

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

SCHEDULE 13D
(Amendment No. 4)*
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

October 29, 2019
(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).

1	NAMES OF REPORTING PERSONS RANDAL J. KIRK	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) PF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 9,076,753
	8	SHARED VOTING POWER 0
	9	SOLE DISPOSITIVE POWER 9,076,753
	10	SHARED DISPOSITIVE POWER 0
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 9,076,753	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 42.0%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN	

1	NAMES OF REPORTING PERSONS THIRD SECURITY, LLC I.R.S. IDENTIFICATION NO.: 54-1923091	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Virginia	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 8,874,193
	8	SHARED VOTING POWER 0
	9	SOLE DISPOSITIVE POWER 8,874,193
	10	SHARED DISPOSITIVE POWER 0
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 8,874,193	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 41.1%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) OO – limited liability company	

1	NAMES OF REPORTING PERSONS TS AQUACULTURE LLC I.R.S. IDENTIFICATION NO.: 84-3478741	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP	
	(a) <input type="checkbox"/>	(b) <input checked="" type="checkbox"/>
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E)	
	<input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Virginia	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 8,239,199
	8	SHARED VOTING POWER 0
	9	SOLE DISPOSITIVE POWER 8,239,199
	10	SHARED DISPOSITIVE POWER 0
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 8,239,199	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)	
	<input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 38.1%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) OO – limited liability company	

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

This Amendment No. 4 (the “Amendment”) amends and supplements the Statement on Schedule 13D, dated January 18, 2017 and filed on January 20, 2017, as amended by Amendment No. 1, dated July 24, 2017 and filed on July 26, 2017, as amended by Amendment No. 2 dated January 17, 2018 and filed on January 19, 2018, and as amended by Amendment No. 3 dated October 24, 2018 and filed on October 29, 2018 (the “Original Schedule 13D”), relating to the Common Stock, par value \$0.001 per share (the “Common Stock”), of AquaBounty Technologies, Inc., a Delaware corporation (the “Company”). Mr. Randal J. Kirk (“Mr. Kirk”), Third Security, LLC, a Virginia limited liability company that is controlled by Mr. Kirk (“Third Security”), TS AquaCulture LLC, a Virginia limited liability company that is managed by Third Security (“TS AquaCulture”), and Intrexon Corporation, a Virginia corporation that may be deemed to be controlled by Mr. Kirk (“Intrexon” and, together with Mr. Kirk, Third Security, and TS AquaCulture, the “Reporting Persons”) are filing this Amendment to disclose the purchase of 8,239,199 shares of Common Stock by TS AquaCulture, for an aggregate purchase price of \$21,586,701.38, or \$2.62 per share (the “Purchase Price”), pursuant to a Stock Purchase Agreement dated October 29, 2019 (the “Purchase Agreement”).

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 October 29, 2019, TS AquaCulture entered into the Purchase Agreement with Intrexon, pursuant to which TS AquaCulture purchased 8,239,199 shares of Common Stock at the Purchase Price. Additionally, Intrexon assigned to TS AquaCulture all of Intrexon’s rights, and TS AquaCulture accepted and assumed all of such rights and obligations, under the Relationship Agreement, dated as of December 5, 2012, which was entered into by and between Intrexon and the Company (the “Relationship Agreement”).

The Relationship Agreement, which sets forth certain matters relating to Intrexon’s relationship with the Company as a major stockholder, was entered into in connection with the acquisition in October 2012 by Intrexon of shares of Common Stock constituting 47.56% of the Company’s outstanding share capital from Linnaeus Capital Partners B.V. and Tethys Aquaculture Canada, Inc. (doing business as the Center for Aquaculture Technology Canada), the Company’s former major stockholders. Pursuant to the Relationship Agreement, the current Intrexon appointees of the Company’s Board of Directors are Mr. Jeffrey T. Perez, Mr. Rick L. Sterling, and Mr. James C. Turk. So long as the Relationship Agreement remains in effect and TS AquaCulture and its affiliates together control 25% or more of the voting rights exercisable at meetings of the Company’s stockholders, the Company will (i) nominate such number of TS AquaCulture nominees as may be designated by TS AquaCulture for election to the Company’s Board of Directors at each annual meeting of stockholders so that TS AquaCulture will have representation on the Company’s Board of Directors proportional to TS AquaCulture’s and its affiliates’ percentage shareholding, rounded up to the nearest whole person, and (ii) recommend that stockholders vote to elect such nominees at the next annual meeting of stockholders occurring after the date of nomination. If a member of the Company’s Board of Directors that has been designated by Intrexon or TS AquaCulture resigns or is removed from the Board and TS AquaCulture indicates that it does not wish to designate a nominee to fill the vacancy or fails to nominate a designee that meets the standards set forth in the Relationship Agreement to replace such individual within ten (10) business days following receipt of notice of such resignation or removal, the Company will take or cause to be taken all necessary actions to reduce the size of the Board so that there is no vacancy as a result thereof and then to promptly increase the size of the Board to create a vacancy at such time as TS AquaCulture indicates that it wishes to designate a nominee to fill the vacancy that meets the standards set forth in the Relationship Agreement. Upon termination of the Relationship Agreement pursuant to clause 6 (Duration) of the Relationship Agreement, TS AquaCulture shall, upon the written request of the Board, cause such member(s) of the Board that have been designated by TS AquaCulture to resign from the Board, effective immediately.

In addition, the Company agreed that, so long as TS AquaCulture and its affiliates control 10% or more of the voting rights exercisable at meetings of the Company's stockholders, for any time period for which TS AquaCulture has reasonably concluded that it is required to consolidate or include the Company's financial statements with its own:

- the Company will maintain at the Company's principal place of business (i) a copy of the Company's certificate of incorporation and any amendments thereto; (ii) a copy of the Relationship Agreement; (iii) copies of the Company's federal, state, and local income tax returns and reports; and (iv) minutes of the Company's Board of Director and stockholder meetings and actions by written consent in lieu thereof, redacted as necessary to exclude sensitive or confidential information;
- the Company will keep the Company's books and records consistent with United States generally accepted accounting principles ("U.S. GAAP");
- TS AquaCulture may examine any information that it may reasonably request; make copies of and abstracts from the Company's financial and operating records and books of account; and discuss the Company's affairs, finances, and accounts with the Company and the Company's independent auditors;
- as soon as available, but no later than ninety days after the end of each fiscal year, the Company will furnish to TS AquaCulture an audited balance sheet, income statement, and statements of cash flows and stockholders' equity as of and for the fiscal year then ended, together with a report of the Company's independent auditor that such financial statements have been prepared in accordance with U.S. GAAP and present fairly, in all material respects, the Company's financial position, results of operation, and cash flows;
- as soon as available, but no later than forty-five days after the end of each calendar quarter, the Company will furnish to TS AquaCulture an unaudited balance sheet, income statement, and statements of cash flows and stockholders' equity for such period, in each case prepared in accordance with U.S. GAAP; and
- as requested by TS AquaCulture, but no more than quarterly, the Company will provide to TS AquaCulture (i) a certificate of the Company's Chief Executive Officer or Chief Financial Officer certifying as to the accuracy of the Company's books and records and the adequacy of the Company's internal control over financial reporting and disclosure controls and procedures and (ii) any information requested by TS AquaCulture for purposes of its compliance with applicable law.

The foregoing descriptions of the Purchase Agreement and Relationship Agreement are only summaries and are qualified by reference to the Purchase Agreement, which is filed as Exhibit 1 hereto, and the Relationship Agreement, which is filed as Exhibit 2 hereto.

Item 4. Purpose of Transaction.

Item 4 of the Original Schedule 13D is hereby amended and supplemented as follows:

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

TS AquaCulture acquired the shares issued in connection with the Purchase Agreement for investment purposes.

Other than as disclosed herein, as of the date of this Amendment, 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;
 - (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.
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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 21,605,322 shares of Common Stock issued and outstanding as of August 5, 2019, as disclosed by the Company in its Quarterly Report on Form 10-Q for the period ended June 30, 2019.

Reporting Person	Amount of Common Stock Beneficially Owned	Percent of Class	Sole Power to Vote or Direct the Vote	Shared Power to Vote or Direct the Vote	Sole Power to Dispose or to Direct the Disposition	Shared Power to Dispose or to Direct the Disposition
Randal J. Kirk	9,076,753 ⁽¹⁾	42.0%	9,076,753 ⁽¹⁾	--	9,076,753 ⁽¹⁾	--
Third Security, LLC	8,874,193 ⁽²⁾	41.1%	8,874,193 ⁽²⁾	--	8,874,193 ⁽²⁾	--
TS AquaCulture LLC	8,239,199 ⁽²⁾	38.1%	8,239,199 ⁽²⁾	--	8,239,199 ⁽²⁾	--
Intrexon Corporation	--	0.00%	--	--	--	--

(1) Includes 202,560 shares of Common Stock held by various entities that are controlled by Mr. Kirk but not managed by Third Security, none of which beneficially owns more than 5.0% individually.

(2) Mr. Kirk could be deemed to have indirect beneficial ownership of the shares of Common Stock directly held by entities managed by Third Security, including TS AquaCulture.

(c) 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, dated as of October 29, 2019, by and between TS AquaCulture LLC and Intrexon Corporation (filed as Exhibit 10.1 to the Current Report on Form 8-K dated October 29, 2019 and filed on October 31, 2019, and incorporated herein by reference)
Exhibit 2	Relationship Agreement, dated as of December 5, 2012, by and between the Company and Intrexon Corporation (filed as Exhibit 10.7 to the Company's Registration Statement on Form 10 filed on November 7, 2016, and incorporated herein by reference)
Exhibit 3	Joint Filing Agreement, dated as of October 31, 2019, by and between Mr. Kirk, Third Security, TS AquaCulture, and Intrexon

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 31, 2019

/s/ Randal J. Kirk

Randal J. Kirk

THIRD SECURITY, LLC

By: /s/ Randal J. Kirk

Randal J. Kirk
Manager

TS AQUACULTURE LLC

By: /s/ Randal J. Kirk

Randal J. Kirk
Manager

INTREXON CORPORATION

By: /s/ Randal J. Kirk

Randal J. Kirk
Chief Executive Officer

EXHIBIT INDEX

Exhibit 1	Stock Purchase Agreement, dated as of October 29, 2019, by and between TS AquaCulture LLC and Intrexon Corporation (filed as Exhibit 10.1 to the Current Report on Form 8-K dated October 29, 2019 and filed on October 31, 2019, and incorporated herein by reference)
Exhibit 2	Relationship Agreement, dated as of December 5, 2012, by and between the Company and Intrexon Corporation (filed as Exhibit 10.7 to the Company's Registration Statement on Form 10 filed on November 7, 2016, and incorporated herein by reference)
Exhibit 3	Joint Filing Agreement, dated as of October 31, 2019, by and between Mr. Kirk, Third Security, TS AquaCulture and Intrexon

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 31st day of October, 2019.

/s/ Randal J. Kirk

Randal J. Kirk

THIRD SECURITY, LLC

By: /s/ Randal J. Kirk

Randal J. Kirk

Manager

TS AQUACULTURE LLC

By: /s/ Randal J. Kirk

Randal J. Kirk

Manager

INTREXON CORPORATION

By: /s/ Randal J. Kirk

Randal J. Kirk

Chief Executive Officer
