRD SECURITY, LLC**

By: /s/ Randal J. Kirk

Randal J. Kirk

Manager

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