

This preliminary prospectus supplement and the accompanying prospectus relate to an effective registration statement under the Securities Act of 1933, but the information in this preliminary prospectus supplement is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell the securities and we are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

**Filed pursuant to Rule 424(b)(5)
Registration No. 333-224184**

Subject to Completion, dated April 4, 2019

Prospectus Supplement

(to Prospectus dated April 6, 2018, as amended on April 23, 2018)



shares of common stock

We are offering shares of our common stock, par value \$0.001 per share, at a price of \$ per share.

Our common stock is listed on The Nasdaq Capital Market under the symbol “AQB.” The last reported sale price of our common stock on The Nasdaq Capital Market on April 3, 2019, was \$2.84 per share.

As of April 3, 2019, the aggregate market value of our outstanding common stock held by non-affiliates was \$28.5 million based on 18,697,477 shares of outstanding common stock, of which 10,022,609 shares are held by non-affiliates, and a per share price of \$4.89, based on the closing bid price of our common stock as quoted on The Nasdaq Capital Market on March 8, 2019. During the twelve calendar months prior to and including the date of this prospectus supplement, we sold 3,345,282 shares of our common stock pursuant to General Instruction I.B.6. of Form S-3.

The underwriter may offer the shares of common stock from time to time to purchasers directly or through agents, or through brokers in brokerage transactions on The Nasdaq Capital Market, or to dealers in negotiated transactions or in a combination of such methods of sale, or otherwise, at fixed price or prices, which may be changed, or at market prices prevailing at the time of sale, at prices related to such prevailing market prices or at negotiated prices, subject to receipt and acceptance by it and subject to its right to reject any order in whole or in part. See “Underwriting.”

Investing in our securities involves significant risks. Please read the information contained in or incorporated by reference under the heading “Risk Factors” beginning on page S-7 of this prospectus supplement, and under similar headings in other documents filed after the date hereof and incorporated by reference into this prospectus supplement and the accompanying prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	Per share	Total
Offering price	\$	\$
Underwriting discounts and commissions(1)(2).....	\$	\$
Proceeds, before expenses, to us	\$	\$

- (1) The underwriter will receive a 7% underwriting discount in connection with this offering. However, no underwriting discount will be paid on any shares of common stock that Intrexon Corporation agrees to purchase in this offering.
- (2) We have agreed to reimburse the underwriter for certain of its expenses as described under the “Underwriting” section on page S-20 of this prospectus supplement.

We have granted the underwriter a 45-day option to purchase up to additional shares of common stock from us at the public offering price, less underwriting discounts and commissions, to cover over-allotments, if any. See “Underwriting” on page S-20 of this prospectus supplement for a description of the over-allotment option.

Delivery of the shares will take place on or about April , 2019, subject to the satisfaction of certain conditions.

H.C. Wainwright & Co.

Prospectus Supplement dated April , 2019.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This document is part of the registration statement that we filed with the Securities and Exchange Commission, or the SEC, using a “shelf” registration process and consists of two parts. The first part is this prospectus supplement, which describes the specific terms of this offering. The second part, the accompanying prospectus, gives more general information, some of which may not apply to this offering. Generally, when we refer only to the “prospectus,” we are referring to both parts combined. This prospectus supplement may add to, update or change information in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement or the accompanying prospectus.

If information in this prospectus supplement is inconsistent with the accompanying prospectus or with any document incorporated by reference that was filed with the SEC before the date of this prospectus supplement, you should rely on this prospectus supplement. This prospectus supplement, the accompanying prospectus and the documents incorporated into each by reference include important information about us, the securities being offered and other information you should know before investing in our securities. You should also read and consider information in the documents we have referred you to in the sections of this prospectus supplement entitled “Where You Can Find Additional Information” and “Incorporation of Certain Information by Reference.”

You should rely only on this prospectus supplement, the accompanying prospectus, the documents incorporated or deemed to be incorporated by reference herein or therein and any free writing prospectus prepared by us or on our behalf. We have not, and the underwriter has not, authorized anyone to provide you with information that is in addition to or different from that contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. If anyone provides you with different or inconsistent information, you should not rely on it. We and the underwriter are not offering to sell these securities in any jurisdiction where the offer or sale is not permitted. You should not assume that the information contained in this prospectus supplement, the accompanying prospectus or any free writing prospectus, or incorporated by reference herein, is accurate as of any date other than as of the date of this prospectus supplement or the accompanying prospectus or any free writing prospectus, as the case may be, or in the case of the documents incorporated by reference, the date of such documents regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or any sale of our securities. Our business, financial condition, liquidity, results of operations and prospects may have changed since those dates.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference in the this prospectus supplement or the accompanying prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

All references in this prospectus supplement or the accompanying prospectus to “Aquabounty Technologies,” “Aquabounty,” “the Company,” “we,” “us,” and “our company” mean Aquabounty Technologies, Inc. and its consolidated subsidiaries, unless we state otherwise or the context otherwise requires.

No action is being taken in any jurisdiction outside the United States to permit a public offering of the securities or possession or distribution of this prospectus supplement or the accompanying prospectus in that jurisdiction. Persons who come into possession of this prospectus supplement or the accompanying prospectus in jurisdictions outside the United States are required to inform themselves about and to observe any restrictions as to this offering and the distribution of this prospectus supplement or the accompanying prospectus applicable to that jurisdiction.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy these reports, proxy statements and other information at the SEC's Public Reference Room at 100 F Street, N.E., Washington, DC 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. The SEC also maintains an Internet site that contains reports, proxy statements and other information about issuers, like us, who file electronically with the SEC. The address of the SEC's web site is <http://www.sec.gov>. Our common stock is listed for trading on The Nasdaq Capital Market under the symbol "AQB."

We have filed with the SEC a registration statement on Form S-3 (File No. 333-224184) under the Securities Act of 1933, as amended, or the Securities Act, with respect to the securities offered by this prospectus supplement and the accompanying prospectus. This prospectus supplement and the accompanying prospectus filed as part of the registration statement do not contain all the information set forth in the registration statement and its exhibits and schedules. For further information about us, this offering and our common stock, you may refer to the registration statement and to its exhibits and schedules as well as the documents described herein or incorporated herein by reference. You can review and copy these documents, without charge, at the public reference facilities maintained by the SEC or on the SEC's website as described above or you may obtain a copy from the SEC upon payment of the fees prescribed by the SEC.

We maintain a website at www.aquabounty.com. The information contained on or accessible through our website is not incorporated by reference into this prospectus supplement or the accompanying prospectus and you should not consider information on or accessible through our website to be part of this prospectus supplement or the accompanying prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” information that we file with it, which means that we can disclose important information to you by referring you to those documents instead of having to repeat the information in this prospectus supplement and the accompanying prospectus. The information incorporated by reference is an important part of this prospectus supplement and accompanying prospectus. To the extent that any statement that we make in this prospectus supplement is inconsistent with the statements made in the accompanying prospectus or the information incorporated by reference, the statements made in the accompanying prospectus are deemed modified or superseded by the statements made in this prospectus supplement, while information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference into this prospectus supplement the documents listed below and any future filings we will make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act after the date of this prospectus supplement but prior to the termination of the offering of the securities covered by this prospectus supplement and accompanying prospectus (other than information deemed furnished pursuant to Items 2.02 and 7.01 of Form 8-K). The documents we are incorporating by reference are:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, filed with the SEC on March 7, 2019, and our definitive proxy statement on Schedule 14A (other than information furnished rather than filed), which was filed with the SEC on March 21, 2019;
- the information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2017, and our definitive proxy statement on Schedule 14A (other than information furnished rather than filed), which was filed with the SEC on April 3, 2018;
- our Current Reports on Form 8-K filed with the SEC on March 7, 2019; March 8, 2019; March 14, 2019; March 18, 2019; March 19, 2019; March 21, 2019; March 25, 2019; and April 2, 2019 (except that, with respect to each of the foregoing Current Reports, any portions thereof which are furnished and not filed shall not be deemed incorporated by reference into this prospectus supplement); and
- the description of our common stock contained in our Registration Statement on Form 10 (File No. 001-36426), filed with the SEC on December 29, 2016 (including any further amendment or reports filed with the SEC for the purpose of updating such description).

We will provide without charge to each person, including any beneficial owner, to whom this prospectus supplement is delivered, upon written or oral request, a copy of any or all documents that are incorporated by reference into this prospectus supplement, but not delivered with the prospectus supplement, other than exhibits to such documents unless such exhibits are specifically incorporated by reference into the documents that this prospectus supplement incorporates. You should direct written requests to Corporate Secretary, AquaBounty Technologies, Inc., 2 Mill & Main Place, Suite 395, Maynard Massachusetts 01754, Telephone: (978) 648-6000.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the accompanying prospectus, including the documents that we incorporate by reference, contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act, that are based on our management's belief and assumptions and on information currently available to our management. Although we believe that the expectations reflected in these forward-looking statements are reasonable, these statements relate to future events or our future financial performance, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements.

In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "expects," "intends," "plans," "anticipates," "believes," "estimates," "predicts," "potential," "continue" or the negative of these terms or other comparable terminology. These statements are only predictions. You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties and other factors, which are, in some cases, beyond our control and which could materially affect our results. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed in the section entitled "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, as well as any amendments thereto reflected in subsequent filings with the SEC, and under the heading "Risk Factors" in this prospectus supplement, the accompanying prospectus and in any free writing prospectus. If one or more of these risks or uncertainties occur, or if our underlying assumptions prove to be incorrect, actual events or results may vary significantly from those implied or projected by the forward-looking statements. No forward-looking statement is a guarantee of future performance. You should read this prospectus supplement, the accompanying prospectus, any free writing prospectus and the documents that we reference herein and therein and have filed as exhibits to the registration statement, of which this prospectus supplement is part, completely and with the understanding that our actual future results may be materially different from any future results expressed or implied by these forward-looking statements.

In particular, forward-looking statements in this prospectus supplement, the accompanying prospectus and any free writing prospectus and in the documents that we reference herein and therein include statements about:

- the anticipated benefits and characteristics of our AquAdvantage Salmon product;
- the implementation and likelihood of achieving the business plan, future revenue, and operating results;
- developments concerning our research projects;
- our expectations regarding our ability to successfully enter new markets or develop additional products;
- our competitive position and developments and projections relating to our competitors and our industry;
- expectations regarding anticipated operating results;
- our cash position and ability to raise additional capital to finance our activities;
- our ability to protect our intellectual property and other proprietary rights and technologies;
- the impact of and our ability to adapt to changes in laws or regulations and policies;
- the ability to secure any necessary regulatory approvals to commercialize any products;
- the rate and degree of market acceptance of any products developed through the application of bioengineering, including bioengineered fish;
- our ability to retain and recruit key personnel;
- the success of any of our future acquisitions or investments;
- our expectations regarding the time during which we will be an emerging growth company under the Jumpstart Our Business Startups Act (the "JOBS Act");
- our estimates regarding expenses, future revenue, capital requirements, and needs for additional financing; and
- other risks and uncertainties referenced under "Risk Factors" below and in any applicable free writing prospectus and any documents incorporated by reference herein.

Forward-looking statements contained in this prospectus supplement, the accompanying prospectus or in the documents that we reference herein and therein represents our views only as of the respective dates on which such statements were made. We anticipate that subsequent events and developments may cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by

applicable law. Therefore, these forward-looking statements do not represent our views as of any date other than the date on which they were made.

SUMMARY

This summary highlights selected information contained elsewhere or incorporated by reference in this prospectus supplement and the accompanying prospectus. This summary does not contain all the information that you should consider before investing in our securities. You should read the entire prospectus supplement and the accompanying prospectus carefully, including “Risk Factors” contained in this prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein and the financial statements incorporated by reference in this prospectus supplement and the accompanying prospectus, before making an investment decision. Unless otherwise stated, all information contained in this prospectus supplement assumes or gives effect to no exercise by the underwriter of its over-allotment option.

Overview

We are a biotechnology company focused on enhancing productivity and sustainability in the fast-growing aquaculture market. We use bioengineering and other technical innovations to improve the productivity and sustainability of fish stocks to help the aquaculture industry meet growing consumer demand. Since 2008, we have been focused on the regulatory approval of our AquAdvantage Salmon product, culminating with the approval of our New Animal Drug Application (“NADA”) by the U.S. Food and Drug Administration (“FDA”) on November 19, 2015, for the production, sale, and consumption of AquAdvantage Salmon in the United States.

On May 19, 2016, we received approval from Health Canada, the department of the government of Canada with responsibility for national public health, for the production, sale, and consumption of AquAdvantage Salmon as a novel food and feed in Canada. Previously, we had received approval from Environment Canada, the agency of the government of Canada with responsibility for regulating environmental policies and issues, which decided that AquAdvantage Salmon was not harmful to the environment or human health when produced in contained facilities. Consequently, we have received approvals for our product from what we believe are two of the most respected and rigorous regulatory agencies in the world.

We believe that receipt of FDA approval for AquAdvantage Salmon not only represents a major milestone for us but is also a significant pioneering development in introducing bioengineered animals into the food chain. Although bioengineered crops have been accepted by consumers in the United States and South America for some time, AquAdvantage Salmon is the first bioengineered animal to be approved for human consumption. We intend to deploy AquAdvantage Salmon in land-based, contained, freshwater recirculating aquaculture systems (“RAS”), a technology which would allow inland fish farms to be established close to major demand centers in a profitable and environmentally sustainable manner. The technology underlying AquAdvantage Salmon offers the potential to improve the profitability of RAS facilities and thus reintroduce salmon aquaculture in the United States, which imported more than \$3.1 billion of Atlantic salmon in 2017 according to the U.S. Department of Commerce.

See “—Our Product” for more information on AquAdvantage Salmon and “—Regulatory Environment” for more information on our completed NADA process with the FDA.

In January 2016, the FDA issued an Import Alert that prevented our AquAdvantage Salmon from being imported into the United States. In anticipation of the Import Alert being lifted, we took the step of introducing conventional Atlantic salmon into our Indiana facility for grow-out, and we expect that our first crop will reach harvest in the second half of 2020. On March 8, 2019, the FDA announced that it was lifting the Import Alert, and, while a lawsuit challenging the FDA’s decision to approve AquAdvantage Salmon for importation into and sale in the United States continues and could pose future barriers to commercialization in the United States, we are presently preparing to introduce AquAdvantage Salmon to the Indiana facility. For more information, see “Risk Factors — Risks Relating to Our Business — We may become subject to increasing regulation, changes in existing regulations, and review of existing regulatory decisions” and “Risk Factors — Risks Relating to Our Business — We or regulatory agencies approving of our products may be sued by non-governmental organizations and others who are opposed to the development or commercialization of bioengineered products.”

We have incurred significant losses since our inception. We expect to continue to incur significant losses for the foreseeable future, and we may never achieve or maintain profitability. We made our first sales of AquAdvantage Salmon from our farm site in Panama in 2017 and expect modest revenues during 2019, with more significant revenues in 2020 once our facilities in Indiana and on Prince Edward Island commence harvesting. For the fiscal years ended December 31, 2018, 2017, and 2016, we experienced net losses of \$10.4 million, \$9.3 million, and \$8.5 million, respectively. At December 31, 2018, we had limited capital to fund operations. This raises substantial doubt of our ability to continue as a going concern.

Management is pursuing several paths to revenue generation that follow different timelines, including production of our fish at our existing farm sites, purchase or construction of additional production facilities in North America, and licensing or

partnership arrangements. Additionally, management is pursuing regulatory approval for AquAdvantage Salmon in Brazil, Argentina, China, Israel, and Chile.

We were formed on December 17, 1991. Our principal place of business is located at 2 Mill & Main Place, Suite 395, Maynard, Massachusetts 01754, and our telephone number at that location is (978) 648-6000. On January 19, 2017, our common stock began trading on The Nasdaq Capital Market under the symbol "AQB." Prior to our listing on The Nasdaq Capital Market, we were listed in 2006 on the Alternative Investment Market ("AIM"), the London Stock Exchange's international market for smaller growing companies, initially under the symbol "ABTX" and, commencing in 2014, under the symbol "ABTU." For the period from January 19, 2017, to May 31, 2017, we were dual listed on both The Nasdaq Capital Market and AIM. Effective June 1, 2017, we voluntarily delisted our common stock from AIM.

THE OFFERING

The following is a brief summary of some of the terms of the offering and is qualified in its entirety by reference to the more detailed information appearing elsewhere in this prospectus supplement and the accompanying prospectus. For a more complete description of the terms of our common stock, see the “Description of Securities” section in this prospectus supplement and the “Description of Capital Stock” section in the accompanying prospectus.

Common stock we are offering	shares (or shares if the underwriter’s over-allotment option is exercised in full).
Common stock to be outstanding after this offering	shares, as more fully described in the notes following this table (or shares if the underwriter’s over-allotment option is exercised in full).
Over-allotment option	We have granted the underwriter an option to purchase additional shares of common stock equal to 15% of the shares in the offering at the public offering price per share of common stock set forth on the cover page hereto less the underwriting discounts and commission. This option is exercisable, in whole or in part, for a period of 45 days from the date of this prospectus supplement.
The Nasdaq Capital Market symbol	Our common stock is quoted on The Nasdaq Capital Market under the symbol “AQB.”
Use of proceeds	We estimate that the proceeds from this offering will be approximately \$ million (or approximately \$ million if the underwriter’s over-allotment option is exercised in full), after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from this offering for working capital and general corporate purposes. See “Use of Proceeds” below.
Risk factors	Investing in our securities involves significant risks. Please read the information contained in or incorporated by reference under the heading “Risk Factors” beginning on page S-7 of this prospectus supplement, and under similar headings in other documents filed after the date hereof and incorporated by reference into this prospectus supplement and the accompanying prospectus.
The number of shares of common stock shown above to be outstanding after this offering is based on 18,697,477 shares outstanding as of April 3, 2019, and excludes:	
	<ul style="list-style-type: none">• 347,464 shares of common stock issuable upon the exercise of stock options outstanding as of April 3, 2019, with a weighted-average exercise price of \$6.98 per share under our 2006 Equity Incentive Plan (the “2006 Plan”) and our 2016 Equity Incentive Plan (the “2016 Plan”);• 84,077 shares of common stock reserved for future issuance under our 2016 Plan and 2006 Plan as of April 3, 2019; and• 1,669,071 shares of our common stock issuable upon the exercise of warrants issued in January 2018 outstanding as of April 3, 2019, at an exercise price of \$3.25 per share.
Except as otherwise indicated, the information in this prospectus reflects or assumes the following:	
	<ul style="list-style-type: none">• no exercise of options outstanding as of April 3, 2019; and

- no exercise by the underwriter of its option to purchase up to an additional shares of our common stock in this offering.

SUMMARY CONSOLIDATED FINANCIAL DATA

The following tables set forth summary consolidated financial data and other operating information of our company. The summary consolidated statements of operations data for the years ended December 31, 2018 and 2017, and the consolidated balance sheet data as of December 31, 2018, as set forth below are derived from our audited consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, and incorporated by reference herein. The information is only a summary and you should read it in conjunction with our audited consolidated financial statements, including the related notes, and other financial information and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, and incorporated by reference herein. Historical results are not necessarily indicative of the results for future periods.

Consolidated Statements of Operations Data:

	Fiscal Years Ended December 31,	
	2018	2017
(in thousands, except share data)		
Statement of Operations Data:		
Revenues:		
Product revenues	\$ 85	\$ 53
Costs and expenses:		
Product Costs	78	51
Sales and marketing	298	799
Research and development	3,459	3,372
General and administrative	6,616	5,063
Total costs and expenses	10,451	9,285
Operating loss	(10,366)	(9,232)
Other income (expense):		
Interest and other income (expense), net	(16)	(27)
Total other income (expense)	(16)	(27)
Net loss	\$ (10,382)	\$ (9,259)
Other comprehensive income		
Foreign currency translation gain (loss)	(360)	72
Total other comprehensive income (loss)	(360)	72
Comprehensive loss	\$ (10,742)	\$ (9,187)
Earnings per share		
Net loss	(10,382)	(9,259)
Deemed dividend	(1,823)	-
Net loss attributable to common shareholders	\$ (12,205)	\$ (9,259)
Basic and diluted net loss per share attributable to common shareholders	\$ (0.94)	\$ (1.06)
Weighted average number of common shares-basic and diluted (1)	13,028,760	8,772,494

(1) The basic and diluted net loss per share and weighted average number of common shares used in the net loss per share calculation have been adjusted to reflect the 1-for-30 reverse stock split effected January 2017.

Consolidated Balance Sheet Data:

As of December 31, 2018

Balance Sheet Data:

Cash and CD's	\$3,003
Total assets	\$27,671
Debt	\$3,591
Stockholders' equity	\$23,234

RISK FACTORS

Investing in our securities involves a high degree of risk. In addition to the other information contained in this prospectus supplement to the accompanying prospectus and in the documents we incorporate by reference, you should carefully consider the risks discussed below and under the heading “Risk Factors” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, before making a decision about investing in our securities. The risks and uncertainties discussed below and in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, are not the only ones facing us. Additional risks and uncertainties not presently known to us may also harm our business. If any of these risks occur, our business, financial condition and operating results could be harmed, the trading price of our common stock could decline and you could lose part or all of your investment.

Risks Related to this Offering

Intrexon’s significant share ownership position allows it to influence corporate matters.

Based solely on a Schedule 13D/A filed on October 29, 2018, by Randal J. Kirk, Intrexon, and Third Security, LLC (“Third Security”), Intrexon currently owns 8,239,199 shares of our common stock, or approximately 44.1% of our outstanding shares. In addition, entities controlled by Randal J. Kirk, including Third Security and its affiliates other than Intrexon, currently hold 837,554 shares of our common stock, or approximately 4.5% of our outstanding shares. Based on these holdings, Randal J. Kirk, Intrexon’s Chairman, Chief Executive Officer, and controlling shareholder, and Third Security’s Chief Executive Officer and Senior Managing Director, has reported control over approximately 48.6% of our outstanding shares. Given this, and our grant to Intrexon of certain rights to nominate members of our Board of Directors that are intended to ensure that Intrexon-nominated Board members represent a percentage of our Board that is proportionate to Intrexon’s percentage ownership of our common stock, Intrexon will be able to significantly influence who serves on our Board of Directors and the outcome of matters required to be submitted to our shareholders for approval, including decisions relating to the outcome of any proposed merger or consolidation of our company. Intrexon’s interests may not be consistent with those of our other shareholders. Furthermore, Intrexon’s significant interest in us may discourage third parties from seeking to acquire control of us, which may adversely affect the market price of our common stock.

An active trading market for our common stock may not develop or be sustained.

Although our common stock is currently traded on The Nasdaq Capital Market, an active trading market for our common stock may never develop or, if developed, be maintained. If an active market for our common stock does not develop or is not maintained, it may be difficult for shareholders to sell shares of our common stock. An inactive trading market may impair our ability to raise capital to continue to fund operations by selling shares and may impair our ability to acquire other companies or technologies by using our shares as consideration.

The price of our shares of common stock is likely to be volatile and you may be unable to sell your shares at or above the offering price, if at all.

The share price of publicly traded emerging companies can be highly volatile and subject to wide fluctuations. The prices at which our common stock are quoted and the prices which investors may realize will be influenced by a large number of factors, some specific to our company and operations and some which may affect the quoted biotechnology sector, or quoted companies generally. These factors could include variations in our operating results, publicity regarding the process of obtaining regulatory approval to commercialize our products, divergence in financial results from analysts’ expectations, changes in earnings estimates by stock market analysts, overall market or sector sentiment, legislative changes in our sector, the performance of our research and development programs, large purchases or sales of our common stock, currency fluctuations, legislative changes in the genetic engineering environment, and general economic conditions. Certain of these events and factors are outside of our control. Stock markets have from time to time experienced severe price and volume fluctuations, which, if recurring, could adversely affect the market prices for our common stock. If the market price of our common stock after this offering does not exceed the offering price, you may not realize any return on your investment and may lose some or all of your investment.

We do not anticipate paying cash dividends in the foreseeable future, and, accordingly, shareholders must rely on stock appreciation for any return on their investment.

We have never declared or paid cash dividends on our common stock. We do not anticipate paying cash dividends in the foreseeable future and intend to retain all of our future earnings, if any, to finance the operations, development, and growth of our business. There can be no assurance that we will have sufficient surplus under Delaware law to be able to pay any dividends at any time in the future. As a result, absent payment of dividends, only appreciation of the price of our common stock, which may never occur, will provide a return to shareholders. You may also have to sell some or all of your shares of our common stock in order to generate cash flow from your investment in us.

If securities or industry analysts do not publish research or reports, or publish inaccurate or unfavorable research or reports about our business, our share price and trading volume could decline.

The U.S. trading market for our shares of common stock depends, in part, on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If no securities or industry analysts commence coverage of us, the trading price for our shares of common stock may be negatively impacted. If we obtain securities or industry analyst coverage and one or more of the analysts who covers us downgrades our shares of common stock, changes their opinion of our shares, or publishes inaccurate or unfavorable research about our business, our share price would likely decline. If one or more of these analysts ceases coverage of us or fails to publish reports on us regularly, demand for our shares of common stock could decrease and we could lose visibility in the financial markets, which could cause our share price and trading volume to decline.

We are an “emerging growth company,” and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our shares of common stock less attractive to investors.

We are an “emerging growth company,” as defined in Section 2(a) of the Securities Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including the auditor attestation requirements in the assessment of our internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act of 2002 (“Sarbanes-Oxley Act”), compliance with any new requirements adopted by the Public Company Accounting Oversight Board (“PCAOB”) requiring mandatory audit firm rotation or a supplement to the auditors’ report in which the auditor would be required to provide additional information about the audit and the financial statements of the issuer, disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and the requirements of holding advisory “say-on-pay” votes on executive compensation and shareholder advisory votes on golden parachute compensation not previously approved. Under the Jumpstart Our Business Startups Act of 2012 (“JOBS Act”), we will remain an emerging growth company until the earliest of (1) the last day of the fiscal year following the fifth anniversary of the date of the first sale of our common stock pursuant to an effective registration statement filed under the Securities Act, (2) the last day of the fiscal year during which we have total annual gross revenues of \$1 billion or more, (3) the date on which we have, during the previous three-year period, issued more than \$1 billion in non-convertible debt, and (4) the date on which we are deemed to be a “large accelerated filer” as defined in Rule 12b-2 under the Exchange Act. We cannot predict if investors will find our shares of common stock to be less attractive because we may rely on these exemptions. If some investors find our shares of common stock less attractive as a result, there may be a less active trading market for our shares of common stock and our share price may be more volatile.

Under the JOBS Act, emerging growth companies also can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected to avail ourselves of this exemption from new or revised accounting standards and, therefore, will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud.

Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation could cause us to fail to meet our reporting obligations. In addition, any testing by us conducted in connection with Section 404 of the Sarbanes-Oxley Act, or any subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses or that may require prospective or retroactive changes to our financial statements or identify other areas for further attention or improvement. Ineffective internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our common stock.

We may issue preferred stock with terms that could dilute the voting power or reduce the value of our common stock.

While we have no specific plan to issue preferred stock, our certificate of incorporation authorizes us to issue, without the approval of our shareholders, one or more series of preferred stock having such designation, relative powers, preferences, including preferences over our common stock respecting dividends and distributions, voting rights, terms of conversion or redemption, and other relative, participating, optional, or other special rights, if any, of the shares of each such series of preferred stock and any qualifications, limitations or restrictions thereof, as our Board of Directors may determine. The terms of one or more classes or series of preferred stock could dilute the voting power or reduce the value of our common stock. For example, the repurchase or redemption rights or liquidation preferences we could assign to holders of preferred stock could affect the residual value of the common stock.

The financial reporting obligations of being a public company in the United States are expensive and time consuming and may place significant additional demands on our management.

The obligations of being a public company in the United States require significant expenditures, which we estimate will be approximately \$400 thousand annually, and place additional demands on our management, including costs resulting from public company reporting obligations under the Exchange Act, and the rules and regulations regarding corporate governance practices, including those under the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, and the listing requirements for The Nasdaq Capital Market. Our management and other personnel devote a substantial amount of time to ensure that we comply with all of these requirements. Moreover, despite reforms made possible by the JOBS Act, the reporting requirements, rules, and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly, particularly if we were no longer to qualify as an emerging growth company. Any changes that we make to comply with these obligations may not be sufficient to allow us to satisfy our obligations as a public company on a timely basis, or at all.

These rules and regulations make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. These factors also could make it more difficult for us to attract and retain qualified persons to serve on our Board of Directors, particularly to serve on our Audit Committee and Compensation Committee, or as executive officers.

There can be no assurance that we will be able to comply with the continued listing standards of The Nasdaq Capital Market.

Even though our common stock has been listed on The Nasdaq Capital Market, we cannot assure you that we will be able to comply with standards necessary to maintain a listing of our common stock on The Nasdaq Capital Market. Our failure to meet the continuing listing requirements may result in our common stock being delisted from The Nasdaq Capital Market.

If you purchase shares of our common stock in this offering, you will experience substantial and immediate dilution.

If you purchase shares of our common stock in this offering, you will experience substantial and immediate dilution in the pro forma net tangible book value per share after giving effect to this offering, based on the public offering price of \$ per share, because the price that you pay will be substantially greater than the pro forma net tangible book value per share of the common stock that you acquire. This dilution is due in large part to the fact that our earlier investors paid substantially less than the public offering price when they purchased their shares of our capital stock. You will experience additional dilution upon exercise of any warrant, upon exercise of options to purchase common stock under our equity incentive plans, vesting of restricted stock units issued to our employees, if we further issue restricted stock to our employees under our equity incentive plans or if we otherwise issue additional shares of our common stock. For a further description of the dilution that you will experience immediately after this offering, see the section of this prospectus titled "Dilution."

Our management will have broad discretion over the use of the proceeds we receive in this offering and might not apply the proceeds in ways that increase the value of your investment.

Our management will have broad discretion to use the net proceeds we receive from this offering and, and you will be relying on the judgment of our management regarding the application of these proceeds. Our management might not apply the net proceeds that we receive from this offering in ways that increase the value of your investment. We currently intend to use the net proceeds of this offering to complete construction and renovations of our existing facilities in Rollo Bay and Indiana, for working capital and other general corporate purposes. We may also use a portion of the net proceeds for acquisitions of complementary businesses, technologies or other assets, although we do not currently have any agreements, commitments or understandings with respect to any such acquisitions. Until we use the net proceeds that we receive from this offering, we plan to invest them, and these investments may not yield a favorable rate of return. If we do not invest or apply the net proceeds we receive from this offering in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline.

Provisions in our corporate documents and Delaware law could have the effect of delaying, deferring or preventing a change in control of us, even if that change may be considered beneficial by some of our shareholders.

The existence of some provisions of our articles of incorporation or our bylaws or Delaware law could have the effect of delaying, deferring or preventing a change in control of us that a shareholder may consider favorable. These provisions include:

- providing that the number of members of our board is limited to a range fixed by our bylaws;
- establishing advance notice requirements for nominations of candidates for election to our Board of Directors or for proposing matters that can be acted on by shareholders at shareholder meetings; and
- authorizing the issuance of "blank check" preferred stock, which could be issued by our Board of Directors to issue securities with voting rights and thwart a takeover attempt.

As a Delaware corporation, we are also subject to provisions of Delaware law, including Section 203 of the General Corporation Law of the State of Delaware. Section 203 prevents some shareholders holding more than 15% of our voting stock from engaging in certain business combinations unless the business combination or the transaction that resulted in the shareholder becoming an interested shareholder was approved in advance by our Board of Directors, results in the shareholder holding more than 85% of our voting stock, subject to certain restrictions, or is approved at an annual or special meeting of shareholders by the holders of at least 66 2/3% of our voting stock not held by the shareholder engaging in the transaction. Any provision of our certificate of incorporation or our bylaws or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for our shareholders to receive a premium for their shares of our common stock and could also affect the price that some investors are willing to pay for our common stock.

Risks Relating to our Business

We may become subject to increasing regulation, changes in existing regulations, and review of existing regulatory decisions.

Regulations pertaining to bioengineered animals are still developing and could change from their present state. In addition, new legislation could require new regulatory frameworks, changes in existing regulation, or re-evaluation of prior regulatory decisions. For example, despite the FDA's final determination that AquAdvantage Salmon may be sold without being labeled as a bioengineered product, a provision added to the 2016 Omnibus Appropriations Act required the FDA to issue final guidance for such labeling. The FDA was therefore obligated to maintain an Import Alert starting in January 2016 that prohibited import of AquAdvantage Salmon until such guidance was finalized or the provision was no longer effective. On March 8, 2019, several months after the USDA promulgated its final rule establishing a national standard for the labeling of bioengineered foods, including AquAdvantage Salmon, the FDA lifted the Import Alert. Similarly, in July 2017, a bill was introduced in the United States Senate that could have, had it become law, required labeling unique to, as well as re-examination of the environmental assessments used by the FDA in its 2015 approval of the NADA for, AquAdvantage Salmon. While this bill was reintroduced in January 2019 without the requirement for re-examination of those environmental assessments, any such legislatively imposed review of a completed regulatory process could result in new restrictions on, or delays in, commercialization of our product in the United States. We could be subject to increasing or more onerous regulatory hurdles as we attempt to commercialize our product, which could require us to incur significant additional capital and operating expenditures and other costs in complying with these laws and regulations. Our regulatory burdens could also increase if AquAdvantage Salmon are found, or believed, to grow to a larger final size than conventional Atlantic salmon.

We or regulatory agencies approving of our products may be sued by non-governmental organizations and others who are opposed to the development or commercialization of bioengineered products.

There are many organizations in the United States and elsewhere that are fundamentally opposed to the development of bioengineered products. These groups have a history of bringing legal action against companies attempting to bring new biotechnology products to market. On December 23, 2013, an application was filed by two NGOs with the Canadian Federal Court seeking judicial review to declare invalid the decision by the Canadian Minister of the Environment to publish in the Canadian Gazette a Significant New Activity Notice ("SNAN") with respect to AquAdvantage Salmon. Though the Canadian Federal Court dismissed this challenge, the petitioners filed an appeal of the ruling, which was subsequently dismissed by the Canadian Federal Court of Appeal on October 21, 2016.

In the United States, a coalition of NGOs filed a complaint on March 30, 2016, against the FDA, the United States Fish and Wildlife Service, and related individuals for their roles in the approval of AquAdvantage Salmon, claiming that the FDA had no statutory authority to regulate bioengineered animals, and, if it did, that the agency failed to analyze and implement measures to mitigate ecological, environmental, and socioeconomic risks that could impact wild salmon and the environment, including the risk that AquAdvantage Salmon could escape and threaten endangered wild salmon stocks. Among other things, the claimants are seeking a judgment that the FDA decision to approve AquAdvantage Salmon is not authorized by the FFDCFA, that an injunction be issued requiring the FDA to withdraw its assertion of jurisdiction over bioengineered animals, that the FDA decision to approve AquAdvantage Salmon and its EA and FONSI determinations be declared in violation of the FFDCFA, and that the decision to approve the AquAdvantage Salmon NADA be vacated.

Though we believe this legal action lacks merit, it is currently ongoing and may take considerable time to resolve, and plaintiffs may seek to have importation or sale of AquAdvantage Salmon in the United States put on hold until such resolution. We may be subject to future litigation brought by one or more of these organizations in their attempt to block the development or sale of our product. In addition, animal rights groups and various other organizations and individuals have attempted to stop bioengineering activities by pressing for legislation and additional regulation in these areas. To the extent the actions of these organizations are successful, commercialization of our product may be restricted, and our business may be adversely affected. Such actions, even if unsuccessful, may distract management from its operational priorities and may cause us to incur significant costs.

USE OF PROCEEDS

We estimate that the proceeds from this offering will be approximately \$ million (or approximately \$ million if the underwriter's over-allotment option is exercised in full) after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from this offering for general corporate purposes, including investing further in our sales and marketing and research and development efforts and payment of anticipated general and administrative expenses.

We anticipate that completion of construction and renovation projects at our facilities in Rollo Bay and Indiana will require a total of \$7 million; however, we do not believe that the postponement of these construction and renovations projects will impact our plan to commence operations at these sites in 2019. In the event that our capital requirements are higher than we anticipate, we may need to seek alternative sources of capital and we are currently seeking to secure debt financing in the form of a mortgage on our Indiana farm site and a provincial loan on the Rollo Bay farm site to finance these projects.

We may use a portion of the net proceeds we receive for the acquisition of businesses, technologies or other assets that we believe are complementary to our own, although we have no agreements, commitments or understandings with respect to any such transaction.

The amount of what, and timing of when, we actually spend for these purposes may vary significantly and will depend on a number of factors, including our future revenue and expenses and the other factors described in the section of this prospectus captioned "Risk Factors" and under the heading "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018. Accordingly, our management will have broad discretion in applying a portion of the net proceeds we receive from this offering. Pending these uses, we intend to invest the remaining net proceeds in high quality, investment-grade instruments.

DILUTION

If you invest in our common stock, you will experience dilution to the extent of the difference between the public offering price per share and the net tangible book value per share of our common stock immediately after this offering.

Our net tangible book value as of December 31, 2018, was approximately \$22.9 million, or \$1.51 per share of our common stock, based upon the number of shares of our common stock outstanding as of that date. Net tangible book value per share is determined by dividing our total tangible assets, less total liabilities, by the number of shares of our common stock outstanding as of December 31, 2018. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the net tangible book value per share of our common stock immediately after this offering.

After giving effect to the sale of shares of our common stock in this offering, at the public offering price of \$ per share and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of December 31, 2018, would have been approximately \$ million, or \$ per share. This represents an immediate increase in net tangible book value of \$ per share to existing stockholders and immediate dilution in net tangible book value of \$ per share to new investors purchasing our common stock in this offering at the public offering price. The following table illustrates this dilution on a per share basis:

Public offering price per share		\$
Net tangible book value per share as of December 31, 2018	\$1.51	
Increase in net tangible book value per share attributable to new investors	\$	
As adjusted net tangible book value per share as of December 31, 2018, after giving effect to this offering	\$	
Dilution in net tangible book value per share to investors in this offering	\$	

Each \$0.10 increase (decrease) in the public offering price of \$ per share would increase (decrease) dilution per share to new investors by approximately \$ after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us for this offering.

If the underwriter exercises in full its over-allotment option at the public offering price of \$ per share, the as adjusted net tangible book value after this offering would be \$ per share of our common stock, representing an increase of as adjusted net tangible book value of \$ per share to our existing stockholders and an immediate dilution of \$ per share to new investors purchasing shares in this offering.

The foregoing table and discussion is based on 15,098,837 shares outstanding as of December 31, 2018, and excludes:

- 339,964 shares of common stock issuable upon the exercise of stock options outstanding as of December 31, 2018, with a weighted-average exercise price of \$7.09 per share under our 2006 Plan and our 2016 Plan;
- 268,138 shares of common stock reserved for future issuance under our 2016 Plan and 2006 Plan; and
- 1,745,868 shares of our common stock issuable upon the exercise of warrants issued in January 2018 outstanding as of December 31, 2018, at an exercise price of \$3.25 per share.

The above illustration of dilution per share to investors participating in this offering assumes no exercise of outstanding options to purchase our common stock or outstanding warrants to purchase shares of our common stock. The exercise of outstanding options and warrants having an exercise price less than the offering price will increase dilution to new investors. In addition, we may choose to raise additional capital depending on market conditions, our capital requirements and strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

CAPITALIZATION

The following table sets forth our cash and capitalization as of December 31, 2018:

- on an actual basis; and
- on an as adjusted basis to give effect to: our sale in this offering of shares of common stock at a public offering price of \$ per share, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this table in conjunction with “Use of Proceeds” as well as our “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements, including the related notes, incorporated by reference into this prospectus supplement and the accompanying prospectus.

	As of December 31, 2018	
	Actual	As Adjusted
	(in thousands, except for share data)	
Cash and CD’s	\$ 3,003	\$
Current debt	71	
Long-term debt	3,520	
Total liabilities	4,437	
Preferred stock, \$0.01 par value per share; 5 million shares authorized	—	
Common stock, \$0.001 par value per share; 50 million shares authorized, actual; 15,098,837 shares issued and outstanding, actual; 50 million shares authorized, as adjusted; shares issued and outstanding, as adjusted	15	
Additional paid-in capital	142,708	
Accumulated other comprehensive loss	(574)	
Accumulated deficit	(118,915)	
Total stockholders’ equity	23,234	
Total capitalization	\$ 27,671	\$

(1) The number of shares of our common stock in the table above excludes:

- 339,964 shares of common stock issuable upon the exercise of stock options outstanding as of December 31, 2018, with a weighted-average exercise price of \$7.09 per share under our 2006 Plan and our 2016 Plan;
- 268,138 shares of common stock reserved for future issuance under our 2016 Plan and 2006 Plan; and
- 1,745,868 shares of our common stock issuable upon the exercise of warrants issued in January 2018 outstanding as of December 31, 2018, at an exercise price of \$3.25 per share.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our common stock. We currently intend to retain earnings, if any, to finance the growth and development of our business. We are currently prohibited from declaring or paying dividends without the prior consent of our lenders, and we do not expect to pay any cash dividends on our common stock in the foreseeable future. Payment of future dividends, if any, will be at the discretion of our Board of Directors and will depend on our financial condition, results of operations, capital requirements, restrictions contained in current or future financing instruments, provisions of applicable law, and other factors the Board of Directors deems relevant.

DESCRIPTION OF SECURITIES

Our authorized capital stock consists of 50,000,000 shares of common stock, \$0.001 par value per share, and 5,000,000 shares of preferred stock, \$0.01 par value per share. As of April 3, 2019, there were 18,697,477 shares of our common stock outstanding, zero shares of our preferred stock outstanding, warrants issued in January 2018 to purchase 1,669,071 shares of our common stock outstanding.

In this offering, we are offering shares of common stock.

Common Stock

Holders of the common stock are entitled to one vote per share on all matters to be voted upon by the stockholders. Holders of common stock are entitled to receive ratably such dividends, if any, as may be declared by the Board of Directors out of funds legally available therefor. Upon the liquidation, dissolution, or winding up of our company, the holders of common stock are entitled to share ratably in all of our assets which are legally available for distribution after payment of all debts and other liabilities and liquidation preference of any outstanding common stock. Holders of common stock have no preemptive, subscription, redemption or conversion rights. The outstanding shares of common stock are validly issued, fully paid and non-assessable.

The material terms and provisions of our common stock are described under the caption "Description of Capital Stock" starting on page 10 of the accompanying prospectus.

CERTAIN MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS OF COMMON STOCK

The following discussion is a summary of the material U.S. federal income tax considerations applicable to non-U.S. holders (as defined below) with respect to their ownership and disposition of shares of our common stock issued pursuant to this offering. For purposes of this discussion, a non-U.S. holder means a beneficial owner of our common stock that is for U.S. federal income tax purposes:

- a non-resident alien individual;
- a foreign corporation or any other foreign organization taxable as a corporation for U.S. federal income tax purposes; or
- a foreign estate or trust, the income of which is not subject to U.S. federal income tax on a net income basis.

This discussion does not address the tax treatment of partnerships or other entities that are pass-through entities for U.S. federal income tax purposes or persons that hold their common stock through partnerships or other pass-through entities. A partner in a partnership or other pass-through entity that will hold our common stock should consult his, her or its tax advisor regarding the tax consequences of acquiring, holding and disposing of our common stock through a partnership or other pass-through entity, as applicable.

This discussion is based on current provisions of the U.S. Internal Revenue Code of 1986, as amended, which we refer to as the Code, existing and proposed U.S. Treasury Regulations promulgated thereunder, current administrative rulings and judicial decisions, all as in effect as of the date of this prospectus and, all of which are subject to change or to differing interpretation, possibly with retroactive effect. Any such change or differing interpretation could alter the tax consequences to non-U.S. holders described in this prospectus. There can be no assurance that the Internal Revenue Service, which we refer to as the IRS, will not challenge one or more of the tax consequences described herein, and we have not obtained nor do we intend to obtain, a ruling from the IRS with respect to the U.S. federal income tax consequences to a non-U.S. holder of the ownership or disposition of our common stock. We assume in this discussion that a non-U.S. holder holds shares of our common stock as a capital asset within the meaning of Section 1221 of the Code, which generally consists of property held for investment.

This discussion does not address all aspects of U.S. federal income taxation that may be relevant to a particular non-U.S. holder in light of that non-U.S. holder's individual circumstances nor does it address any U.S. state, local or non-U.S. taxes, the alternative minimum tax, the Medicare tax on net investment income, the rules regarding qualified small business stock within the meaning of Section 1202 of the Code, or any other aspect of any U.S. federal tax other than the income tax. This discussion also does not consider any specific facts or circumstances that may apply to a non-U.S. holder and does not address the special tax rules applicable to particular non-U.S. holders, such as:

- insurance companies;
- tax-exempt or governmental organizations;
- financial institutions;
- brokers or dealers in securities;
- regulated investment companies;
- pension plans;
- "controlled foreign corporations," "passive foreign investment companies," and corporations that accumulate earnings to avoid U.S. federal income tax;
- "qualified foreign pension funds," or entities wholly owned by a "qualified foreign pension fund";
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons that hold our common stock as part of a straddle, hedge, conversion transaction, synthetic security or other integrated investment; and
- certain U.S. expatriates.

This discussion is for general information only and is not tax advice. Accordingly, all prospective non-U.S. holders of our common stock should consult their tax advisors with respect to the U.S. federal, state, local and non-U.S. tax consequences of the purchase, ownership and disposition of our common stock for each non-U.S. holder's individual circumstances.

Distributions on our common stock

Distributions, if any, on our common stock will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the non-U.S. holder's investment, up to such holder's tax basis in the common stock. Any distributions in excess of the holder's tax basis will be treated as capital gain, subject to the tax treatment described below in "Gain on sale or other taxable disposition of our common stock." Any such distributions will also be subject to the discussions below under the sections titled "Backup withholding and information reporting" and "Withholding and information reporting requirements—FATCA."

Subject to the discussion in the following two paragraphs in this section, dividends paid to a non-U.S. holder generally will be subject to withholding of U.S. federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the U.S. and such holder's country of residence.

Dividends that are treated as effectively connected with a trade or business conducted by a non-U.S. holder within the U.S. and, if an applicable income tax treaty so provides, that are attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder within the U.S., are generally exempt from the 30% withholding tax described above if the non-U.S. holder satisfies applicable certification and disclosure requirements. However, such U.S. effectively connected income, net of specified deductions and credits, is taxed at the same graduated U.S. federal income tax rates applicable to U.S. persons (as defined in the Code). Any U.S. effectively connected income received by a non-U.S. holder that is a corporation may also, under certain circumstances, be subject to an additional "branch profits tax" at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the U.S. and such holder's country of residence.

A non-U.S. holder of our common stock who claims the benefit of an applicable income tax treaty between the U.S. and such holder's country of residence generally will be required to provide a properly executed IRS Form W-8BEN or W-8BEN-E (or successor form) to the applicable withholding agent and satisfy applicable certification and other requirements. Non-U.S. holders are urged to consult their tax advisors regarding their entitlement to benefits under a relevant income tax treaty. A non-U.S. holder that is eligible for a reduced rate of U.S. withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by timely filing a U.S. tax return with the IRS.

Gain on sale or other taxable disposition of our common stock

Subject to the discussions below under "Backup withholding and information reporting" and "Withholding and information reporting requirements—FATCA," a non-U.S. holder generally will not be subject to any U.S. federal income tax on any gain realized upon such holder's sale or other taxable disposition of shares of our common stock unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a U.S. trade or business and, if an applicable income tax treaty so provides, is attributable to a permanent establishment or a fixed-base maintained by such non-U.S. holder in the U.S., in which case the non-U.S. holder generally will be taxed on a net income basis at the graduated U.S. federal income tax rates applicable to U.S. persons (as defined in the Code) and, if the non-U.S. holder is a foreign corporation, the branch profits tax described above in "Distributions on our common stock" also may apply;
- the non-U.S. holder is a nonresident alien individual who is present in the U.S. for 183 days or more in the taxable year of the disposition and certain other conditions are met, in which case the non-U.S. holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax treaty between the U.S. and such holder's country of residence) on the net gain derived from the disposition, which may be offset by certain U.S. source capital losses of the non-U.S. holder, if any (even though the individual is not considered a resident of the U.S.), provided that the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses; or
- we are, or have been, at any time during the five-year period preceding such sale or other taxable disposition (or the non-U.S. holder's holding period, if shorter) a "U.S. real property holding corporation," unless our common stock is regularly traded on an established securities market and the non-U.S. holder holds no more than 5% of our outstanding common stock, directly or indirectly, actually or constructively, during the shorter of the 5-year period ending on the date of the disposition or the period that the non-U.S. holder held our common stock. Generally, a corporation is a U.S. real property holding corporation only if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. If we are a U.S. real property holding corporation, the a purchaser may be required to withhold 15% of the proceeds payable to a non-U.S. holder from a sale of our common stock, and the non-U.S. holder generally will be taxed on its gain derived from the disposition of our common stock at the graduated U.S. federal income tax rates applicable to a United States person (as defined in the Code). Although there can be no assurance, we do not believe that we are, or have been, a U.S. real property

holding corporation, or that we are likely to become one in the future. No assurance can be provided that our common stock will be regularly traded on an established securities market for purposes of the rules described above.

Backup withholding and information reporting

We must report annually to the IRS and to each non-U.S. holder the gross amount of the distributions on our common stock paid to such holder and the tax withheld, if any, with respect to such distributions. Non-U.S. holders may have to comply with specific certification procedures to establish that the holder is not a U.S. person (as defined in the Code) in order to avoid backup withholding at the applicable rate with respect to dividends on our common stock, generally by providing an applicable IRS Form W-8. Dividends paid to non-U.S. holders subject to withholding of U.S. federal income tax, as described above in “Distributions on our common stock,” generally will be exempt from U.S. backup withholding.

Information reporting and backup withholding will generally apply to the proceeds of a disposition of our common stock by a non-U.S. holder effected by or through the U.S. office of any broker, U.S. or foreign, unless the holder certifies its status as a non-U.S. holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a non-U.S. holder where the transaction is effected outside the U.S. through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker.

Non-U.S. holders should consult their tax advisors regarding the application of the information reporting and backup withholding rules to them. Copies of information returns may be made available to the tax authorities of the country in which the non-U.S. holder resides or is incorporated under the provisions of a specific treaty or agreement. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder can be refunded or credited against the non-U.S. holder’s U.S. federal income tax liability, if any, provided that an appropriate claim is filed with the IRS in a timely manner.

Withholding and information reporting requirements—FATCA

Provisions of the Code commonly referred to as the Foreign Account Tax Compliance Act, or FATCA, generally impose a U.S. federal withholding tax at a rate of 30% on payments of dividends on our common stock paid to a foreign entity unless (i) if the foreign entity is a “foreign financial institution,” such foreign entity undertakes certain due diligence, reporting, withholding, and certification obligations, (ii) if the foreign entity is not a “foreign financial institution,” such foreign entity identifies certain of its U.S. investors, if any, or (iii) the foreign entity is otherwise exempt under FATCA. Such withholding may also apply to payments of proceeds of sales or other dispositions of our common stock, although under recently proposed U.S. Treasury Regulations no withholding would apply to payments of gross proceeds. The preamble to the proposed regulations specifies that taxpayers (including withholding agents) are permitted to rely on the proposed regulations pending finalization. Under certain circumstances, a non-U.S. holder may be eligible for refunds or credits of this withholding tax. An intergovernmental agreement between the U.S. and an applicable foreign country may modify the requirements described in this paragraph. Non-U.S. holders should consult their tax advisors regarding the possible implications of this legislation on their investment in our common stock and the entities through which they hold our common stock, including, without limitation, the process and deadlines for meeting the applicable requirements to prevent the imposition of the 30% withholding tax under FATCA.

The preceding discussion of U.S. federal income tax considerations is for general information only. It is not tax advice. Each prospective investor should consult its own tax advisor regarding the particular U.S. federal, state and local and non-U.S. tax consequences of purchasing, holding and disposing of our common stock, including the consequences of any proposed change in applicable laws.

UNDERWRITING

We have entered into an underwriting agreement with H.C. Wainwright & Co., LLC as underwriter dated _____, 2019, with respect to the common stock being offered hereby. Subject to the terms and conditions of the underwriting agreement, the underwriter has agreed to purchase from us the number of shares of our common stock set forth opposite its name below. The underwriting agreement provides that the obligations of the underwriter are subject to certain customary conditions precedent, representations and warranties contained therein.

Underwriter	Number of Shares
H.C. Wainwright & Co., LLC	
Total	

Pursuant to the underwriting agreement, the underwriter has agreed to purchase all of the shares sold under the underwriting agreement if any of these shares are purchased, other than those shares covered by the overallotment option described below. The underwriter has advised us that it does not intend to confirm sales to any account over which it exercises discretionary authority.

The underwriter may offer the shares of common stock from time to time to purchasers directly or through agents, or through brokers in brokerage transactions on The Nasdaq Capital Market, or to dealers in negotiated transactions or in a combination of such methods of sale, or otherwise, at a fixed price or prices, which may be changed, or at market prices prevailing at the time of sale, at prices related to such prevailing market prices or at negotiated prices, subject to receipt and acceptance by it and subject to its right to reject any order in whole or in part. Any shares sold by the underwriter to securities dealers will be sold at the public offering price less a selling concession not in excess of \$ per share. The difference between the price at which the underwriter purchases shares from us and the price at which the underwriter resells such shares may be deemed underwriting compensation. If the underwriter effects such transactions by selling shares of common stock to or through dealers, such dealers may receive compensation in the form of discounts, concessions or commissions from the underwriter and/or purchasers of shares of common stock for whom they may act as agents or to whom they may sell as principal.

The underwriter is offering the shares, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters and other conditions specified in the underwriting agreement. The underwriter reserves the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

We have granted to the underwriter an option to purchase up to an additional _____ shares of common stock (up to 15% of the shares of common stock in this offering) at the public offering price, less the underwriting discount. The option is exercisable for 45 days. The underwriter may exercise this option solely for the purpose of covering overallotments, if any, made in connection with the sale of common stock offered hereby.

The following table shows the public offering price, underwriting discount and proceeds, before expenses, to us. These amounts are shown assuming both no exercise and full exercise of the underwriter's option to purchase additional shares.

	Total (no exercise of overallotment)	Total (full exercise of overallotment)
Public offering price	\$	\$
Underwriting discounts and commissions payable by us (1)	\$	\$
Proceeds, before expenses, to us	\$	\$

(1) The underwriter will receive a 7% underwriting discount in connection with this offering. However, no underwriting discount will be paid on any shares of common stock that Intrexon Corporation agrees to purchase in this offering.

We have agreed to reimburse the expenses of the underwriter in the non-accountable sum of \$15,000 and the other actual expenses of the underwriter, including its legal fees, up to \$70,000 in connection with this offering. We have also agreed to pay the underwriter a management fee equal to 1% of the aggregate gross proceeds in this offering and to reimburse the underwriter \$10,000 for its clearing expenses.

Upon completion of this offering, in the event that we decide (i) to enter into an acquisition, merger or recapitalization transaction and to retain a financial advisor in such transaction, (ii) to finance or refinance any indebtedness using a manager or agent, or (iii) to raise funds through a public offering or private placement of equity or debt securities using an underwriter or placement agent, we have granted the underwriter a right of first refusal to act as lead financial advisor, lead book runner or agent or lead book-running manager, underwriter or placement agent in connection with any such transactions, subject to certain specified exceptions. This right of first refusal extends for five months from July 25, 2019. The terms of any such engagement of the underwriter will be determined by separate agreement.

We have agreed to indemnify the underwriter against certain liabilities, including civil liabilities under the Securities Act of 1933, as amended (the “Securities Act”), or to contribute to payments that the underwriter may be required to make in respect of those liabilities.

We have agreed to not sell any shares of our common stock or any securities convertible into or exercisable or exchangeable into share of common stock, subject to certain exceptions, for a period of 90 days after the date of this prospectus.

In connection with this offering, the underwriter may engage in stabilizing transactions, overallotment transactions, syndicate covering transactions and penalty bids in connection with our common stock.

- Stabilizing transactions permit bids to purchase shares of common stock so long as the stabilizing bids do not exceed a specified maximum.
- Overallotment transactions involve sales by the underwriter of shares of common stock in excess of the number of shares the underwriter is obligated to purchase. This creates a syndicate short position which may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriter is not greater than the number of shares that it may purchase in the overallotment option. In a naked short position, the number of shares involved is greater than the number of shares in the overallotment option. The underwriter may close out any short position by exercising its overallotment option and/or purchasing shares in the open market.
- Syndicate covering transactions involve purchases of common stock in the open market after the distribution has been completed in order to cover syndicate short positions. Such a naked short position would be closed out by buying securities in the open market. A naked short position is more likely to be created if the underwriter is concerned that there could be downward pressure on the price of the securities in the open market after pricing that could adversely affect investors who purchase in the offering.
- Penalty bids permit the underwriter to reclaim a selling concession from a syndicate member when the securities originally sold by the syndicate member are purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock in the open market may be higher than it would otherwise be in the absence of these transactions. Neither we nor the underwriter make any representation or prediction as to the effect that the transactions described above may have on the price of our common stock. These transactions may be effected on The Nasdaq Capital Market, in the over-the-counter market or otherwise and, if commenced, may be discontinued at any time.

In connection with this offering, the underwriter also may engage in passive market making transactions in our common stock in accordance with Regulation M during a period before the commencement of offers or sales of shares of our common stock in this offering and extending through the completion of the distribution. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for that security. However, if all independent bids are lowered below the passive market maker’s bid that bid must then be lowered when specific purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

The transfer agent for our common stock is Computershare Trust Company, N.A.

Our common stock is listed on The Nasdaq Capital Market under the symbol “AQB.”

LEGAL MATTERS

The validity of the securities offered hereby has been passed upon for us by Goodwin Procter LLP, Boston, Massachusetts. Ellenoff Grossman & Schole LLP, New York, New York is representing the underwriter in connection with this offering.

EXPERTS

The consolidated financial statements of Aquabounty Technologies, Inc. as of December 31, 2018 and 2017, and for each of the years in the two-year period ended December 31, 2018, have been incorporated by reference herein in reliance upon the report of Wolf & Company, P.C., independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in auditing and accounting.



**Common Stock
Preferred Stock
Warrants
And
Units**

We may offer and sell from time to time, in one or more series or issuances and on terms that we will determine at the time of the offering, any combination of the securities described in this prospectus, up to an aggregate amount of \$100,000,000.

This prospectus also may be used in connection with the issuance of up to 4,246,153 shares of our common stock (the “Warrant Shares”) upon exercise of certain of our outstanding warrants (the “Outstanding Warrants”). The Outstanding Warrants and Warrant Shares were registered under our Registration Statement on Form S-1 (File No. 333-221435), filed with the Securities and Exchange Commission on November 8, 2017, and declared effective on January 12, 2018 (the “Prior Registration Statement”), as more fully described herein under the heading “Description of Capital Stock—Outstanding Warrants.”

We will provide specific terms of any offering in a supplement to this prospectus. Any prospectus supplement may also add, update, or change information contained in this prospectus. You should carefully read this prospectus and the applicable prospectus supplement as well as the documents incorporated or deemed to be incorporated by reference in this prospectus before you purchase any of the securities offered hereby.

These securities may be offered and sold in the same offering or in separate offerings; to or through underwriters, dealers, and agents; or directly to purchasers. The names of any underwriters, dealers, or agents involved in the sale of our securities, their compensation, and any over-allotment options held by them will be described in the applicable prospectus supplement. See the section titled “Plan of Distribution.”

Our common stock is listed on the Nasdaq Capital Market under the symbol “AQB.” As of the date of this prospectus, the aggregate market value of our outstanding voting and nonvoting common equity held by non-affiliates of the Company (*i.e.*, our public float) was approximately \$13,817,523, based on 4,378,176 shares of outstanding common stock held by non-affiliates and the closing price of our common stock on April 20, 2018, which was \$3.156 per share. We will provide information in any applicable prospectus supplement regarding any listing of securities other than shares of our common stock on any securities exchange. Pursuant to Instruction I.B.6 of Form S-3, in no event will we sell, pursuant to the registration statement of which this prospectus forms a part, securities in a public primary offering with a value exceeding more than one-third of our public float in any twelve-month period so long as our public float remains below \$75 million. We have offered and sold no securities pursuant to General Instruction I.B.6 of Form S-3 during the twelve calendar months prior to and including the date of this prospectus.

We are an “emerging growth company” as that term is used in the Jumpstart our Business Startups Act of 2012 and, as such, have elected to avail ourselves of certain reduced public company reporting requirements for this prospectus and future filings.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties referenced under the heading “Risk Factors” contained in this prospectus beginning on page 5 and any applicable prospectus supplement and under similar headings in the other documents that are incorporated by reference into this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this Prospectus is April 23, 2018.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the United States Securities and Exchange Commission, or the SEC, using a “shelf” registration process. Under this shelf process, we may, from time to time, sell any combination of the securities described in this prospectus in one or more offerings up to a total amount of \$100,000,000. This prospectus also relates to the issuance of up to 4,246,153 Warrant Shares upon exercise of certain of the Outstanding Warrants. The Outstanding Warrants and the Warrant Shares were registered under the Prior Registration Statement.

This prospectus provides you with a general description of the Warrant Shares and securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add to, update, or change information contained in the prospectus and, accordingly, to the extent inconsistent, information in this prospectus is superseded by the information in the prospectus supplement.

The prospectus supplement to be attached to the front of this prospectus may describe, as applicable: the terms of the securities offered; the initial public offering price; the price paid for the securities; net proceeds; and the other specific terms related to the offering of the securities.

You should only rely on the information contained or incorporated by reference in this prospectus and any prospectus supplement or free writing prospectus relating to a particular offering. No person has been authorized to give any information or make any representations in connection with this offering other than those contained or incorporated by reference in this prospectus, any accompanying prospectus supplement, and any related free writing prospectus in connection with the offering described herein and therein, and, if given or made, such information or representations must not be relied upon as having been authorized by us. Neither this prospectus nor any prospectus supplement nor any related free writing prospectus shall constitute an offer to sell or a solicitation of an offer to buy offered securities in any jurisdiction in which it is unlawful for such person to make such an offering or solicitation. This prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the securities, you should refer to the registration statement, including its exhibits.

You should read the entire prospectus and any prospectus supplement and any related free writing prospectus, as well as the documents incorporated by reference into this prospectus, any prospectus supplement, or any related free writing prospectus, before making an investment decision. Neither the delivery of this prospectus, any prospectus supplement, or any free writing prospectus nor any sale made hereunder shall under any circumstances imply that the information contained or incorporated by reference herein or in any prospectus supplement or free writing prospectus is correct as of any date subsequent to the date hereof or of such prospectus supplement or free writing prospectus, as applicable. You should assume that the information appearing in this prospectus, any prospectus supplement, or any document incorporated by reference is accurate only as of the date of the applicable documents, regardless of the time of delivery of this prospectus or any sale of securities. Our business, financial condition, results of operations, and prospects may have changed since that date.

Unless otherwise specified or the context requires otherwise:

The terms “we,” “us,” “our,” and the “Company” mean AquaBounty Technologies, Inc., a Delaware corporation, and its consolidated subsidiaries.

FORWARD-LOOKING STATEMENTS

This prospectus, each prospectus supplement and the information incorporated by reference in this prospectus and each prospectus supplement contain forward-looking statements within the meaning of the federal securities laws, which statements involve substantial risks and uncertainties. Forward-looking statements generally relate to future events or our future financial or operating performance. In some cases, you can identify forward-looking statements because they contain words such as “may”, “will”, “should”, “expects”, “plans”, “anticipates”, “could”, “intends”, “target”, “projects”, “contemplates”, “believes”, “estimates”, “predicts”, “potential” or “continue” or the negative of these words or other similar terms or expressions that concern our expectations, strategy, plans or intentions. Forward-looking statements contained in this prospectus include, but are not limited to, statements about:

- the anticipated benefits and characteristics of our AquAdvantage Salmon product;
- The implementation and likelihood of achieving the business plan, future revenue, and operating results;
- developments concerning our research projects;
- our expectations regarding our ability to successfully enter new markets or develop additional products;
- our competitive position and developments and projections relating to our competitors and our industry;
- expectations regarding anticipated operating results;
- our cash position and ability to raise additional capital to finance our activities;
- our ability to protect our intellectual property and other proprietary rights and technologies;
- the impact of and our ability to adapt to changes in laws or regulations and policies;
- the ability to secure any necessary regulatory approvals to commercialize any products;
- the rate and degree of market acceptance of any products developed through the application of genetic engineering, including genetically modified fish;
- our ability to retain and recruit key personnel;
- the success of any of our future acquisitions or investments;
- our expectations regarding the time during which we will be an emerging growth company under the JOBS Act;
- our expectations related to the use of proceeds from this offering; and
- our estimates regarding expenses, future revenue, capital requirements, and needs for additional financing.

We caution you that the foregoing list may not contain all of the forward-looking statements made in this prospectus, any prospectus supplement or the information incorporated by reference herein or therein.

You should not rely upon forward-looking statements included or incorporated by reference in this prospectus or any prospectus supplement as predictions of future events. We have based the forward-looking statements contained in this prospectus and any prospectus supplement primarily on our current expectations and projections about future events and trends that we believe may affect our business, financial condition, results of operations and prospects. The outcome of the events described in these forward-looking statements is subject to risks, uncertainties and other factors described in “Risk Factors” and elsewhere in this prospectus, any prospectus supplement any the information incorporated by reference herein or therein. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time, and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements.

PROSPECTUS SUMMARY

This summary highlights selected information that is presented in greater detail elsewhere, or incorporated by reference, in this prospectus. This summary does not contain all of the information you should consider before investing in our securities. You should carefully read this entire prospectus and any applicable prospectus supplement, including each of the documents incorporated herein or therein by reference, before making an investment decision.

Our Company

AquaBounty Technologies, Inc. is a biotechnology company focused on enhancing productivity in the fast-growing aquaculture market. We use genetic modification and other molecular biologic techniques to improve the quality and yield of fish stocks and help the aquaculture industry meet growing consumer demand. Since 2008, we have been focused on the regulatory approval of our first product, AquAdvantage® Salmon, which features accelerated growth during its early development stages and improved feed conversion rates. These qualities reduce both farming time from the 28 to 36 months for conventional Atlantic salmon to 18 to 20 months and the amount of feed required to produce a harvest. In November 2015, we received approval from the U.S. Food and Drug Administration for the production, sale, and consumption of AquAdvantage Salmon in the United States, and, in May 2016, we received approval from Health Canada, the department of the government of Canada with responsibility for national public health, for the production, sale, and consumption of AquAdvantage Salmon as a novel food and feed in Canada. Although genetically modified crops have been accepted by consumers in the United States and South America for some time, AquAdvantage Salmon is the first genetically modified animal to be approved for human consumption. We intend to deploy AquAdvantage Salmon in land-based, contained, freshwater aquaculture systems, which would allow inland fish farms to be established close to major demand centers in a profitable and environmentally sustainable manner. Environmental benefits would include a lower carbon footprint due to local production, reduced impact on the environment compared to conventional sea-cage production, reduced exposure of the fish to the environmental toxins found in marine environments, and minimized reliance on chemotherapeutics due to reduced exposure to disease and parasites. The technology underlying AquAdvantage Salmon offers the potential to reintroduce salmon aquaculture in the United States, which imported more than \$3.1 billion of Atlantic salmon in 2017 according to the U.S. Department of Commerce.

We are an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year 2023, (2) the last day of the fiscal year in which we have total annual gross revenue of at least \$1.07 billion, (3) the date on which we are deemed to be a large accelerated filer (this means the market value of our common stock that is held by non-affiliates exceeds \$700 million as of the end of the second quarter of that fiscal year), or (4) the date on which we have issued more than \$1.07 billion in non-convertible debt securities during the prior three-year period.

Corporate Information

AquaBounty Technologies, Inc. (the “Parent”) was incorporated in Delaware in December 1991 as A/F Protein, Inc. for the purpose of conducting research and development of the commercial viability of a group of proteins commonly known as antifreeze proteins (AFPs). The Parent changed its name to Aqua Bounty Farms, Inc. in March 2000 and to AquaBounty Technologies, Inc. in June 2004. AQUA Bounty Canada Inc. (the “Canadian Subsidiary”), a wholly owned subsidiary of the Parent, was incorporated in January 1994 in Canada for the purpose of establishing a biotechnology laboratory to conduct research and development programs related to the Parent’s technologies and to commercialize the Parent’s products. AquaBounty Panama, S. de R.L. was incorporated in May 2008 in Panama for the purpose of conducting commercial trials of the Parent’s products and is jointly owned by the Parent and the Canadian Subsidiary. AquaBounty Farms, Inc. (the “US Subsidiary”), a wholly owned subsidiary of the Parent, was incorporated in December 2014 in the State of Delaware for the purpose of conducting field trials and commercializing the Parent’s products in the United States. AquaBounty Brasil Participacoes Ltda. was incorporated in May 2015 in Brazil for the purpose of conducting field trials and commercializing the Parent’s products and is jointly owned by the Parent and the US Subsidiary. AquaBounty Farms Indiana LLC, a wholly owned subsidiary of the US Subsidiary, was formed in June 2017 in the State of Delaware for the purpose of operating its aquaculture facility in Albany, Indiana. The Parent consolidates the financial results of its direct and indirect subsidiaries.

Based on a Schedule 13D/A filed on January 19, 2018, by Randal J. Kirk, Intrexon Corporation (“Intrexon”), and Third Security, LLC (“Third Security”), Intrexon currently owns 6,700,738 shares of our common stock and has the right to acquire 1,538,461 additional shares upon exercise of warrants purchased by Intrexon on January 17, 2018, which are immediately exercisable. Intrexon therefore currently holds approximately 53% of our outstanding common stock and would own approximately 58% of our common stock upon exercise of those warrants. In addition, entities controlled by Randal J. Kirk, including Third Security and its affiliates other than Intrexon currently hold 837,554 shares of our common stock, or approximately 6% of our shares following exercise of the Intrexon warrants. Based on these holdings, Randal J. Kirk, Intrexon’s Chairman, Chief Executive Officer, and controlling shareholder, and Third Security’s Chief Executive Officer and Senior Managing Director, has reported control over approximately 64% of our outstanding stock following exercise of the Intrexon warrants.

For more information regarding Intrexon's relationship with the Company, see each of the following, which are incorporated by reference herein: both "— Research and Development" in Item I and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the year ended December 31, 2017; the "Risk Factors" in that Form 10-K; our audited consolidated financial statements and related notes in that Form 10-K; and "Related Party Transactions, Policies, and Procedures" in our proxy statement for our 2018 annual meeting of stockholders.

For more information on the ownership of our common stock and warrants, see Note 9 in the Notes to Consolidated Financial Statements contained in Item 8 in our Annual Report on Form 10-K for the year ended December 31, 2017, which is incorporated by reference herein, and related information in any prospectus supplement.

Our principal executive offices are located at Two Mill & Main Place, Suite 395, Maynard, Massachusetts 01754, telephone (978) 648-6000. Our website address is www.aquabounty.com. Information contained on or that can be accessed through our website does not constitute part of this prospectus and inclusions of our website address in this prospectus are inactive textual references only.

The Securities We May Offer

We may offer up to \$100,000,000 of common stock, preferred stock, warrants, and/or units in one or more offerings and in any combination. This prospectus provides you with a general description of the securities we may offer. A prospectus supplement, which we will provide each time we offer securities, will describe the specific amounts, prices, and terms of these securities.

Common Stock

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders. We have not provided for cumulative voting for the election of directors in our Third Amended and Restated Certificate of Incorporation, as amended (our "Charter"). Subject to preferences that may apply to any shares of preferred stock outstanding at the time, the holders of our common stock are entitled to receive dividends out of funds legally available if our board of directors, in its discretion, determines to issue dividends and then only at the times and in the amounts that our board of directors may determine. If we become subject to a liquidation, dissolution, or winding-up, the assets legally available for distribution to our stockholders would be distributable ratably among the holders of our common stock and any participating preferred stock outstanding at that time, subject to prior satisfaction of all outstanding debt and liabilities and the preferential rights of and the payment of liquidation preferences, if any, on any outstanding shares of preferred stock.

Preferred Stock

Our Board is authorized, subject to limitations prescribed by Delaware law, to issue preferred stock in one or more series; to establish from time to time the number of shares to be included in each series; and to fix the designation, powers, preferences, and rights of the shares of each series and any of its qualifications, limitations, or restrictions, in each case without further vote or action by our stockholders.

Each series of preferred stock, if issued, will be more fully described in the particular prospectus supplement that will accompany this prospectus, including redemption provisions; rights in the event of our liquidation, dissolution, or winding up; voting rights; and rights to convert into common stock. We have no present plans to issue any shares of preferred stock nor are any shares of our preferred stock presently outstanding.

Warrants

We may issue warrants for the purchase of common stock or preferred stock. We may issue warrants independently or together with other securities.

Units

We may issue units comprised of one or more of the other classes of securities issued by us as described in this prospectus in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit.

Warrant Shares

This prospectus also relates to the issuance of the Warrant Shares upon exercise of certain of the Outstanding Warrants. The Outstanding Warrants and Warrant Shares were previously registered under the Prior Registration Statement. The material terms of the Outstanding Warrants are summarized herein, which summaries are qualified in their entirety by reference to the forms of warrants and warrant agreements incorporated by reference as exhibits to the registration statement of which this prospectus is a part. To the extent that the terms of the offering and issuance of the Warrant Shares materially differs from those terms disclosed in this prospectus, we may provide you with a prospectus supplement that will contain specific information about the terms of such offering.

RISK FACTORS

An investment in our securities involves a high degree of risk. The prospectus supplement applicable to each offering of our securities will contain a discussion of the risks applicable to an investment in our securities. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed in the section titled “Risk Factors” in the applicable prospectus supplement, together with all of the other information contained or incorporated by reference in the prospectus supplement or appearing or incorporated by reference in this prospectus. You should also consider the risks, uncertainties, and assumptions discussed under “Part I – Item 1A – Risk Factors,” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, and “Part II – Item 1A – Risk Factors” in our Quarterly Reports on Form 10-Q, all of which are incorporated herein by reference, as they may be amended, supplemented, or superseded from time to time by other reports we file with the SEC in the future and any prospectus supplement related to a particular offering. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations.

RATIO OF EARNINGS TO FIXED CHARGES AND PREFERENCE SECURITY DIVIDENDS

The following table sets forth our ratio of earnings to fixed charges and preference security dividends for the periods shown. You should read this table in conjunction with the consolidated financial statements and notes incorporated by reference in this prospectus. See Exhibit 12.1 hereto for additional details regarding the computation of the ratio of earnings to fixed charges and preference security dividends. Our net losses were insufficient to cover fixed charges in each of the periods presented. Because of these deficiencies, the ratio information is not applicable for such periods.

\$ in millions	Year Ended December 31,				
	2,017	2,016	2,015	2,014	2,013
Ratio of earnings to fixed charges and preference security dividends	—	—	—	—	—
Deficiency of earnings available to cover fixed charges and preferred stock dividends	\$ (9.2)	\$ (8.1)	\$ (7.0)	\$ (7.1)	\$ (4.7)

For purposes of computing the ratio of earnings to combined fixed charges and preferred stock dividends, earnings consist of net loss plus fixed charges. Combined fixed charges and preferred stock dividends consist of interest expense, an estimate of interest within rent expense, and preferred stock dividends.

As of the date of this prospectus, we have not previously paid dividends on any shares of preferred stock, and consequently, our ratio of earnings to preferred share dividends and ratio of earnings to fixed charges would be identical.

USE OF PROCEEDS

Unless otherwise indicated in the prospectus supplement, we will use the net proceeds from the sale of securities by us offered by this prospectus for general corporate purposes, which may include working capital, capital expenditures, and other corporate expenses. The timing and amount of our actual expenditures will be based on many factors, including cash flows from operations and the anticipated growth of our business. As a result, unless otherwise indicated in the prospectus supplement, our management will have broad discretion to allocate the net proceeds of the offerings. Pending their ultimate use, we intend to invest the net proceeds in short-term, investment-grade, interest-bearing instruments.

PLAN OF DISTRIBUTION

This prospectus relates to the possible offer and sale by us, from time to time, in one or more series or issuances and on terms that we will determine at the time of the offering, of any combination of the securities described in this prospectus, up to an aggregate amount of \$100,000,000.

We may sell the securities offered through this prospectus (1) to or through underwriters or dealers, (2) directly to purchasers, including our affiliates, (3) through agents, or (4) through a combination of any these methods. We may use any one or more of the following methods when selling shares:

- on the Nasdaq Capital Market or any other national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- through the writing of options, whether such options are listed on an options exchange or otherwise;
- through ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- through block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- directly to one or more purchasers;
- through agents;
- through purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- through one or more underwriters on a firm commitment or best-efforts basis;
- in an exchange distribution in accordance with the rules of the applicable exchange;
- in privately negotiated transactions;
- through loans or pledges of our common stock to a broker-dealer who may sell shares of our common stock so loaned or, upon a default, may sell or otherwise transfer the pledged stock;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The securities may be distributed at a fixed price or prices, which may be changed; market prices prevailing at the time of sale; prices related to the prevailing market prices; or negotiated prices. The prospectus supplement will include, to the extent required, the following information:

- the terms of the offering;
- the names of any underwriters or agents;
- the name or names of any managing underwriter or underwriters;
- the purchase price of the securities;
- the net proceeds from the sale of the securities;
- any delayed delivery arrangements;
- any underwriting discounts, commissions, and other items constituting underwriters' compensation;

- any initial public offering price;
- any discounts or concessions allowed or reallocated or paid to dealers; and
- any commissions paid to agents.

We may issue to the holders of our common stock on a pro rata basis, for no consideration, subscription rights to purchase shares of our common stock or preferred stock. These subscription rights may or may not be transferable by stockholders. The applicable prospectus supplement will describe the specific terms of any offering of our common or preferred stock through the issuance of subscription rights, including the terms of the subscription rights offering; the terms, procedures, and limitations relating to the exchange and exercise of the subscription rights; and, if applicable, the material terms of any standby underwriting or purchase arrangement entered into by us in connection with the offering of common or preferred stock through the issuance of subscription rights. Pursuant to a requirement by the Financial Industry Regulatory Authority, Inc., or FINRA, the maximum commission or discount to be received by any FINRA member or independent broker-dealer may not be greater than 8% of the maximum gross proceeds of the securities that may be sold under this prospectus.

Sale through Underwriters or Dealers

If underwriters are used in the sale, the underwriters will acquire the securities for their own account, including through underwriting, purchase, security lending, or repurchase agreements with us. The underwriters may resell the securities from time to time in one or more transactions, including negotiated transactions. Underwriters may sell the securities in order to facilitate transactions in any of our other securities (described in this prospectus or otherwise), including other public or private transactions and short sales. Underwriters may offer securities to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. Unless otherwise indicated in the prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions, and the underwriters will be obligated to purchase all the offered securities if they purchase any of them. The underwriters may change from time to time any initial public offering price and any discounts or concessions allowed or reallocated or paid to dealers. The prospectus supplement will include the names of the principal underwriters, the respective amount of securities underwritten, the nature of the obligation of the underwriters to take the securities, and the nature of any material relationship between an underwriter and us.

If dealers are used in the sale of securities offered through this prospectus, we will sell the securities to them as principals. They may then resell those securities to the public at varying prices determined by the dealers at the time of resale. The prospectus supplement will include the names of the dealers and the terms of the transaction.

Direct Sales and Sales through Agents

We may sell the securities offered through this prospectus directly. In this case, no underwriters or agents would be involved. Such securities may also be sold through agents designated from time to time. The prospectus supplement will name any agent involved in the offer or sale of the offered securities and will describe any commissions payable to the agent by us. Unless otherwise indicated in the prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its appointment.

We may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities. The terms of any such sales will be described in the prospectus supplement.

Delayed Delivery Contracts

If the prospectus supplement indicates, we may authorize agents, underwriters, or dealers to solicit offers from certain types of institutions to purchase securities at the public offering price under delayed-delivery contracts. These contracts would provide for payment and delivery on a specified date in the future. The contracts would be subject only to those conditions described in the prospectus supplement. The applicable prospectus supplement will describe the commission payable for solicitation of those contracts.

Market Making, Stabilization, and Other Transactions

Unless the applicable prospectus supplement states otherwise, each series of offered securities will be a new issue and will have no established trading market. We may elect to list any series of offered securities on an exchange. Any underwriters that we use in the sale of offered securities may make a market in such securities but may discontinue such market making at any time without notice. Therefore, we cannot assure you that the securities will have a liquid trading market.

Any underwriter may also engage in stabilizing transactions, syndicate covering transactions, and penalty bids in accordance with Rule 104 under the Exchange Act. Stabilizing transactions involve bids to purchase the underlying security in the open market for the purpose of pegging, fixing, or maintaining the price of the securities. Syndicate covering transactions involve purchases of the securities in the open market after the distribution has been completed in order to cover syndicate short positions. Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the securities originally sold by the syndicate member

are purchased in a syndicate covering transaction to cover syndicate short positions. Stabilizing transactions, syndicate covering transactions, and penalty bids may cause the price of the securities to be higher than it would be in the absence of the transactions. The underwriters may, if they commence these transactions, discontinue them at any time.

Derivative Transactions and Hedging

We or the underwriters or other agents may engage in derivative transactions involving the securities. These derivatives may consist of short sale transactions and other hedging activities. The underwriters or agents may acquire a long or short position in the securities, hold or resell securities acquired, and purchase options or futures on the securities and other derivative instruments with returns linked to or related to changes in the price of the securities. In order to facilitate these derivative transactions, we may enter into security lending or repurchase agreements with the underwriters or agents. The underwriters or agents may effect the derivative transactions through sales of the securities to the public, including short sales, or by lending the securities in order to facilitate short sale transactions by others. The underwriters or agents may also use the securities purchased or borrowed from us or others (or, in the case of derivatives, securities received from us in settlement of those derivatives) to directly or indirectly settle sales of the securities or close out any related open borrowings of the securities.

Electronic Auctions

We may also make sales through the Internet or through other electronic means. Since we may from time to time elect to offer securities directly to the public, with or without the involvement of agents, underwriters, or dealers, utilizing the Internet or other forms of electronic bidding or ordering systems for the pricing and allocation of such securities, you should pay particular attention to the description of that system we will provide in a prospectus supplement.

Such electronic system may allow bidders to directly participate, through electronic access to an auction site, by submitting conditional offers to buy that are subject to acceptance by us and may directly affect the price or other terms and conditions at which such securities are sold. These bidding or ordering systems may present to each bidder, on a so-called "real-time" basis, relevant information to assist in making a bid, such as the clearing spread at which the offering would be sold, based on the bids submitted, and whether a bidder's individual bids would be accepted, prorated, or rejected. Of course, many pricing methods can and may also be used.

Upon completion of such an electronic auction process, securities will be allocated based on prices bid, terms of bid, or other factors. The final offering price at which securities would be sold and the allocation of securities among bidders would be based in whole or in part on the results of the Internet or other electronic bidding process or auction.

General Information

Agents, underwriters, and dealers may be entitled, under agreements entered into with us, to indemnification by us against certain liabilities, including liabilities under the Securities Act.

DESCRIPTION OF CAPITAL STOCK

General

The following description summarizes the most important terms of our capital stock. We adopted our Charter in connection with the registration of our common stock on the Nasdaq stock market, and this description summarizes the provisions included in such document, as well as those contained in our Amended and Restated Bylaws (our “Bylaws”). Because it is only a summary, it does not contain all the information that may be important to you. For a complete description of the matters set forth in this “Description of Capital Stock,” you should refer to our Charter and Bylaws, which have been filed with the SEC and are incorporated by reference into the registration statement of which this prospectus is a part, and to the applicable provisions of Delaware law. Our authorized capital stock consists of 200,000,000 shares of common stock, \$0.001 par value per share, and 40,000,000 shares of undesignated preferred stock, \$0.01 par value per share. At our annual meeting of stockholders to be held on May 1, 2018, we will be seeking stockholder approval of an amendment to our Charter to implement a reduction in the number of shares of authorized common stock from 200,000,000 shares to 50,000,000 and in the number of shares of undesignated preferred stock from 40,000,000 to 5,000,000.

As of April 30, 2018, there were 12,680,533 shares of our common stock outstanding, held by 344 stockholders of record, and no shares of our preferred stock outstanding. Included in the outstanding shares of our common stock are 12,844 shares of restricted stock that are subject to vesting requirements. Our board of directors is authorized, without stockholder approval except as required by the listing standards of the Nasdaq Capital Market, to issue additional shares of our capital stock.

Common Stock

Dividend Rights

Subject to preferences that may apply to any shares of preferred stock outstanding at the time, the holders of our common stock are entitled to receive dividends out of funds legally available if our board of directors, in its discretion, determines to issue dividends and then only at the times and in the amounts that our board of directors may determine.

Voting Rights

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders. Our Charter does not provide for cumulative voting for the election of directors or for a classified board of directors.

No Preemptive or Similar Rights

Our common stock is not entitled to preemptive rights, and is not subject to conversion, redemption, or sinking fund provisions.

Right to Receive Liquidation Distributions

If we become subject to a liquidation, dissolution, or winding-up, the assets legally available for distribution to our stockholders would be distributable ratably among the holders of our common stock and any participating preferred stock outstanding at that time, subject to prior satisfaction of all outstanding debt and liabilities and the preferential rights of and the payment of liquidation preferences, if any, on any outstanding shares of preferred stock.

Fully Paid and Non-Assessable

All of the outstanding shares of our common stock are, and the shares of our common stock to be issued by us pursuant to this offering will be, fully paid and non-assessable.

Preferred Stock

Our Board is authorized, subject to limitations prescribed by Delaware law, to issue preferred stock in one or more series; to establish from time to time the number of shares to be included in each series; and to fix the designation, powers, preferences, and rights of the shares of each series and any of its qualifications, limitations, or restrictions, in each case without further vote or action by our stockholders. Our board of directors can also increase or decrease the number of shares of any series of preferred stock, but not below the number of shares of that series then outstanding, without any further vote or action by our stockholders. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring, or preventing a change in control of our company and might adversely affect the market price of our common stock and the voting and other rights of the holders of our common stock. We have no current plan to issue any shares of preferred stock.

We will fix the rights, preferences, and privileges of the preferred stock of each such series, as well as any qualifications, limitations, or restrictions thereon, in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of

which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of that series of preferred stock. This description will include:

- the title and stated value;
- the number of shares we are offering;
- the liquidation preference per share;
- the purchase price;
- the dividend rate, period, payment date, and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- the procedures for any auction and remarketing, if any;
- the provisions for a sinking fund, if any;
- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
- any listing of the preferred stock on any securities exchange or market;
- voting rights, if any, of the preferred stock;
- preemptive rights, if any;
- restrictions on transfer, sale, or other assignment, if any;
- whether interests in the preferred stock will be represented by depositary shares;
- a discussion of any material United States federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve, or wind up our affairs;
- any limitations on the issuance of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock as to dividend rights and rights if we liquidate, dissolve, or wind up our affairs; and
- any other specific terms, preferences, rights, or limitations of, or restrictions on, the preferred stock.

The General Corporation Law of the State of Delaware, the state of our incorporation, provides that the holders of preferred stock will have the right to vote separately as a class (or, in some cases, as a series) on an amendment to our Charter if the amendment would change the par value; the number of authorized shares of the class; or the powers, preferences, or special rights of the class or series so as to adversely affect the class or series, as the case may be. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring, or preventing a change in our control and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. Additionally, the issuance of preferred stock may have the effect of decreasing the market price of our common stock.

Outstanding Warrants

As of April 30, 2018, we had warrants outstanding and exercisable for 4,164,172 shares of our common stock (defined above as the “Outstanding Warrants”). Below is a summary of the Outstanding Warrants.

The material terms and provisions of the Outstanding Warrants issued pursuant to the Prior Registration Statement are summarized below. The following description is subject to, and qualified in its entirety by, the form of Common Stock Purchase Warrant, which was filed as an exhibit to our registration statement on Form S-1 that was filed on January 9, 2018. You should review a copy of the form of Common Stock Purchase Warrant for a complete description of the terms and conditions applicable to the Outstanding Warrants. The offering and sale of the Outstanding Warrants, and the shares of common stock underlying the Outstanding Warrants, were registered under the Prior Registration Statement.

Term

The Outstanding Warrants are exercisable upon issuance and for five years from the date of issuance but not thereafter.

Exercise Price

The exercise price of the Outstanding Warrants is \$3.25 per share. The exercise price and number of shares of our common stock issuable upon the exercise of the Outstanding Warrants are subject to adjustment in the event of any stock dividend, stock split, reverse stock split, recapitalization, reorganization, or similar transaction. The exercise price can also be lowered by us for any period of time, with the prior written consent of the holders of a majority in interest of the Outstanding Warrants then outstanding, unless prohibited by the listing rules of the exchange on which our common stock is listed.

Exercisability

The Outstanding Warrants are immediately exercisable upon issuance and are exercisable at any time during the term of the Outstanding Warrants. The Outstanding Warrants are exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise.

No Fractional Shares

No fractional shares or scrip representing fractional shares shall be issued upon the exercise of any of the Outstanding Warrants. As to any fraction of a share that the holder would otherwise be entitled to purchase upon such exercise, we shall, at our election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the exercise price of the Outstanding Warrants or round up to the next whole share.

Transferability

Subject to applicable laws, any Outstanding Warrant may be transferred at the option of the holder thereof upon surrender of that Outstanding Warrant to us, together with the appropriate instruments of transfer, provided that we may require an opinion of counsel in connection with certain transfers.

Authorized Shares

During the period the Outstanding Warrants are outstanding, we will reserve from our authorized and unissued common stock a sufficient number of shares to provide for the issuance of shares of common stock underlying the Outstanding Warrants upon the exercise of the Outstanding Warrants.

Fundamental Transactions

In the event of any fundamental transaction, as described in the Outstanding Warrants, which include, generally, any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our common stock, then, upon any subsequent exercise of a Outstanding Warrant, the holder shall have the right to receive as alternative consideration, for each share of our common stock that would have been issuable upon such exercise immediately prior to the occurrence of such fundamental transaction, the number of shares of common stock of the successor or acquiring corporation or of us, if we are the surviving corporation, and any additional consideration receivable upon or as a result of such transaction by a holder of the number of shares of our common stock for which the Outstanding Warrant is exercisable immediately prior to such event. Any successor to us or surviving entity is obligated to assume the obligations under the Outstanding Warrants. In the event of certain fundamental transactions, the Company shall, at each Outstanding Warrant holder's option, purchase such holder's Outstanding Warrant by paying an amount in cash equal to the Black Scholes value of the remaining unexercised portion of such Outstanding Warrant.

Right as a Stockholder

Except as otherwise provided in the Outstanding Warrants or by virtue of a holder's ownership of shares of our common stock, the holders of the Outstanding Warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until they exercise their Outstanding Warrants.

Waiver and Amendments

The terms of any Outstanding Warrant, other than a lowering of the exercise price as described above, may be amended or waived with our written consent and the written consent of the holder of such Outstanding Warrant.

Beneficial Ownership Limitation

Subject to limited exceptions, a holder of an Outstanding Warrant will not have the right to exercise any portion thereof if the holder (together with such holder's affiliates, and any persons acting as a group together with such holder or any of such holder's affiliates)

would beneficially own a number of shares of our common stock in excess of 4.99% (or, at the election of the holder, 9.99%) of the shares of our common stock then outstanding immediately after giving effect to such exercise (the “Beneficial Ownership Limitation”); provided, however, that upon notice to us, the holder may increase or decrease the Beneficial Ownership Limitation; and, provided further, that in no event shall the Beneficial Ownership Limitation exceed 9.99% and in no event shall any increase in the Beneficial Ownership Limitation be effective until 61 days following notice of such increase from the holder to us.

Registration Rights

There are no rights with regard to registration under the Securities Act of 1933 of our common stock or preferred stock.

Anti-Takeover Provisions

The provisions of Delaware law, our Charter, and our Bylaws, which are summarized below, may have the effect of delaying, deferring, or discouraging another person from acquiring control of our company. They are also designed, in part, to encourage persons seeking to acquire control of us to negotiate first with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging a proposal to acquire us because negotiation of these proposals could result in an improvement of their terms.

Delaware Law

We are governed by the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a public Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A “business combination” includes mergers, asset sales, or other transactions resulting in a financial benefit to the stockholder. An “interested stockholder” is a person who, together with affiliates and associates, owns, or within three years did own, 15% or more of the corporation’s outstanding voting stock. These provisions may have the effect of delaying, deferring, or preventing a change in our control.

Third Amended and Restated Certificate of Incorporation and Amended and Restated Bylaw Provisions

Our Charter and our Bylaws include a number of provisions that could deter hostile takeovers or delay or prevent changes in control of our board of directors or management team, including the following:

- *Board of Directors Vacancies.* Our Charter and Bylaws authorize only our board of directors to fill vacant directorships, including newly created seats. In addition, the number of directors constituting our board of directors will be permitted to be set only by a resolution adopted by a majority vote of our entire board of directors. These provisions would prevent a stockholder from increasing the size of our board of directors and then gaining control of our board of directors by filling the resulting vacancies with its own nominees. This makes it more difficult to change the composition of our board of directors and promotes continuity of management.
- *Stockholder Action; Special Meeting of Stockholders.* Our Charter provides that our stockholders may not take action by written consent, but may only take action at annual or special meetings of our stockholders. As a result, a holder controlling a majority of our capital stock would not be able to amend our Bylaws or remove directors without holding a meeting of our stockholders called in accordance with our Bylaws. Our Bylaws further provide that special meetings of our stockholders may be called only by the Chairman of our board of directors or our Chief Executive Officer, thus prohibiting a stockholder from calling a special meeting. These provisions might delay the ability of our stockholders to force consideration of a proposal or for stockholders controlling a majority of our capital stock to take any action, including the removal of directors.
- *Advance Notice Requirements for Stockholder Proposals and Director Nominations.* Our Bylaws provide advance notice procedures for stockholders seeking to bring business before our annual meeting of stockholders or to nominate candidates for election as directors at our annual meeting of stockholders. Our Bylaws also specify certain requirements regarding the form and content of a stockholder’s notice. These provisions might preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders if the proper procedures are not followed. We expect that these provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer’s own slate of directors or otherwise attempting to obtain control of our company.
- *No Cumulative Voting.* The Delaware General Corporation Law provides that stockholders are not entitled to cumulate votes in the election of directors unless a corporation’s certificate of incorporation provides otherwise. Our Charter does not provide for cumulative voting.

- *Removal of Directors.* Our Charter provides that stockholders may remove directors for cause only by affirmative vote of a majority of the voting power of the outstanding voting stock and without cause only by affirmative vote of two-thirds of the voting power of our then-outstanding voting stock.
- *Amendment of Charter or Bylaw Provisions.* Any amendment of the above provisions in our Charter or Bylaws would require approval by holders of at least two-thirds of the voting power of our then-outstanding voting stock.
- *Issuance of Undesignated Preferred Stock.* Our board of directors has the authority, without further action by the stockholders, to issue up to 40,000,000 shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by our board of directors; our stockholders may approve a proposal to reduce this number of authorized shares to 5,000,000 at our 2018 annual meeting of stockholders to be held on May 1, 2018. The existence of authorized but unissued shares of preferred stock would enable our board of directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest, or other means.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A.

Listing

Our common stock is listed on the Nasdaq Capital Market under the symbol "AQB."

DESCRIPTION OF THE WARRANTS

General

We may issue warrants for the purchase of our preferred stock, common stock, or any combination thereof. Warrants may be issued independently or together with our preferred stock or common stock and may be attached to or separate from any offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent. The warrant agent will act solely as our agent in connection with the warrants. The warrant agent will not have any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. This summary of certain provisions of the warrants is not complete. For the terms of a particular series of warrants, you should refer to the prospectus supplement for that series of warrants and the warrant agreement for that particular series.

Equity Warrants

The prospectus supplement relating to a particular series of warrants to purchase our common stock or preferred stock will describe the terms of the warrants, including the following:

- the title of the warrants;
- the offering price for the warrants, if any;
- the aggregate number of warrants;
- the designation and terms of the common stock or preferred stock that may be purchased upon exercise of the warrants;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each security;
- if applicable, the date from and after which the warrants and any securities issued with the warrants will be separately transferable;
- the number of shares of common stock or preferred stock that may be purchased upon exercise of a warrant and the exercise price for the warrants;
- the dates on which the right to exercise the warrants shall commence and expire;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- if applicable, a discussion of material U.S. federal income tax considerations;
- the antidilution provisions of the warrants, if any;
- the redemption or call provisions, if any, applicable to the warrants;
- any provisions with respect to the holder's right to require us to repurchase the warrants upon a change in control or similar event; and
- any additional terms of the warrants, including procedures and limitations relating to the exchange, exercise, and settlement of the warrants.

Holders of equity warrants will not be entitled:

- to vote, consent, or receive dividends;
- receive notice as stockholders with respect to any meeting of stockholders for the election of our directors or any other matter; or
- exercise any rights as stockholders of us.

DESCRIPTION OF THE UNITS

We may issue units comprised of one or more of the other classes of securities described in this prospectus in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The units may be issued under unit agreements to be entered into between us and a unit agent, as detailed in the prospectus supplement relating to the units being offered. The prospectus supplement will describe:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances the securities comprising the units may be held or transferred separately;
- a description of the terms of any unit agreement governing the units;
- a description of the provisions for the payment, settlement, transfer, or exchange of the units;
- a discussion of material federal income tax considerations, if applicable; and
- whether the units if issued as a separate security will be issued in fully registered or global form.

The descriptions of the units in this prospectus and in any prospectus supplement are summaries of the material provisions of the applicable agreements. These descriptions do not restate those agreements in their entirety and may not contain all the information that you may find useful. We urge you to read the applicable agreements because they, and not the summaries, define your rights as holders of the units. For more information, please review the forms of the relevant agreements, which will be filed with the SEC promptly after the offering of units and will be available as described in the section titled “Where You Can Find More Information.”

LEGAL MATTERS

Goodwin Procter LLP, Boston, Massachusetts, will pass upon the validity of the securities being offered by this prospectus.

EXPERTS

The financial statements of the Company, incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended December 31, 2017, have been audited by Wolf & Company, P.C., an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference. Such financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

INCORPORATION BY REFERENCE

The SEC allows us to "incorporate by reference" information in this prospectus that we have filed with it. This means that we can disclose important information to you by referring you to another document already on file with the SEC. The information contained in this prospectus updates and supersedes the information incorporated by reference herein to the extent there are any inconsistencies. This prospectus incorporates by reference the documents listed below that we have previously filed with the SEC (excluding any document, or portion thereof, to the extent disclosure is furnished and not filed):

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed with the SEC on March 8, 2018;
- our Definitive Proxy Statement on Schedule 14A filed with the SEC on April 3, 2018; and
- our Current Reports on Form 8-K filed with the SEC on January 16, 2018, and March 8, 2018.

We will provide to each person, including any beneficial owners, to whom a prospectus is delivered, upon written or oral request of any such person, a copy of the reports and documents that have been incorporated by reference into this prospectus, at no cost. Any such request should be directed to: AquaBounty Technologies, Inc. Two Mill & Main Place, Suite 395 Maynard, Massachusetts 01754 Attention: Corporate Secretary. These documents are also available on the Investor Relations section of our website, which is located at www.aquabounty.com, or as described under "Where You Can Find More Information," below. The reference to our website address does not constitute incorporation by reference of the information contained on our website. Further, the public may read and copy any materials the Company files with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D. C. 20549. Information on the operation of the Public Reference Room can be obtained by calling the SEC at 1-800-SEC-0330. The SEC maintains a website that contains reports, proxy and information statements, and other information regarding our filings at <http://www.sec.gov>.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly, and other reports, proxy statements, and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. You may also read and copy any document we file at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, including any amendments to those reports, and other information that we file with or furnish to the SEC pursuant to Sections 13(a) or 15(d) of the Exchange Act can also be accessed free of charge through the Internet. These filings will be available as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. We have filed with the SEC a registration statement under the Securities Act of 1933 relating to the offering of these securities. The registration statement, including the attached exhibits, contains additional relevant information about us and the securities. This prospectus does not contain all of the information set forth in the registration statement. You can obtain a copy of the registration statement, at prescribed rates, from the SEC at the address listed above. The registration statement and the documents referred to above under "Incorporation by Reference" are also available on our Internet website, www.aquabounty.com. We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this prospectus.



Shares of common stock

H.C. Wainwright & Co.

April , 2019