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

Form 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2016

Commission file number: 001-36426

AquaBounty Technologies, Inc.

(Exact name of the registrant as specified in its charter)

Delaware	**04-3156167**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. employer identification no.)*

Two Mill & Main Place, Suite 395
Maynard, Massachusetts 01754
(978) 648-6000

(Address and telephone number of the registrant's principal executive offices)

Securities registered pursuant to Section 12(b) of the Securities Exchange Act of 1934 (the "Exchange Act"):

Title of each class	**Name of exchange on which registered**
Common Stock, par value $0.001 per share	The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act*:* None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the *Securities Act of 1933.*

Yes ☐ No ☑

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the *Exchange Act.*

Yes ☐ No ☑

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the *Exchange Act* during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or such shorter period that the registrant was required to submit and post such files).

Yes ☐ No ☐ **N/A**

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☑

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the *Exchange Act.* (Check one):

Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer ☑ Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the *Exchange Act*).

Yes ☐ No ☑

At June 30, 2016, the aggregate market value of the 1,146,701 Common Shares held by non-affiliates of the registrant was approximately $11.3 million. At March 10, 2017, the registrant had 8,885,009 Common Shares outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for its Annual Meeting of Shareholders to be held on May 23, 2017 (the "2017 Proxy Statement"), are incorporated by reference into Part III of this Annual Report on Form 10-K.

ANNUAL REPORT ON FORM 10-K
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2016
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Cautionary Note Regarding Forward-Looking Statements

This Annual Report on Form 10-K contains “forward-looking statements.” Forward-looking statements include any statements that address future results or occurrences. In some cases, you can identify forward-looking statements by terminology such as “may,” “might,” “will,” “would,” “should,” “could,” or the negatives thereof. Generally, the words “anticipate,” “believe,” “continue,” “expect,” “intend,” “estimate,” “project,” “plan,” and similar expressions identify forward-looking statements. In particular, statements about our expectations, beliefs, plans, objectives, assumptions, or future events or performance contained in this Annual Report on Form 10-K in “Business,” “Risk Factors,” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” are forward-looking statements. These forward-looking statements include statements that are not historical facts, including statements regarding management’s expectations for future financial and operational performance and operating expenditures, expected growth, and business outlook; the nature of and progress toward our commercialization plan; the future introduction of our products to consumers; the countries in which we may obtain regulatory approval and the progress toward such approvals; any continued backing by our majority shareholder, Intrexon Corporation; the volume of eggs or fish we may be able to produce; the timeline for our production of saleable fish; the expected advantages of land-based systems over sea cage production; the validity and impact of legal actions; the potential for lifting of the FDA Import Alert and the issuance of labeling guidance; the completion of renovations at our new hatchery facility and the construction of a pilot-scale grow-out unit; and the establishment of a larger-scale grow-out facility.

We have based these forward-looking statements on our current expectations, assumptions, estimates, and projections. While we believe these expectations, assumptions, estimates, and projections are reasonable, such forward-looking statements are only predictions and involve known and unknown risks, uncertainties, and other factors, many of which are outside of our control, which could cause our actual results, performance, or achievements to differ materially from any results, performance, or achievements expressed or implied by such forward-looking statements. These risks, uncertainties, and other factors include, but are not limited to:

- the anticipated benefits and characteristics of our AquAdvantage® Salmon product;
- the uncertainty of achieving the business plan, future revenue, and operating results;
- developments concerning our research projects;
- our ability to successfully enter new markets or develop additional products;
- competition from existing technologies and products or new technologies and products that might emerge;
- actual or anticipated variations in our operating results;
- our cash position and ability to raise additional capital to finance our activities;
- market conditions in our industry;
- our ability to protect our intellectual property and other proprietary rights and technologies;
- 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 ability of our majority shareholder, Intrexon Corporation, to control us;

- the success of any of our future acquisitions or investments;
- international business risks and exchange rate fluctuations;
- the possible volatility of our stock price;
- our limited operating history and track record of operating losses; 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 risks to which the forward-looking statements made in this Annual Report on Form 10-K are subject. We may not actually achieve the plans, intentions, or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions, and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in this Annual Report on Form 10-K, particularly in “Risk Factors,” that could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures, or investments that we may make.

Given these risks and uncertainties, you are cautioned not to place undue reliance on such forward-looking statements. These forward-looking statements are made only as of the date of this Annual Report on Form 10-K. We do not undertake and specifically decline any obligation to update any such statements or to publicly announce the results of any revisions to any such statements to reflect future events or developments unless required by federal securities law. New risks emerge from time to time, and it is not possible for us to predict all such risks.

Where You Can Find More Information

We file with the Securities and Exchange Commission (the “SEC”) periodic reports and other information, including our Annual Report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports. The SEC maintains an internet site at www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers that file, as we do, electronically with the SEC.

All of these documents are available free of charge on our website, www.aquabounty.com, and will be provided free of charge to any shareholders requesting a copy by writing to: Corporate Secretary, AquaBounty Technologies, Inc., 2 Mill & Main Place, Suite 395, Maynard Massachusetts 01754, Telephone: (978) 648-6000. We use our website as a channel for routine distribution of important information, including news releases, analyst presentations, and financial information. In addition, our website allows investors and other interested persons to sign up to automatically receive e-mail alerts when we post news releases and financial information on our website. The information contained on, or accessible from, our website or in any other report or document we file with or furnish to the SEC is intended to be inactive textual references only, and is not incorporated by reference into this Annual Report on Form 10-K.

Part I

Item 1. Business

Overview

AquaBounty Technologies, Inc., a Delaware corporation, was formed on December 17, 1991. Unless otherwise noted or indicated by the context, the terms “AquaBounty,” “the Company,” “we,” “us,” and “our” refer to AquaBounty Technologies, Inc., together with its consolidated subsidiaries. Headquartered in Maynard, Massachusetts, we are a biotechnology company focused on enhancing productivity in the fast-growing aquaculture market. 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.

Our common stock has been listed on AIM, the London Stock Exchange’s international market for smaller growing companies, since 2006. On January 18, 2017, we sold 2,421,073 shares of our common stock to Intrexon Corporation (“Intrexon”), our controlling shareholder, for proceeds of approximately $25 million. Following the closing of this sale, Intrexon distributed 1,776,557 shares of our common stock that it held prior to the closing via a share dividend to its shareholders (the “Distribution”). On January 19, 2017, our common stock began “regular way” trading on the NASDAQ Capital Market, and it continues to trade on AIM.

We use genetic modification and other molecular biologic techniques in order 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 AquAdvantage Salmon product, our only reportable business segment. Since that time, we completed the New Animal Drug Application (“NADA”) process with the U.S. Food and Drug Administration (“FDA”) for AquAdvantage Salmon, and, on November 19, 2015, we received approval of the NADA.

On May 19, 2016, we received approval from Health Canada, the department of the government of Canada responsible 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 responsible 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 now 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 also a significant pioneering development in introducing transgenic animals into the food chain. 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. The technology underlying AquAdvantage Salmon offers the potential to reintroduce salmon aquaculture in the United States, which imported more than $2.6 billion of Atlantic salmon in 2016 according to the U.S. Department of Commerce (the “DOC”).

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

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 have never generated revenues from the sale of AquAdvantage Salmon, and we have had no revenues from any other product since 2008. For the years ended December 31, 2016, 2015, and 2014, we incurred net losses of $8.5 million, $7.0 million, and $7.1 million, respectively. As of December 31, 2016, our cumulative losses since inception were $99.3 million, and our total assets were $5.7 million.

Management is evaluating several paths to revenue generation that follow different timelines, including production of our fish at our existing farm in Panama, purchase of an existing production facility in North America, and construction of a new production facility in North America. We have begun an active search in both the United States and Canada for either an existing land-based recirculating aquaculture system facility or a site on which to build a new facility for the commercial production of AAS. Depending on which path or combination of paths is chosen, modest revenues could commence as early as the fourth quarter of 2017 from our Panama farm, with more significant revenues expected once a new facility is in full production.

The Aquaculture Industry

Aquaculture is the farming of aquatic organisms such as fish, shellfish, crustaceans, and aquatic plants. It involves cultivating freshwater or saltwater species under controlled conditions, as an alternative to the commercial harvesting of wild species of aquatic organisms. The aquaculture industry has experienced growth in recent years, and we believe that the aquaculture industry—and in particular salmon farming—is poised for significant additional growth in the coming years as the global population expands.

Salmon Farming

According to industry analyst Kontali Analyse (“Kontali”), and major producer Marine Harvest ASA (“Marine Harvest”), farmed salmon accounted for approximately 70% of the world’s salmon production during 2015. According to the United Nations Food and Agriculture Organization (“FAO”), Atlantic salmon aquaculture production grew by approximately 6.5% annually between 2000 and 2014. Kontali and Marine Harvest have both indicated that they expect increases in demand to drive continued production growth through 2020, although at a lower annual rate of approximately 3.0%, primarily due to supply constraints.

Atlantic salmon farming is a major industry in the cold-water countries of the northern and southern hemispheres. According to the FAO, total production volume of farmed Atlantic salmon during 2014 was 2.3 million metric tons. This production had a market value of over $14.6 billion. Below is a break-down by major producing country for the time period 2008 through 2014, which is the last year for which data is readily available.

Worldwide Atlantic Salmon Production by Country (in metric tons)

Country	2008	2009	2010	2011	2012	2013	2014
Canada	104,075	100,212	101,544	110,328	116,101	100,126	78,979
United States	16,714	14,074	19,535	18,595	19,295	18,685	18,719
Chile	388,847	233,308	123,233	264,349	399,678	492,329	644,459
United Kingdom	128,744	144,663	154,633	158,310	162,547	163,518	165,006
Ireland	9,217	12,210	15,691	12,196	12,440	9,125	9,368
Norway	737,694	862,908	939,536	1,064,868	1,232,095	1,168,324	1,258,356
Faroe Islands	38,494	51,383	45,391	60,473	76,564	75,821	86,454
Australia	25,737	29,893	31,807	36,662	43,982	42,776	41,591
All other	1,745	2,975	6,472	10,393	11,981	25,534	23,356
WW Volume (mt)	1,451,267	1,451,626	1,437,842	1,736,174	2,074,683	2,096,238	2,326,288

Pricing

According to the DOC, which tracks the volume and value of Atlantic salmon imports into the United States, from 2008 to 2015 the average wholesale price of Atlantic salmon imported into the country increased from $3.17 per pound ($7.05/kilogram) to $4.30 per pound ($9.55/kilogram).

The daily spot (farm-gate or wholesale market) price for Atlantic salmon is very volatile due to the species' long production cycle, which typically ranges between two and three years, and its short shelf life, which typically ranges between two and three weeks. Farmed salmon is typically sold as fresh and thus must be consumed within this timeframe. Consequently, the available supply is very inelastic over the short-term, while demand can be very elastic due to price, season, or market size.

Major Producers

The global Atlantic salmon farming industry includes several very large companies with operations in each of the major producing countries. Consolidation has been evident in the past few years as producers attempt to gain competitive cost advantages while overcoming the regulatory challenges associated with developing new marine farm sites. Major market producers, and their primary country of operation, include the following companies: Marine Harvest (Norway), Leroy Seafood Group ASA (Norway), Cermaq ASA (Norway), SalMar ASA (Norway), Empresas AquaChile S.A. (Chile), and Cooke Aquaculture Inc. (Canada).

U.S. Atlantic Salmon Market

According to the DOC, in 2015 the United States imported a record 619 million pounds (279 thousand metric tons) of Atlantic salmon with an aggregate market value of approximately $2.66 billion, or $4.30 per pound. The DOC also reported that over 75% of the total quantity of Atlantic salmon imports into the United States in 2016 originated from Chile and Canada. The Atlantic salmon farming industry in the United States contracted significantly beginning in the 1990s in the face of environmental concerns and lower costs of production from foreign sources, notably Chile. According to the FAO, a total of only 41 million pounds of farmed Atlantic salmon was produced in the United States in 2014, a slight decrease from the previous year.

Despite intensive public consumer education campaigns promoting its health benefits, seafood consumption in the United States still lags behind other protein sources and trails consumption in overseas markets. According to the DOC, during the period from 2007 to 2012, annual seafood consumption in the United States ranged between 14 and 16 pounds per capita, significantly behind consumption of poultry (80 to 85 pounds), beef (57 to 65 pounds), and pork (46 to 50 pounds). In

comparison, according to SeaFood Business magazine, average seafood consumption throughout Europe was 48.5 pounds per capita in 2012.

Perception of Genetically Modified Atlantic Salmon

Though Atlantic salmon is the second-largest-consumed seafood in the United States, activist groups opposing genetic modifications of organisms have recently pressured a number of retail food outlets and grocery chains to publicly state that they will not carry genetically modified Atlantic salmon.

However, we do not expect that this will have a significant impact on overall consumer demand and product placement in the marketplace generally, and in particular the wholesale marketplace. To date, large wholesalers have not followed the example of these retailers, and we believe that there will be sufficient demand from smaller retailers, wholesalers, and institutional seafood buyers to absorb our projected production. We believe that FDA approval reinforces the message that AquAdvantage Salmon is a safe and nutritious seafood product that is equivalent to conventional farmed Atlantic salmon. This belief is based in part on the results of a 2014 survey released by the International Food Information Council, titled “Consumer Perceptions of Food Technology,” which indicated that 59% of consumers are “somewhat” or “very” likely to buy genetically engineered seafood if the FDA deems it safe. Internally generated data has shown that, although AquAdvantage Salmon exhibit an accelerated growth rate in early development stages, they do not grow to a larger end size than conventional Atlantic salmon. Consumer acceptance could be adversely affected if AquAdvantage Salmon were found, or believed, to grow to a larger final size than traditional Atlantic salmon. In addition, our regulatory burdens could also increase. Furthermore, there are surveys that have been cited by various non-governmental organizations (“NGOs”) that indicate that consumers are reluctant to purchase genetically modified food and that they would like to see labeling in order to avoid it. In response, we plan to educate consumers on the benefits of AquAdvantage Salmon versus conventional Atlantic salmon, including better feed conversion (meaning less feed is needed to produce the same harvest), a lower carbon footprint due to local production, reduced impact on the environment and reduced exposure of the fish to environmental toxins due to use of land-based aquaculture systems, and reduced reliance on chemotherapeutics due to improved biosecurity.

Atlantic Salmon Disease Impact

An area of concern with current Atlantic salmon farming techniques is the environmental impact and the cost of disease management associated with those techniques. Salmon farming systems, particularly conventional, open sea-cage systems, are vulnerable to disease introduction and transmission, primarily from the marine environment or adjacent culture systems. The economic impact of disease to these production systems can be significant, as farmers must incur the cost of preventative measures, such as vaccines and antibiotics and then, if infected, the cost of lost or reduced harvests.

The most prevalent disease and health management issues are Infectious Salmon Anemia (“ISA”) and sea lice. ISA is a viral disease in Atlantic salmon, and outbreaks have occurred in virtually every major salmon farming geography since 1984, including a major event in Chile in 2008 that impacted the country’s production for three years. There is currently no effective treatment for the disease, and the salmon farming industry relies on vaccines and health management practices to mitigate its impact. Though primarily occurring in traditional sea-cage farming environments, ISA can also be introduced into populations that are in land-based, self-contained facilities. In November 2009, certain fish from our land-based hatchery on Prince Edward Island tested positive for ISA. We notified the Canadian Department of Fisheries and Oceans (“DFO”) following discovery of the virus, which was diagnosed as a strain with low pathogenicity and of unknown origin. We conducted an extensive screening program of all fish in the facility, destroying any fish that tested positive for ISA.

Subsequent tests conducted by DFO of fish in the facility began in March 2010 and indicated that the virus had been eliminated from the facility. We enacted improvements in biosecurity and facility operation, and the facility regained its disease-free status from DFO after four consecutive tests indicated no presence of the virus. The fish health status of the facility continues to be monitored by the Canadian Food Inspection Agency. The facility has not had any reportable disease outbreaks since the isolated incident in 2009.

Sea lice are marine parasites that occur naturally and attach to the skin of Atlantic salmon. Though a few lice on a large salmon present no problem, the presence of significant numbers can adversely impact the health and aesthetic appearance of the fish. The cost of managing sea lice in sea-cage farming environments can be significant.

The closed, contained, land-based production systems, using technology referred to as recirculating aquaculture systems ("RAS"), proposed for the grow-out of AquAdvantage Salmon are less susceptible, though not immune, to the same disease-related pressures because this type of culture system is isolated from the environment. RAS facilities employ sophisticated water treatment technology including the use of ozone, salt treatment and ultraviolet radiation to kill potential bacterial, fungal, or viral pathogens which might enter the system. In addition, incoming water is similarly filtered and treated prior to entering the system, and water quality is regularly measured as part of the standard procedures. The fish in RAS facilities are generally not vaccinated against typical fish diseases, and no antibiotics, pesticides, or pharmacological agents are typically required. RAS facilities employ effective biosecurity to prevent disease by reducing or eliminating the introduction of pathogens and continuously treating the water to assure optimal fish health.

In contrast, sea cage, or conventional aquaculture fish, are housed in large cages in coastal waterways exposed to currents which can bring a variety of pathogens in contact with the farmed salmon. The presence of pathogens in an uncontrolled environment is a universally accepted fact in human and animal health. The presence of disease agents in these uncontrolled water currents could result in infection and spread of infection within the captive population. The risks and outcomes of conventional, open sea-cage systems are well established, and are often evidenced by outbreaks of a variety of bacterial and viral diseases as well as water fouling and contamination due to algal blooms and similar events. Furthermore, the use of antibiotics, vaccines, and other pharmacological agents is similarly well documented in conventional systems, presenting a risk to the environment and also to the consumers of treated fish.

Further, stocking RAS facilities with disease-free eggs results in a much higher degree of biosecurity and protection from disease. We expect that production and economic losses due to disease will be significantly less in the closed, land-based culture systems proposed for the production of AquAdvantage Salmon, because of greater control over environmental conditions and superior biosecurity than in traditional Atlantic salmon production systems.

Restrictions on Atlantic Salmon Farming

Environmental concerns have led certain states to impose legislative and regulatory restrictions or bans on the farming of Atlantic salmon. This could reduce the number of potential sites available to us for production farms in the United States. Nevertheless, we expect that many states will offer excellent potential sites for AquAdvantage Salmon production systems.

Our Product

Our product, AquAdvantage Salmon, is a genetically modified Atlantic salmon that can grow to marketable size in about half the time of traditional farmed Atlantic salmon. By placing the salmon growth hormone under the control of an alternative genetic promoter (gene switch) from the ocean pout, an edible marine fish, more consistent levels of growth hormone are released, which

accelerates the early stages of the salmon's development. Based on internally generated data, we have determined that the AquAdvantage Salmon do not reach a larger final size than their traditional counterparts. However, by accelerating growth in the early stages of rearing, these fish can reach a marketable size sooner. In the case of Atlantic salmon, this can reduce farming time from 28 to 36 months to 18 to 20 months.

This accelerated growth has several advantages, both economic and environmental. The faster life cycle, from birth to harvesting, of AquAdvantage Salmon as compared to conventional salmon would allow it to be produced more economically in contained inland systems. Although this would require greater capital investment than the sea cage approach, we believe that the higher costs would be offset by more efficient growth, better feed conversion, reduced exposure to environmental toxins, and more effective control of disease. In addition, with a facility located nearer to the major food markets, we believe there would be savings on transportation of the harvested stock, a reduced carbon footprint, and an improved ability to get fresh product to market faster.

Plan of Operation

Our core business is to develop and market superior products to improve productivity in aquaculture. Our first product is the AquAdvantage Salmon, which recently received FDA and Health Canada approval as the first genetically modified animal for human consumption as food. Our business plan contemplates that we will initially establish a pilot production facility to prove the economic benefit and consumer acceptance for our product. Once the pilot-scale production operation is completed, we intend to commercialize the product through the channel we determine to be most advantageous to us. Such efforts may involve producing AquAdvantage Salmon eggs for commercial production, licensing the technology to salmon growers, and/or growing out the salmon in our own land-based facilities.

In order to scale up our egg production capabilities, we plan to increase our supply of unfertilized Atlantic salmon eggs, and in 2016 we purchased a farm site near our existing hatchery on Prince Edward Island for this purpose. We also intend to engage in pilot-scale commercial production of AquAdvantage Salmon through the construction or purchase of an operation in the United States or Canada utilizing a land-based recirculating aquaculture system facility, which is a closed-loop production system that filters and recycles water. Our ability to pursue some or all of these plans is subject to uncertainties, including the receipt of necessary regulatory approvals and our ability to obtain financing on acceptable terms. The uncertainty of the timing of the commencement and completion of the pilot-scale production operation for AquAdvantage Salmon makes it difficult to create a definitive plan beyond the short term. Upon completion of the project, we expect to finalize our operational plan and move forward with our expansion, which may require us to seek to raise additional funds.

We intend to continue investing in research and development. We anticipate that our research and development expenditures will increase as we continue to develop our other AquAdvantage fish products and initiate new development projects under the Exclusive Channel Collaboration Agreement that we entered into in February 2013 with Intrexon (the "ECC"). See "—Research and Development." The timeline for development projects will depend on many factors, but could extend beyond ten to fifteen years, taking into account the time needed for development, regulatory approval, and pre-marketing activities.

Any additions to headcount in our research and production activities will depend on the number of development activities we undertake and the success of our commercialization efforts for AquAdvantage Salmon. We expect to increase our headcount in administration at our corporate headquarters as we begin to commercialize our product and as a result of being a public reporting company in the United States.

Our Markets

With regulatory approvals in the United States and Canada, we plan to market AquAdvantage Salmon throughout both countries. In addition, we intend to focus on those significant fish farming markets where we believe we will have success in gaining further regulatory approvals and consumer acceptance. We currently expect to market AquAdvantage Salmon in the United States and Canada, as well as Argentina, Brazil, and Panama following receipt of required regulatory approval in the respective jurisdiction.

If we pursue a commercial strategy to sell AquAdvantage Salmon eggs, we expect the cost of production for each AquAdvantage Salmon egg will be higher than the industry norm, but will fall significantly once volume production increases. While no pricing structure has been set, we believe that the cost savings associated with AquAdvantage Salmon resulting from the ability to spread fixed costs over a greater number of fish and reduced grow-out time will allow AquAdvantage Salmon eggs to sell at a premium to standard Atlantic salmon eggs.

If we pursue a commercial strategy to grow-out AquAdvantage Salmon in our own land-based facilities, we expect our production costs to be lower than traditional salmon farming due to the faster growth rate and better feed conversion rate of our fish, along with lower relative transportation costs.

The salmon distribution system in the United States is complex and varied. Participants include fishermen, fish farmers, processors, importers, secondary processors, broadline distributors, specialty seafood distributors, brokers, traders, and many different kinds of retail and food service companies. Salmon distribution channels are evolving, with fewer and larger distributors handling an increasing share of total volume, and an increasing share of salmon being sold directly by large fish-farming companies and large wild salmon processors to large retail and food service chains. We expect that harvested AquAdvantage Salmon will be sold into this distribution network.

Regulatory Environment

FDA Approval

We opened an Investigational New Animal Drug file for AquAdvantage Salmon with the FDA in 1995. At that time, there was no defined regulatory framework for the regulation of genetically engineered animals. There were, however, certain studies that were generally acknowledged to be necessary for an eventual approval process. We commenced work on those studies and began a phased submission of studies to the FDA that ultimately were responsive to each technical section of the NADA. These technical sections require submission of studies relating to molecular characterization of the construct; molecular characterization of AquAdvantage Salmon lineage; phenotypic characterization of AquAdvantage Salmon; a genotypic and phenotypic durability plan; support for environmental, food, and feed safety; and claim validation. The FDA's phased review process, which included a cycle of study conduct, submission, review, and acceptance, continued over the period from 1995 to 2010. The following is a summary of certain submissions relating to the technical section of the NADA that we made to the FDA's Center for Veterinary Medicine ("CVM") during this period:

- In August 2006, we submitted to the CVM the last correspondence for the review of the molecular characterization of the AquAdvantage construct. On October 6, 2006, we received a letter from the CVM stating "the data and information that you have submitted adequately supports the molecular characterization of the opAFP-GHc2 construct."
- In May 2007, we submitted to the CVM the last correspondence for the review of the molecular characterization of the AquAdvantage Salmon lineage. On July 2, 2008, we received a letter from the CVM stating "[w]e have reviewed the data and information you have submitted in support of the molecular characterization of the genetically engineered (GE) salmon referred to

as ‘AquAdvantage Salmon’ and find that it is adequate support to conclude the molecular characterization of the inserted rDNA construct and GE animal lineage step of our review.”

- In July 2009, we submitted to the CVM the last of the correspondence for the review of AquAdvantage Salmon claim validation. On March 12, 2010, we received a letter from the CVM stating “[w]e have reviewed the data and information that you have submitted in support of the Claim Validation of the genetically engineered (GE) salmon referred to as ‘AquAdvantage Salmon’, and consider this section complete.”
- In December 2009, we submitted to the CVM the last of the correspondence for the review of the phenotypic characterization of AquAdvantage Salmon. On June 4, 2010, we received a letter from the CVM stating “[w]e have reviewed the data and information that you have submitted in support of the phenotypic characterization of the genetically engineered (GE) salmon referred to as ‘AquAdvantage Salmon’ and find that it is adequate support to conclude the phenotypic characterization step of our review.”
- In March 2010, we submitted to the CVM the final correspondence for the review of data submitted in support of the safety of food from AquAdvantage Salmon. On August 27, 2010, we received a letter from the CVM stating “[w]e have reviewed the data and information that you have submitted in support of the food safety assessment of food from the genetically engineered (GE) salmon referred to as ‘AquAdvantage Salmon’ and find that it is adequate to conclude our evaluation of food safety.”
- In April 2010, we submitted to the CVM the last of the correspondence for the review of the genotypic and phenotypic durability of AquAdvantage Salmon. On June 11, 2010, we received a letter from the CVM stating “[w]e have reviewed the data and information that you have submitted in support of the Genotypic and Phenotypic Durability of the genetically engineered (GE) salmon referred to as ‘AquAdvantage Salmon’ and find that you have adequately supported the Genotypic and Phenotypic Durability step of our review.”

By the spring of 2010, we had submitted to the FDA data for each technical submission requirement for approval under the NADA. By the fall of 2010, we had received from the FDA technical section complete letters for each submission requirement.

Following this process, the FDA concluded that AquAdvantage Salmon “is as safe as food from conventional salmon, and that there is a reasonable certainty of no harm from consumption of food” from AquAdvantage Salmon.

In September 2010, the FDA held a public meeting of its Veterinary Medicine Advisory Committee (the “VMAC”) to review the FDA’s findings regarding AquAdvantage Salmon. The VMAC, which was disbanded in September 2013, was a group of independent experts charged with providing scientific advice to the FDA on animal drug and food issues. The VMAC had no authoritative power regarding the approval of the NADA but was convened to listen to the results of the FDA review process and to provide an outside opinion on the FDA’s conclusions. At the public meeting, the FDA posed four questions to the VMAC relating to the safety and effectiveness of AquAdvantage Salmon, including safety to the animal, safety of consumption, safety to the environment, and effectiveness of the growth gene. The Chairman’s Report of the VMAC relating to the public meeting stated that (1) the VMAC found no evidence to conclude that the gene construct was unsafe to the animal; (2) a large number of the test results studied by the VMAC established similarities and equivalence between AquAdvantage Salmon and traditional Atlantic salmon and that the levels of growth hormone contained in AquAdvantage Salmon did not appear to be biologically relevant from a food safety standpoint, although the VMAC noted that it could not conclude from the data submitted that AquAdvantage Salmon would be more or less allergenic than traditional Atlantic salmon; (3) the multitude of barriers to escape of AquAdvantage Salmon at both our Prince Edward Island and

Panama facilities were extensive, mitigating the potential environmental impact of escape; and (4) there was evidence to support our claim that AquAdvantage Salmon grows faster than traditional Atlantic salmon. The VMAC did not vote or make a recommendation on whether to approve the NADA, and certain members of the panel recommended additional monitoring to determine whether the growing conditions could cause health abnormalities. While the FDA is not bound by the VMAC's recommendations or opinions, the VMAC did not dispute the FDA's conclusions that AquAdvantage Salmon is safe for human consumption.

On December 26, 2012, the FDA published its Environmental Assessment ("EA") and its preliminary Finding of No Significant Impact ("FONSI") determinations for AquAdvantage Salmon, confirming that an approval of the pending NADA would not have an adverse effect on the environment. The FDA opened up a 60-day period for public comment on the EA and preliminary FONSI. On February 13, 2013, the FDA extended the period for public comment by an additional 60 days, and that period expired April 26, 2013.

In July 2014, we submitted to the FDA revised label and package insert information, which updated label and package insert information that we initially submitted to the FDA in April 2011. The submission of revised label and package insert information was in response to a June 2014 request from the FDA to revise and update the initial submission. Under the NADA review process, we were required to submit to the FDA from time to time information responsive to an "all other information" portion of the NADA, which requires the submission of information, not included in any of the technical sections, that comes to our attention and is pertinent to an evaluation of the safety or effectiveness of AquAdvantage Salmon. We submitted our last supplement to the "all other information" portion of the NADA on July 15, 2015, and the FDA formally acknowledged its acceptance of this submission on November 18, 2015.

On November 19, 2015, the FDA finalized the FONSI on the EA and issued an approval letter for the NADA for AquAdvantage Salmon. This approval was published in the Federal Register on November 24, 2015. In conjunction with the approval, the FDA issued a guidance document on the voluntary labeling of food derived from Atlantic salmon that has or has not been genetically engineered. That document was intended to assist those manufacturers who wish to voluntarily make the distinction on the labeling of their food products.

Following the FDA approval, in April 2016, a coalition of NGOs sued the FDA for their approval of AquAdvantage Salmon. The NGOs claim that the FDA failed to analyze and prevent risks to wild salmon and the environment. Among other things, the claimants are seeking a judgment that the FDA decision to approve AquAdvantage Salmon is not authorized by the Federal Food, Drug and Cosmetic Act, or FFDCA; that an injunction be issued requiring the FDA to withdraw its assertion of jurisdiction over GMO animals; that the FDA decision to approve AquAdvantage Salmon and it EA and FONSI be declared in violation of the FFDCA; and that the decision to approve the AquAdvantage Salmon NADA be vacated. Although we believe that these claims lack merit, this legal action is ongoing and is currently in the discovery phase.

In January 2016, the U.S. Congress passed the 2016 Omnibus Appropriations Act ("Appropriations Act"), which was signed into law. The Appropriations Act contained an amendment that directed the FDA to issue final guidance for labeling of AquAdvantage Salmon as a genetically modified organism, or GMO, despite the absence of any GMO labeling requirement in the FDA's NADA approval. Current FDA policy does not require labeling for method of production if there is no material difference compared with its traditional counterpart, and the FDA arrived at the decision that AquAdvantage Salmon is as safe to eat as any non-genetically engineered Atlantic salmon, and also as nutritious. However, given this directive, the FDA issued an Import Alert on AquAdvantage Salmon and stated that a temporary hold was being implemented to comply with language in the Appropriations Act, which was due to expire on September 30, 2016, but which was extended through a continuing

resolution to December 9, 2016, and was extended again through a continuing resolution to April 28, 2017. At this time, there can be no certainty as to when or if the Import Alert will be lifted or when the FDA will finalize its labeling guidance.

In addition to FDA approval of the NADA for AquAdvantage Salmon, our operating sites in Panama and on Prince Edward Island, as well as those we plan to build or purchase in the future, must be registered with, and periodically inspected by, the FDA as drug manufacturing establishments. Drug manufacturing establishments that supply FDA-regulated products for use in the United States must comply with the product's conditions for approval, whether located in the United States or in a foreign country. Each of our Panama and Prince Edward Island operating sites is currently registered with the FDA, and the FDA has performed inspections and site visits at each facility.

With the FDA approval of our NADA, we must continue to comply with FDA requirements not only for manufacturing, but also for labeling, advertising, record keeping, and reporting to the FDA of adverse events and other information. Failure to comply with these requirements could subject us to administrative or judicial enforcement actions, including but not limited to product seizures, injunctions, civil penalties, criminal prosecution, refusals to approve new products, or withdrawal of existing approvals, as well as increased product liability exposure.

Other Regulatory Approvals

In February 2012, we filed a Novel Food application for AquAdvantage Salmon with Health Canada. In conjunction with this application, we filed to register AquAdvantage Salmon as a Novel Feed with the Canadian Food Inspection Agency, a prerequisite for a Novel Food approval. Health Canada and the Canadian Food Inspection Agency reviewed our data submission on the safety of AquAdvantage Salmon as a food and feed, respectively. On May 19, 2016, Health Canada concluded that AquAdvantage Salmon does not raise concerns related to food safety. Health Canada also noted in its opinion that fillets derived from AquAdvantage Salmon are as safe and nutritious as fillets from currently available farmed Atlantic salmon.

In April 2013, we filed a New Substances Notification for AquAdvantage Salmon with Environment Canada. On November 25, 2013, Environment Canada concluded that AquAdvantage Salmon is not harmful to the environment or human health when produced in contained facilities. This ruling, which was subject to a judicial review brought about by certain environmental groups on administrative procedural grounds, recognized that our Canadian hatchery, which produces sterile, all-female eggs, was no longer solely a research facility but could produce eggs on a commercial scale without harm to the environment or human health. In December 2015, the Federal Court in Canada ruled that the Ministers of Environment and Health decision to allow production of AquAdvantage Salmon in Canada for commercial use was "reasonable and made in the manner prescribed by the Canadian Environmental Protection Act." Accordingly, the court dismissed the entire application brought before it by the Ecology Action Centre and Living Oceans Society. This ruling was appealed by those organizations, however, the Canadian Federal Court of Appeal dismissed the appeal on October 21, 2016.

We are required to comply with regulatory and permitting requirements in Panama, where we operate a demonstration farm for AquAdvantage Salmon. In October 2010, we received authority from *Autoridad Nacional del Ambiente* ("ANAM"), the Panamanian environmental regulator, to operate our facility in Panama. In March 2012, we were notified by ANAM that we had failed to comply with specified permitting, inspection, reporting, and other regulatory requirements in connection with the construction and operation of the facility. We initiated a program to remedy the deficiencies, and the issues were formally resolved in August 2014. We paid a fine of $9,500 in connection with the resolution of these issues, and the matter is now closed. We currently have all regulatory approvals necessary to operate our demonstration farm in Panama and we have obtained, and are in

compliance in all material respects with, all permits necessary to operate that facility. We have moved forward with an application for the commercial production, sale, and consumption of AquAdvantage Salmon in Panama. This application process is new, and we do not have information on when, or if, the application will be approved.

We have also received approval from regulators to conduct field trials for AquAdvantage Salmon in Argentina and Brazil. We intend to initiate additional regulatory filings outside the United States in selected markets that offer a clear regulatory path and market opportunity.

Grow-out of AquAdvantage Salmon in the United States will require compliance with environmental regulations and local site permitting statutes. In addition, every production site for AquAdvantage Salmon in the United States will require approval by the FDA of both a Supplemental NADA and a site-specific EA, as well as compliance with local permitting requirements for construction of grow-out facilities. We expect that we will incur costs to comply with these environmental and regulatory requirements, which could take several years to complete for each production site. We are currently unable to estimate these costs, but they may be significant.

Raw Materials

We previously sourced the unfertilized eggs that we use for internal research and trials of our AquAdvantage Salmon eggs from a Canadian supplier. After our FDA approval, we purchased a salmon farm near our hatchery on Prince Edward Island to maintain our own source of unfertilized eggs. We believe this site will allow for the sufficient production of unfertilized eggs to meet our needs for the next several years.

Intellectual Property

The AquAdvantage fish program is based upon a single, specific molecular modification in fish that results in more rapid growth in early development. This enables shorter production cycles and increased efficiency of production. Prior to February 2014, we were a party to a license agreement with Genesis Group, Inc. (“Genesis”) and an affiliate of the Hospital for Sick Children of Toronto and Memorial University (“HSC”) related to our transgenic fish program. Under the terms of this agreement, we were required to make an annual royalty payment of $25 thousand or revenue-based royalty payments equal to five percent of any gross revenues generated from products that utilize the technology covered under the license agreement. No revenue-based royalty payments were made under this agreement. The patent for the licensed technology, which had been issued in every major salmon producing country, expired in August 2013. In February 2014, we entered into a new license agreement with Genesis and HSC that replaced the prior license agreement. Under the new agreement, we hold a global, perpetual, royalty-free, fully paid, sub-licensable, assignable, non-exclusive right to the technology covering genetically modified salmonid fish that express endogenous growth hormone under the control of a protein gene promoter from an edible fish. In consideration for this license, we agreed to pay to Genesis a one-time payment of C$150,000 (US$140,235), which amount was paid on March 6, 2014. Despite the expiration of the patent for the licensed technology, we believe that the degree of know-how in the molecular modification process and the regulatory timescales associated with approval of genetically modified fish would present significant barriers to competition.

We rely on a combination of patent, trademark, and trade secret laws in the United States and applicable foreign jurisdictions, as well as confidentiality procedures and contractual provisions, to protect our proprietary technology, processes, and brand. In December 2015, we were granted a U.S. patent for our molecular sterility system, which renders sterile the progeny of any female fish carrying a defined maternal sterility gene. Patents for this technology have been granted in other foreign jurisdictions, and we continue to pursue additional patent applications.

For information regarding our rights to use certain technologies under the ECC with Intrexon, see "—Research and Development."

Seasonality

Atlantic salmon spawn once per year, so there is a natural seasonality of three to five months in the production of Atlantic salmon eggs for commercial use. This natural seasonality can be lengthened through the use of photoperiod techniques to make Atlantic salmon eggs available year round. We are not currently capable of producing AquAdvantage Salmon eggs on a year-round basis. Currently, we produce AquAdvantage Salmon eggs during the period of January through April of each year. We expect that, with the establishment of our new farm site to produce unfertilized eggs, within three years we will be able to produce AquAdvantage Salmon eggs year-round.

Competition

There are four major commercial salmonid breeding companies that market proprietary lines of Atlantic salmon eggs, as well as many small producers of salmonid eggs. Additionally, many of the largest Atlantic salmon producers maintain their own egg production capabilities. We do not believe, however, that we have a direct competitor for genetically modified, growth-enhanced Atlantic salmon eggs.

The industry and market for farmed Atlantic salmon is dominated by a group of large, multinational corporations with entrenched distribution channels, as discussed above under "—The Aquaculture Industry—Major Producers." While we do not believe that we have a direct competitor for genetically modified, growth-enhanced Atlantic salmon, we do believe that our product will need to compete with non-genetically modified salmon.

Research and Development

As of December 31, 2016, we had 16 employees dedicated to research and development. Our primary research and development operations are located in our owned hatchery on Prince Edward Island. In addition, we contracted research activities to Tethys Aquaculture Canada, Inc. (doing business as the Center for Aquaculture Technologies Canada), our former research group, which was spun-off and sold to Tethys in 2012. We incurred expenses of $3.4 million in 2016, $3.3 million in 2015, and $3.2 million in 2014 on research and development activities.

In February 2013, we entered into the ECC with Intrexon pursuant to which we are permitted to use Intrexon's UltraVector® and other technology platforms to develop and commercialize additional genetically modified traits in finfish for human consumption. The ECC grants us a worldwide license to use specified patents and other intellectual property of Intrexon in connection with the research, development, use, importing, manufacture, sale, and offer for sale of products involving DNA administered to finfish for human consumption. This license is exclusive with respect to any development, selling, offering for sale, or other commercialization of developed products, and otherwise is non-exclusive. Under the ECC and subject to certain exceptions, we are responsible for, among other things, the performance of the program, including development, commercialization, and certain aspects of manufacturing developed products. Among other things, Intrexon is responsible for the costs of establishing manufacturing capabilities and facilities for the bulk manufacture of certain products developed under the program; certain other aspects of manufacturing; costs of discovery-stage research with respect to platform improvements; and costs of filing, prosecution, and maintenance of Intrexon's patents. We agreed to pay Intrexon, on a quarterly basis, 16.66% of the gross profits calculated for each developed product. We also agreed to pay Intrexon 50% of the quarterly revenue obtained from a sublicensor in the event of a sublicensing arrangement. In addition, we agreed to reimburse Intrexon for the costs of certain services provided by Intrexon.

Since its execution in February 2013, we and Intrexon have commenced development on two projects under the ECC, both of which are in their early stages. The first project, which commenced in June 2013, is a research effort to determine the effectiveness of utilizing precise genome engineering technology to produce desirable features in a finfish. The second project, which commenced in September 2013, is a research effort to determine if the use of germ cells to perform gene modification is effective in reducing the time required to develop new traits in finfish. If these technology-enabling projects prove to be successful, they will allow us to add additional beneficial traits to AquAdvantage Salmon.

In addition to the projects being undertaken under the ECC, we are exploring the potential development of a range of additional products, including a second generation of AquAdvantage Salmon to ensure 100% sterility, a line of AquAdvantage® Trout that grows faster than traditional rainbow trout, molecular sterility systems to provide an improved means of sterility for farmed fish, infection control in shrimp, and improved methods for generating transgenic fish.

Our research and development expenditures are directly tied to the number of projects that we choose to undertake. We expect to increase our development efforts as we commence projects under our ECC with Intrexon. We expect that these projects could result in an increase in our research and development expenditures in the range of 5% to 10% per year.

Employees

As of December 31, 2016, we had 25 employees. None of our employees are represented by a labor union, and we consider our employee relations to be good.

Financial Information About Geographic Areas

Our corporate headquarters are located in Maynard, Massachusetts. Our primary physical assets are comprised of our hatchery and farm site on Prince Edward Island, Canada. We own the buildings, all improvements, and the equipment used in both facilities. In addition, we lease a demonstration farm for AquAdvantage Salmon in Panama.

Recent Events

On February 23, 2016, we executed a convertible debt facility with Intrexon to provide us with up to $10.0 million (the “Convertible Debt”). The debt carried an interest rate of 10%, had a maturity of March 1, 2017, and could be converted into shares of our common stock at a price of 690 U.K. pence per share using the British pound sterling to U.S. dollar exchange rate, as reported on Reuters, as of the business day prior to the conversion. The entire $10.0 million (plus accrued interest) of Convertible Debt was converted into 1,212,908 shares of AquaBounty common stock on December 16, 2016.

Our common stock has been listed on AIM since 2006. On January 18, 2017, we sold 2,421,073 shares of our common stock to Intrexon, our controlling shareholder, for proceeds of approximately $25 million. Following the closing of this sale, Intrexon distributed 1,776,557 shares of our common stock that it held prior to the closing via the Distribution. On January 19, 2017, our common stock began “regular way” trading on the NASDAQ Capital Market, and continues to trade on AIM. Based on our current operations and anticipated expenditures, we believe that proceeds from the sales of securities described above will provide adequate funds for on-going operations, planned capital expenditures, and other working capital requirements for at least the next twelve months.

Management is evaluating several paths to revenue generation that follow different timelines, including production of our fish at our existing farm in Panama, purchase of an existing production facility in North America, and construction of a new production facility in North America. We have

begun an active search in both the United States and Canada for either an existing land-based recirculating aquaculture system facility or a site on which to build a new facility for the commercial production of AAS. Depending on which path or combination of paths is chosen, modest revenues could commence as early as the fourth quarter of 2017 from our Panama farm with more significant revenues expected once a new facility is in full production.

Emerging Growth Company Status

We are an “emerging growth company,” as defined in Section 2(a) of the Securities Act, as amended by the Jumpstart Our Business Startups Act (the “JOBS Act”) enacted on April 5, 2012. For as long as we are an emerging growth company, we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies. These include, but are not limited to, not being required to comply with 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”); an exemption from the adoption of new or revised financial accounting standards until they would apply to private companies; an exemption from compliance with any new requirements adopted by the Public Company Accounting Oversight Board (“PCAOB”), that require 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; reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements; and exemptions from the requirements of holding advisory “say-on-pay” votes on executive compensation and shareholder advisory votes on golden parachute compensation not previously approved.

Section 107 of the JOBS Act provides that an emerging growth company can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. In other words, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to take advantage of this extended transition period. Our financial statements may therefore not be comparable to those of companies that comply with such new or revised accounting standards. Section 107 of the JOBS Act provides that our decision not to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable.

Under the JOBS Act, we will remain an emerging growth company until the earliest of:

- 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;
- the last day of the fiscal year during which we have total annual gross revenues of $1 billion or more;
- the date on which we have, during the previous three-year period, issued more than $1 billion in non-convertible debt; and
- the date on which we are deemed to be a “large accelerated filer” as defined in Rule 12b-2 under the Exchange Act, which would occur as of the first day of the first fiscal year after we have (i) more than $700 million in outstanding common equity held by our non-affiliates as of the last day of our second fiscal quarter and (ii) been public for at least twelve months.

Our Executive Officers

The following table sets forth certain information regarding our directors and executive officers as of March 16, 2017:

Name	Age	Position(s)
Ronald L. Stotish	67	Director, Chief Executive Officer and President
David A. Frank	56	Chief Financial Officer and Treasurer
Alejandro Rojas	55	Chief Operating Officer, AquaBounty Farms
Christopher Martin	50	General Counsel and Corporate Secretary

Our executive officers are elected by our Board of Directors and hold office until removed by the Board of Directors, and until their successors have been duly elected and qualified or until their earlier resignation, retirement, removal, or death.

Ronald L. Stotish, Ph.D. Chief Executive Officer and President. Dr. Stotish was appointed Executive Director, President, and Chief Executive Officer of AquaBounty in May 2008. He joined AquaBounty in 2006 as Vice-President for Regulatory Affairs and, most recently, was Senior Vice-President for R&D and Regulatory Affairs. Prior to joining AquaBounty, Dr. Stotish was Executive Vice-President for R&D at MetaMorphix, Inc. He has served as Vice-President for Pharmaceutical R&D at Fort Dodge Animal Health and held a variety of positions at American Cyanamid. He began his career in research at Merck & Co. Dr. Stotish has degrees in biochemistry and over 40 years' experience in the discovery, development, and commercialization of new animal health products. Dr. Stotish has a Bachelor of Science degree from Pennsylvania State University and a Master of Science and a Ph.D. from Rutgers University.

David A. Frank, M.B.A. Chief Financial Officer and Treasurer. Mr. Frank was appointed Chief Financial Officer and Treasurer of AquaBounty in October 2007. Previously he served as President and General Manager of TekCel LLC, a subsidiary of Magellan Biosciences, after serving as Magellan's Chief Financial Officer since the company's founding in 2004 and as TekCel's Chief Financial Officer. Mr. Frank has over 30 years of financial management experience, including as Chief Financial Officer of SmartEnergy, an independent energy supplier, as Corporate Controller for Moldflow Corporation, and in financial roles at PerSeptive Biosystems, Inc., Lotus Development Corporation, Apollo Computer, Inc., and Honeywell International, Inc. He has a Bachelor of Science in finance and accounting from Boston College and a Masters of Business Administration from Babson College.

Alejandro Rojas, D.V.M. Chief Operating Officer, AquaBounty Farms. Dr. Rojas joined AquaBounty as the Chief Operating Officer, AquaBounty Farms in February 2014. He formerly was the Production and Technical Manager for Marine Harvest from 1988 to 2000, where he was responsible for operations and the production of salmonids in Chile. He was also responsible for managing Quality Control Labs, Environmental Programs, and Fish Health Programs. Dr. Rojas has a doctorate in Veterinary Medicine and for the past 14 years has been a Technical Advisor and Consultant to numerous global aquaculture and biotech companies working with marine fish, including salmon, seabass, seabream, and barramundi. His areas of expertise include benchmarking and market studies; technical and economic analysis for M&A activities; new species development in Latin America, the Middle East, and Africa; and consulting on fish production, aquatic health, environment, and biosecurity programs to private companies and governments.

Christopher Martin, J.D. General Counsel and Corporate Secretary. Mr. Martin has served as our General Counsel since June 2015 and as our Corporate Secretary since July 2015. Prior to joining AquaBounty, he was Assistant General Counsel at athenahealth, Inc. from 2012 to 2014 and Senior Corporate Counsel from 2008 to 2012. He also served as Corporate Counsel at LeMaitre Vascular,

Inc. from 2006 to 2008 and practiced in the areas of commercial, corporate, finance, and intellectual property law with Hemenway & Barnes LLP in Boston and Cummings & Lockwood LLC in Connecticut. Mr. Martin holds a Bachelor of Arts from Stanford University and a Juris Doctor from the University of California, Berkeley (Boalt Hall).

Item 1A. Risk Factors

The following are certain risk factors that could affect our business, financial condition and results of operations. You should carefully consider the risks described below, together with the other information contained in this Annual Report on Form 10-K, including our consolidated financial statements and the related notes. We cannot assure you that any of the events discussed in the risk factors below will not occur. These risks could have a material and adverse impact on our business, results of operations, financial condition, or prospects. If that were to happen, the trading price of our common stock could decline, and you could lose all or part of your investment.

This Annual Report on Form 10-K also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks faced by us described below and elsewhere in this Annual Report on Form 10-K. See “Cautionary Note Regarding Forward-Looking Statements” for information relating to these forward-looking statements.

Risks Relating to our Business

We have a history of net losses and will likely incur future losses, at least during the next five years, and we may not achieve or maintain profitability.

Although we were established in 1991, we did not start to develop our current product portfolio until 1996. In the period since incorporation to December 31, 2016, we have incurred net losses of approximately $99.3 million. These losses reflect our personnel, research and development, and marketing costs. Management is evaluating several paths to revenue generation that follow different timelines, including production of our fish at our existing farm in Panama, purchase of an existing production facility in North America, and construction of a new production facility in North America. Depending on which path or combination of paths is chosen, modest revenues could commence as early as the fourth quarter of 2017 from our Panama farm with more significant revenues expected once a new facility is in full production. However, the ability to realize revenues and the timing thereof are not certain, and achieving revenues does not assure that we will become profitable.

We will need substantial additional capital in the future in order to fund our business.

We do not expect significant sales until 2021, at the earliest, and to date we have not generated any profit and expect to incur losses for the foreseeable future and may never become profitable. Therefore, based on our current business plan, we anticipate a need to raise further funds. Any issuance of shares of our common stock could have an effect of depressing the market price of shares of our common stock through dilution of earnings per share or otherwise.

The amount and timing of the expenditures needed to achieve our development and commercialization programs will depend on numerous factors, some of which are outside our control. Changes in our plans could result in the need for additional funds. The primary factor impacting the amount and timing of any additional expenditures is the timing of the completion of our pilot commercial operation for AquAdvantage Salmon, which is expected to commence in 2017. Until the pilot operation is completed, we will have no sources of revenue and thus will require funds to cover operational losses, which have recently averaged between $7 million and $8 million per year.

Following completion of the pilot commercial operation, we plan to commercialize the product through the channel we determine to be most advantageous to the Company. Such efforts may involve producing AquAdvantage Salmon eggs for commercial production, licensing the technology to salmon growers, and/or growing out the salmon in our own land-based facilities. If we elect to grow-out fish ourselves, we would need to invest in the construction of land based recirculating aquaculture system facilities. These facilities have estimated construction costs of $15 million for each 1,000 metric tons of output. We have begun an active search in both the United States and Canada for either an existing land-based recirculating aquaculture system facility or a site on which to build a new facility for the commercial production of AAS.

There can be no assurance that additional funds will be available on a timely basis, on favorable terms, or at all, or that such funds, if raised, would be sufficient to enable us to continue to implement our business strategy.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interests of holders of our common stock will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of holders of our common stock. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures, or declaring dividends. If we raise additional funds through government or other third-party funding; marketing and distribution arrangements; or other collaborations, strategic alliances, or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs, or product candidates or to grant licenses on terms that may not be favorable to us.

Our ability to generate revenue to support our operations depends on obtaining additional regulatory approvals for AquAdvantage Salmon, the receipt of which is uncertain, and the maintenance of existing approvals.

As a genetically modified animal for human consumption, AquAdvantage Salmon required approval from the FDA in the United States and the Ministers of Health and Environment in Canada before it could be produced, sold, or consumed in those countries. Our FDA approval covers the production of our eggs in our hatchery in Canada and the grow-out of our eggs in our facility in Panama. FDA approvals will be needed for each additional facility we plan to bring on line. Additionally, we will require local regulatory approvals in other countries in which we hope to operate. There is no guarantee that we will receive or be able to maintain regulatory approvals from the FDA or other regulatory bodies or that there will not be a significant delay before approval. There is also no guarantee that any approvals granted will not be subject to unduly onerous obligations in relation to matters such as production or labeling, or that any regulator will not require additional data prior to approval, which may be costly and time consuming to acquire.

We will be required to continue to comply with FDA regulations.

Even with the approval of the NADA for AquAdvantage Salmon, we must continue to comply with FDA requirements not only for manufacturing, but also for labeling, advertising, record keeping, and reporting to the FDA of adverse events and other information. Failure to comply with these requirements could subject us to administrative or judicial enforcement actions, including but not limited to product seizures, injunctions, civil penalties, criminal prosecution, refusals to approve new products, or withdrawal of existing approvals, as well as increased product liability exposure, any of which could have a material adverse effect on our business, financial condition, or results of operations.

Ethical, legal, and social concerns about genetically modified organisms could limit or prevent the use of our products and limit our revenues.

Our technologies involve the use of genetically modified organisms. Public perception about the safety and environmental hazards of, and ethical concerns over, genetically engineered products could influence public acceptance of our technologies and products. Activist groups opposing genetic modifications of organisms have in the past pressured a number of retail food outlets and grocery chains to publicly state that they will not carry genetically modified Atlantic salmon. If we are not able to overcome the ethical, legal, and social concerns relating to genetic engineering, products using our technologies may not be accepted in the marketplace, and demand for our products could fall short of what we expect. These concerns could also result in increased expenses, regulatory scrutiny, delays, or other impediments to implementation of our business plan.

The subject of genetically modified organisms has received negative publicity, which has aroused public debate. This adverse publicity could lead to greater regulation and trade restrictions on imports of genetically altered products. Further, there is a concern that products produced using our technologies could be perceived to cause adverse events, which could also lead to negative publicity.

We may have limited success in gaining consumer acceptance of our products.

There is an active and vocal group of opponents to genetically modified organisms who wish to ban or restrict the technology and who, at a minimum, hope to sway consumer perceptions and acceptance of this technology. Their efforts include regulatory legal challenges and labeling campaigns for genetically modified products, as well as application of pressure to consumer retail outlets seeking a commitment not to carry genetically modified Atlantic salmon. Consumer acceptance could also be adversely affected if AquAdvantage Salmon were found, or believed, to grow to a larger final size than traditional Atlantic salmon. We may not be able to overcome the negative consumer perceptions that these organizations have instilled against our products.

We may be sued by non-governmental organizations and others who are opposed to the development or commercialization of genetically modified organisms.

There are many organizations in the United States and elsewhere that are fundamentally opposed to the development of genetically modified organisms. These groups have a history of bringing legal action against companies attempting to bring new biotechnology products to market. On January 16, 2014, 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 genetically modified 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 federal Food, Drug and Cosmetic Act (“FFDCA”); that an injunction be issued requiring the FDA to withdraw its assertion of jurisdiction over animals that contain genetically modified organisms (“GMOs”); that the FDA decision to approve AquAdvantage Salmon and its EA and FONSI determinations be declared in violation of the FFDCA; and that the decision to approve the AquAdvantage Salmon NADA be vacated.

Though we believe this legal action lacks merit, it is currently ongoing. 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 genetic engineering activities by pressing for legislation and additional regulation in these areas. To the extent the actions of these organizations are successful, 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.

We may have to label our AquAdvantage Salmon at the retail level as containing a genetically modified organism, which could negatively impact consumer acceptance.

Until the recent passage of the National Sea Grant College Program Reauthorization in July 2016, which contained the National Bioengineered Food Disclosure Standard, or Labeling Act, our AquAdvantage Salmon did not need to be labeled as containing a genetically modified organism, because it had been deemed to be “substantially equivalent” to the traditional product. However, because several states either passed or considered new laws specifying varying requirements for labeling products sold at the retail level that contain genetically modified ingredients, the United States Congress passed the Labeling Act to establish a national standard for package labeling for foods containing genetically modified ingredients. The United States Department of Agriculture has until July 2018 to implement this new law. Labeling requirements could cause consumers to view the label as either a warning or as an indication that AquAdvantage Salmon is inferior to traditional Atlantic salmon, which could negatively impact consumer acceptance of our product.

The markets in which we intend to sell our products are subject to significant regulations.

In addition to our FDA approval for the sale and consumption of AquAdvantage Salmon in the United States, we will also be subject to state and local regulations and permitting requirements, which could impact or delay the commercialization and commencement of revenue generation from the sale of AquAdvantage Salmon. International sales are also subject to rules and regulations promulgated by regulatory bodies within foreign jurisdictions. There can be no assurance that foreign, state, or local regulatory bodies will approve the sale of our product in their jurisdiction.

We may incur significant costs complying with environmental, health, and safety laws and regulations, and failure to comply with these laws and regulations could expose us to significant liabilities.

Our operations are subject to a variety of federal, state, local, and international laws and regulations governing, among other matters, the use, generation, manufacture, transportation, storage, handling, disposal of, and human exposure to our products in both the United States and overseas, including regulation by governmental regulatory agencies, such as the FDA and the U.S. Environmental Protection Agency. We have incurred, and will continue to incur, capital and operating expenditures and other costs in the ordinary course of our business in complying with these laws and regulations.

We may become subject to increasing regulation in the future.

Regulations pertaining to genetically modified animals are still developing and could change from their present state. 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 traditional Atlantic salmon.

Atlantic Salmon farming is restricted in certain states.

Concerns regarding the possible environmental impact from AquAdvantage Salmon have led Washington and California to impose legislative and regulatory restrictions or bans on its farming. In addition, some states, such as Alaska, have enacted restrictions on Atlantic salmon farming generally. While we currently believe that many states will offer excellent potential sites for AquAdvantage Salmon production systems, if additional states adopt similar restrictions, or otherwise prohibit the rearing of AquAdvantage Salmon in those states, the number of potential sites available to us for production farms in the United States could be reduced.

The loss of AquAdvantage Salmon broodstock could result in the loss of our commercial technology.

Our intellectual property for AquAdvantage Salmon resides in the breeding population of live fish, or broodstock, themselves. Destruction of AquAdvantage Salmon broodstocks by whatever means would result in the loss of the commercial technology. Live animals are subject to disease that may, in some cases, prevent or cause delay in the export of fish or eggs to customers. Disease organisms may be present undetected and transferred inadvertently. In addition, our broodstock is kept at a limited number of facilities, and damage to or failure of critical systems at any one of those facilities could lead to the loss of a substantial percentage of our broodstock. Such events may cause loss of revenue, increased costs, or both.

Atlantic salmon farming is subject to disease outbreaks, which can increase the cost of production and/or reduce production harvests.

Salmon farming systems, particularly conventional, open sea-cage systems, are vulnerable to disease introduction and transmission, primarily from the marine environment or adjacent culture systems. The economic impact of disease to these production systems can be significant, as farmers must incur the cost of preventative measures, such as vaccines and antibiotics, and then, if the fish become infected, the cost of lost or reduced harvests. Although we will produce and grow our AquAdvantage Salmon in land-based, closed containment facilities, we will still be at risk for potential disease outbreaks. We have implemented biosecurity measures in our facilities intended to prevent or mitigate disease impact, but there can be no assurance that any measures will be 100% effective.

Our ability to compete may be negatively impacted if we do not adequately protect our proprietary technologies or if we lose some of our intellectual property rights.

Our success depends in part on our ability to obtain patents and maintain adequate protection of our intellectual property in the United States and abroad for our technologies and resultant products and potential products. We have adopted a strategy of seeking patent protection in the United States and abroad with respect to certain of the technologies used in or relating to our products; however, the patent to the technology covering AquAdvantage Salmon, which we license under a global, perpetual, royalty-free, non-exclusive license from Genesis and HSC, expired in August 2013. We expect to protect our proprietary technology in regards to AquAdvantage Salmon through a combination of in-house know-how and the deterrence of the regulatory process that would need to be completed for a competing product to be commercialized, which we believe would be cost-prohibitive to our competitors. There can be no guaranty that this strategy will be successful.

We also rely on trade secrets to protect our technologies, particularly in cases when we believe patent protection is not appropriate or obtainable. However, trade secrets are difficult to protect, and we may not be able to adequately protect our trade secrets or other proprietary or licensed information. While we require our employees, academic collaborators, consultants, and other contractors to enter into confidentiality agreements with us, if we cannot maintain the confidentiality of our proprietary and licensed technologies and other confidential information, our ability and that of our

licensor to receive patent protection, and our ability to protect valuable information owned or licensed by us may be imperiled.

Enforcing our intellectual property rights may be difficult and unpredictable.

Enforcing our intellectual property rights can be expensive and time consuming, and the outcome of such efforts can be unpredictable. If we were to initiate legal proceedings against a third party to enforce a patent covering one of our technologies, the defendant could counterclaim that our patent is invalid and/or unenforceable or assert that the patent does not cover its manufacturing processes, manufacturing components, or products. Furthermore, in patent litigation in the United States, defendant counterclaims alleging both invalidity and unenforceability are commonplace. Although we may believe that we have conducted our patent prosecution in accordance with the duty of candor and in good faith, the outcome following legal assertions of invalidity and unenforceability during patent litigation is unpredictable. With respect to the validity of our patent rights, we cannot be certain, for example, that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would not be able to exclude others from practicing the inventions claimed therein. Such a loss of patent protection could have a material adverse impact on our business. Even if our patent rights are found to be valid and enforceable, patent claims that survive litigation may not cover commercially valuable products or prevent competitors from importing or marketing products similar to our own, or using manufacturing processes or manufacturing components similar to those used to produce the products using our technologies.

Although we believe we have obtained assignments of patent rights from all inventors, if an inventor did not adequately assign their patent rights to us, a third party could obtain a license to the patent from such inventor. This could preclude us from enforcing the patent against such third party.

We may not be able to enforce our intellectual property rights throughout the world.

The laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the United States. Many companies have encountered significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, often do not favor the enforcement of patents and other intellectual property protection, particularly those relating to genetic engineering. This could make it difficult for us to stop the infringement of our patents or misappropriation of our other intellectual property rights. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business. Accordingly, our efforts to protect our intellectual property rights in such countries may be inadequate.

Competitors and potential competitors may develop products and technologies that make ours obsolete or garner greater market share than ours.

We do not believe that we have a direct competitor for genetically modified, growth-enhanced Atlantic salmon. However, the market for Atlantic salmon is dominated by a group of large, multinational corporations with entrenched distribution channels. Our ability to compete successfully will depend on our ability to demonstrate that AquAdvantage Salmon is superior to and/or less expensive than other products available in the market. Certain of our competitors may benefit from government support and other incentives that are not available to us. As a result, our competitors may be able to develop competing and/or superior products and compete more aggressively and sustain that competition over a longer period of time than we can. As more companies develop new intellectual property in our markets, a competitor could acquire patent or other rights that may limit our ability to successfully market our product.

If our technologies or products are stolen, misappropriated, or reverse engineered, others could use the technologies to produce competing technologies or products.

Third parties, including our collaborators, contractors, and others involved in our business often have access to our technologies. If our technologies or products were stolen, misappropriated, or reverse engineered, they could be used by other parties that may be able to reproduce our technologies or products using our technologies for their own commercial gain. If this were to occur, it would be difficult for us to challenge this type of use, especially in countries with limited intellectual property protection.

If we lose key personnel, including key management personnel, or are unable to attract and retain additional personnel, it could delay our commercialization plans or harm our research and development efforts, and we may be unable to sell or develop our own products.

Our success depends substantially on the efforts and abilities or our officers and other key employees. The loss of any key members of our management, or the failure to attract or retain other key employees who possess the requisite expertise for the conduct of our business, could prevent us from developing and commercializing our products and executing on our business strategy. We may not be able to attract or retain qualified employees in the future due to the intense competition for qualified personnel among biotechnology and other technology-based businesses, or due to the unavailability of personnel with the particular qualifications or experience necessary for our business. If we are not able to attract and retain the necessary personnel to accomplish our business objectives, we may experience staffing constraints that could adversely affect our ability to meet the demands of our customers in a timely fashion or to support our internal research and development programs. In particular, our product development programs are dependent on our ability to attract and retain highly skilled scientists. Competition for experienced scientists and other technical personnel from numerous companies and academic and other research institutions may limit our ability to attract and retain such personnel on acceptable terms.

We may encounter difficulties managing our growth, which could adversely affect our business.

We could face a period of rapid growth following commercial availability of our products, which may place significant pressure on our management, sales, operational, and financial resources. The execution of our business plan and our future success will depend, in part, on our ability to manage current and planned expansion and on our ability to continue to implement and improve our operational management. Any failure to manage the planned growth may have a significant adverse effect on our business, financial condition, trading performance, and prospects.

We may pursue strategic acquisitions and investments that could have an adverse impact on our business if they are unsuccessful.

If appropriate opportunities become available, we may acquire businesses, assets, technologies, or products to enhance our business in the future. In connection with any future acquisitions, we could:

- issue additional equity securities, which would dilute our current shareholders;
- incur substantial debt to fund the acquisitions; or
- assume significant liabilities.

Acquisitions involve numerous risks, including:

- difficulties integrating the purchased operations, technologies, or products;
- unanticipated costs and other liabilities;

- diversion of management's attention from our core business;
- adverse effects on existing business relationships with current and/or prospective customers and/or suppliers;
- risks associated with entering markets in which we have no or limited prior experience; and
- potential loss of key employees.

We do not have extensive experience in managing the integration process, and we may not be able to successfully integrate any businesses, assets, products, technologies, or personnel that we might acquire in the future without a significant expenditure of operating, financial, and management resources. The integration process could divert management time from focusing on operating our business, result in a decline in employee morale, or cause retention issues to arise from changes in compensation, reporting relationships, future prospects, or the direction of the business. Acquisitions also may require us to record goodwill and non-amortizable intangible assets that will be subject to impairment testing on a regular basis and potential periodic impairment charges, incur amortization expenses related to certain intangible assets, and incur large and immediate write-offs and restructuring and other related expenses, all of which could harm our operating results and financial condition. In addition, we may acquire companies that have insufficient internal financial controls, which could impair our ability to integrate the acquired company and adversely impact our financial reporting. If we fail in our integration efforts with respect to any of our acquisitions and are unable to efficiently operate as a combined organization, our business and financial condition may be adversely affected.

We have entered into agreements that require us to pay a significant portion of our future revenue to third parties.

In 2009, we received a grant from the Atlantic Canada Opportunities Agency to fund a research program. A total of C$2.9 million was made available under the grant, and we received the entire amount through December 31, 2015. Once we begin to generate revenue, we must commence repayment of the outstanding loan in the form of a 10% royalty. These payments could negatively impact our ability to support our operations.

In February 2013, we entered into the ECC with Intrexon, pursuant to which we are permitted to use Intrexon's UltraVector and other technology platforms to develop and commercialize additional genetically modified traits in finfish for human consumption. The ECC grants us a worldwide license to use specified patents and other intellectual property of Intrexon in connection with the research, development, use, importing, manufacture, sale, and offer for sale of products involving DNA administered to finfish for human consumption. We agreed under the ECC to pay Intrexon, on a quarterly basis, 16.66% of the gross profits calculated for each developed product. We also agreed to pay Intrexon 50% of the quarterly revenue obtained from a sublicensor in the event of a sublicensing arrangement. In addition, we agreed to reimburse Intrexon for the costs of certain services provided by Intrexon. The ECC remains in effect. These payments could negatively impact our ability to support our operations.

Our financial condition or results of operations may be adversely affected by international business risks, including exchange rate fluctuation.

The majority of our employees, including our research personnel, are located outside of the United States. As a consequence of the international nature of our business, we are exposed to risks associated with changes in foreign currency exchange rates. We are based in the United States and present our financial statements in U.S. dollars and the majority of our cash resources are held in U.S. dollars or in Canadian dollars. Some of our future expenses and revenues are expected to be denominated in currencies other than in U.S. dollars. Therefore, movements in exchange rates to

translate to foreign currencies may have a negative impact on our reported results of operations, financial position, and cash flows.

We have received government research grants and loans in the past, but such grants and loans may not be available in the future.

We have in the past received government assistance in the form of research grants and loans to partially fund various research projects, including projects involving our AquAdvantage Salmon. There can be no assurance that additional government assistance will be available in the future to help offset the cost of our research activities, in which case we would need to fund our research projects entirely from our available cash resources, which may be limited. This could delay progress on future product development and introduction. In addition, we may be subject to audit by the government agencies that provided research assistance to ensure that the funds were used in accordance with the terms of the grant or loan. Any audit of the use of these funds would require the expenditure of funds and result in the diversion of management's attention.

Our success will depend in part on our ongoing relationship with Intrexon.

We are party to agreements with Intrexon, including the ECC. Our success will depend, in part, on the maintenance of our ongoing relationship with Intrexon.

Certain members of management and our Board of Directors may hold stock in both Intrexon and AquaBounty, and as a result may face actual or potential conflicts of interest.

The management and directors of each of Intrexon and AquaBounty may own both Intrexon common stock and AquaBounty common stock. This ownership overlap could create, or appear to create, potential conflicts of interest when AquaBounty management and directors and Intrexon management and directors face decisions that could have different implications for AquaBounty and Intrexon. For example, potential conflicts of interest could arise in connection with the resolution of any dispute between AquaBounty and Intrexon regarding the terms of their relationship. Potential conflicts of interest may also arise out of additional commercial arrangements that AquaBounty or Intrexon may enter into in the future.

Risks Relating to our Common Stock

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

Intrexon currently holds approximately 58.1% of our outstanding shares of common stock. Third Security, LLC and its affiliates other than Intrexon ("Third Security") hold approximately 9.6% of our outstanding shares of common stock. 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 beneficial ownership of approximately 68.6% of our outstanding shares of common stock, which includes shares owned by both Intrexon and Third Security. In addition, we have granted to Intrexon 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. Accordingly, 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. In addition, 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 AIM and 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.

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 commons stock.

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 AquaBounty 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, compliance with any new requirements adopted by the 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 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.

Our shareholders may not have the same protections generally available to shareholders of other NASDAQ-listed companies because we are currently a "controlled company" within the meaning of the NASDAQ listing rules.

Because Intrexon holds a majority of the voting power for the election of our Board of Directors, we are a "controlled company" within the meaning of NASDAQ Listing Rule 5615(c). As a controlled company, we qualify for exemptions from several of NASDAQ's corporate governance requirements, including requirements that:

- a majority of our Board of Directors consist of independent directors;
- compensation of officers be determined or recommended to our Board of Directors by a majority of its independent directors or by a compensation committee comprised solely of independent directors; and
- director nominees be selected or recommended to our Board of Directors by a majority of its independent directors or by a nominating committee that is composed entirely of independent directors.

While our Board of Directors has determined that a majority of its members are independent, we are not required to have a compensation committee or a nominating committee composed entirely of independent directors. Accordingly, our shareholders may not be afforded the same protections generally as shareholders of other NASDAQ-listed companies for so long as Intrexon controls the

composition of our Board of Directors and our Board of Directors determines to rely upon exemptions available to controlled 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.

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.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our primary operations include locations in Massachusetts, Canada, and Panama. We lease approximately 1,800 square feet of office space, which is used as our corporate headquarters in Maynard, Massachusetts. We lease a demonstration farm for AquAdvantage Salmon in Panama, and we own an 18,000-square-foot hatchery and a salmon farm on Prince Edward Island, Canada. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Contractual Obligations.”

Item 3. Legal Proceedings

Legal Challenge in Canada to Significant New Activity Notice

On January 16, 2014, an application was filed by Ecology Action Centre and Living Oceans Society with the Canadian Federal Court seeking judicial review to declare invalid the decision by the Canadian Minister of the Environment to publish in the Canada Gazette a SNAN with respect to AquAdvantage Salmon. The Canadian Minister of the Environment, the Canadian Minister of Health, and AQUA Bounty Canada Inc., our Canadian subsidiary, were listed as respondents on the application. The plaintiffs alleged that the Canadian Minister of the Environment inappropriately waived a requirement of the Canadian Environmental Protection Act ("CEPA") to provide certain prescribed information for an assessment under CEPA. The plaintiffs sought an order from the court that the minister acted unlawfully and without jurisdiction by publishing notice of the SNAN with respect to AquAdvantage Salmon in the Canada Gazette, that the SNAN was invalid and unlawful, and, in the alternative, that the minister acted unreasonably in exercising her discretion.

In December 2015, the Canadian Federal Court ruled that the decision by the Ministers of Environment and Health to allow production of AquAdvantage Salmon in Canada for commercial use was reasonable and made in the manner prescribed by the CEPA, and accordingly dismissed the entire application brought before it. The petitioners appealed this ruling, and, in October 2016, the Canadian Federal Court of Appeal dismissed the appeal.

Lawsuit Against the FDA Approval of NADA

On March 30, 2016, a coalition of NGOs filed a complaint against the FDA, the United States Fish and Wildlife Service, and related individuals for their roles in the approval of AquAdvantage Salmon. The coalition, including the Centre for Food Safety and Friends of the Earth, claims that the FDA had no statutory authority to regulate genetically modified 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. This lawsuit is currently in the discovery phase of litigation.

Other than as set forth above, we are not party to any legal proceedings the outcome of which, we believe, if determined adversely to us, would individually or in the aggregate have a material adverse effect on our future business, consolidated results of operations, cash flows, or financial position. We may, from time to time, be subject to legal proceedings and claims arising from the normal course of business activities.

Item 4. Mine Safety Disclosures

Not applicable.

Part II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information

Our common stock was listed on AIM in 2006 and trades under the symbol "ABTU," and, in connection with the Distribution, began "regular way" trading on the NASDAQ Capital Market under the symbol "AQB" on January 19, 2017. As of March 10, 2017, 8,885,009 shares of our common stock were issued and outstanding. As of March 10, 2017, there were approximately 302 holders of record of our common stock. The U.S. transfer agent for our common stock is Computershare Trust Company, N.A.

The following table sets forth the high and low bid prices for our common stock for the periods indicated, as reported by AIM, the only exchange on which our common stock was listed in 2016 and 2015. These prices are as reported by the London Stock Exchange plc. Amounts presented in U.S. dollars reflect the currency exchange rate in effect on the date the price was reported on AIM.

	Price Per Share of Common			
Quarterly Period	**Low**		**High**	
2015				
Quarter ended March 31, 2015	£ 3.60	$ 5.48	£ 5.10	$ 7.94
Quarter ended June 30, 2015	£ 4.35	$ 6.48	£ 4.65	$ 7.14
Quarter ended September 30, 2015	£ 3.75	$ 5.69	£ 4.50	$ 7.08
Quarter ended December 31, 2015	£ 4.05	$ 6.11	£ 11.10	$ 16.94
2016				
Quarter ended March 31, 2016	£ 6.60	$ 9.51	£ 8.25	11.85
Quarter ended June 30, 2016	£ 4.05	$ 5.87	£ 11.85	17.26
Quarter ended September 30, 2016	£ 7.35	$ 9.67	£ 10.95	14.18
Quarter ended December 31, 2016	£ 7.20	$ 8.81	£ 9.15	11.79

Dividends

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 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.

Securities Authorized for Issuance Under Equity Compensation Plans

The information under "Equity Compensation Plan Information" to be included in our definitive proxy statement relating to our 2017 annual meeting of stockholders to be filed with the SEC within 120 days after the end of our fiscal year ended December 31, 2016, is incorporated herein by reference.

Recent Sales of Unregistered Securities

The following sets forth information regarding all unregistered securities sold since January 1, 2016:

- On December 16, 2016, we issued 1,212,908 shares of our common stock upon conversion of the Convertible Debt.
- On January 18, 2017, we issued 2,421,073 shares of our common stock to Intrexon at a per share price of $10.326, for aggregate consideration of approximately $25 million. The net proceeds are to be used for general corporate purposes.

Each of the sales of our common stock referenced above was exempt from the registration requirements of the Securities Act pursuant to the exemptions provided by Section 4(a)(2) of the Securities Act and/or Regulation D under the Securities Act. We did not pay or give, directly or indirectly, any commission or other remuneration, including underwriting discounts or commissions, in connection with any of the sales of our common stock referenced above. The recipients of the shares of our common stock in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed upon the stock certificates issued in these transactions. All recipients represented that they had adequate access to information about us. Each of the sales was made without any general solicitation or advertising.

Item 6. Selected Financial Data

The following table sets forth our selected consolidated financial data for the periods and as of the dates indicated. You should read the following selected consolidated financial data in conjunction with our audited consolidated financial statements and the related notes thereto included elsewhere in this information statement and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

The consolidated statement of operations data for the years ended December 31, 2016, 2015, and 2014, and the consolidated balance sheet data as of December 31, 2016, 2015, and 2014, are derived from our audited consolidated financial statements. Our audited consolidated financial statements have been prepared in U.S. dollars in accordance with United States generally accepted accounting principles, or U.S. GAAP.

Our historical results for any prior period are not necessarily indicative of results to be expected in any future period.

	Fiscal Years Ended December 31,		
	2016	2015	2014
(in thousands, except share data)			
Statement of Operations Data:			
Costs and expenses:			
Sales and marketing	$ 860	$ 994	$ 729
Research and development (2)	3,430	3,338	3,213
General and administrative	3,775	2,697	3,193
Total costs and expenses	8,065	7,029	7,135
Operating loss	(8,065)	(7,029)	(7,135)
Other income (expense):			
Interest and other income (expense), net	(406)	(3)	8
Total other income (expense)	(406)	(3)	8
Net loss	$ (8,471)	$ (7,032)	$ (7,127)
Other comprehensive income:			
Foreign currency translation gain (loss)	(60)	229	111
Total other comprehensive income (loss)	(60)	229	111
Comprehensive loss	$ (8,531)	$ (6,803)	$ (7,016)
Basic and diluted net loss per share (1)	$ (1.60)	$ (1.40)	$ (1.52)
Weighted average number of common shares—basic and diluted (1)	5,303,113	5,037,367	4,679,737

(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.

(2) For all years presented, we reclassified the costs of our field trials and Panama farm site from sales and marketing to research and development.

	As of December 31,	
	2016	2015
Balance Sheet Data:		
Cash and CD's	$ 3,335	$ 1,324
Total assets	$ 5,709	$ 2,637
Debt	$ 2,663	$ 2,070
Stockholders' equity (deficit)	$ 2,028	$ (56)

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis should be read in conjunction with the other sections of this Annual Report on Form 10-K, including our consolidated financial statements and notes thereto included herein. This discussion and analysis also contains forward-looking statements and should also be read in conjunction with the disclosures and information contained in "Cautionary Note Regarding Forward-Looking Statements" and "Risk Factors." Our actual results may differ materially from those discussed below. The following discussion and analysis is intended to enhance the reader's understanding of our business environment.

Overview

We believe we are a leader in the field of biotechnology tools for improving the productivity of aquaculture. Our lead product is the AquAdvantage Salmon, which recently received FDA approval as the first genetically modified animal available for sale for human consumption. We intend to commence commercial activities with a pilot-scale operation and subsequent commercialization in markets where we have received regulatory approval. Management is evaluating several paths to revenue generation that follow different timelines, including production of our fish at our existing farm in Panama, purchase of an existing production facility in North America, and construction of a new production facility in North America. We have begun an active search in both the United States and Canada for either an existing land-based recirculating aquaculture system facility or a site on which to build a new facility for the commercial production of AAS. Depending on which path or combination of paths is chosen, modest revenues could commence as early as the fourth quarter of 2017 from our Panama farm, with more significant revenues expected once a new facility is in full production.

Financial Overview

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 have never generated revenues from the sale of AquAdvantage Salmon, and we have had no revenues from any other product since 2008.

We expect our future capital requirements will be substantial, particularly as we continue to develop our business and expand our commercial activities. As discussed in Item 1, “Business—Recent Events,” in February 2016, we executed a convertible debt facility providing for borrowings of up to $10.0 million with Intrexon, our majority shareholder. On December 16, 2016, the entire $10 million (plus accrued interest) of Convertible Debt was converted into 1,212,908 shares of AquaBounty common stock. Additionally, in January 2017, we sold 2,421,073 shares of our common stock to Intrexon for proceeds of approximately $25 million. We also believe that such proceeds will allow us to commence activities for a pilot-scale commercial operation to prove the economic benefit and market acceptance for our product.

During the next several years, we expect that our annual spending on operations will increase. We expect that our research and development costs will increase as we expand the scope of our current projects and add new development projects under the ECC with Intrexon. We expect that our general and administrative expenses and capital expenditures will increase due to the added reporting requirements of being a reporting company in the United States, as well as due to the build-out and operation of our new salmon egg farm, the commencement of our pilot commercial operation, and the anticipated growth of our company. We expect that our sales and marketing expenses will increase with the commencement of commercial activities for our AquAdvantage Salmon. We may also decide to enter full-scale production operations and raise the AquAdvantage Salmon eggs to harvest in our own facilities. These activities would require substantial new investment to fund the cost of construction for land-based farming facilities. However, the uncertainty of the timing of the completion of the pilot-scale commercial operation for AquAdvantage Salmon makes it difficult to forecast these expenses or create a definitive operational plan beyond the short term. Upon completion of the pilot-scale commercial operation, we expect to finalize our operational plan and move forward with our expansion, which will require us to raise additional funds.

Sales and Marketing Expenses

Our sales and marketing expenses currently consist primarily of personnel costs, travel, and consulting fees for premarket commercial activities. As of December 31, 2016, we had three employees dedicated to sales and marketing.

Research and Development Expenses

As of December 31, 2016, we employed sixteen scientists and technicians at our hatchery on Prince Edward Island to oversee our broodstock of AquAdvantage Salmon, as well as the lines of fish we maintain for research and development purposes. Beginning in 2012, we outsourced our research activities at the hatchery to Tethys Aquaculture Canada, Inc. (doing business as the Center for Aquaculture Technologies Canada), our former research group. During 2015, we made the decision to reinstitute our in-house research group, and we have hired personnel to reestablish that function internally. This has allowed us to phase-out and end our contract research agreement with Tethys Aquaculture Canada. In addition, under the ECC, we have an agreement with Intrexon to conduct research on and develop new finfish products using their technology platform. We recognize research and development expenses as they are incurred. Our research and development expenses consist primarily of:

- salaries and related overhead expenses for personnel in research and development functions;
- fees paid to contract research organizations, Intrexon, and consultants who perform research on our behalf and under our direction;
- costs related to laboratory supplies used in our research and development efforts; and
- costs related to the operation of our field trials and Panama site.

From time to time we receive government funding or assistance in support of certain research projects. Any funds received are credited against costs incurred for the specific program.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related costs for employees in executive, operational, and finance functions. Other significant general and administrative expenses include corporate governance and public market maintenance, regulatory compliance, rent and utilities, insurance, and legal services. We had six employees in our general and administrative group at December 31, 2016.

Other Income (Expense), Net

Interest income consists of interest earned on our cash and short-term investments. Interest expense includes the interest on our outstanding loans. Other expense includes bank charges and fees and gains or losses on our royalty-based financings.

Significant Accounting Policies and Estimates

This management’s discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which we have prepared in accordance with U.S. GAAP. The preparation of our consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenues and expenses during the reporting periods. We evaluate these estimates and judgments on an ongoing basis. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Our actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are more fully described in Note 2 to our audited consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K, we

believe that the following accounting policies are the most critical for fully understanding and evaluating our financial condition and results of operations.

Government Assistance

From time to time we receive government assistance in the form of research grants and loans, which are recorded as a reduction of the related expenditures. All government assistance is subject to periodic audit by the agency involved in the grant.

Valuation Allowance for Net Deferred Tax Assets

We record a valuation allowance to offset any net deferred tax assets if, based upon the available evidence, it is more likely than not that we will not recognize some or all of the deferred tax assets. We have had a history of net losses since inception, and, as a result, we have established a 100% valuation allowance for our net deferred tax assets. If circumstances change, and we determine that we will be able to realize some or all of these net deferred tax assets in the future, we will record an adjustment to the valuation allowance.

Valuation of Long-Lived Assets

Definite-lived intangible assets include patents and licenses. Patent costs consist primarily of legal and filing fees incurred to file patents on proprietary technology that we have developed. Patent costs are amortized on a straight-line basis over 20 years beginning with the issue date of the applicable patent. Licensing fees are capitalized and expensed over the term of the licensing agreement. Indefinite-lived intangible assets include trademark costs, which are capitalized with no amortization as they have an indefinite life.

We review the carrying value of our long-lived tangible assets and definite-lived intangible assets on an annual basis or more frequently if facts and circumstances suggest that they may be impaired. The carrying values of such assets are considered impaired when the anticipated identifiable undiscounted cash flows from such assets are less than their carrying values. An impairment loss, if any, is recognized in the amount of the difference between the carrying amount and fair value. Indefinite-lived intangible assets are subject to impairment testing annually or more frequently if impairment indicators arise. Our impairment testing utilizes a discounted cash flow analysis that requires significant management judgment with respect to revenue and expense growth rates, changes in working capital, and the selection and use of the appropriate discount rate. An impairment loss, if any, is recognized in the amount of the difference between the carrying amount and fair value.

Share-Based Compensation

We measure and recognize all share-based payment awards, including stock options made to employees and directors, based on estimated fair values. The fair value of each share-based payment award is estimated on the date of grant using an option pricing model. The value of the portion of the award that is ultimately expected to vest is recognized as an expense over the requisite service period in our consolidated statement of operations. We use the Black-Scholes option pricing model (“Black-Scholes”) as our method of valuation.

Results of Operations

Comparison of the year ended December 31, 2016, to the year ended December 31, 2015.

The following table summarizes our results of operations for the years ended December 31, 2016 and 2015, together with the changes in those items in dollars and as a percentage (in thousands):

	Year Ended December 31,		Dollar Change	% Change
	2016	2015		
Operating expenses:				
Sales and marketing	$ 860	$ 994	$ (134)	(13)%
Research and development	3,430	3,338	92	3 %
General and administrative	3,775	2,697	1,078	40 %
Operating loss	8,065	7,029	1,036	15 %
Total other (income) expense, net	406	3	403	13,433 %
Net loss	$ 8,471	$ 7,032	$ 1,439	20 %

Sales and Marketing Expenses

The decrease in sales and marketing expenses for the year ended December 31, 2016, was due to a decrease in outside services related to design fees for a land-based recirculating aquaculture facility, which were completed in February 2016. This was partially offset by an increase in headcount and travel costs. We expect that our sales and marketing expenses will continue to increase now that we have received both FDA and Health Canada approvals for AquAdvantage Salmon.

Research and Development Expenses

The increase in research and development expenses for the year ended December 31, 2016, was due to the shift of spending from the use of outside contract work to inside personnel, along with the commencement of field trials in Argentina and Brazil. We expect that our research and development expenses will increase as we further develop our new site at Rollo Bay and as we continue to pursue regulatory approval for additional products.

General and Administrative Expenses

The increase in general and administrative expenses for the year ended December 31, 2016, was due to the addition of headcount, increased legal fees from third-party challenges to our two regulatory approvals, and legal fees for the filing of the registration statement for our common shares with the Securities and Exchange Commission. We expect that our general and administrative expenses will increase as we begin to operate as a public company in the United States. We estimate that expenditures associated with being a public company will be approximately $400 thousand annually and will include increased costs for director and officer liability insurance; costs related to the hiring of additional personnel; and increased fees for outside consultants, lawyers, and accountants. We also expect to incur increased costs to comply with corporate governance, internal controls, and similar requirements applicable to U.S. public companies.

Total Other (Income) Expense

Total other (income) expense is comprised of interest on debts, gains on asset disposals, and bank charges for the years ended December 31, 2016 and 2015.

Comparison of the year ended December 31, 2015, to the year ended December 31, 2014.

The following table summarizes our results of operations for the years ended December 31, 2015 and 2014, together with the changes in those items in dollars and as a percentage (in thousands):

	Years Ended December 31,		Dollar Change	% Change
	2015	2014		
Operating expenses:				
Sales and marketing	$ 994	$ 729	$ 265	36 %
Research and development	3,338	3,213	125	4 %
General and administrative	2,697	3,193	(496)	(16)%
Operating loss	7,029	7,135	(106)	(1)%
Total other (income) expense, net	3	(8)	11	(138)%
Net loss	$ 7,032	$ 7,127	$ (95)	(1)%

Sales and Marketing Expenses

The increase in sales and marketing expenses for the year ended December 31, 2015, was the result of pre-commercialization activities for our AquAdvantage Salmon product. We contracted for the design of a land-based recirculating aquaculture facility and hired an international technical support person.

Research and Development Expenses

The increase in research and development expenses for the year ended December 31, 2015, was due to an increase in work performed under our ECC agreement with Intrexon and the ending of our USDA grant for work on our maternal sterility project. These costs were partly offset by the positive impact of the weakening Canadian dollar versus the US dollar.

General and Administrative Expenses

The decrease in general and administrative expenses for the year ended December 31, 2015, was the result of lower legal fees incurred and lower outside consulting fees. This reduction was partly offset by the cost of hiring a General Counsel to join the management team.

Total Other Income (Expense)

Total other income (expense) was primarily comprised of bank charges for the year ended December 31, 2015. It was comprised of interest income and bank charges for the year ended December 31, 2014.

Liquidity and Capital Resources

Sources of Liquidity

We have incurred losses from operations since our inception in 1991, and, as of December 31, 2016, we had an accumulated deficit of $99.3 million. On June 30, 2015, we completed a private placement of 424,269 shares of our common stock, all of which was purchased by Intrexon. The net proceeds from this offering were $3.0 million. On February 22, 2016, we executed a convertible debt agreement for up to $10.0 million with Intrexon. Advances on the Convertible Debt carried an interest rate of 10% per year and had a maturity date of March 1, 2017.The entire $10 million (plus accrued interest) of Convertible Debt was converted into 1,212,908 shares of AquaBounty common stock on December 16, 2016. As of December 31, 2016, we had a cash balance of $3.3 million. In addition, in

January 2017 we closed the Purchase Agreement to sell Intrexon 2,421,073 shares of our common stock for proceeds of approximately $25 million.

Cash Flows

The following table sets forth the significant sources and uses of cash for the periods set forth below (in thousands):

	Years Ended December 31,		
	2016	2015	2014
Net cash provided by (used in):			
Operating activities	$ (7,449)	$ (6,748)	$ (6,561)
Investing activities	(1,074)	(105)	(152)
Financing activities	10,541	3,044	10,024
Effect of exchange rate changes on cash	(7)	(41)	(23)
Net increase (decrease) in cash	$ 2,011	$ (3,850)	$ 3,288

Cash Flows from Operating Activities

Net cash used in operating activities during the year ended December 31, 2016, was primarily comprised of our $8.5 million net loss, offset by non-cash depreciation and stock compensation charges and accrued interest of $765 thousand, and working capital sources of $257 thousand. Spending on operations increased during 2016 due to headcount additions, increased legal fees, the commencement of two international field trials, and the purchase of a new farm site. The increase in cash sourced by working capital in 2016 was due to an increase in accrued expenses, offset by an increase in government receivables.

Net cash used in operating activities during the year ended December 31, 2015, was primarily comprised of our $7.0 million net loss, offset by non-cash depreciation and stock compensation charges of $344 thousand, and working capital reductions of $59 thousand. Spending on operations was slightly down during 2015. We increased spending on research and pre-commercial activities and added headcount, but we reduced legal fees and benefited from favorable foreign exchange rates. Cash used for working capital went to an increase in prepaid expenses and outstanding receivables, along with a reduction in accounts payable and accrued liabilities.

Net cash used in operating activities during the year ended December 31, 2014, was primarily comprised of our $7.1 million net loss, offset by non-cash depreciation and stock compensation charges of $414 thousand, and working capital increases of $153 thousand. Spending on operations increased by $2.3 million during 2014, as we incurred legal and professional fees for the planned registration of our common stock in 2014, began to increase employee headcount, and invested in new research programs. Cash provided by changes in working capital came primarily from a reduction in prepaid expenses and outstanding receivables, offset by an increase in accounts payable and accrued liabilities.

Cash Flows from Investing Activities

During 2016, we used $1.1 million for property and equipment purchases, primarily for the purchase of the Rollo Bay farm site, and $6 thousand for patent charges. This was offset by $24 thousand in proceeds from the sale of existing assets. During fiscal 2015, we used $74 thousand for equipment purchases and incurred $31 thousand for patent charges. In 2014, we used $117 thousand for equipment purchases and incurred $35 thousand for patent charges.

Cash Flows from Financing Activities

During 2016, we received $10.0 million in proceeds from the issuance of convertible debt, which was converted into common stock, and $547 thousand in proceeds from the issuance of term debt. This was off-set by $6 thousand in the repayment of debt. In 2015, we received $3.0 million of net proceeds from the issuance of our common stock in a private placement of shares and $44 thousand from the issuance of term debt. In 2014, we received $9.7 million of net proceeds from the issuance of our common stock in a private placement of shares, $12 thousand in proceeds from the exercise of stock options, and $268 thousand in proceeds from the issuance of term debt.

Future Capital Requirements

On March 20, 2014, we completed a private offering of 634,679 shares of our common stock to Intrexon, our majority shareholder. The net proceeds from this offering were approximately $9.7 million. On June 30, 2015, we completed a private offering of 424,269 shares of our common stock to Intrexon. The net proceeds from this offering were approximately $3.0 million.

We had $3.3 million of available cash and cash equivalents at December 31, 2016. On January 18, 2017, we completed a private offering of 2,421,073 shares of our common stock to Intrexon. The net proceeds from this offering were approximately $25 million.

We believe our existing cash and borrowing capacity will provide adequate funds for ongoing operations, planned capital expenditures, and working capital requirements for at least the next twelve months. We anticipate a need to raise further funds in order to complete the commercialization of AquAdvantage Salmon. We intend to devote a significant portion of our existing cash to the pilot-scale commercial operation of our AquAdvantage Salmon product and the continued investment in our research and development projects. We have not determined the amounts we may spend on the commercial roll-out of AquAdvantage Salmon and research and development projects. We may also use existing cash for acquisitions of companies that we believe may be complementary to our current business plan.

We have based our estimates on assumptions that may prove to be wrong, and we may use our available capital resources sooner than we currently expect. Our future capital requirements will depend on many factors, including:

- the timing of additional regulatory approvals and permits for AquAdvantage Salmon, if any;
- a successful roll-out of our AquAdvantage Salmon pilot-scale commercial plan;
- the degree of acceptance of AquAdvantage Salmon by consumers;
- the resources, time, and cost required to develop new and complimentary products; and
- the costs associated with legal activities and regulatory filings.

Until such time, if ever, as we can generate positive operating cash flows, we may finance our cash needs through a combination of equity offerings, debt financings, government or other third-party funding, strategic alliances, and licensing arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interests of holders of our common stock will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of holders of our common stock. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures, or declaring dividends. If we raise additional funds through government or other third-party funding; marketing and distribution arrangements; or other collaborations, strategic alliances, or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams,

research programs, or product candidates or to grant licenses on terms that may not be favorable to us.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements as defined under SEC rules.

Contractual Obligations

The following table summarizes our significant contractual obligations and commercial commitments at December 31, 2016, and the effects such obligations are expected to have on our liquidity and cash flows in future periods (in thousands):

	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
PEI Finance loan	527	18	58	451	—
Panama site lease	240	180	60	—	—
Total	767	198	118	451	—

In addition to the obligations in the table above, as of December 31, 2016, we also have the following significant contractual obligations described below:

- In January 2009, we were awarded a grant to provide funding of a research and development project from the Atlantic Canada Opportunities Agency (“ACOA”), a Canadian government agency. The total amount provided under the award was C$2.9 million ($2.1 million as of December 31, 2016), which must be repaid in the form of a 10% royalty on any products commercialized out of this research and development project until fully paid. This amount is included in long-term debt in the consolidated balance sheet, but is not included in the table above due to the uncertainty of the timing of repayment.
- In February 2013, we entered into the ECC with Intrexon, pursuant to which we are permitted to use Intrexon’s UltraVector and other technology platforms to develop and commercialize additional genetically modified traits in finfish for human consumption. We agreed under the ECC to pay Intrexon, on a quarterly basis, 16.66% of the gross profits calculated for each developed product. We also agreed to pay Intrexon 50% of the quarterly revenue obtained from a sublicensor in the event of a sublicensing arrangement. In addition, we agreed to reimburse Intrexon for the costs of certain services provided by Intrexon. Amounts required to be paid to Intrexon under the ECC are not included in the table above due to the uncertainty of the timing of payments.
- In February 2016, our Canadian subsidiary executed an agreement with ACOA to partially finance the renovations to our Rollo Bay farm site. The terms of the agreement include funding up to C$337,000 with repayment commencing after the final draw-down of the funds. The loan term is nine years with a zero percent interest rate. The loan is not included in the table above as we had not drawn-down any funds as of December 31, 2016, and the timing of payments is uncertain.

Recent Accounting Pronouncements

In August 2014, the Financial Accounting Standards Board (the “FASB”) issued Accounting Standards Update (“ASU”) 2014-15 “Disclosure of Uncertainties about an Entity’s Ability to Continue as a Going Concern.” The core principle of the guidance is that an entity’s management should evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the entity’s ability to continue as a going concern within one year after the date that the financial

statements are available to be issued. When management identifies conditions or events that raise substantial doubt about an entity's ability to continue as a going concern, management should consider whether its plans that are intended to mitigate those relevant conditions or events that will alleviate the substantial doubt are adequately disclosed in the footnotes to the financial statements. This guidance is now effective and has been adopted.

In February 2016, the FASB issued ASU 2016-02, "Leases," which requires a lessee to recognize lease liabilities for the lessee's obligation to make lease payments arising from a lease, measured on a discounted basis, and right-of-use assets, representing the lessee's right to use, or control the use of, specified assets for the lease term. Additionally, the new guidance has simplified accounting for sale and leaseback transactions. Lessor accounting is largely unchanged. The ASU is effective for fiscal years beginning after December 15, 2018.

In March 2016, the FASB issued ASU No. 2016-09, "Compensation—Stock Compensation." The areas for simplification in this update involve several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. For public entities, the amendments in this update are effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods. We do not expect that adoption of this ASU will have an impact on our financial statements.

In August 2016, the FASB issued ASU No. 2016-15, "Statement of Cash Flows," which provides specific guidance on eight cash flow classification issues. For public entities, the amendments in this update are effective for annual periods beginning after December 15, 2017, and interim periods within those annual periods. We are currently evaluating the impact of adopting this ASU on our financial statements.

We do not expect any other recently issued, but not yet effective, accounting standards to have a material effect on our results of operations or financial condition.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

The following sections provide quantitative information on our exposure to interest rate risk and foreign currency exchange risk. We make use of sensitivity analyses, which are inherently limited in estimating actual losses in fair value that can occur from changes in market conditions.

Interest Rate Risk

Our primary exposure to market risk is interest rate risk associated with debt financing that we utilize from time to time to fund operations or specific projects. The interest on this debt is usually determined based on a fixed rate and is contractually set in advance. At December 31, 2016, and December 31, 2015, we had $527 thousand and nil, respectively, in interest-bearing debt instruments on our consolidated balance sheet. All of our interest-bearing debt is at fixed rates.

Foreign Currency Exchange Risk

Our functional currency is the U.S. Dollar. The functional currency of our Canadian subsidiary is the Canadian Dollar, and the functional currency of our Panama, U.S., and Brazil subsidiaries is the U.S. Dollar. For the Canadian subsidiary, assets and liabilities are translated at the exchange rates in effect at the balance sheet date, equity accounts are translated at the historical exchange rate, and the income statement accounts are translated at the average rate for each period during the year. Net translation gains or losses are adjusted directly to a separate component of other comprehensive loss within shareholders' equity (deficit).

Item 8. Financial Statements and Supplementary Data

The financial statements required by this Item are located beginning on page F-1 of this report.

Item 9. Changes In and Disagreements With Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the Company's disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this Annual Report on Form 10-K. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of such period, the Company's disclosure controls and procedures are effective in recording, processing, summarizing, and reporting, on a timely basis, information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act and are effective in ensuring that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including the Company's Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control Over Financial Reporting

This Annual Report on Form 10-K does not include a report of management's assessment regarding internal control over financial reporting or an attestation report of the Company's independent registered accounting firm due to a transition period established by rules of the SEC for newly public companies. In addition, we are an emerging growth company, as defined under the JOBS Act, and are subject to reduced public company reporting requirements. The JOBS Act provides that an emerging growth company is not required to have the effectiveness of the Company's internal control over financial reporting audited by its external auditors for as long as the Company is deemed to be an emerging growth company.

Item 9B. Other Information

None.

Part III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this Item is set forth in our 2017 Proxy Statement to be filed with the SEC within 120 days of December 31, 2016, and is incorporated by reference into this Annual Report on Form 10-K by reference.

Item 11. Executive Compensation

We are an emerging growth company, as defined under the JOBS Act, and are therefore not required to provide certain disclosures regarding executive compensation required of larger public companies or hold a nonbinding advisory vote on executive compensation or obtain stockholder approval of any golden parachute payments not previously approved.

The information required by this Item is set forth in our 2017 Proxy Statement to be filed with the SEC within 120 days of December 31, 2016, and is incorporated by reference into this Annual Report on Form 10-K by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this Item is set forth in our 2017 Proxy Statement to be filed with the SEC within 120 days of December 31, 2016, and is incorporated by reference into this Annual Report on Form 10-K by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this Item is set forth in our 2017 Proxy Statement to be filed with the SEC within 120 days of December 31, 2016, and is incorporated by reference into this Annual Report on Form 10-K by reference.

Item 14. Principal Accountant Fees and Services

The information required by this Item is set forth in our 2017 Proxy Statement to be filed with the SEC within 120 days of December 31, 2016, and is incorporated by reference into this Annual Report on Form 10-K by reference.

Part IV

Item 15. Exhibits and Financial Statement Schedules

List of Documents Filed as Part of this Report

1. Consolidated Financial Statements

The following consolidated financial statements are filed herewith in accordance with Item 8 of Part II above:

(i) Report of Independent Registered Public Accounting Firm

(ii) Consolidated Balance Sheets

(iii) Consolidated Statements of Operations and Comprehensive Loss

(iv) Consolidated Statements of Changes in Stockholders' Equity (Deficit)

(v) Consolidated Statements of Cash Flows

(vi) Notes to Consolidated Financial Statements

2. Schedules

Schedules not listed are omitted because the required information in inapplicable or is presented in the consolidated financial statements.

3. Exhibits

See the Exhibit Index immediately following the signature page of this Annual Report on Form 10-K.

The registrant hereby undertakes to file with the Securities and Exchange Commission, upon request, copies of any constituent instruments defining the rights of holders of long-term debt of the registrant or its subsidiaries that have not been filed herewith because the amounts represented thereby are less than 10% of the total assets of the registrant and its subsidiaries on a consolidated basis.

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AQUABOUNTY TECHNOLOGIES, INC.

By: /s/ Ronald L. Stotish

Ronald L. Stotish

Chief Executive Officer, President, and Director

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints David A. Frank and Christopher Martin, as his or her attorneys-in-fact, each with the power of substitution, for him or her in any and all capacities, to sign any amendment to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Company and in the capacities and on the dates indicated below.

Signature	Title	Date
/s/ Ronald L. Stotish Ronald L. Stotish	President, Chief Executive Officer and Director (Principal Executive Officer)	March 16, 2017
/s/ David A. Frank David A. Frank	Chief Financial Officer and Treasurer (Principal Financial Officer and Principal Accounting Officer)	March 16, 2017
/s/ Richard J. Clothier Richard J. Clothier	Chairman of the Board, Director	March 16, 2017
/s/ Jack A. Bobo Jack A. Bobo	Director	March 16, 2017
/s/ Richard L. Huber Richard L. Huber	Director	March 16, 2017
/s/ Christine St.Clare Christine St.Clare	Director	March 16, 2017
/s/ Rick Sterling Rick Sterling	Director	March 16, 2017
/s/ James C. Turk James C. Turk	Director	March 16, 2017

EXHIBIT INDEX

Exhibit Number	Exhibit Description
3.1*	Third Amended and Restated Certificate of Incorporation of AquaBounty Technologies, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
3.2*	Certificate of Amendment of Third Amended and Restated Bylaws of AquaBounty Technologies, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Registration Current Report on Form 8-K, filed on January 6, 2017).
3.3*	Amended and Restated Bylaws of AquaBounty Technologies, Inc. (incorporated by reference to Exhibit 3.2 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
4.1*	Specimen Certificate of Common Stock (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.1*	Stock Purchase Agreement, by and between AquaBounty Technologies, Inc. and Intrexon Corporation, dated November 7, 2016 (incorporated by reference to Exhibit 10.1 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.2*†	AquaBounty Technologies, Inc. 2006 Equity Incentive Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.3*†	Amendment No. 1 to AquaBounty Technologies, Inc. 2006 Equity Incentive Plan (incorporated by reference to Exhibit 10.3 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.4*†	Form of Stock Option Agreement pursuant to AquaBounty Technologies, Inc. 2006 Equity Incentive Plan (incorporated by reference to Exhibit 10.4 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.5*†	Form of Restricted Stock Agreement pursuant to AquaBounty Technologies, Inc. 2006 Equity Incentive Plan (incorporated by reference to Exhibit 10.5 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.6*†	AquaBounty Technologies, Inc. 2016 Equity Incentive Plan (incorporated by reference to Exhibit 10.6 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.7*†	Form of Stock Option Agreement pursuant to AquaBounty Technologies, Inc. 2016 Equity Incentive Plan (incorporated by reference to Exhibit 10.22 to the Registrant's Registration Statement on Form 10, filed on December 12, 2016).
10.8*†	Form of Restricted Stock Agreement pursuant to AquaBounty Technologies, Inc. 2016 Equity Incentive Plan (incorporated by reference to Exhibit 10.21 to the Registrant's Registration Statement on Form 10, filed on December 12, 2016).
10.9*	Relationship Agreement, by and between AquaBounty Technologies, Inc. and Intrexon Corporation, dated December 5, 2012 (incorporated by reference to Exhibit 10.7 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.10*	Exclusive Channel Collaboration Agreement, by and between AquaBounty Technologies, Inc. and Intrexon Corporation, dated February 14, 2013 (incorporated by reference to Exhibit 10.8 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.11*	Subscription Agreement, by and between AquaBounty Technologies, Inc. and the investors listed therein, dated February 14, 2013 (incorporated by reference to Exhibit 10.9 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.12*	Subscription Agreement, by and between AquaBounty Technologies, Inc. and Intrexon Corporation, dated March 5, 2014 (incorporated by reference to Exhibit 10.10 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.13*	Subscription Agreement, by and between AquaBounty Technologies, Inc. and Intrexon Corporation, dated June 24, 2015 (incorporated by reference to Exhibit 10.11 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.14*	Promissory Note Purchase Agreement, by and between AquaBounty Technologies, Inc. and Intrexon Corporation, dated February 22, 2016 (incorporated by reference to Exhibit 10.12 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).

10.15*	Lease and Management Agreement, by and between AquaBounty Panama, S. de R.L. and Luis Lamastus, dated October 1, 2013 (incorporated by reference to Exhibit 10.13 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.16*	Agreement, by and among Atlantic Canada Opportunities Agency and AQUA Bounty Canada Inc. and AquaBounty Technologies Inc., dated December 16, 2009 (incorporated by reference to Exhibit 10.14 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.17*†	Employment Agreement, by and between Ronald Stotish and AquaBounty Technologies, Inc., dated April 1, 2006 (incorporated by reference to Exhibit 10.15 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.18*†	Employment Agreement, by and between David Frank and AquaBounty Technologies, Inc., dated October 1, 2007 (incorporated by reference to Exhibit 10.16 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.19*†	Employment Agreement, by and between Alejandro Rojas and AquaBounty Technologies, Inc., dated December 30, 2013 (incorporated by reference to Exhibit 10.17 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.20*	Collaborative Research Agreement, by and between AQUA Bounty Canada Inc. and Tethys Aquaculture Canada, Inc., dated March 22, 2012 (incorporated by reference to Exhibit 10.18 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.21*	Intellectual Property License and Full and Final Release among Genesis Group, Inc., HSC Research and Development Partnership and AquaBounty Technologies, Inc., dated February 28, 2014 (incorporated by reference to Exhibit 10.19 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.22*	Amended and Restated Lease Agreement, by and between AquaBounty Panama, S. de R.L. and Ligia Gabriela Surgeon de Lamastus, dated May 1, 2016 (incorporated by reference to Exhibit 10.20 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
21.1	List of Subsidiaries of AquaBounty Technologies, Inc.
31.1	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of the Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

*Incorporated herein by reference as indicated.

†Management contract or compensatory plan or arrangement.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of AquaBounty Technologies, Inc.:

We have audited the accompanying consolidated balance sheets of AquaBounty Technologies, Inc. as of December 31, 2016 and 2015, and the related consolidated statements of operations and comprehensive loss, changes in stockholders' equity (deficit), and cash flows for each of the years in the three-year period ended December 31, 2016. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of AquaBounty Technologies, Inc. as of December 31, 2016 and 2015, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2016, in conformity with accounting principles generally accepted in the United States of America.

Wolf & Company, P.C.
Boston, Massachusetts
March 16, 2017

AquaBounty Technologies, Inc.
Consolidated Balance Sheets

	As of December 31, 2016	As of December 31, 2015
Assets		
Current assets:		
Cash and cash equivalents	**$ 3,324,609**	$ 1,313,421
Certificate of deposit	**10,666**	10,339
Other receivables	**164,743**	41,897
Prepaid expenses and other current assets	**72,983**	109,898
Total current assets	**3,573,001**	1,475,555
Property, plant and equipment, net	**1,723,707**	741,340
Definite-lived intangible assets, net	**198,698**	206,381
Indefinite-lived intangible assets	**191,800**	191,800
Other assets	**21,628**	21,628
Total assets	**$ 5,708,834**	$ 2,636,704
Liabilities and stockholders' equity (deficit)		
Current liabilities:		
Accounts payable and accrued liabilities	**$ 1,017,851**	$ 621,909
Current debt	**17,913**	—
Total current liabilities	**1,035,764**	621,909
Long-term debt	**2,645,015**	2,070,366
Total liabilities	**3,680,779**	2,692,275
Commitments and contingencies		
Stockholders' equity (deficit):		
Common stock, $0.001 par value, 200,000,000 shares authorized;		
6,463,935 (2015: 5,247,604) shares outstanding	**6,464**	5,248
Additional paid-in capital	**101,581,724**	90,968,813
Accumulated other comprehensive loss	**(286,272)**	(226,432)
Accumulated deficit	**(99,273,861)**	(90,803,200)
Total stockholders' equity (deficit)	**2,028,055**	(55,571)
Total liabilities and stockholders' equity (deficit)	**$ 5,708,834**	$ 2,636,704

See accompanying notes to the consolidated financial statements and report of the independent registered public accounting firm.

AquaBounty Technologies, Inc.
Consolidated Statements of Operations and Comprehensive Loss

	Years ended December, 31		
	2016	**2015**	**2014**
Costs and expenses			
Sales and marketing	**$ 860,365**	$ 993,706	$ 729,655
Research and development	**3,429,400**	3,338,411	3,212,908
General and administrative	**3,775,289**	2,696,369	3,192,716
Total costs and expenses	**8,065,054**	7,028,486	7,135,279
Operating loss	**(8,065,054)**	(7,028,486)	(7,135,279)
Other income (expense)			
Interest expense	**(402,554)**	(10)	(62)
Gain on disposal of equipment	**2,861**	1,912	—
Other income (expense), net	**(5,914)**	(4,928)	7,966
Total other income (expense)	**(405,607)**	(3,026)	7,904
Net loss	**$ (8,470,661)**	$ (7,031,512)	$ (7,127,375)
Other comprehensive income (loss):			
Foreign currency translation gain (loss)	**(59,840)**	228,740	111,138
Total other comprehensive income (loss)	**(59,840)**	228,740	111,138
Comprehensive loss	**$ (8,530,501)**	$ (6,802,772)	$ (7,016,237)
Basic and diluted net loss per share	**$ (1.60)**	$ (1.40)	$ (1.52)
Weighted average number of common shares -			
basic and diluted	**5,303,113**	5,037,367	4,679,737

See accompanying notes to the consolidated financial statements and report of the independent registered public accounting firm.

AquaBounty Technologies, Inc.
Consolidated Statements of Changes in Stockholders' Equity (Deficit)

	Common stock issued and outstanding	Par value	Additional paid-in capital	Accumulated other comprehensive loss	Accumulated deficit	Total
Balance at December 31, 2013	4,176,941	$ 4,177	$ 77,703,338	$ (566,310)	$ (76,644,313)	$ 496,892
Net loss					(7,127,375)	(7,127,375)
Other comprehensive income				111,138		111,138
Issuance of common stock, net of expenses	634,679	635	9,742,851			9,743,486
Exercise of options for common stock	4,000	4	12,296			12,300
Share based compensation	2,381	2	272,936			272,938
Balance at December 31, 2014	4,818,001	$ 4,818	$ 87,731,421	$ (455,172)	$ (83,771,688)	$ 3,509,379
Net loss					(7,031,512)	(7,031,512)
Other comprehensive income				228,740		228,740
Issuance of common stock, net of expenses	424,269	425	2,999,575			3,000,000
Share based compensation	5,334	5	237,817			237,822
Balance at December 31, 2015	5,247,604	$ 5,248	$ 90,968,813	$ (226,432)	$ (90,803,200)	$ (55,571)
Net loss					**(8,470,661)**	**(8,470,661)**
Other comprehensive loss				**(59,840)**		**(59,840)**
Conversion of debt and accrued interest to common stock	**1,212,908**	**1,213**	**10,394,620**			**10,395,833**
Cashless exercise of options for common stock	**524**	—	—			—
Share based compensation	**2,899**	**3**	**218,291**			**218,294**
Balance at December 31, 2016	**6,463,935**	**$ 6,464**	**$ 101,581,724**	**$ (286,272)**	**$ (99,273,861)**	**$ 2,028,055**

See accompanying notes to the consolidated financial statements and report of the independent registered public accounting firm.

AquaBounty Technologies, Inc.
Consolidated Statements of Cash Flows

	Years ended December, 31		
	2016	**2015**	**2014**
Operating activities			
Net loss	**$ (8,470,661)**	$ (7,031,512)	$ (7,127,375)
Adjustment to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	**153,996**	105,952	140,742
Share-based compensation	**218,294**	237,822	272,938
Gain on disposal of equipment	**(2,861)**	(1,912)	—
Non-cash interest expense	**395,833**	—	—
Changes in operating assets and liabilities:			
Other receivables	**(121,640)**	(21,195)	48,054
Prepaid expenses and other assets	**38,054**	(12,421)	117,876
Accounts payable and accrued liabilities	**340,092**	(25,032)	(13,135)
Net cash used in operating activities	**(7,448,893)**	(6,748,298)	(6,560,900)
Investing activities			
Purchase of property, plant and equipment	**(934,495)**	(74,113)	(116,911)
Deposits on equipment purchases	**(156,982)**	—	—
Proceeds from sale of equipment	**23,844**	—	—
Payment of patent costs	**(5,664)**	(30,372)	(35,340)
Net cash used in investing activities	**(1,073,297)**	(104,485)	(152,251)
Financing activities			
Proceeds from issuance of debt	**547,142**	44,004	268,491
Repayment of term debt	**(6,268)**	—	—
Proceeds from the issuance of convertible debt	**10,000,000**	—	—
Proceeds from the issuance of common stock, net	**—**	3,000,000	9,743,486
Proceeds from exercise of stock options	**—**	—	12,300
Net cash provided by financing activities	**10,540,874**	3,044,004	10,024,277
Effect of exchange rate changes on cash and cash equivalents	**(7,496)**	(41,062)	(23,613)
Net change in cash and cash equivalents	**2,011,188**	(3,849,841)	3,287,513
Cash and cash equivalents at beginning of period	**1,313,421**	5,163,262	1,875,749
Cash and cash equivalents at the end of period	**$ 3,324,609**	$ 1,313,421	$ 5,163,262
Supplemental disclosure of cash flow information and non-cash transactions:			
Interest paid in cash	**$ 6,721**	$ 10	$ 62
Conversion of convertible debt and accrued interest to common stock	**$ 10,395,833**	$ —	$ —
Acquisition of equipment through vendor payments	**$ 50,132**	$ —	$ —

See accompanying notes to the consolidated financial statements and report of the independent registered public accounting firm.

1. Nature of business and organization

Nature of business

AquaBounty Technologies, Inc. (the “Parent”) was incorporated in December 1991 in the State of Delaware for the purpose of conducting research and development of the commercial viability of a group of proteins commonly known as antifreeze proteins (AFPs). In 1996, the Parent obtained the exclusive licensing rights for a gene construct (transgene) used to create a breed of farm-raised Atlantic salmon that exhibit growth rates that are substantially faster than traditional salmon.

In 2015, the Parent obtained approval from the US Food and Drug Administration for the production, sale, and consumption of its AquAdvantage Salmon product in the United States.

In 2016, the Parent obtained approval from Health Canada for the sale and consumption of its AquAdvantage Salmon product in Canada. Previously, in 2013, the Parent obtained approval from Environment Canada for the production of the product.

AQUA Bounty Canada Inc. (the “Canadian Subsidiary”) was incorporated in January 1994 in Canada for the purpose of establishing a commercial biotechnology laboratory to conduct research and development programs related to the Parent’s technologies.

AquaBounty Panama, S. de R.L. (the “Panama Subsidiary”) was incorporated in May 2008 in Panama for the purpose of conducting commercial trials of the Company’s AquAdvantage Salmon.

AquaBounty Farms, Inc. (the “US Subsidiary”) was incorporated in December 2014 in the State of Delaware for the purpose of conducting commercial trials of the Company’s AquAdvantage Salmon.

AquaBounty Brasil Participacoes Ltda. (the “Brazil Subsidiary”) was incorporated in May 2015 in Brazil for the purpose of conducting commercial trials of the Company’s AquAdvantage Salmon.

Basis of presentation

The consolidated financial statements include the accounts of AquaBounty Technologies, Inc. and its wholly owned subsidiaries, AQUA Bounty Canada Inc.; AquaBounty Panama, S. de R.L.; AquaBounty Farms, Inc.; and AquaBounty Brasil Participacoes Ltda. The entities are collectively referred to herein as the “Company.” All inter-company transactions and balances have been eliminated upon consolidation. Certain balances in the 2015 and 2014 Financial Statements have been reclassified to conform with the presentation of the 2016 Financial Statements.

On January 5, 2017, the Company implemented a 1-for-30 reverse share split of its outstanding common shares. All share balances in the Financial Statements and accompanying notes have been restated to reflect this change.

Liquidity and Management’s Plan

The Company has adopted Accounting Standards Update 2014-15 “Disclosure of Uncertainties about an Entity’s Ability to Continue as a Going Concern” (Note 16). The core principle of the guidance is that an entity’s management should evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the entity’s ability to continue as a going concern within one year after the date that the financial statements are available to be issued. In accordance with the guidance, management has performed an analysis and determined

that there is no substantial doubt that the Company has sufficient funds to continue as a going concern. Therefore, the accompanying financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business.

The Company has experienced net losses and negative cash flows from operations since its inception and has cumulative losses attributable to common stockholders of $99.3 million as of December 31, 2016. The Company has historically financed its operations through issuances of equity and the proceeds of debt instruments and will continue to do so until such time that the Company is able to achieve positive cash flows from operations.

The Company continues to actively pursue various funding options, including equity offerings, to obtain additional funds to continue the development of its products and bring them to commercial markets. Management continues to assess fundraising opportunities to ensure minimal dilution to its existing shareholder base and to obtain the best price for its securities. In January 2017, the Company completed an equity subscription with Intrexon resulting in net proceeds of $25 million (Note 17).

2. Summary of significant accounting policies

Use of estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities as of the date of the consolidated financial statements, and the reported amounts of expenses during the reporting periods. Actual results could differ from those estimates.

Comprehensive loss

The Company displays comprehensive loss and its components as part of its consolidated financial statements. Comprehensive loss consists of net loss and other comprehensive income (loss). Other comprehensive income (loss) includes foreign currency translation adjustments.

Foreign currency translation

The functional currency of the Parent is the US Dollar. The functional currency of the Canadian Subsidiary is the Canadian Dollar (C$) and the functional currency of the Panama, US, and Brazil Subsidiaries is the US Dollar. For the Canadian Subsidiary, assets and liabilities are translated at the exchange rates in effect at the balance sheet date, equity accounts are translated at the historical exchange rate, and the income statement accounts are translated at the average rate for each period during the year. Net translation gains or losses are adjusted directly to a separate component of other comprehensive income (loss) within stockholders’ equity (deficit).

Cash equivalents

The Company considers all highly liquid investments with maturities of three months or less when purchased to be cash equivalents. Cash equivalents consist primarily of business savings accounts.

Certificate of deposit

The Company has a six-month certificate of deposit at December 31, 2016 and 2015, that currently bears interest at 0.45%. It is renewable semi-annually in January and July.

Intangible assets

Definite-lived intangible assets include patents and licenses. Patent costs consist primarily of legal and filing fees incurred to file patents on proprietary technology developed by the Company. Patent costs are amortized on a straight-line basis over 20 years beginning with the filing date of the applicable patent. License fees are capitalized and expensed over the term of the licensing agreement.

Indefinite-lived intangible assets include trademark costs, which are capitalized with no amortization as they have an indefinite life.

Property, plant and equipment

Property, plant and equipment are carried at cost, except for those owned by the Canadian Subsidiary, which records such assets net of any related Canadian government grants received. The Company depreciates all asset classes over their estimated useful lives, as follows:

Building	25 years
Equipment	7 - 10 years
Office furniture and equipment	3 years
Leasehold improvements	shorter of asset life or lease term
Vehicles	3 years

Impairment of long-lived assets

The Company reviews the carrying value of its long-lived tangible assets and definite-lived intangible assets on an annual basis or more frequently if facts and circumstances suggest that they may be impaired. The carrying values of such assets are considered impaired when the anticipated identifiable undiscounted cash flows from such assets are less than their carrying values. An impairment loss, if any, is recognized in the amount of the difference between the carrying amount and fair value.

Indefinite-lived intangible assets are subject to impairment testing annually or more frequently if impairment indicators arise. The Company’s impairment testing utilizes a discounted cash flow analysis that requires significant management judgment with respect to revenue and expense growth rates, changes in working capital, and the selection and use of the appropriate discount rate. An impairment loss is recognized in the amount of the difference between the carrying amount and fair value.

Income taxes

The Company uses the liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are recorded for the expected future tax consequences of temporary differences between the financial reporting and income tax bases of assets and liabilities and are measured using the enacted tax rates and laws that are expected to be in effect when the differences reverse. A valuation allowance is established to reduce net deferred tax assets to the amount expected to be realized. The Company follows accounting guidance regarding the recognition,

measurement, presentation, and disclosure of uncertain tax positions in the financial statements. Tax positions taken or expected to be taken in the course of preparing the Company's tax returns are required to be evaluated to determine whether the tax positions are "more likely than not" to be upheld under regulatory review. The resulting tax impact of these tax positions is recognized in the financial statements based on the results of this evaluation. The Company did not recognize any tax liabilities associated with uncertain tax positions, nor has it recognized any interest or penalties related to unrecognized tax positions. Generally, the Company is no longer subject to federal and state tax examinations by tax authorities for years before 2013.

Net loss per share

Basic and diluted net loss per share available to common stockholders has been calculated by dividing net loss by the weighted average number of common shares outstanding during the year. Basic net loss is based solely on the number of common shares outstanding during the year. Fully diluted net loss per share includes the number of shares of common stock issuable upon the exercise of warrants and options with an exercise price less than the fair value of the common stock. Since the Company is reporting a net loss for all periods presented, all potential common shares are considered anti-dilutive and are excluded from the calculation of diluted net loss per share.

Share-based compensation

The Company measures and recognizes all share-based payment awards, including stock options made to employees and Directors, based on estimated fair values. The fair value of a share-based payment award is estimated on the date of grant using an option pricing model. The value of the portion of the award that is ultimately expected to vest is recognized as an expense over the requisite service period in the Company's consolidated statement of operations. The Company uses the Black-Scholes option pricing model ("Black-Scholes") as its method of valuation. Non-employee stock-based compensation is accounted for using Black-Scholes to determine the fair value of warrants or options awarded to non-employees with the fair value of such issuances expensed over the period of service.

3. Risks and uncertainties

The Company is subject to risks and uncertainties common in the biotechnology and aquaculture industries. Such risks and uncertainties include, but are not limited to: (i) results from current and planned product development studies and trials; (ii) decisions made by the FDA or similar regulatory bodies in other countries with respect to approval and commercial sale of any of the Company's proposed products; (iii) the commercial acceptance of any products approved for sale and the Company's ability to manufacture, distribute, and sell for a profit any products approved for sale; (iv) the Company's ability to obtain the necessary patents and proprietary rights to effectively protect its technologies; and (v) the outcome of any collaborations or alliances entered into by the Company.

Concentration of credit risk

Financial instruments that potentially subject the Company to credit risk consist principally of cash and cash equivalents and certificates of deposit. This risk is minimized by the Company's policy of investing in financial instruments with short-term maturities issued by highly rated financial institutions. The Company's cash balances may at times exceed insurance limitations. The Company holds cash balances in bank accounts located in Canada to fund its local operations. These amounts are subject to foreign currency exchange risk, which is minimized by the Company's policy to limit the

balances held in these accounts. Balances in Canadian bank accounts totaled C$267,449 ($198,901) at December 31, 2016.

Financial instruments

The carrying amounts reported in the consolidated balance sheets for other receivables and accounts payable approximate fair value based on the short-term maturity of these instruments. The carrying value of term debt approximates its fair value since it provides for market terms and interest rates.

Included in other assets is a long-term investment that consists of 216,281 shares of common stock of A/F Protein, Inc. (AFP), equating to less than 1% ownership, with a cost basis of $21,628, which the Company believes to be the best estimate of market value. AFP and the Company have certain shareholders in common.

4. Property, plant and equipment

Major classifications of property, plant and equipment are summarized as follows for December 31, 2016 and 2015:

		2016		2015
Land	**$**	**157,107**	$	73,158
Building and improvements		**1,557,184**		1,143,384
Equipment		**1,194,531**		553,231
Office furniture and equipment		**78,780**		77,697
Vehicles		**27,201**		26,367
Total property and equipment	**$**	**3,014,803**	$	1,873,837
Less accumulated depreciation and amortization		**(1,291,096)**		(1,132,497)
Property, plant and equipment, net	**$**	**1,723,707**	$	741,340

Depreciation and amortization expense for 2016 on property, plant and equipment was $140,649 (2015: $104,842; 2014: 140,742).

During 2016, the Company purchased the property, plant and equipment of the former Atlantic Sea Smolt plant in Rollo Bay West on Prince Edward Island for $717,225, including legal and other expenses incurred. The Company allocated the purchase price to land, building, and equipment based on valuations and management's estimates. The Company intends to utilize this facility to raise its broodstock to supply Atlantic salmon eggs for the production of its AquAdvantage Salmon. The Company anticipates significant renovations to the site, and, during 2016, renovation costs incurred totaled C$203,047 ($151,006) with an additional C$1.1 million committed.

5. Definite-lived intangible assets

The following is a summary of definite-lived intangible assets at December 31, 2016 and 2015:

		2016		2015
Patents, gross	**$**	**217,369**	$	211,705
Less accumulated amortization		**(18,671)**		(5,324)
Definite-lived intangible assets, net	**$**	**198,698**	$	206,381

Patent amortization expense for 2016 was $13,347 (2015: $1,110; 2014: $0). Estimated amortization expense for each of the next five years is $13,347.

6. Prepaid expenses and other current assets

Prepaid expenses and other current assets include the following at December 31, 2016 and 2015:

	2016	2015
Prepaid insurance	**$ 35,544**	$ 30,031
Prepaid supplies	**17,066**	13,837
Prepaid professional services	**17,533**	32,086
Prepaid rent and lease deposits	**2,840**	17,841
Other current assets	**—**	16,103
Total prepaid expenses and other current assets	**$ 72,983**	$ 109,898

7. Accounts payable and accrued liabilities

Accounts payable and accrued liabilities include the following at December 31, 2016 and 2015:

	2016	2015
Accounts payable	**$ 161,768**	$ 157,272
Accrued payroll including vacation	**242,436**	263,851
Accrued professional fees	**500,430**	82,036
Accrued research and development costs	**87,751**	100,583
Accrued other	**25,466**	18,167
Accounts payable and accrued liabilities	**$ 1,017,851**	$ 621,909

8. Debt

The current terms and conditions of long-term debt outstanding at December 31, 2016 and 2015, are as follows:

	Interest rate	Monthly repayment	Maturity date	2016	2015
ACOA AIF grant (C$2,871,919)	0%	Royalties	-	**$ 2,135,846**	$ 2,070,366
ACOA term loan (C$337,000)	0%	C$3,120	June 2026	**—**	—
PEI Finance term loan (C$717,093)	4%	C$4,333	July 2021	**527,082**	—
Total debt				**$ 2,662,928**	$ 2,070,366
less: current portion				**(17,913)**	—
Long-term debt				**$ 2,645,015**	$ 2,070,366

Principal payments due on the PEI Finance term loan debt are as follows:

Year	FPEI
2017	$ 17,913
2018	18,643
2019	19,403
2020	20,192
2021	450,931
Thereafter	—
Total	$ 527,082

1. The amounts due under the ACOA AIF grant debt are not included in the maturity schedule above due to the uncertainty of the timing of repayment.

Atlantic Canada Opportunities Agency ("ACOA")

ACOA is a Canadian government agency that provides funding to support the development of businesses and to promote employment in the Atlantic region of Canada.

In January 2009, the Canadian Subsidiary was awarded a grant from ACOA to provide a contribution towards the funding of a research and development project. The total amount claimed under the award over the five-year claim period was C$2,871,919 ($2,135,846). No further funds are available under this grant. Amounts claimed by the Canadian Subsidiary must be repaid in the form of a 10% royalty on any products that are commercialized out of this research project, until the loan is fully repaid. The first scheduled repayment was June 30, 2015, and subsequent repayments are due annually until the full balance of the contributed funds is paid. The Company did not generate any revenue from the sale of products related to this research during 2015 or 2016 and therefore did not make a royalty payment during 2016 and does not expect to make a royalty payment during 2017.

In February 2016, the Canadian Subsidiary executed an agreement with ACOA to partially finance the renovations to the Rollo Bay site. The terms of the agreement include funding up to C$337,000 with repayment commencing after the final draw-down of the funds. The loan term is nine years with a zero percent interest rate. No funds have been drawn on the loan as of December 31, 2016.

Finance PEI ("FPEI")

FPEI is a corporation of the Ministry of Economic Development and Tourism for Prince Edward Island, Canada, and administers business financing programs for the provincial government. In August 2016, the Canadian Subsidiary obtained a loan from FPEI in the amount of C$717,093 ($547,142) to partially finance the purchase of the assets of the former Atlantic Sea Smolt plant in Rollo Bay West on Prince Edward Island. The loan is being repaid through monthly payments of principal and interest with a balloon payment for the balance due in July 2021. The loan is collateralized by a mortgage executed by the Canadian Subsidiary, which conveys a first security interest in all of its current and acquired assets. The loan is guaranteed by the Parent.

Intrexon

Intrexon is a public company specializing in next-generation synthetic biology and the Company's majority shareholder. In February 2016, Intrexon agreed to provide the Company with a $10.0 million convertible debt facility. The unsecured loan could be drawn-down in increments of $2.5 million, carried an interest rate of 10.0%, and all principal and accrued interest would mature on March 1, 2017. In December, Intrexon converted the outstanding balance of $10.0 million plus accrued interest of $395,833 into 1,212,908 common shares in the Company.

The Company recognized interest expense in 2016 of $402,554 (2015: $0; 2014: $0) on their interest-bearing debt.

9. Stockholders' equity

The Company is presently authorized to issue up to 240 million shares of stock, of which 40 million are authorized as preferred stock and 200 million as common stock. At December 31, 2016, the Company had zero shares (2015: zero) of preferred stock and 6,463,935 shares (2015: 5,247,604) of common stock, issued and outstanding.

In November 2016, the Company's shareholders approved a reverse share split at several ratios, with the ultimate ratio to be decided by the Board. In December 2016, the Board approved a reverse share

split ratio of 1-for-30 to be implemented on January 5, 2017. All share balances in the Financial Statements and accompanying notes have been restated to reflect this change.

Common stock

The holders of the common stock are entitled to one vote for each share held at all meetings of stockholders. Dividends and distribution of assets of the Company in the event of liquidation are subject to the preferential rights of any outstanding preferred shares. At December 31, 2016, the Company had reserved 185,591 shares of common stock for the exercise of options.

Recent issuances

In December 2016, the Company issued 1,212,908 shares of common stock upon the conversion of the outstanding principal and accrued interest of $10.4 million on the convertible debt facility with Intrexon.

In June 2015 the Board approved a fundraising of $3.0 million by means of a subscription for new common shares by the Company's majority shareholder, Intrexon Corporation. The subscription price was $7.07 (450.0 pence) per share, which represented the closing price of the Company's stock on June 23, 2015, and the aggregate number of common shares subscribed was $424,269. The transaction closed on June 30, 2015.

In January 2014 the Board approved a fundraising of $10.0 million before expenses by means of a subscription for new common shares by the Company's majority shareholder, Intrexon Corporation. The subscription price was $15.76 (945.0 pence) per share, which represented the closing price of the Company's stock on March 4, 2014, and the aggregate number of common shares subscribed was 634,679. The transaction closed on March 20, 2014, with net proceeds to the Company of $9.7 million.

Restricted stock

The Company grants restricted common stock to the Chairman of the Board of Directors as part of his compensation package. Generally, the shares are fully vested upon the third anniversary of the grant date. Unvested shares can be cancelled upon termination of the Chairman's services.

A summary of the Company's unvested shares of restricted stock as of December 31, 2016, is as follows:

	Shares		Weighted average grant date fair value
Unvested at December 31, 2015	3,853	$	5.81
Granted	2,899		9.62
Vested	(2,583)		7.00
Unvested at December 31, 2016	4,169	$	7.72

During 2016, the Company expensed $18,070 (2015: $8,604; 2014: $25,577) related to the Chairman's restricted stock awards. At December 31, 2016, the balance of unearned share-based compensation to be expensed in future periods related to the restricted stock awards is $32,194. The period over which the unearned share-based compensation is expected to be earned is approximately two years.

Stock options

In 2006, the Company established the 2006 Equity Incentive Plan (the “2006 Plan”). The 2006 Plan provided for the issuance of incentive stock options to employees of the Company and non-qualified stock options and awards of restricted and direct stock purchases to Directors, officers, employees and consultants of the Company. In accordance with its original terms, no further shares may be granted under the 2006 Plan subsequent to March 18, 2016. All outstanding awards under the 2006 Plan will continue until their individual termination dates.

In March 2016, the Company’s Board of Directors adopted the AquaBounty Technologies, Inc. 2016 Equity Incentive Plan (the “2016 Plan”) to replace the 2006 Plan. The 2016 Plan provides for the issuance of incentive stock options, non-qualified stock options and awards of restricted and direct stock purchases to Directors, officers, employees and consultants of the Company. The aggregate number of shares of common stock that may be issued pursuant to awards granted under the 2016 Plan cannot exceed 450,000. The 2016 Plan was approved by the Company’s shareholders at its Annual Meeting on April 26, 2016. As of December 31, 2016, no awards have been granted under the 2016 Plan.

The Company’s option activity under the 2006 Plan is summarized as follows:

	Number of options		Weighted average exercise price
Outstanding at December 31, 2015	179,426	$	7.83
Issued	7,500		9.60
Exercised	(1,085)		6.25
Expired	(250)		23.40
Outstanding at December 31, 2016	185,591	$	7.89
Exercisable at December 31, 2016	181,766	$	7.86

In September 2016, the Company issued 524 shares of common stock in a cashless exercise of 1,085 stock options by an employee.

Unless otherwise indicated, options issued to employees, members of the Board of Directors and non-employees are vested over one to three years and are exercisable for a term of ten years from the date of issuance.

The weighted average fair value of stock options granted during 2016 was $4.46 (2015: $4.06; 2014: $17.40). The total intrinsic value of options exercised in 2016 was $6,338 (2015: $0; 2014: $40,428). At December 31, 2016, the total intrinsic value of all options outstanding was $602,773 (2015: $934,081), the total intrinsic value of exercisable options was $597,872 (2015: $844,224), and the total number of shares available for grant under the 2006 Plan and 2016 Plan was 450,000 (2015: 345,351).

The following table summarizes information about options outstanding and exercisable at December 31, 2016:

Weighted average exercise price of outstanding options	Number of options outstanding	Weighted average remaining estimated life (in years)	Number of options exercisable	Weighted average price of outstanding and exercisable options
$3.30	87,671	2.5	87,671	
$3.60	800	5.5	800	
$5.70	10,336	8.2	9,760	
$6.90	29,038	4.5	27,466	
$7.50	15,837	6.3	15,837	
$9.60	8,300	8.7	7,064	
$9.90	800	1.5	800	
$10.50	1,600	6.5	1,600	
$10.80	2,400	7.5	2,400	
$19.50	2,554	0.5	2,554	
$23.40	26,255	7.1	25,814	
	185,591		181,766	$7.86

The fair values of stock option grants to employees and members of the Board of Directors during 2016, 2015, and 2014 were measured on the date of grant using Black-Scholes, with the following weighted average assumptions:

	2016	2015	2014
Expected volatility	**53%**	88%	105%
Risk free interest rate	**1.31%**	1.54%	1.67%
Expected dividend yield	**0.0%**	0.0%	0.0%
Expected life (in years)	**5**	5	5

The risk-free interest rate is estimated using the Federal Funds interest rate for a period that is commensurate with the expected term of the awards. The expected dividend yield is zero because the Company has never paid a dividend and does not expect to do so for the foreseeable future. The expected life was based on a number of factors including historical experience, vesting provisions, exercise price relative to market price and expected volatility. The Company believes that all groups of employees demonstrate similar exercise and post-vesting termination behavior and, therefore, does not stratify employees into multiple groups. The expected volatility was estimated using the Company's historical price volatility over a period that is commensurate with the expected term of the awards.

Total share-based compensation on stock-option grants amounted to $200,224 in 2016 (2015: $229,218; 2014: $247,361). At December 31, 2016, the balance of unearned share-based compensation to be expensed in future periods related to unvested share-based awards is $26,090. The period over which the unearned share-based compensation is expected to be earned is approximately two years.

Share-based compensation

The following table summarizes share-based compensation costs recognized in the Company's Consolidated Statements of Operations and Comprehensive Loss for the years ended December 31, 2016, 2015, and 2014:

	2016	2015	2014
Research and development	**$ 2,115**	$ 6,699	$ 29,910
Sales and marketing	**65,517**	75,843	75,843
General and administrative	**150,662**	155,280	167,185
Total share-based compensation	**$ 218,294**	$ 237,822	$ 272,938

10. Income taxes

The components of loss before income taxes for the years ended December 31, 2016, 2015, and 2014, are presented below:

	2016	2015	2014
Domestic	**$ (5,950,862)**	$ (4,780,607)	$ (4,772,727)
Foreign	**(2,519,799)**	(2,250,905)	(2,354,648)
Loss before income taxes	**$ (8,470,661)**	$ (7,031,512)	$ (7,127,375)

Income taxes computed using the federal statutory income tax rate differs from the Company's effective tax rate for the years ended December 31, 2016, 2015, and 2014, primarily due to the following:

	2016	2015	2014
Income tax benefit	**$ (2,880,025)**	$ (2,390,714)	$ (2,423,308)
State and provincial income tax, net of federal benefit	**(604,354)**	(47,976)	(449,481)
Permanent differences	**234,247**	158,207	367,766
US-Foreign rate differential	**359,729**	(165,029)	245,256
Other, net	**73,220**	(11,125)	581,653
	(2,817,183)	(2,456,637)	(1,678,114)
Change in valuation allowance	**2,817,183**	2,456,637	1,678,114
Total income tax	**$ —**	$ —	$ —

As of December 31, 2016, the Company has net domestic operating loss carryforwards of approximately $22.2 million to offset future federal taxable income, which begin to expire in 2018. The future utilization of the net operating loss and tax credit carryforwards, however, is subject to annual use limitations based on the change in stock ownership rules of Internal Revenue Code Sections 382 and 383. The Company experienced a change in ownership under these rules during 2012 and revised its calculation of net operating loss carryforwards based on annual limitation rules. The Company also has foreign net operating loss carryforwards in the amount of approximately $12.9 million and foreign research and development expense tax credits of approximately $2.4 million at December 31, 2016, which expire at various times commencing in 2018. Since the Company has incurred only losses from inception and there is uncertainty related to the ultimate use of the loss carryforwards and tax credits, a valuation allowance has been recognized to offset the Company's deferred tax assets, and no benefit for income taxes has been recorded.

Significant components of the Company's deferred tax assets and liabilities are as follows:

		2016		2015
Deferred tax assets:				
Net operating loss carryforwards	**$**	**12,844,999**	$	10,166,675
Foreign research and development tax credit carryforwards		**2,428,094**		2,225,961
Property and equipment		**412,283**		374,253
Accounts receivable and other		**400**		400
Stock options		**50,580**		163,109
Accrued vacation		**34,107**		33,014
Intangible assets		**(162,057)**		(172,189)
Total deferred tax assets	**$**	**15,608,406**	$	12,791,223
Valuation allowance	**$**	**(15,608,406)**	$	(12,791,223)
Net deferred tax assets	**$**	**—**	$	—

The valuation allowance increased by $2,817,183 during 2016 and increased by $2,456,637 during 2015. The increase in both years was due primarily to an increase in deferred tax assets for net operating loss carryforwards and foreign tax credits, offset by a decrease in stock options.

11. Commitments and contingencies

The Company recognizes and discloses commitments when it enters into executed contractual obligations with other parties. The Company accrues contingent liabilities when it is probable that future expenditures will be made and such expenditures can be reasonably estimated.

Lease commitments

In May 2016, the Company extended its lease for its Panama farm site. The lease has a term of two years, ending in May 2018, with total rent payments of $360,000.

In addition, the Company leases office space in Brazil and Maynard, Massachusetts on a month-to-month basis.

Total rent expense in 2016 was $202,788 (2015: $202,237; 2014: $349,641). Future minimum commitments under the Company's operating leases are $240,000 with $180,000 in 2017 and $60,000 in 2018.

Employment agreements

The Company has employment agreements with certain of its officers. The agreements provide for base pay and benefits, as defined. Under certain circumstances of termination, the Company must make severance payments.

12. Retirement plan

The Company has a savings and retirement plan for its US employees that qualifies under Section 401(k) of the Internal Revenue Code. The plan covers substantially all employees and provides for voluntary contributions by participating employees up to the maximum contribution allowed under the Internal Revenue Code. Contributions by the Company can be made, as determined by the Board of Directors, provided the amount does not exceed the maximum permitted by the Internal Revenue Code. Company contributions made and expensed in operations in connection with the plan during the year ended December 31, 2016, amounted to $33,422 (2015: $29,931; 2014: $24,018).

The Company also has a Registered Retirement Savings Plan for its Canadian employees. Company contributions made and expensed in operations in connection with the plan during the year ended December 31, 2016, amounted to $21,777 (2015: $16,274; 2014: $16,566).

13. Government Assistance

From time to time, the Company receives government assistance in the form of research grants, which are recorded as a reduction of research and development expenditures. During 2016, grants of $33,451 (2015: $70,338; 2014: $192,773) were recorded as a reduction of expenditures. At December 31, 2016, there was $12,629 (2015: $13,829) due to the Company under research grants. All government assistance is subject to periodic audit by the agency involved in the grant.

14. Contract Research Agreement

In March 2012, the Company executed a contract research agreement with Tethys Aquaculture Canada Inc. (“TAC”), to provide the Company with the resources required for its ongoing development needs. Under the terms of the extended agreement, TAC would provide services to the Company through September 30, 2016, and on a project-related basis thereafter. Total costs incurred under the terms of this agreement amounted to $103,208 in 2016 (2015: $287,246; 2014: $338,993) and are included as a component of research and development expense in the Consolidated Statements of Operations and Comprehensive Loss.

In February 2015, the Company executed a contract research agreement with the Center for Aquaculture Technologies, Inc. (“CAT”) to provide research services for a specific project. Under the terms of the extended agreement, CAT provided services to the Company through December 31, 2016. Total costs incurred amounted to $172,966 in 2016 (2015: $185,426) and are included as a component of research and development expense in the Consolidated Statements of Operations and Comprehensive Loss. The contract with CAT has been extended for 2017.

15. Related Party Collaboration Agreement

In February 2013, the Company entered into the ECC with Intrexon Corporation, its majority shareholder, pursuant to which the Company will use Intrexon’s UltraVector and other technology platforms to develop and commercialize additional genetically modified traits in finfish for human consumption. The ECC, which can be terminated by the Company upon 90 days’ written notice, grants the Company a worldwide license to use specified patents and other intellectual property of Intrexon in connection with the research, development, use, importing, manufacture, sale, and offer for sale of products involving DNA administered to finfish for human consumption. Such license is exclusive with respect to any clinical development, selling, offering for sale, or other commercialization of developed products, and otherwise is non-exclusive.

Under the ECC and subject to certain exceptions, the Company is responsible for, among other things, the performance of the program, including development, commercialization, and certain aspects of manufacturing developed products. Among other things, Intrexon is responsible for the costs of establishing manufacturing capabilities and facilities for the bulk manufacture of certain products developed under the program; certain other aspects of manufacturing; costs of discovery-stage research with respect to platform improvements; and costs of filing, prosecution, and maintenance of Intrexon’s patents.

The Company will pay Intrexon quarterly 16.66% of the gross profits calculated under the terms of the agreement for each developed product. The Company has likewise agreed to pay Intrexon 50% of

quarterly revenue obtained from a sublicensor in the event of a sublicensing arrangement. In addition, the Company will reimburse Intrexon for the costs of certain services provided by Intrexon. No royalties were paid to Intrexon in 2016 and the Company does not expect to pay royalties in 2017.

Total Intrexon service costs incurred under the terms of this agreement amounted to $912,182 in 2016 (2015: $1,186,404; 2014: $1,091,021), of which $73,780 is included in accounts payable and accrued liabilities at December 31, 2016 (2015: $79,388) and is included as a component of research and development expense in the Consolidated Statements of Operations and Comprehensive Loss.

16. Recently Issued Accounting Standards

Recently issued accounting pronouncements that may be relevant to the Company are the following:

In August 2014, the Financial Accounting Standards Board (the “FASB”) issued Accounting Standards Update (“ASU”) 2014-15 “Disclosure of Uncertainties about an Entity’s Ability to Continue as a Going Concern.” The core principle of the guidance is that an entity’s management should evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the entity’s ability to continue as a going concern within one year after the date that the financial statements are available to be issued. When management identifies conditions or events that raise substantial doubt about an entity’s ability to continue as a going concern, management should consider whether its plans that are intended to mitigate those relevant conditions or events that will alleviate the substantial doubt are adequately disclosed in the footnotes to the financial statements. This guidance is now effective and has been adopted by the Company.

In February 2016, the FASB issued ASU 2016-02, “Leases,” which requires a lessee to recognize lease liabilities for the lessee’s obligation to make lease payments arising from a lease, measured on a discounted basis, and right-of-use assets, representing the lessee’s right to use, or control the use of, specified assets for the lease term. Additionally, the new guidance has simplified accounting for sale and leaseback transactions. Lessor accounting is largely unchanged. The ASU is effective for fiscal years beginning after December 15, 2018.

In March 2016, the FASB issued ASU No. 2016-09, “Compensation – Stock Compensation.” The areas for simplification in this update involve several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. For public entities, the amendments in this update are effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods. The Company does not expect that adoption of this ASU will have an impact on the financial statements.

In August 2016, the FASB issued ASU No. 2016-15, “Statement of Cash Flows,” which provides specific guidance on eight cash flow classification issues. For public entities, the amendments in this update are effective for annual periods beginning after December 15, 2017, and interim periods within those annual periods. The Company is currently evaluating the impact of adopting this ASU on the financial statements.

Management does not expect any other recently issued, but not yet effective, accounting standards to have a material effect on its results of operations or financial condition.

17. Quarterly Financial Information (unaudited)

The following information has been derived from unaudited consolidated statements that, in the opinion of management, include all recurring adjustments necessary for a fair statement of such information.

	Three Months Ended 2016			
	March 31	June 30	September 30	December 31
Operating loss	$ (1,796,159)	$ (1,979,021)	$ (2,008,917)	$ (2,280,957)
Net loss	(1,818,977)	(2,063,836)	(2,141,826)	(2,446,022)
Basic and diluted net loss per share	$ (0.350)	$ (0.390)	$ (0.410)	$ (0.450)

	Three Months Ended 2015			
	March 31	June 30	September 30	December 31
Operating loss	$ (1,800,363)	$ (1,732,163)	$ (1,657,469)	$ (1,838,491)
Net loss	(1,802,126)	(1,733,112)	(1,658,405)	(1,837,869)
Basic and diluted net loss per share	$ (0.370)	$ (0.360)	$ (0.320)	$ (0.350)

18. Subsequent events

On January 18, 2017, the Company closed an equity subscription of $25.0 million with its majority shareholder, Intrexon, for 2,421,073 common shares at a price of $10.326. The financing was approved by the Board in November 2016 and closed after the Company completed a listing of its common shares on the NASDAQ stock exchange.

On January 5, 2017, the Company implemented a 1-for-30 reverse share split, which had been approved by the Company’s shareholders in November 2016. The split ratio was determined by the Board in December 2016.

EXHIBIT 21.1

List of Subsidiaries of AquaBounty Technologies, Inc.

The following is a list of subsidiaries of AquaBounty Technologies, Inc., the names under which such subsidiaries do business, and the state or country in which each was organized:

Name	Jurisdiction of Organization
AQUA Bounty Canada Inc.	Canada
AquaBounty Panama, S. de R.L.	Panama
Aqua Bounty Farms Chile Limitada	Chile
AquaBounty Farms, Inc.	Delaware
AquaBounty Brasil Participações Ltda.	Brazil

EXHIBIT 31.1

Certification

I, Ronald L. Stotish, certify that:

1. I have reviewed this Annual Report on Form 10-K of AquaBounty Technologies, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

(a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(c) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's Board of Directors (or persons performing the equivalent functions):

(a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and

(b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 16, 2017

/s/ Ronald L. Stotish

Chief Executive Officer

EXHIBIT 31.2

Certification

I, David A. Frank, certify that:

1. I have reviewed this Annual Report on Form 10-K of AquaBounty Technologies, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

(a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(c) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's Board of Directors (or persons performing the equivalent functions):

(a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and

(b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 16, 2017

/s/ David A. Frank

Chief Financial Officer

EXHIBIT 32.1

The following certification is being made to the Securities and Exchange Commission solely for purposes of Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. 1350).

In accordance with the requirements of Section 906 of the Sarbanes-Oxley Act of 2002 (18 USC 1350), each of the undersigned hereby certifies, to his knowledge, that:

(i) this Annual Report on Form 10-K for the year ended December 31, 2016, which this statement accompanies, fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and

(ii) the information contained in this Annual Report on Form 10-K for the year ended December 31, 2016, fairly presents, in all material respects, the financial condition and results of operations of AquaBounty Technologies, Inc.

Dated as of this 16th day of March 2017.

/s/ Ronald L. Stotish	/s/ David A. Frank
Ronald L. Stotish Chief Executive Officer	David A. Frank Chief Financial Officer