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

Form 10-K

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

For the fiscal year ended December 31, 2019

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

For the transition period from _____ to _____

Commission file number: 001-36426

AquaBounty Technologies, Inc.

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

Delaware

(State or other jurisdiction of
incorporation or organization)

04-3156167

(I.R.S. employer
identification no.)

2 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	Trading Symbol(s)	Name of exchange on which registered
Common Stock, par value \$0.001 per share	AQB	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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or such shorter period that the registrant was required to submit such files).

Yes No

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

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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, 2019, the aggregate market value of the 10,456,870 shares of common stock held by non-affiliates of the registrant was approximately \$32.1 million. At March 9, 2020, the registrant had 31,985,365 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for its Annual Meeting of Shareholders to be held on April 28, 2020 (the "2020 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, 2019**

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Cautionary Note Regarding Forward-Looking Statements

This Annual Report on Form 10-K, particularly the sections titled “Summary,” “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business,” contains forward looking statements. All statements other than present and historical facts and conditions contained in this Annual Report on Form 10-K, including statements regarding our future results of operations and financial positions, business strategy, plans, and our objectives for future operations, are forward-looking statements. When used in this Annual Report on Form 10-K, the words “anticipate,” “believe,” “can,” “could,” “estimate,” “expect,” “intend,” “is designed to,” “may,” “might,” “plan,” “potential,” “predict,” “objective,” “should,” or the negative of these and similar expressions identify 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; 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 completion of renovations at our farms; 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. Forward-looking statements in this Annual Report on Form 10-K include, but are not limited to, statements about:

- the anticipated benefits and characteristics of our AquAdvantage Salmon product;
- the implementation and likelihood of achieving the business plan, future revenue, and operating results;
- our plans for and the timing of the development of new farms and the output of those farms;
- developments concerning our research projects;
- our expectations regarding our ability to successfully enter new markets or develop additional products;
- our competitive position and developments and projections relating to our competitors and our industry;
- expectations regarding anticipated operating results;
- our cash position and ability to raise additional capital to finance our activities;
- our ability to protect our intellectual property and other proprietary rights and technologies;
- the impact of and our ability to adapt to changes in laws or regulations and policies;
- the ability to secure any necessary regulatory approvals to commercialize any products;
- the rate and degree of market acceptance of any products developed through the application of bioengineering, including bioengineered fish;
- our ability to retain and recruit key personnel;
- the success of any of our future acquisitions or investments;
- our expectations regarding the time during which we will be an emerging growth company under the JOBS Act; 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, particularly in the section titled “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 is a leader in the field of land-based aquaculture and the use of technology for improving its productivity and sustainability. Our objective is to ensure the availability of high-quality seafood to meet global consumer demand, while addressing critical production constraints in the most popular farmed species.

In 1995, we began the process of seeking regulatory approval from the FDA for our first bioengineered product, AquAdvantage Salmon, which grows to harvest size faster than conventional Atlantic salmon. In 1996, we acquired our first land-based RAS hatchery on Prince Edward Island, Canada, and we now have over two decades of experience in successfully rearing Atlantic salmon in RAS facilities.

On November 19, 2015, we received approval from the FDA of our NADA for the production, sale, and consumption in the United States of AquAdvantage Salmon. This was followed on May 19, 2016, by the approval from Health Canada for the production, sale, and consumption of AquAdvantage Salmon in Canada. Consequently, we have received approvals for our product from what we believe are two of the most respected and rigorous regulatory agencies in the world.

We believe that receipt of FDA approval for AquAdvantage Salmon not only represents a major milestone for us, but also a significant pioneering development in introducing bioengineered 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 bioengineered animal to be approved for human consumption.

We farm AquAdvantage Salmon in land-based, contained, freshwater aquaculture systems, which allows inland fish farms to be established close to major demand centers in a profitable and environmentally sustainable manner. Our years of experience growing Atlantic salmon in land-based farms, coupled with the economic advantage of our faster-growing AquAdvantage Salmon, offers the opportunity to energize salmon aquaculture in the United States, which imported more than \$3.4 billion of Atlantic salmon in 2018 according to the DOC.

In 2017, we purchased an existing land-based aquaculture facility in Indiana as our first farm in the United States. We currently are growing both conventional Atlantic salmon and AquAdvantage Salmon at the farm, with our first harvests of conventional Atlantic salmon expected in Q2 of 2020 and our first harvests of AquAdvantage Salmon expected in Q4 of 2020. Our future plans include construction of four to five new farms in North America at sites close to consumer consumption over the next several years. Additionally, we are pursuing regulatory approval for AquAdvantage Salmon in Argentina, Brazil, China, and Israel.

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

Due to an Import Alert that was implemented by the FDA in response to a provision in the 2016 Appropriations bill requiring labeling guidance for our product, AquAdvantage Salmon could not be imported into the U.S. until March 2019. In the interim, we introduced conventional Atlantic Salmon into our Indiana facility for grow-out, and, after the Import Alert was lifted, added AquAdvantage Salmon. We expect our first harvest of each group in the second quarter and fourth quarter, respectively. For more information, see “Risk Factors-Risks Relating to Our Business-We may become subject to increasing regulation, changes in existing regulations, and review of existing regulatory decisions.” We also anticipate the first harvest from our Rollo Bay farm in the same period.

We have incurred significant losses since our inception in 1991 and expect to continue to incur significant losses until we achieve market acceptance for our product and expand our production capacity. We have sold small quantities of AquAdvantage Salmon from our demonstration farm site in Panama during 2018 and 2019, and we expect more significant revenues in 2020 once we begin to harvest from our farms in Indiana and on Prince Edward Island. For the fiscal years ended December 31, 2019, 2018 and 2017, we experienced operating losses of \$13.2 million, \$10.4 million and \$9.3 million, respectively.

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. According to Research and Markets, an industry research organization, the global aquaculture market was valued at \$264.5 billion in 2018 and is expected to grow at a compound annual rate of 7.7% to reach a market size of \$509.7 billion by the year 2027. 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 and consumers seek out high-quality proteins.

Salmon Farming

Atlantic salmon farming is a major industry in the cold-water countries of the northern and southern hemispheres. According to the FAO, Atlantic salmon aquaculture production grew by approximately 5.9% annually between 2000 and 2017. Total production volume

of farmed Atlantic salmon during 2017 was 2.36 million metric tons with a value of over \$16.7 billion. Industry analyst Kontali expects 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.

Below is a break-down by major producing country for the time period 2012 through 2017, which is the last year for which data is readily available from FAO.

Worldwide Atlantic Salmon Production by Country (in metric tons)

Country	2012	2013	2014	2015	2016	2017
Norway	1,232,095	1,168,324	1,258,356	1,303,346	1,233,619	1,236,353
Chile	399,678	492,329	644,459	608,546	532,225	614,180
United Kingdom	162,547	163,518	179,397	172,146	163,135	189,707
Canada	116,101	97,629	86,347	121,926	123,522	120,553
Faroe Islands	76,564	75,821	86,454	80,600	83,300	86,800
Australia	43,982	42,825	41,591	48,331	56,115	52,580
Ireland	12,440	9,125	9,368	13,116	16,300	18,342
United States	19,295	18,866	18,719	18,719	16,185	14,685
All other	11,696	25,549	23,376	14,849	22,892	25,463
Volume-Worldwide (mt)	2,074,398	2,093,986	2,348,067	2,381,579	2,247,293	2,358,663

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Pricing

According to the DOC, which tracks the volume and value of Atlantic salmon imports into the United States, from 2011 to 2018 the average wholesale price of Atlantic salmon imported into the country increased from \$3.81 per pound (\$8.39/kilogram) to \$4.77 per pound (\$10.51/kilogram).

The daily spot (farm-gate or wholesale market) price for Atlantic salmon is very volatile due to the species' long production cycle, which normally ranges between two and three years, and its short shelf life, which usually 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 include the following companies: Mowi, Cermaq, Agrosuper, Leroy Seafood Group, SalMar, Cooke Aquaculture, and Grieg Seafood. According to Kontali, these seven companies accounted for approximately 46% of the Atlantic salmon produced in 2018.

U.S. Atlantic Salmon Market

According to the DOC, in 2018 the United States imported a record 719 million pounds (326 thousand metric tons) of Atlantic salmon with an aggregate market value of approximately \$3.4 billion, or \$4.77 per pound. The DOC also reported that over 89% of the total quantity of Atlantic salmon imports into the United States in 2018 originated from Chile, Canada, and Norway. 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 32 million pounds (15 thousand metric tons) of farmed Atlantic salmon was produced in the United States in 2017, representing only 4.7% of the total farmed Atlantic salmon supplied to the country.

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 USDA, during the period from 2012 to 2017, annual seafood consumption in the United States ranged between 14 and 16 pounds per capita, significantly behind consumption of poultry (96 to 108 pounds), beef (53 to 57 pounds), and pork (45 to 50 pounds). In comparison, according to FAO, average seafood consumption worldwide was 45 pounds per capita in 2016.

Perception of Bioengineered Atlantic Salmon

Though Atlantic salmon is the second most consumed seafood in the United States, activist groups opposing bioengineering have pressured a number of retail food outlets and grocery chains to publicly state that they will not carry bioengineered 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 identical to conventional farmed Atlantic salmon.

There are surveys that have been cited by various NGOs that indicate that consumers are reluctant to purchase bioengineered food and that they would like to see labeling in order to avoid it. In response to the potential for state-by-state labeling laws, Congress passed the National Bioengineered Food Disclosure Law in 2016, which directed USDA to establish a national mandatory standard for disclosing foods that are or may be bioengineered. The Disclosure Standard requires food manufacturers, importers, and certain retailers to ensure bioengineered foods are appropriately disclosed. The implementation date of the Disclosure Standard is January 1, 2020, except for small food manufacturers, whose implementation date is January 1, 2021. The mandatory compliance date of the Disclosure Standard is January 1, 2022. We plan to implement the Disclosure Standard immediately with the first sales of AquAdvantage Salmon.

In conjunction with the bioengineered disclosure, we plan to educate consumers on the benefits of AquAdvantage Salmon versus conventional Atlantic salmon, including its 25% improved 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, reduced exposure of the fish to environmental toxins due to use of land-based aquaculture systems, and reduced reliance on vaccines or antibiotics due to improved biosecurity.

Atlantic Salmon Disease Impact

An area of concern with current Atlantic salmon farming production is the environmental impact and the cost of disease management associated with those operations. 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 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 health management practices to mitigate its impact.

Sea lice are marine parasites that occur naturally and attach to the skin of Atlantic salmon. Even a few sea lice can increase the likelihood of secondary infections and mortality, and the presence of significant numbers are likely to have adverse effects on fish health and aesthetic appearance. The cost of managing sea lice in sea-cage farming environments can be significant.

The closed, contained, land-based production systems using RAS technology 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. RAS production will allow the AquAdvantage Salmon to be raised in optimized conditions with total control of the water coming in and going out of the system, while recirculating greater than 95% of the water used.

In contrast, conventional salmon aquaculture takes place in large cages (sea 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. This risk of disease has led to the widespread use of antibiotics, vaccines, and other pharmacological agents, which are unnecessary in a RAS environment.

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 have identified several states that would be excellent potential sites for AquAdvantage Salmon farms and are in the process of conducting a site search for the location of our next farm.

Our Product

Our product, AquAdvantage Salmon, is a bioengineered Atlantic salmon that can grow to market size faster than conventional farmed Atlantic salmon. The original research on the Atlantic salmon was conducted at Memorial University in Newfoundland, Canada, by a team seeking to protect the fish from the effects of the cold waters of the North Atlantic Ocean. They discovered that the single genetic change made by placing a second copy of the salmon growth hormone gene under the control of an alternative genetic promoter (gene switch) from the ocean pout resulted in more consistent levels of growth hormone being released, which accelerated the early stages of the salmon's development, a time period when the salmon are more susceptible to disease and mortality. The accelerated growth allows these fish to reach a marketable size sooner. This can reduce farming time from between 28 to 36 months for conventional Atlantic salmon to between 18 to 20 months for AquAdvantage Salmon.

This accelerated growth has economic and environmental advantages. The faster life cycle, from birth to harvesting, of AquAdvantage Salmon, as compared to conventional salmon, allows it to be produced more economically in contained, land-based RAS farms. Although this requires greater capital investment than the sea cage approach, we believe that the higher costs will be offset by more efficient growth, which allows for us to produce approximately 70% more AquAdvantage Salmon each year in comparison to conventional Atlantic salmon; 25% better feed conversion; reduced exposure to environmental threats; and more effective control of disease. In addition, with farms located nearer to the major food markets, we believe there will be savings on transportation of the harvested stock, a reduced carbon footprint, and an improved ability to get fresh product to market faster. We estimate that producing AquAdvantage Salmon in a land-based RAS farm can provide a 2x advantage in EBITDA annual cash returns in comparison to growing conventional Atlantic salmon in a facility of the same size (EBITDA being defined as farm operation net income (loss), plus depreciation expense, other income/expense, including interest expense and interest income, and the provision for income taxes).

The following table reflects current estimates of the financial impact of building a facility for conventional Atlantic salmon production in comparison to AquAdvantage Salmon. We believe that the current assumptions and other considerations used to make these estimates are accurate; however, actual outcomes may differ. See "Risk Factors" for more information.

	Conventional	AquAdvantage
Annual Output	5,000 mt	8,550 mt
Annual Revenue*	\$34m - \$37m	\$59m - \$64m
Contribution Margin %	27% - 31%	37% - 40%
EBITDA	\$12m - \$15m	\$25m - \$30m
Payback Period	8-10 years	4-5 years

Plan of Operation

We are an aquaculture company that utilizes technology to produce fish economically and sustainably. We have over 25 years of experience raising Atlantic salmon in land-based RAS facilities, and our first bioengineered product is the AquAdvantage Salmon, which can grow to harvest size faster than conventional Atlantic salmon. Our near-term business plan contemplates that we will construct and operate four to five new, land-based RAS farms in North America at locations close to consumer consumption. Each of these farms could cost \$75 million to \$100 million to construct. We currently have two farms in operation, a 250-metric-ton farm in Rollo Bay, Prince Edward Island, and a 1,200-metric-ton farm in Indiana. Based on our progress to date, we expect that the Indiana farm will begin harvesting its fish in the second quarter of 2020, and the Rollo Bay farm will begin harvesting in the fourth quarter of 2020. Our target is to achieve an annual production output of at least 50,000 metric tons by 2027.

We also are seeking regulatory approval for AquAdvantage Salmon in Brazil, Argentina, Israel, and China. Once approved in these locations, we plan to commercialize through a combination of partnerships, joint ventures, and licensing arrangements.

In order to scale up our egg production capabilities, we have begun construction on a new broodstock facility at our farm site in Rollo Bay. Once completed and at full capacity, this facility will be capable of producing over ten million AquAdvantage Salmon eggs annually.

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 aquaculture products and initiate new research projects focusing on health and productivity. Any additions to staff 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 also expect to increase our staffing in administration and at our farms as we grow our company.

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, China, and Israel following receipt of required regulatory approval in the respective jurisdictions.

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

United States Regulation of Bioengineered Products

The bioengineering of food using the tools of modern biotechnology is regulated in the United States by two government organizations, the USDA for bioengineered plants and the FDA for bioengineered animals.

The regulatory system for bioengineered plants is based upon the Coordinated Framework, issued by the Office of Science and Technology Policy in 1986 and regulated by the USDA's Biotechnology Regulatory Services and Animal and Plant Health Inspection Services under the Federal Plant Protection Act. Certain bioengineered plants are regulated under the Federal Insecticide, Fungicide, and Rodenticide Act by the EPA. The USDA is also required to determine the environmental impact of a proposed application under the National Environmental Policy Act ("NEPA"). The process for plants is essentially one of issuing test permits and data dossiers for the product's proposed use, followed by a process of de-regulation or approval if the application is found to be acceptable under the applicable law and regulations.

The regulatory process for food and animal feed is also based upon the Coordinated Framework, but the enabling legislation is the Federal Food, Drug, and Cosmetic Act, along with NEPA. In the case of animals for food or materials for feed, the FDA process is a pre-approval review followed by an approval if the application is acceptable under the relevant legislation.

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 bioengineered 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 was 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. 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.

On November 19, 2015, the FDA 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 bioengineered. That document was intended to assist those manufacturers who wish to voluntarily make the distinction on the labeling of their food products.

Legal Challenge to FDA Approval

Following the FDA approval, in March 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 ("FFDCA"); that an injunction be issued requiring the FDA to withdraw its assertion of jurisdiction over bioengineered animals; that the FDA decision to approve AquAdvantage Salmon and its EA and FONSI 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, with the discovery phase now complete and the case moving forward on substantive briefing.

Labeling of Bioengineered Products

In January 2016, the U.S. Congress passed the 2016 Omnibus Appropriations Act ("2016 Appropriations Act"), which was signed into law. The 2016 Appropriations Act contained an amendment that directed the FDA to issue final guidance for labeling of AquAdvantage Salmon as a bioengineered product, despite the absence of any bioengineered product 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 conventional counterpart, and the FDA arrived at the decision that AquAdvantage Salmon is as safe to eat, and as nutritious, as any conventional Atlantic salmon. 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. However, while the language in the 2016 Appropriations Act was in effect, the United States Congress passed the National Bioengineered Food Disclosure Law in July 2016, which provided for the establishment of a national standard for package disclosure for foods containing bioengineered ingredients. On December 21, 2018, the USDA issued its final rule for such labeling, and AquAdvantage Salmon must be labeled in accordance with this rule. On March 8, 2019, the FDA released AquAdvantage Salmon from the Import Alert.

In December 2019, the 2020 Appropriations Act was signed into law. The 2020 Appropriations Act contains an amendment that requires that any engineered animal approved by FDA prior to the effective date of the Disclosure Standard shall include the words “genetically engineered” prior to the existing acceptable market name. While the Company believes that this labeling requirement is unnecessary and redundant to the requirement of the Disclosure Standard, it plans to work with the USDA and the FDA to determine how to comply.

Ongoing FDA Regulatory Requirements

In addition to FDA approval of the NADA for AquAdvantage Salmon, our operating sites in the United States 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 operating sites in Indiana and Fortune and Rollo Bay, Prince Edward Island, is currently registered with the FDA, and the FDA has performed inspections and site visits at each of those facilities.

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. We will also need to comply with USDA disclosure requirements. 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, but the Canadian Federal Court of Appeal dismissed the appeal on October 21, 2016.

We received approval from regulators to conduct field trials for AquAdvantage Salmon in Argentina and Brazil. The field trials in both countries have been successfully completed, and we are pursuing approval for the production and sale of AquAdvantage. 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 are currently constructing a broodstock facility on this site, which, when completed and at full capacity, will provide sufficient fertilized AquAdvantage Salmon eggs to satisfy our production requirements for at least the next five 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., an affiliate of Memorial University of Newfoundland (“Genesis”), and an affiliate of the Hospital for Sick Children of Toronto (“HSC”) related to our bioengineered 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 certain salmon producing countries, 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 bioengineered 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 \$140 thousand, which amount was paid on March 6, 2014, but no additional patents are contemplated under this agreement. 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 bioengineered 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. While the technology described in the sterility system patent is not currently used or required under any of our current regulatory approvals, the technology may be desirable in the future to obtain or maintain regulatory approvals.

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 and temperature control techniques to make Atlantic salmon eggs available year-round, and we are currently capable of producing AquAdvantage Salmon eggs year-round on a limited basis. However, with the establishment of our new broodstock facility at our Rollo Bay farm site on Prince Edward Island, we expect that we will be able to produce sufficient AquAdvantage Salmon eggs year-round to satisfy all of our production needs over the next five years.

Competition

The industry and market for farmed Atlantic salmon is dominated by a group of large, multinational corporations with entrenched distribution channels, as discussed in the section of this 10-K titled “Business-The Aquaculture Industry-Major Producers.” We will compete against large, global Atlantic salmon farming companies when we sell our AquAdvantage Salmon in the market. We will also compete against new companies utilizing RAS technology to grow their salmon. We believe the faster growth and better feed efficiency of our fish will provide us with a cost advantage versus these competitors.

Research and Development

As of December 31, 2019, we had twenty-two 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 contract some research activities to the Center for Aquaculture Technologies, Inc.

In the future, we may enter into other partnerships and collaboration agreements to advance our research and development efforts. For example, we are party to a collaboration agreement with Precigen, Inc. (“Precigen”; formerly Intrexon Corporation) pursuant to which we are permitted to use certain of Precigen’s technology platforms to develop and commercialize additional bioengineered traits in finfish for human consumption. Under the agreement, we and Precigen conducted two research projects, one of which led to a gene-edited line of tilapia, and another of which focused on the use of germ cells to perform gene modification. No additional work is being conducted under the agreement, and, as a result, we are winding down, and may renegotiate, the relationship with Precigen.

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 conventional rainbow trout, molecular sterility systems to provide an improved means of sterility for farmed fish, and improved methods for generating bioengineered 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 additional projects either in-house or with third parties. 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, 2019, we had sixty-four employees. None of our employees are represented by a labor union, and we consider our employee relations to be good.

Recent Events

Our common stock was listed on AIM, the London Stock Exchange's international market for smaller growing companies, from 2006 through May 31, 2017, initially under the symbol "ABTX" and, commencing in 2014, under the symbol "ABTU." On January 19, 2017, our common stock began "regular way" trading on the Nasdaq Capital Market, and, effective June 1, 2017, we voluntarily delisted our common stock from AIM.

On January 18, 2017, we sold 2,421,073 shares of our common stock to Precigen, our controlling shareholder at the time, for proceeds of approximately \$25 million. Following the closing of this sale, Precigen distributed 1,776,557 shares of our common stock that it held prior to the closing via a share dividend to its shareholders.

On January 17, 2018, we completed a public offering of 3,692,307 shares of our common stock and 4,246,153 warrants to purchase shares of common stock for net proceeds of approximately \$10.6 million. Precigen participated in this offering, purchasing 1,538,461 shares of our common stock and warrants to purchase shares of common stock for \$5.0 million.

During the period of March 23, 2018, to June 26, 2018, 249,824 shares of common stock were issued through the conversion of outstanding warrants at a price of \$3.25 per share. Proceeds to the Company totaled \$0.8 million.

On October 24, 2018, 2,250,461 shares of common stock were issued through the exercise of outstanding warrants at a discounted price of \$2.00 per share. Net proceeds to the Company were \$4.3 million. Precigen participated in the exercise, converting warrants for 1,538,461 shares of common stock, resulting in gross proceeds of \$3.1 million.

During the period of March 8, 2019, to June 17, 2019, 83,564 shares of common stock were issued through the conversion of outstanding warrants at a price of \$3.25 per share. Proceeds to the Company totaled \$0.3 million.

On March 21, 2019, we completed a public offering of 3,345,282 shares of our common stock for net proceeds of approximately \$6.6 million.

On April 9, 2019, we completed a public offering of 2,554,590 shares of our common stock for net proceeds of approximately \$5.1 million.

On April 17, 2019, we completed a public offering of 346,488 shares of our common stock in conjunction with the over-allotment exercise of our underwriter for net proceeds of approximately \$0.7 million.

On February 13, 2020 we completed a public offering of 10,350,000 shares of our common stock for net proceeds of approximately \$14.5 million.

Our Executive Officers

The following table sets forth certain information regarding our executive officers as of March 9, 2020:

Name	Age	Position(s)
Sylvia A. Wulf	62	Director, Chief Executive Officer, and President
David A. Frank	59	Chief Financial Officer and Treasurer
Angela M. Olsen	51	General Counsel and Corporate Secretary
Alejandro Rojas	58	Chief Operating Officer, AquaBounty Farms

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.

Sylvia A. Wulf, Chief Executive Officer and President. Ms. Wulf was appointed Executive Director, President, and Chief Executive Officer of AquaBounty as of January 1, 2019. Prior to joining AquaBounty, Ms. Wulf served as a Senior Vice President of US Foods, Inc., where she had been President of the Manufacturing Division since June 2011. Prior to US Foods, Ms. Wulf held senior positions in Tyson Foods, Inc., Sara Lee Corporation, and Bunge Corp. She is also currently on the Board of Directors and the Executive

Committee of the National Fisheries Institute. Ms. Wulf was chosen for her experience in the food industry in North America, including its fish sector. Ms. Wulf received a B.S. in Finance from Western Illinois University and an MBA from DePaul 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.

Angela M. Olsen, J.D. General Counsel and Corporate Secretary. Ms. Olsen was appointed General Counsel and Corporate Secretary in November 2019. Prior to joining AquaBounty, she served as Senior Advisor and Associate General Counsel at E.I. du Pont de Nemours and Company for nine years, where she worked extensively on legal and commercial matters relating to biotechnology. She also served for six years on USDA's Advisory Committee on Biotechnology and 21st Century Agriculture. Before joining DuPont, Ms. Olsen spent over a decade in private practice in Washington, D.C. at Jones Day, followed by Latham & Watkins, LLP. She also was an appellate trial attorney at the U.S. Department of Justice. Ms. Olsen holds a Bachelor of Arts from Hamilton College, a Master of Science in cellular and molecular biology from the Catholic University of America, and a Juris Doctor from American University, Washington College of Law. Ms. Olsen also has completed Yale University's Global Executive Leadership and Management Program.

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 a Bachelor of Science degree from the Universidad Austral de Chile 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.

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 and 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 from incorporation to December 31, 2019, we have incurred net losses of approximately \$132 million. These losses reflect our personnel, research and development, and marketing costs. We have constructed a 250-metric-ton annual capacity production facility in Rollo Bay and in 2017 we acquired a facility in Indiana, which has undergone renovations to increase its annual capacity to 1,200 metric tons. We expect more significant revenues in 2020 once our new facilities are in full production. However, our 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.

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 commercialization plans, including the construction of four to five new, land-based RAS farms at a cost of \$75 million to \$100 million each, will depend on numerous factors, some of which are outside our control. Changes in our plans could also result in the need for additional funds.

Our share price and our ability to raise additional funds may depend on our success in growing, or our perceived ability to grow, our AquAdvantage Salmon successfully and profitably at commercial scale.

We have not yet demonstrated that we can grow our AquAdvantage Salmon successfully or profitably at commercial scale. If we are unsuccessful in growing our salmon to harvest size and selling the fish in the market at a profit from our commercial-scale facilities, or are perceived as being unable to do so prior to commercial-scale harvest and sale, we may lose credibility with the investor community and other funding sources, which may negatively impact our share price and our ability to raise additional funds.

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 maintaining regulatory approvals for AquAdvantage Salmon and our farm sites and obtaining new approvals for farm sites and the sale of our products in other markets, the receipt of which is uncertain.

As a bioengineered 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 facilities in Indiana and Rollo Bay. FDA approvals will be needed for each additional facility we plan to operate. 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 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 and foreign regulations.

Even with the approval of our NADA and other regulatory applications for AquAdvantage Salmon, we must continue to comply with FDA and other regulatory requirements not only for manufacturing, but also for labeling, advertising, record keeping, and reporting to the FDA and other regulators 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 bioengineered products could limit or prevent the use of our products and limit our revenues.

Our technologies include the use of bioengineering. Public perception about the safety and environmental hazards of, and ethical concerns over, bioengineered products could influence public acceptance of our technologies and products. Activist groups opposing the bioengineering of organisms have in the past pressured a number of retail food outlets and grocery chains to publicly state that they will not carry bioengineered Atlantic salmon. If we are not able to overcome the ethical, legal, and social concerns relating to bioengineering, 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 bioengineered products has received negative publicity, which has aroused public debate. This adverse publicity could lead to greater regulation and trade restrictions on imports of bioengineered 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 bioengineered products 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 bioengineered products, as well as application of pressure to consumer retail outlets seeking a commitment not to carry bioengineered Atlantic salmon. Consumer acceptance could also be adversely affected if AquAdvantage Salmon were believed to grow to a larger final size than conventional Atlantic salmon. We may not be able to overcome the negative consumer perceptions that these organizations have instilled against our products.

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

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

In the United States, a coalition of NGOs filed a complaint on March 30, 2016, against the FDA, the United States Fish and Wildlife Service, and related individuals for their roles in the approval of AquAdvantage Salmon, claiming that the FDA had no statutory authority to regulate bioengineered animals, and, if it did, that the agency failed to analyze and implement measures to mitigate ecological, environmental, and socioeconomic risks that could impact wild salmon and the environment, including the risk that AquAdvantage Salmon could escape and threaten endangered wild salmon stocks. Among other things, the claimants are seeking a judgment that the FDA decision to approve AquAdvantage Salmon is not authorized by the FFDCA, that an injunction be issued requiring the FDA to withdraw its assertion of jurisdiction over bioengineered animals, that the FDA decision to approve AquAdvantage Salmon and its Environmental Assessment (“EA”) and Finding of No Significant Impact (“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 and may take considerable time to resolve, and plaintiffs may seek to have importation or sale of AquAdvantage Salmon in the United States put on hold until such resolution.

We may be subject to future litigation brought by one or more of these organizations in their attempt to block the development or sale of our product. In addition, animal rights groups and various other organizations and individuals have attempted to stop bioengineering activities by pressing for legislation and additional regulation in these areas. To the extent the actions of these organizations are successful, commercialization of our product may be restricted, and our business may be adversely affected. Such actions, even if unsuccessful, may distract management from its operational priorities and may cause us to incur significant costs.

The term “genetically engineered” will need to be included as part of the acceptable market name for AquAdvantage Salmon, and bioengineering disclosures will need to be provided at the retail level, in accordance with USDA regulations. These disclosures could negatively impact consumer acceptance.

Until the passage of the National Bioengineered Food Disclosure Law in July 2016, which contained the requirement to establish the Disclosure Standard, our AquAdvantage Salmon did not need to be labeled as containing a bioengineered product, because it had been deemed to be “substantially equivalent” to the conventional product. However, because several states either passed or considered new laws specifying varying requirements for labeling products sold at the retail level that contain bioengineered ingredients, the United States Congress passed the National Bioengineered Food Disclosure Law in July 2016, requiring USDA to establish a mandatory standard for disclosing foods that are or may be bioengineered. USDA issued the National Bioengineered Food Disclosure Standard in December 2018. AquaBounty plans to include the bioengineered logo on its AquAdvantage Salmon packaging, in accordance with the Disclosure Standard. In addition, the 2020 Appropriations Act, which was signed into law in December 2019, contains an amendment that requires that any engineered animal approved by FDA prior to the effective date of the Disclosure Standard shall include the words “genetically engineered” prior to the existing acceptable market name. While the Company believes that this labeling requirement is unnecessary and redundant to the requirement of the Disclosure Standard, it plans to work with the USDA and the FDA to determine how to comply. Labeling requirements could cause consumers to view the label as either a warning or as an indication that AquAdvantage Salmon is inferior to conventional 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 also will 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 also are 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 and consumption 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, international shipment, 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, changes in existing regulations, and review of existing regulatory decisions.

Regulations pertaining to bioengineered animals are still developing and could change from their present state. In addition, new legislation could require new regulatory frameworks, changes in existing regulation, or re-evaluation of prior regulatory decisions. For example, despite the FDA's final determination that AquAdvantage Salmon may be sold without being labeled as a bioengineered product, a provision added to the 2016 Omnibus Appropriations Act required the FDA to issue final guidance for such labeling. The FDA was therefore obligated to maintain an Import Alert starting in January 2016 that prohibited import of AquAdvantage Salmon until such guidance was finalized or the provision was no longer effective. On March 8, 2019, several months after the USDA promulgated its final rule establishing the Disclosure Standard, which included disclosure requirements for bioengineered foods, including AquAdvantage Salmon, the FDA lifted the Import Alert.

Similarly, in July 2017, a bill was introduced in the United States Senate that could have, had it become law, required labeling unique to, as well as re-examination of the environmental assessments used by the FDA in its 2015 approval of the NADA for, AquAdvantage Salmon. While this bill was reintroduced in January 2019 without the requirement for re-examination of those environmental assessments, any such legislatively imposed review of a completed regulatory process could result in new restrictions on, or delays in, commercialization of our product in the United States. We could be subject to increasing or more onerous regulatory hurdles as we attempt to commercialize our product, which could require us to incur significant additional capital and operating expenditures and other costs in complying with these laws and regulations. Our regulatory burdens could also increase if AquAdvantage Salmon are found, or believed, to grow to a larger final size than conventional Atlantic salmon.

In addition, the 2020 Appropriations Act, which was signed into law in December 2019, contains an amendment that requires that any bioengineered animal approved by FDA prior to the effective date of the Disclosure Standard shall include the words "genetically engineered" prior to the existing acceptable market name. While the Company believes that this labeling requirement is unnecessary and redundant to the requirement of the Disclosure Standard, it plans to work with the USDA and the FDA to determine how to comply.

Atlantic salmon farming is restricted in certain states.

Concerns regarding the possible environmental impact from AquAdvantage Salmon have led several states 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.

AquAdvantage Salmon, or more specifically the breeding population of live fish, or broodstock, themselves, is a product of our combined intellectual property, which includes our trade secrets related to creating and maintaining the broodstock. Destruction of AquAdvantage Salmon broodstocks by whatever means would result in the loss of the product of that 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. The broodstock, however, could be reinstated, in whole or in part, using our technology and stored breeding reserves.

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.

Business, political, or economic disruptions or global health concerns could seriously harm our current or planned business and increase our costs and expenses.

Broad-based business or economic disruptions, political instability, or global health concerns could adversely affect our current or planned production, sale, distribution, research and development, and expansion. For example, in December 2019 an outbreak of a

novel strain of coronavirus originated in Wuhan, China, and has since spread to a number of other countries, including the United States. This outbreak has already resulted in extended shutdowns of certain businesses in China and has had ripple effects on businesses around the world. Global health concerns like the coronavirus outbreak could in themselves result in social, economic, and labor instability in the countries in which we or the third parties with whom we engage operate. We cannot presently predict the scope and severity of any potential business shutdowns or disruptions due to any of these factors, but if we or any of the third parties with whom we engage, including suppliers, distributors, service providers, regulators, and overseas business partners, were to experience shutdowns or other disruptions, our ability to conduct our business in the manner and on the timelines presently planned could be materially and negatively impacted, and our costs and expenses could rise as a result of our efforts to address such disruptions. Further, uncertainty around these and related issues could lead to adverse effects on the economy of the United States and other economies, which could impact our ability to raise the necessary capital needed to develop and commercialize our products.

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 Group, Inc., an affiliate of Memorial University of Newfoundland, and an affiliate of the Hospital for Sick Children of Toronto, 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 guarantee 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 that 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 bioengineering. 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.

Security breaches and other disruptions could compromise our information, expose us to fraud or liability, or interrupt our operations, which would cause our business and reputation to suffer.

In the ordinary course of our business, we use our servers and networks to store sensitive data, including our proprietary business and financial information; general business information regarding our customers, suppliers, and business partners; and personally identifiable information of our employees. The secure storage and maintenance of this information is critical to our operations. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error or malfeasance. A breach of our security could compromise our networks, and the information stored there could be accessed, manipulated, publicly disclosed, lost, or stolen. Any such access, manipulation, disclosure, or loss of information could result in errors in our records, fraudulent use of our financial information, legal claims or proceedings, liability under laws that protect the privacy of personal information, theft of our intellectual property, or damage to our reputation. In addition, our systems could be the subject of denial of service or other interference, which could disrupt our operations and commercial transactions. Any of the foregoing could adversely affect our business, revenues, and competitive position.

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 bioengineered, 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 of 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 aquaculture, 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, adequately staff existing or new production facilities, or support our internal research and development programs. In particular, our production facilities require individuals experienced in RAS-based aquaculture, and our product development programs are dependent on our ability to attract and retain highly skilled scientists. Competition for experienced production staff, 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 from any of the products from the research program, 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. Revenues from sales of our AquAdvantage Salmon are not subject to the royalty.

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 currently located outside of the United States. As a consequence of the international nature of our business, we are exposed to risks associated with international operations. For example, 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. Other risks include possible governmental restrictions of the movement of funds, limitation of contractual rights, or expropriation of assets without fair compensation. Therefore, movements in exchange rates to translate to foreign currencies and other international operational risks 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.

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

The management and directors of each of Precigen and AquaBounty may own both Precigen 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 Precigen management and directors face decisions that could have different implications for AquaBounty and Precigen.

Our ability to use net operating losses and other tax attributes to offset future taxable income may be subject to certain limitations.

In general, under Sections 382 and 383 of the U.S. Tax Code (the “Code”), a corporation that undergoes an “ownership change” is subject to limitations on its ability to utilize its pre-change net operating losses (“NOLs”), tax credits, or other tax attributes to offset future taxable income or taxes. For these purposes, an ownership change generally occurs where the aggregate stock ownership of one or more stockholders or groups of stockholders who owns at least 5% of a corporation’s stock increases its ownership by more than 50 percentage points over its lowest ownership percentage within a specified testing period. In addition to limitations imposed by the 2017 Tax Cuts and Jobs Act, a portion of our NOLs are subject to substantial limitations arising from previous ownership changes, and, if we undergo another ownership change, our ability to utilize NOLs could be further limited by Sections 382 and 383 of the Code. In addition, future changes in our stock ownership, many of which are outside of our control, could result in an ownership change under Sections 382 and 383 of the Code. Our NOLs may also be impaired under state law. Accordingly, we may not be able to utilize a material portion of our NOLs. Furthermore, our ability to utilize our NOLs is conditioned upon our attaining profitability and generating U.S. federal and state taxable income.

Risks Relating to our Common Stock

TS AquaCulture LLC’s significant share ownership position allows it to influence corporate matters.

Based solely on a Schedule 13D/A filed on February 18, 2020, by Randal J. Kirk (“Mr. Kirk”); Third Security, LLC (“Third Security”); TS AquaCulture LLC (“TS AquaCulture”); and TS Biotechnology Holdings, LLC (“TS Biotechnology”), TS AquaCulture owns 8,239,199 shares of our common stock, or approximately 25.8% of our outstanding shares, and TS Biotechnology owns 5,175,000 shares of our common stock, or approximately 16.2% of our outstanding shares. In addition, entities controlled by Mr. Kirk, including Third Security and its affiliates other than TS AquaCulture and TS Biotechnology, currently hold 837,554 shares of our common stock, or approximately 2.6% of our outstanding shares. TS AquaCulture and TS Biotechnology are managed by Third Security, and TS AquaCulture is successor-in-interest to Precigen under the Relationship Agreement entered into by AquaBounty and Precigen dated as of December 5, 2012 (the “Relationship Agreement”). Based on these holdings, Mr. Kirk, Precigen’s Executive Chairman and Third Security’s Chief Executive Officer and Senior Managing Director, has reported control over approximately 44.6% of our outstanding shares. Given this, and our grant to TS AquaCulture, as successor-in-interest to Precigen under the Relationship Agreement, of certain rights to nominate members of our Board of Directors that are intended to ensure that TS AquaCulture-nominated Board members represent a percentage of our Board that is proportionate to TS AquaCulture’s and its affiliates’ percentage ownership of our common stock, TS AquaCulture will be able to significantly influence who serves on our Board of Directors and, together with TS Biotechnology, 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. TS AquaCulture’s and TS Biotechnology’s interests may not be consistent with those of our other shareholders. Furthermore, TS AquaCulture’s and TS Biotechnology’s significant interests in us may discourage third parties from seeking to acquire control of us, which may adversely affect the market price of our common stock.

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

Although our common stock is currently traded on the Nasdaq Capital Market, an active trading market for our common stock may not be maintained. If an active market for our common stock 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 is 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 that 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 bioengineering environment, public health crises, and general economic conditions. Certain of these events and factors are outside of

our control. Stock markets have from time to time experienced severe price and volume fluctuations, which, if recurring, could adversely affect the market prices for our common stock.

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

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

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

The U.S. trading market for our shares of common stock depends, in part, on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If 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, 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 in which we have more than \$1.07 billion in annual revenue; (2) the date we qualify as a “large accelerated filer,” with at least \$700.0 million of equity securities held by non-affiliates; (3) the issuance, in any three-year period, by our company of more than \$1.0 billion in non-convertible debt securities; and (4) December 1, 2023, which is 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. We cannot predict if investors will find our shares of common stock to be less attractive because we may rely on these exemptions. If some investors find our shares of common stock less attractive as a result, there may be a less active trading market for our shares of common stock, and our share price may be more volatile.

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

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

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

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

While we have no specific plan to issue preferred stock, our certificate of incorporation authorizes us to issue, without the approval of our shareholders, one or more series of preferred stock having such designation, relative powers, preferences (including preferences over our common stock respecting dividends and distributions), voting rights, terms of conversion or redemption, and other relative, participating, optional, or other special rights, if any, of the shares of each such series of preferred stock and any

qualifications, limitations, or restrictions thereof, as our Board of Directors may determine. The terms of one or more classes or series of preferred stock could dilute the voting power or reduce the value of our common stock. For example, the repurchase or redemption rights or liquidation preferences we could assign to holders of preferred stock could affect the residual value of the common stock.

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

The obligations of being a public company in the United States place additional demands on our management and require significant expenditures, including costs resulting from public company reporting obligations under the Securities Exchange Act of 1934, as amended (the “Exchange Act”); the rules and regulations regarding corporate governance practices, including those under the Sarbanes-Oxley Act and 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 certificate 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 affect the price that some investors are willing to pay for our common stock.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our corporate headquarters are located in Maynard, Massachusetts, and consist of approximately 3,500 square feet of office space under a lease that expires in March 2023. On Prince Edward Island, Canada, we own both a hatchery in Fortune and a salmon farm, consisting of a hatchery, a grow-out facility, and a broodstock facility in Rollo Bay, and we own a production grow-out facility in Indiana. We believe that the spaces that we lease and own are sufficient to meet our current and near-term needs. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations-Contractual Obligations.”

Item 3. Legal Proceedings

Lawsuit Against the FDA Approval of NADA

On March 30, 2016, a coalition of NGOs filed a complaint in the United States District Court for the Northern District of California against the FDA, the United States Fish and Wildlife Service, and related individuals for their roles in the approval of AquAdvantage Salmon. Subsequently, the Fish and Wildlife Service was dismissed from the case. The coalition, including the Center for Food Safety and Friends of the Earth, claims that the FDA had no statutory authority to regulate bioengineered animals, and, if it did, that the agency failed to analyze and implement measures to mitigate ecological, environmental, and socioeconomic risks that could impact wild salmon and the environment, including the risk that AquAdvantage Salmon could escape and threaten endangered wild salmon stocks. The discovery phase of litigation is now complete, and the case is moving forward on substantive briefing.

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 is currently traded on the Nasdaq Capital Market under the symbol “AQB.” As of March 9, 2020, 31,985,365 shares of our common stock were issued and outstanding.

As of March 9, 2020, there were approximately 329 holders of record of our common stock. The transfer agent for our common stock is Computershare Trust Company, N.A.

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 2020 annual meeting of stockholders to be filed with the SEC within 120 days after the end of our fiscal year ended December 31, 2019, is incorporated herein by reference.

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 Annual Report on Form 10-K 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, 2019, 2018, and 2017, and the consolidated balance sheet data as of December 31, 2019 and 2018, 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,		
	2019	2018	2017
(in thousands, except share data)			
Statement of Operations Data			
Revenues:			
Product revenues	\$ 187	\$ 85	\$ 53
Costs and expenses:			
Production costs	3,574	2,626	1,193
Sales and marketing	709	298	799
Research and development	2,360	3,459	3,372
General and administrative	6,723	4,068	3,921
Total costs and expenses	13,366	10,451	9,285
Operating loss	(13,179)	(10,366)	(9,232)
Other income (expense):			
Interest and other income (expense), net	(49)	(16)	(27)
Total other income (expense)	(49)	(16)	(27)
Net loss	\$ (13,228)	\$ (10,382)	\$ (9,259)
Other comprehensive income			
Foreign currency translation gain (loss)	214	(360)	72
Total other comprehensive income (loss)	214	(360)	72
Comprehensive loss	\$ (13,014)	\$ (10,742)	\$ (9,187)
Earnings per share			
Net loss	\$ (13,228)	\$ (10,382)	\$ (9,259)
Deemed dividend	\$ —	\$ (1,823)	\$ —
Net loss attributable to common shareholders	\$ (13,228)	\$ (12,205)	\$ (9,259)
Basic and diluted net loss per share attributable to common shareholders	\$ (0.66)	\$ (0.94)	\$ (1.06)
Weighted average number of common shares-basic and diluted (1)	20,078,017	13,028,760	8,772,494

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

	As of December 31,	
	2019	2018
Balance Sheet Data:		
Cash and CD's	\$ 2,799	\$ 3,003
Total assets	\$ 30,234	\$ 27,671
Debt	\$ 4,595	\$ 3,591
Stockholders' equity	\$ 23,761	\$ 23,234

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and related notes that appear elsewhere in this Annual Report on Form 10-K. In addition to historical consolidated financial information, the following discussion contains forward-looking statements that reflect our plans, estimates, and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this Annual Report on Form 10-K, particularly in "Risk Factors."

Overview

We believe that we are a leader in the field of land-based aquaculture and the use of technology for improving its productivity and sustainability. Our lead product is the AquAdvantage Salmon, which received FDA approval in 2015 as the first bioengineered animal available for sale for human consumption. We have commenced commercial activities with operations in the United States and Canada where we have received regulatory approval.

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 generate product revenue primarily through the sales of our AquAdvantage Salmon. We also sell conventional Atlantic salmon, salmon eggs, fry, and byproducts. We expect that our sales will be modest and infrequent until our grow-out farms in Indiana and Rollo Bay commence harvesting, which is expected in mid-2020.

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 "Liquidity and Capital Resources".

On January 18, 2017, we sold 2,421,073 shares of our common stock to Precigen, our controlling shareholder at the time, for proceeds of approximately \$25 million. Following the closing of this sale, Precigen distributed 1,776,557 shares of our common stock that it held prior to the closing via a share dividend to its shareholders.

On January 17, 2018, we completed a public offering of 3,692,307 shares of our common stock and 4,246,153 warrants to purchase shares of common stock for net proceeds of approximately \$10.6 million. Precigen participated in this offering, purchasing 1,538,461 shares of our common stock and warrants to purchase shares of common stock for \$5.0 million.

During the period of March 23, 2018, to June 26, 2018, 249,824 shares of common stock were issued through the conversion of outstanding warrants at a price of \$3.25 per share. Proceeds to the Company totaled \$0.8 million.

On October 24, 2018, 2,250,461 shares of common stock were issued through the exercise of outstanding warrants at a discounted price of \$2.00 per share. Net proceeds to the Company were \$4.3 million. Precigen participated in the exercise, converting warrants for 1,538,461 shares of common stock, resulting in gross proceeds of \$3.1 million.

During the period of March 8, 2019, to June 17, 2019, 83,564 shares of common stock were issued through the conversion of outstanding warrants at a price of \$3.25 per share. Proceeds to the Company totaled \$0.3 million.

On March 21, 2019, we completed a public offering of 3,345,282 shares of our common stock for net proceeds of approximately \$6.6 million.

On April 5, 2019, we completed a public offering of 2,554,590 shares of our common stock for net proceeds of approximately \$5.2 million.

On April 17, 2019, we completed a public offering of 346,488 shares of our common stock for net proceeds of approximately \$0.7 million.

On February 13, 2020, we completed a public offering of 10,350,000 shares of our common stock for net proceeds of approximately \$14.5 million.

During the next several years, we expect that our working capital requirements and our capital expenditures will increase substantially due to our plans to construct four to five new land-based production farms.

Revenue

We generate product revenue primarily through the sales of our AquAdvantage Salmon. We also sell conventional Atlantic salmon, salmon eggs, fry, and byproducts. We expect that our sales will be modest and infrequent until our grow-out farms in Indiana and Rollo Bay commence harvesting, which is expected in mid-2020.

In the future, we believe that our revenue will depend upon the number of countries in which we have received regulatory approval for the sale of our products, the number and capacity of grow-out farms we have in operation, and the market acceptance we achieve.

Product Costs

Product costs include the labor and related costs to grow out our fish, including feed, oxygen, and other direct costs; an application of overhead; and the cost to process and ship our products to customers. As of December 31, 2019, we had twenty-eight employees engaged in production activities.

A portion of production costs are absorbed into inventory as fish in process to the extent that these costs do not exceed the net realizable value of the fish in process. As our farms in Indiana and Rollo Bay ramp up their production activity, the costs that are not absorbed into inventory, are classified as other production costs.

Sales and Marketing Expenses

Our sales and marketing expenses currently include personnel costs, travel, and consulting fees for market-related activities. As of December 31, 2019, we had two employee dedicated to sales and marketing.

Research and Development Expenses

As of December 31, 2019, we employed twenty-two scientists and technicians at our facilities 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. 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, development functions, and brood-stock husbandry;
- fees paid to contract research organizations and consultants who perform research for us;
- costs related to laboratory supplies used in our research and development efforts; and
- costs related to the operation of our field trials.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related costs for employees in executive, corporate, and finance functions. Other significant general and administrative expenses include corporate governance and public company costs, regulatory compliance, rent and utilities, insurance, and legal service. We had twelve employees in our general and administrative group at December 31, 2019.

Other Income (Expense), Net

Interest expense includes the interest on our outstanding loans. Other income (expense) includes bank charges, fees, interest income, and miscellaneous gains or losses on asset disposals.

Critical Accounting Policies and Estimates

This Management's Discussion and Analysis of Financial Condition and Results of Operations is based on our consolidated financial statements, which we have prepared in accordance with 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 and estimates are the most critical for fully understanding and evaluating our financial condition and results of operations.

Inventory

Inventories are mainly comprised of feed, eggs, fish in process, and packaging materials. Inventories are measured at the lower of cost or net realizable value ("NRV"), where NRV is defined as the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion and transportation.

Fish in process inventory is a biological asset that is measured based on the estimated biomass of fish on hand. The Company has established a standard procedure to estimate the biomass of fish on hand using counting and sampling techniques.

Results of Operations

Comparison of the year ended December 31, 2019 to the year ended December 31, 2018.

The following table summarizes our results of operations for the years ended December 31, 2019 and 2018, together with the changes in those items in dollars (in thousands) and as a percentage:

	Year Ended December 31,		Dollar Change	% Change
	2019	2018		
Product revenue	\$ 187	\$ 85	\$ 102	120 %
Operating expenses:				
Production costs	3,574	2,626	948	36 %
Sales and marketing	709	298	411	138 %
Research and development	2,360	3,459	(1,099)	(32)%
General and administrative	6,723	4,068	2,655	65 %
Operating loss	(13,179)	(10,366)	(2,813)	27 %
Total other (income) expense, net	(49)	(16)	(33)	206 %
Net loss	\$ (13,228)	\$ (10,382)	\$ (2,846)	27 %

Product Revenue

Product revenue for the year ended December 31, 2019, consisted primarily of sales of AquAdvantage Salmon and conventional Atlantic salmon eggs and byproducts. We expect that our sales will grow significantly once we commence harvesting at our Indiana farm in mid-2020.

Production Costs

Production costs for the year ended December 31, 2019, were up from the corresponding period in 2018 due to production cost increases related to increasing fish biomass at the Indiana and Rollo Bay farms as they continue their start-up.

Sales and Marketing Expenses

Sales and marketing expenses for the year ended December 31, 2019, were up from the corresponding period in 2018 due to increased personnel and consulting expenses, travel costs, and compensation charges related to the commencement of marketing activities for our salmon. We expect that our sales and marketing expenses will increase as we increase our production at our farm sites.

Research and Development Expenses

Research and development expenses for the year ended December 31, 2019, were down from the corresponding period in 2018 due to lower personnel costs, outside contract service fees, travel expenses, and field trial costs, primarily related to the closing of our demonstration farm in Panama. We expect that our research and development expenses will increase as we expand our broodstock capacity, commence new field trials and continue to pursue regulatory approval for additional products and additional markets.

General and Administrative Expenses

General and administrative expenses for the year ended December 31, 2019, were up significantly from the corresponding period in 2018 due to increases in personnel costs, stock compensation charges, travel costs associated with headcount additions to our management team.

Total Other (Income) Expense

Total other (income) expense for 2019 and 2018 is comprised of interest on debt, bank charges, interest income, and a net gain on the disposal of assets.

Liquidity and Capital Resources

Sources of Liquidity

We have incurred losses from operations since our inception in 1991, and, as of December 31, 2019, we had an accumulated deficit of \$132 million.

In January 2017, we completed a private placement of 2,421,073 shares of our common stock to Precigen for proceeds of approximately \$25 million.

In January 2018, we completed a public offering of 3,692,307 Common Shares and warrants for 4,246,153 Common Shares. Net proceeds to the Company were \$10.6 million. Precigen participated in the offering, purchasing 1,538,461 Common Shares and warrants for 1,538,461 Common Shares for gross proceeds of \$5.0 million.

During the period of March 23, 2018, to June 26, 2018, 249,824 Common Shares were issued through the conversion of outstanding warrants at a price of \$3.25. Proceeds to the Company totaled \$0.8 million.

On October 24, 2018, 2,250,461 Common Shares were issued through the exercise of outstanding warrants at a discounted price of \$2.00. Net proceeds to the Company were \$4.3 million. Precigen participated in the exercise, converting warrants for 1,538,461 Common Shares, resulting in gross proceeds of \$3.1 million.

During the period of March 8, 2019, to June 17, 2019, 83,564 shares of common stock were issued through the conversion of outstanding warrants at a price of \$3.25 per share. Proceeds to the Company totaled \$0.3 million.

On March 21, 2019, we completed a public offering of 3,345,282 shares of our common stock for net proceeds of approximately \$6.6 million.

On April 5, 2019, we completed a public offering of 2,554,590 shares of our common stock for net proceeds of approximately \$5.1 million.

On April 17, 2019, we completed a public offering of 346,488 shares of our common stock for net proceeds of approximately \$0.7 million.

As of December 31, 2019, we had a cash balance of \$2.8 million.

On February 13, 2020, we completed a public offering of 10,350,000 shares of our common stock for net proceeds of approximately \$14.5 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,	
	2019	2018
Net cash provided by (used in):		
Operating activities	\$ (11,249)	\$ (9,817)
Investing activities	(2,461)	(4,082)
Financing activities	13,483	16,449
Effect of exchange rate changes on cash	23	(54)
Net increase (decrease) in cash	\$ (204)	\$ 2,496

Cash Flows from Operating Activities

Net cash used in operating activities during the year ended December 31, 2019, was primarily comprised of our \$13.2 million net loss, offset by non-cash depreciation and stock compensation charges of \$2.2 million and a non-cash charge of \$253 thousand for other non-cash charges, and increased by working capital uses of \$420 thousand. Spending on operations increased in 2019 due to headcount additions and production ramp up costs at our Rollo Bay and Indiana farm sites. The use of cash in working capital in 2019 was primarily due to an increase in inventory, offset by increases in accounts payable and accrued liabilities, other receivables and in prepaid expenses and other current assets.

Net cash used in operating activities during the year ended December 31, 2018, was primarily comprised of our \$10.4 million net loss, offset by non-cash depreciation and stock compensation charges of \$1.1 million, and increased by working capital uses of \$527 thousand. Spending on operations increased in 2018 due to headcount additions and commencement of partial activities at our Rollo Bay and Indiana farm sites. The use of cash in working capital in 2018 was primarily due to a reduction in accounts payable and accrued liabilities and increases in prepaid expenses and other current assets.

Cash Flows from Investing Activities

During 2019, we used \$2.5 million for property and equipment purchases for renovations to our Indiana farm site and for construction charges at our Rollo Bay site.

During 2018, we used \$4.1 million for property and equipment purchases for renovations to our Indiana farm site and for construction charges at our Rollo Bay site.

Cash Flows from Financing Activities

During 2019, we received approximately \$12.4 million in net proceeds from the issuance of Common Shares in a public offering, \$272 thousand from the exercise of warrants, and \$815 thousand from the issuance of debt, net of repayments.

During 2018, we received approximately \$10.6 million in net proceeds from the issuance of Common Shares and warrants in a public offering, \$5.1 million from the exercise of warrants, and \$716 thousand from the issuance of debt, net of repayments.

Future Capital Requirements

As discussed in Note 1 to the financial statements, the Company has experienced net losses and negative cash flows from operations since its inception and has cumulative losses attributable to common stockholders of \$132 million and a cash balance of \$2.8 million as of December 31, 2019. The Company completed an equity raise in February 2020, which provided approximately \$14.5 million of net proceeds. Management believes that this new funding will meet the Company's cash requirements for at least the next twelve months from the filing date.

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.

If we are unable to generate additional funds in the future through financings, sales of our products, government grants, loans, or from other sources or transactions, we will exhaust our resources and will be unable to maintain our currently planned operations. If we cannot continue as a going concern, our stockholders would likely lose most or all of their investment in 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, 2019, 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 term loan	\$ 1,767	\$ 81	\$ 172	\$ 1,514	\$ —
ACOA term loans	568	72	143	143	210
Kubota Canada Ltd	54	11	21	21	1
ACOA AIF grant (1)	2,206	—	—	—	2,206
Maynard office lease	216	65	134	17	—
Indiana auto lease	6	5	1	—	—
Indiana well lease	702	15	33	34	620
Total	\$ 5,519	\$ 249	\$ 504	\$ 1,729	\$ 3,037

(1) Repayment of the AIF grant is royalty-based and estimated on revenue projections of products resulting from the project.

Recent Accounting Pronouncements

We do not expect any 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, 2019, and December 31, 2018, we had \$1.8 million and \$1.2 million, 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 Annual Report.

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

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Securities and Exchange Act of 1934 is (1) recorded, processed, summarized, and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and (2) accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure. As of December 31, 2019 (the "Evaluation Date"), our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities and Exchange Act of 1934). Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our Chief Executive Officer and Chief Financial Officer have concluded based upon the evaluation described above that, as of the Evaluation Date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting for our company. Internal control over financial reporting is defined in Rules 13a-15(f) and 15(d)-15(f) promulgated under the Securities Exchange Act of 1934, as amended, as a process designed by, or under the supervision of, our Chief Executive and Chief Financial Officers and effected by our board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and disposition of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles;
- provide reasonable assurance that our receipts and expenditures are being made only in accordance with authorization of our management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the financial statements.

Because of inherent limitations, internal controls over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may deteriorate.

Our management, including our Chief Executive Officer and Chief Financial Officer, has conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2019. In conducting this evaluation, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control-Integrated Framework (2013).

Based upon this evaluation and those criteria, management believes that, as of December 31, 2019, our internal controls over financial reporting were effective.

This Annual Report on Form 10-K does not include an attestation report of the Company's independent registered accounting firm as 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.

Changes in Internal Control

There have been no changes in our internal control over financial reporting for the year ended December 31, 2019, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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 2020 Proxy Statement to be filed with the SEC within 120 days of December 31, 2019, 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 2020 Proxy Statement to be filed with the SEC within 120 days of December 31, 2019, 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 2020 Proxy Statement to be filed with the SEC within 120 days of December 31, 2019, 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 2020 Proxy Statement to be filed with the SEC within 120 days of December 31, 2019, and is incorporated by reference into this Annual Report on Form 10-K by reference.

Item 14. Principal Accounting Fees and Services

The information required by this Item is set forth in our 2020 Proxy Statement to be filed with the SEC within 120 days of December 31, 2019, 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 is inapplicable or is presented in the consolidated financial statements.

3. Exhibits

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 Current Report on Form 8-K, filed on January 6, 2017).
3.3*	Certificate of Amendment of Third Amended and Restated Certificate of Incorporation of AquaBounty Technologies, Inc. (incorporated by reference to Exhibit 3.3 to the Registrant's Registration Statement on Form S-1, filed on January 15, 2020).
3.4*	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).
4.2*	Specimen Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1, filed on January 9, 2018).
4.3	Description of Registrant's securities.
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*†	Amendment No. 1 to AquaBounty Technologies, Inc. 2016 Equity Incentive Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K, filed on May 2, 2019).
10.8*†	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).

Exhibit Number	Exhibit Description
10.9*†	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).
10.10*	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).
10.11*	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*	Form of Warrant Exercise Agreement, by and between AquaBounty Technologies, Inc. and certain holders of its Common Stock Purchase Warrants, dated October 24, 2018 (incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K, filed on October 25, 2018).
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*	Offer Letter dated as of July 10, 2018, from Prince Edward Island Century 2000 Fund Inc. to AQUA Bounty Canada Inc. and accepted by AQUA Bounty Canada Inc. and AquaBounty Technologies, Inc. on August 20, 2018 (incorporated by reference to Exhibit 10.1 to the Registrant’s Quarterly Report on Form 10-Q, filed on November 2, 2018).
10.18*	Negotiable Promissory Note dated as of October 16, 2018, issued by AQUA Bounty Canada Inc. in favor of Prince Edward Island Century 2000 Fund Inc. (incorporated by reference to Exhibit 10.2 to the Registrant’s Quarterly Report on Form 10-Q, filed on November 2, 2018).
10.19*	Collateral Mortgage dated as of July 26, 2016, by and between AQUA Bounty Canada Inc. and Prince Edward Island Century 2000 Fund Inc. (incorporated by reference to Exhibit 10.3 to the Registrant’s Quarterly Report on Form 10-Q, filed on November 2, 2018).
10.20*	Collateral Mortgage dated as of October 9, 2018, by and between AQUA Bounty Canada Inc. and Prince Edward Island Century 2000 Fund Inc. (incorporated by reference to Exhibit 10.4 to the Registrant’s Quarterly Report on Form 10-Q, filed on November 2, 2018).
10.21*	General Security Agreement dated as of July 26, 2016, by and between AQUA Bounty Canada Inc. and Prince Edward Island Century 2000 Fund Inc. (incorporated by reference to Exhibit 10.5 to the Registrant’s Quarterly Report on Form 10-Q, filed on November 2, 2018).
10.22*	Guarantee dated as of October 9, 2018, made by AquaBounty Technologies, Inc. in favor of Prince Edward Island Century 2000 Fund Inc. (incorporated by reference to Exhibit 10.6 to the Registrant’s Quarterly Report on Form 10-Q, filed on November 2, 2018).
10.23*†	Employment Agreement, by and between Sylvia Wulf and AquaBounty Technologies, Inc., dated November 27, 2018 (incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K, filed on November 28, 2018).
10.24*†	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).
10.25*†	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).
10.26*	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).
10.27*	Asset Purchase Agreement by and between AquaBounty Technologies, Inc. and Bell Fish Company LLC, dated as of June 9, 2017 (incorporated by reference to Exhibit 10.1 to the Registrant’s Quarterly Report on Form 10-Q, filed on August 4, 2017).
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.

<u>Exhibit Number</u>	<u>Exhibit Description</u>
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.

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.

Item 16. Form 10-K Summary

Not applicable.

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/ Sylvia A. Wulf

Sylvia A. Wulf

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 Angela M. Olsen, 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
<u>/s/ Sylvia A. Wulf</u> Sylvia A. Wulf	President, Chief Executive Officer and Director (Principal Executive Officer)	March 10, 2020
<u>/s/ David A. Frank</u> David A. Frank	Chief Financial Officer and Treasurer (Principal Financial Officer and Principal Accounting Officer)	March 10, 2020
<u>/s/ Richard J. Clothier</u> Richard J. Clothier	Chairman of the Board, Director	March 10, 2020
<u>/s/ Richard L. Huber</u> Richard L. Huber	Director	March 10, 2020
<u>/s/ Jeffrey T. Perez</u> Jeffrey T. Perez	Director	March 10, 2020
<u>/s/ Christine St.Clare</u> Christine St.Clare	Director	March 10, 2020
<u>/s/ Rick Sterling</u> Rick Sterling	Director	March 10, 2020
<u>/s/ James C. Turk</u> James C. Turk	Director	March 10, 2020

Report of Independent Registered Public Accounting Firm

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

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of AquaBounty Technologies, Inc. (the “Company”) as of December 31, 2019 and 2018, 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, 2019, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting, 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.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Wolf & Company, P.C.
Boston, Massachusetts
March 10, 2020

We have served as the Company’s auditor since 2011.

AquaBounty Technologies, Inc.
Consolidated Balance Sheets

	As of December 31,	
	2019	2018
Assets		
Current assets:		
Cash and cash equivalents	\$ 2,798,744	\$ 3,002,557
Other receivables	55,198	115,982
Inventory	1,232,049	76,109
Prepaid expenses and other current assets	391,162	315,969
Total current assets	4,477,153	3,510,617
Property, plant and equipment, net	25,065,836	23,716,768
Right of use assets, net	399,477	—
Definite-lived intangible assets, net	157,588	171,292
Indefinite-lived intangible assets	101,661	191,800
Other assets	32,024	80,583
Total assets	\$ 30,233,739	\$ 27,671,060
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable and accrued liabilities	\$ 1,462,809	\$ 824,900
Other current liabilities	62,286	20,423
Current debt	163,155	71,613
Total current liabilities	1,688,250	916,936
Long-term lease obligations	352,808	—
Long-term debt	4,432,052	3,519,821
Total liabilities	6,473,110	4,436,757
Commitments and contingencies		
Stockholders' equity:		
Common stock, \$0.001 par value, 50,000,000 shares authorized; 21,635,365, (2018: 15,098,837) shares outstanding	21,635	15,099
Additional paid-in capital	156,241,363	142,707,957
Accumulated other comprehensive loss	(360,160)	(574,186)
Accumulated deficit	(132,142,209)	(118,914,567)
Total stockholders' equity	23,760,629	23,234,303
Total liabilities and stockholders' equity	\$ 30,233,739	\$ 27,671,060

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,		
	2019	2018	2017
Revenues			
Product Revenues	\$ 186,738	\$ 84,518	\$ 53,278
Costs and expenses			
Production costs	3,573,858	2,626,353	1,193,566
Sales and marketing	709,023	297,687	799,009
Research and development	2,359,441	3,458,564	3,371,767
General and administrative	6,723,060	4,067,710	3,921,035
Total costs and expenses	13,365,382	10,450,314	9,285,377
Operating loss	(13,178,644)	(10,365,796)	(9,232,099)
Other income (expense)			
Interest expense	(62,988)	(22,257)	(21,537)
Other income (expense), net	13,990	5,994	(5,011)
Total other income (expense)	(48,998)	(16,263)	(26,548)
Net loss	\$ (13,227,642)	\$ (10,382,059)	\$ (9,258,647)
Other comprehensive income (loss):			
Foreign currency translation gain (loss)	214,026	(360,302)	72,388
Total other comprehensive income (loss)	214,026	(360,302)	72,388
Comprehensive loss	\$ (13,013,616)	\$ (10,742,361)	\$ (9,186,259)
Earnings per share			
Net loss	\$ (13,227,642)	\$ (10,382,059)	\$ (9,258,647)
Deemed dividend	\$ —	\$ (1,822,873)	\$ —
Net loss attributable to common shareholders	\$ (13,227,642)	\$ (12,204,932)	\$ (9,258,647)
Basic and diluted net loss per share attributable to common shareholders	\$ (0.66)	\$ (0.94)	\$ (1.06)
Weighted average number of common shares -basic and diluted	20,078,017	13,028,760	8,772,494

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

	Common stock issued and outstanding	Par value	Additional paid-in capital	Accumulated other comprehensive loss	Accumulated deficit	Total
Balance at December 31, 2016	6,463,936	\$ 6,464	\$ 101,581,724	\$ (286,272)	\$ (99,273,861)	\$2,028,055
Net loss					(9,258,647)	(9,258,647)
Other comprehensive income				72,388		72,388
Issuance of common stock, net of expenses	2,421,073	2,421	24,986,836			24,989,257
Exercise of options for common stock	8334	8	27,494			27,502
Share based compensation	1,751	2	122,132			122,134
Balance at December 31, 2017	8,895,094	\$ 8,895	\$ 126,718,186	\$ (213,884)	\$ (108,532,508)	\$ 17,980,689
Net loss					(10,382,059)	(10,382,059)
Other comprehensive loss				(360,302)		(360,302)
Issuance of common stock and warrants, net of expenses	3,692,307	3,692	10,612,354			10,616,046
Exercise of warrants for common stock, net of expenses	2,500,285	2,501	5,114,032			5,116,533
Share based compensation	11,151	11	263,385			263,396
Balance at December 31, 2018	15,098,837	\$ 15,099	\$ 142,707,957	\$ (574,186)	\$ (118,914,567)	\$ 23,234,303
Net loss					(13,227,642)	(13,227,642)
Other comprehensive income				214,026		214,026
Issuance of common stock, net of expenses	6,246,360	6,246	12,389,102			12,395,348
Exercise of warrants for common stock, net of expenses	83,564	84	272,333			272,417
Share based compensation	206,604	206	871,971			872,177
Balance at December 31, 2019	21,635,365	\$ 21,635	\$ 156,241,363	\$ (360,160)	\$ (132,142,209)	\$ 23,760,629

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,		
	2019	2018	2017
Operating activities			
Net loss	\$ (13,227,642)	\$ (10,382,059)	\$ (9,258,647)
Adjustment to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	1,285,902	843,387	184,946
Share-based compensation	872,177	263,396	122,134
Gain on disposal of equipment	(12,133)	(13,233)	(941)
Loss on asset held for sale	149,800	—	—
Impairment loss	103,116	—	—
Other non-cash charges	—	(1,364)	—
Changes in operating assets and liabilities:			
Other receivables	65,002	56,212	(11,440)
Inventory	(1,154,222)	93,956	(169,991)
Prepaid expenses and other assets	59,942	289,868	(592,602)
Accounts payable, accrued liabilities and other liabilities	609,311	(966,928)	625,763
Net cash used in operating activities	(11,248,747)	(9,816,765)	(9,100,778)
Investing activities			
Purchase of property, plant and equipment	(2,316,809)	(4,009,736)	(18,893,264)
Deposits on equipment purchases	(160,675)	(95,001)	(153,663)
Proceeds from sale of equipment	15,848	23,233	941
Net cash used in investing activities	(2,461,636)	(4,081,504)	(19,045,986)
Financing activities			
Proceeds from issuance of debt	900,767	771,858	256,807
Repayment of term debt	(85,802)	(55,615)	(35,812)
Proceeds from the issuance of common stock and warrants, net	12,395,348	10,616,046	24,989,257
Proceeds from exercise of stock options and warrants, net	272,417	5,116,533	27,502
Net cash provided by financing activities	13,482,730	16,448,822	25,237,754
Effect of exchange rate changes on cash and cash equivalents	23,840	(54,279)	80,018
Net change in cash and cash equivalents	(203,813)	2,496,274	(2,828,992)
Cash and cash equivalents at beginning of period	3,002,557	506,283	3,335,275
Cash and cash equivalents at the end of period	\$ 2,798,744	\$ 3,002,557	\$ 506,283
Supplemental disclosure of cash flow information and non-cash transactions:			
Interest paid in cash	\$ 62,988	\$ 22,257	\$ 21,537
Property and equipment included in accounts payable and accrued liabilities	\$ 210,270	\$ 193,378	\$ 1,036,240
Acquisition of equipment under debt arrangement	\$ —	\$ 74,068	\$ —

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

AquaBounty Technologies, Inc.
Notes to the Consolidated Financial Statements
for the years ended December 31, 2019, 2018, and 2017

1. Nature of business and organization

Nature of business

AquaBounty Technologies, Inc. (the “Parent” and, together with its subsidiaries, the “Company”) 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. 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 conventional salmon.

In 2015, the Parent obtained approval from the US Food and Drug Administration (the “FDA”) 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 for the purpose of establishing a commercial biotechnology laboratory to conduct research and development programs related to the Parent’s technologies and to commercialize the Parent’s products in Canada.

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 Parent’s products. With the regulatory approval of the Company’s farms in Indiana and Rollo Bay, the site in Panama was no longer needed for commercial trials. Operations at the site ceased in May 2019.

AquaBounty Farms, Inc. (the “U.S. Subsidiary”) was incorporated in December 2014 in the State of Delaware for the purpose of conducting field trials and commercializing the Parent’s products in the United States.

AquaBounty Farms Indiana LLC (the “Indiana Subsidiary”), which is wholly owned by the U.S. Subsidiary, was formed in June 2017 in the State of Delaware for the purpose of operating its aquaculture facility in Albany, Indiana.

AquaBounty Brasil Participações Ltda. (the “Brazil Subsidiary”) was incorporated in May 2015 for the purpose of conducting field trials and commercializing the Parent’s products in Brazil.

Basis of presentation

The consolidated financial statements include the accounts of AquaBounty Technologies, Inc. and its wholly owned direct subsidiaries, AQUA Bounty Canada Inc.; AquaBounty Panama, S. de R.L.; AquaBounty Farms, Inc.; AquaBounty Farms Indiana LLC; 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 2018 and 2017 Financial Statements have been reclassified to conform with the presentation of the 2019 Financial Statements.

Liquidity matters

The Company has experienced net losses and negative cash flows from operations since its inception and has cumulative losses attributable to common stockholders of \$132 million as of December 31, 2019.

At December 31, 2019, the Company’s cash balance totaled \$2.8 million. Subsequent to year end, in February 2020, the Company completed a public offering of common shares resulting in net proceeds of \$14.5 million (Note 16).

Management has evaluated its cash resources in view of its planned spending for on-going operations, capital expenditures and working capital and believes that its cash resources will meet the Company’s cash requirements for at least the next twelve months from the filing date. Until such time, if ever, as the Company can generate positive operating cash flows, it may finance its cash needs through a combination of equity offerings, debt financings, government or other third-party funding, strategic alliances, and licensing arrangements.

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

AquaBounty Technologies, Inc.
Notes to the Consolidated Financial Statements
for the years ended December 31, 2019, 2018, and 2017

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, Indiana, 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 and certificates of deposit.

Inventories

Inventories mainly comprise of feed, eggs, fish in process and packaging materials. Inventories are measured at the lower of cost or net realizable value ("NRV"), where NRV is defined as the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion and transportation.

Fish in process inventory is a biological asset that is measured based on the estimated biomass of fish on hand. The Company has established a standard procedure to estimate the biomass of fish on hand using counting and sampling techniques.

Asset held for sale

Equipment classified as held for sale is measured at the lower of fair value, less selling costs, or its carrying value. Gains or losses are recognized for any subsequent changes to fair value, less selling costs. Equipment held for sale is not depreciated.

In December 2019, the Company reclassified certain feed mill equipment at the Indiana farm, with a net book value of \$248 thousand, as held for sale, a component of prepaid expenses and other current assets, and recorded a charge of \$150 thousand to general and administrative expenses to reduce its value to fair value, less estimated selling costs.

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, and depreciation expense commences when the asset is placed into service, which may include receiving applicable regulatory approval. The Company depreciates all asset classes over their estimated useful lives, as follows:

Building	20 - 25 years
Equipment	5 - 20 years
Office furniture and equipment	3 years
Leasehold improvements	shorter of asset life or lease term
Vehicles	3 years

AquaBounty Technologies, Inc.
Notes to the Consolidated Financial Statements
for the years ended December 31, 2019, 2018, and 2017

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.

During 2019, the Company recognized an impairment loss of \$103 thousand, included in general and administrative expenses, and consisting of \$90 thousand for one of its trademarks and a write-down of \$13 thousand on the value of a long-term equity holding.

Leases

The Company leases certain facilities, property, and equipment under noncancelable operating leases. A determination is made if an arrangement is a lease at its inception, and leases with an initial term of twelve months or less are not recorded on the balance sheet.

The Company adopted Financial Accounting Standards Board's (FASB) Accounting Standards Update (ASU) 2016-02 Leases on January 1, 2019, and recognized a lease liability of \$532 thousand and a corresponding right-of-use asset of \$512 thousand. Management calculated the lease liability based on the net present value of the remaining lease payments on the date of adoption using a weighted average discount rate of 8%. As most of the Company's leases did not provide an implicit interest rate, management used an estimated incremental borrowing rate. The adoption did not result in any cumulative-effect adjustment to beginning retained earnings.

Lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. For operating leases, expense is recognized on a straight-line basis over the lease term.

The Company has agreements with lease (*e.g.*, minimum rent payments) and non-lease components (*e.g.*, maintenance), which are generally accounted for separately. The Company has not elected the practical expedient to account for lease and non-lease components as one lease component.

Revenue recognition

The Company records revenue on the sale of a product when all revenue recognition criteria are fulfilled, including identifying the contract with a customer; identifying the performance obligations in the contract; determining the transaction price; allocating the transaction price to the performance obligations in the contract; and recognizing revenue when (or as) the Company satisfies a performance obligation. In addition, collectability is assessed before applying the revenue recognition criteria. The Company evaluates customer credit risk in order to conclude it is "probable" it will collect the amount of consideration due in exchange for the goods or services.

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. In the event any arise, the Company classifies interest and penalties on uncertain tax positions as income tax expense. Generally, the Company is no longer subject to federal and state tax examinations by tax authorities for years before 2016.

In 2016, the FASB issued amended guidance related to intra-entity transfers other than inventory. This guidance removes the current exception in GAAP prohibiting entities from recognizing current and deferred income tax expenses or benefits related to transfer of assets, other than inventory, within the consolidated entity. The current exception to defer the recognition of any tax impact on the transfer of inventory within the consolidated entity until it is sold to a third party remains unaffected. The amended guidance became effective for the Company on January 1, 2018. During 2019, the Company transferred certain IP rights from its Canadian subsidiary to

AquaBounty Technologies, Inc.
Notes to the Consolidated Financial Statements
for the years ended December 31, 2019, 2018, and 2017

the US. The tax effects of this intra-entity transfer are reflected within the components of deferred taxes with an adjustment to the valuation allowance.

Net loss per share

Basic and diluted net loss per share available to common stockholders has been calculated by dividing net loss attributable to common shareholders by the weighted average number of common shares outstanding during the year. Basic net loss per share 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 mitigated 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 \$186 thousand at December 31, 2019.

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. During 2019, the cost basis for these shares was reduced from \$22 thousand to \$9 thousand, which the Company believes to be the best estimate of market value. AFP and the Company have certain shareholders in common.

4. Inventory

Major classifications of inventory are summarized as follows for December 31, 2019 and 2018:

	2019	2018
Feed	\$ 251,778	24,288
Eggs	55,887	—
Packaging	—	8,913
Fish in process	924,384	42,908
Total inventory	\$ 1,232,049	\$ 76,109

AquaBounty Technologies, Inc.
Notes to the Consolidated Financial Statements
for the years ended December 31, 2019, 2018, and 2017

5. Property, plant and equipment

Major classifications of property, plant and equipment are summarized as follows for December 31, 2019 and 2018:

	2019	2018
Land	\$ 718,586	\$ 704,567
Building and improvements	13,297,489	9,244,737
Construction in process	2,105,873	6,091,265
Equipment	12,275,619	9,713,030
Office furniture and equipment	201,813	192,606
Vehicles	28,097	26,832
Total property and equipment	\$ 28,627,477	\$ 25,973,037
Less accumulated depreciation and amortization	(3,561,641)	(2,256,269)
Property, plant and equipment, net	\$ 25,065,836	\$ 23,716,768

Depreciation and amortization expense for 2019 on property, plant and equipment was \$1.3 million (2018: \$830 thousand; 2017: \$171 thousand).

During 2019, the Company's grow-out facility at its Rollo Bay farm was placed in service, and as a result, the Company transferred \$5.2 million of construction in process to building and improvements and equipment and commenced depreciation of these assets. Included in construction in process at December 31, 2019, is \$1.9 million for construction costs related to the farm site. An additional \$257 thousand has been committed.

In June 2017, the Company purchased an aquaculture farm in Indiana, for \$14.2 million. Through December 31, 2019, the Company has invested an additional \$3.2 million to upgrade the farm and has \$227 thousand in construction in process and an additional \$216 thousand committed. This farm is operational, although the Company expects that upgrades will continue through 2020.

6. Prepaid expenses and other current assets

Prepaid expenses and other current assets include the following at December 31, 2019 and 2018:

	2019	2018
Prepaid insurance	\$ 100,374	\$ 90,754
Prepaid supplies	26,892	19,422
Prepaid professional services	97,513	38,375
Prepaid rent and lease deposits	25,581	13,508
Asset held for sale	98,000	—
Other current assets	42,802	153,910
Total prepaid expenses and other current assets	\$ 391,162	\$ 315,969

7. Accounts payable and accrued liabilities

Accounts payable and accrued liabilities include the following at December 31, 2019 and 2018:

	2019	2018
Accounts payable	\$ 809,444	\$ 366,917
Accrued payroll including vacation	236,489	223,481
Accrued professional fees and contract services	346,349	185,992
Accrued taxes	68,831	23,678
Accrued construction costs	—	13,716
Accrued other	1,696	11,116
Accounts payable and accrued liabilities	\$ 1,462,809	\$ 824,900

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8. Debt

The current terms and conditions of long-term debt outstanding at December 31, 2019 and 2018, are as follows:

	Interest rate	Monthly repayment	Maturity date	2019	2018
ACOA AIF grant (C\$2,871,919)	0%	Royalties	-	\$ 2,206,208	\$ 2,106,840
ACOA term loan#1 (C\$337,000)	0%	C\$3,120	June 2026	184,583	203,735
ACOA term loan#2 (C\$500,000)	0%	C\$4,630	November 2028	384,100	—
Kubota Canada Ltd (C\$95,961)	0%	C\$1,142	Jan 2025	53,533	61,178
PEI Finance term loan (C\$2,717,093)	4%	C\$4,333	July 2023	1,766,783	1,219,681
Total debt				\$ 4,595,207	\$ 3,591,434
less: current portion				(163,155)	(71,613)
Long-term debt				\$ 4,432,052	\$ 3,519,821

Principal payments due on the long-term debt are as follows:

Year	AIF	ACOA #1	ACOA #2	Kubota	FPEI	Total
2020	—	28,761	42,681	10,531	81,182	163,155
2021	—	28,761	42,681	10,531	84,494	166,467
2022	—	28,761	42,681	10,531	87,936	169,909
2023	—	28,761	42,681	10,531	1,513,171	1,595,144
2024	—	28,761	42,681	10,531	—	81,973
Thereafter	2,206,208	40,778	170,695	878	—	2,418,559
Total	2,206,208	184,583	384,100	53,533	1,766,783	4,595,207

Atlantic Canada Opportunities Agency (“ACOA”)

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

ACOA Atlantic Innovation Fund (“AIF”) Grant

In January 2009, the Canadian Subsidiary was awarded an AIF grant from ACOA to provide a contribution towards the funding of a research and development project. Contributions under the grant were made through 2014 and no further funds are available. 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. Revenue from the sale of AquaAdvantage Salmon are not subject to the royalty, and the Company does not expect to commercialize products that would be subject to the royalty in the next five years.

ACOA term loans

In February 2016, the Canadian Subsidiary executed an agreement with ACOA to partially finance the renovations to the Rollo Bay farm site. All available funding under the agreement was disbursed through May 2017, and no further amounts are available. The loan is being repaid over a period of nine years.

In November 2018, the Canadian Subsidiary executed a second agreement with ACOA to partially finance the renovations to the Rollo Bay site. All available funding under the agreement was disbursed through March 2019, and no further amounts are available. The loan term is nine years with a zero percent interest rate. Repayments begin in January 2020.

Kubota

Kubota is a manufacturer of power equipment for the construction, agriculture, commercial, and residential industries.

In January 2018, the Canadian Subsidiary financed the purchase of equipment through a loan with Kubota. The total amount is being repaid in monthly installments. The loan is secured by the underlying equipment.

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.

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In August 2016, the Canadian Subsidiary obtained a loan from FPEI to partially finance the purchase of the assets of the former Atlantic Sea Smolt plant in Rollo Bay West on Prince Edward Island.

In 2018, the Canadian Subsidiary obtained a new loan from FPEI, which incorporates the existing loan and provides C\$2.0 million (\$1.5 million) of additional funds. As of December 31, 2019, C\$1.7 million (\$1.3 million) has been drawn down. The final C\$300 thousand (\$230 thousand) is anticipated to be drawn down during the first quarter of 2020, though repayment has commenced. The loan has an interest rate of 4% and 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.

The Company recognized interest expense in 2019 of \$62 thousand (2018: \$22 thousand; 2017: \$22 thousand) on its interest-bearing debt.

9. Stockholders' equity

The Company's shareholders have authorized 55 million shares of stock, of which 5 million are authorized as preferred stock and 50 million as common stock. At December 31, 2019, the Company had zero shares (2018: zero) of preferred stock and 21,635,365 shares (2017: 15,098,837) of common stock, issued and outstanding.

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.

Recent issuances

In January 2017, the Company closed an equity subscription of \$25 million with Precigen for 2,421,073 common shares at a price of \$10.326.

In January 2018, the Company completed a public offering of 3,692,307 Common Shares and warrants for 4,246,153 Common Shares. Net proceeds to the Company were \$10.6 million after deducting discounts, fees, and expenses. Precigen, the Company's then majority shareholder, participated in the offering, purchasing 1,538,461 Common Shares and warrants for 1,538,461 Common Shares for gross proceeds of \$5.0 million.

On October 24, 2018, 2,250,461 Common Shares were issued through the exercise of outstanding warrants at a discounted price of \$2.00. Net proceeds to the Company were \$4.3 million after deducting discounts, fees, and expenses. Precigen participated in the exercise, converting warrants for the issuance of 1,538,461 Common Shares, resulting in gross proceeds of \$3.1 million.

During 2018, the Company issued 249,824 Common Shares in conjunction with the exercise of warrants, with total proceeds of \$0.8 million.

During 2019, the Company issued 83,564 Common Shares in connection with the exercise of warrants, with total proceeds of \$0.3 million.

On March 21, 2019, we completed a public offering of 3,345,282 shares of our common stock for net proceeds of approximately \$6.6 million.

On April 5, 2019, we completed a public offering of 2,554,590 shares of our common stock for net proceeds of approximately \$5.1 million.

On April 17, 2019, we completed a public offering of 346,488 shares of our common stock for net proceeds of approximately \$0.7 million.

Subsequent to year end, on February 13, 2020, we completed a public offering of 10,350,000 shares of our common stock for net proceeds of approximately \$14.5 million.

Warrants

In connection with the public offering of Common Shares that was completed in January 2018, the Company issued warrants to purchase 4,246,153 Common Shares. Each warrant has an exercise price per share of \$3.25, is immediately exercisable, and will expire five years from the date of issuance.

During 2018, 249,824 warrants were exercised at \$3.25 and the Board approved the exercise of 2,250,461 warrants in October 2018 at a discounted price of \$2.00. The intrinsic value of the warrants that were converted at the discounted price was \$1.8 million. The warrant inducement was treated as an extinguishment of an equity contract, as the warrant holders had to exercise their warrants in order to take advantage of the discounted conversion price. In accounting for the transaction the Company analogized to guidance

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regarding the treatment of preferred stock extinguishments and recognized the intrinsic value of the inducement, totaling \$1.8 million, as a return of capital and as an addition to net loss for the purpose of calculating basic and diluted earnings per share.

During 2019, 83,564 warrants were exercised at \$3.25.

The following table summarizes information about outstanding warrants at December 31, 2019:

	Number of warrant shares	Weighted average exercise price
Outstanding at December 31, 2018	1,745,868	\$3.25
Issued	—	0.00
Exercised	(83,564)	3.25
Outstanding at December 31, 2019	1,662,304	\$3.25
Exercisable at December 31, 2019	1,662,304	\$3.25

Share-based compensation

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 stock to Directors, officers, employees, and consultants of the Company. In accordance with its original terms, the 2006 Plan terminated on 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 2016 Plan was approved by the Company’s shareholders at its Annual Meeting on April 26, 2016 and the aggregate number of shares of common stock that were to be issued pursuant to awards granted under the 2016 Plan could not exceed 450,000. At the April 30, 2019, Annual Meeting, an additional 450,000 shares of common stock that may be issued pursuant to awards granted under the 2016 Plan were authorized, for a total of 900,000.

Restricted stock

The Company’s restricted stock activity under the 2006 Plan and the 2016 Plan is summarized as follows:

	Shares	Weighted average grant date fair value
Unvested at December 31, 2018	8,867	\$ 3.51
Granted	206,604	2.16
Vested	(175,571)	2.19
Unvested at December 31, 2019	39,900	\$ 2.31

During 2019, the Company expensed \$385 thousand (2018: \$27 thousand; 2017: \$26 thousand) related to restricted stock awards. At December 31, 2019, the balance of unearned share-based compensation to be expensed in future periods related to the restricted stock awards is \$92 thousand. The period over which the unearned share-based compensation is expected to be earned is approximately 2.2 years.

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Stock options

The Company's option activity under the 2006 Plan and the 2016 Plan is summarized as follows:

	Number of options		Weighted average exercise price
Outstanding at December 31, 2018	339,964	\$	7.09
Issued	313,500		2.23
Expired	(79,539)		3.41
Outstanding at December 31, 2019	573,925	\$	4.94
Exercisable at December 31, 2019	467,357	\$	5.52

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 2019 was \$1.62 (2018: \$2.5; 2017: \$4.55). There were no options exercised in 2019 and 2018. The total intrinsic value of options exercised in 2019 and 2018 was \$0 (2017: \$43 thousand). At December 31, 2019, the total intrinsic value of all options outstanding was \$1 thousand (2018: \$0; 2017: \$17 thousand), the total intrinsic value of exercisable options was \$0 (2018: \$0; 2017: \$17 thousand), and the total number of shares available for grant under the 2016 Plan was 198,034 (2018: 268,138; 2017: 397,500).

The following table summarizes information about options outstanding and exercisable at December 31, 2019:

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
\$2.11 - \$5.70	438,663	9.0	333,465	
\$6.90 - \$9.60	52,841	3.1	52,841	
\$10.50 - \$10.80	4,000	4.6	4,000	
\$14.20 - \$23.40	78,421	5.9	77,051	
	573,925		467,357	\$5.52

The fair values of stock option grants to employees and members of the Board of Directors during 2019, 2018, and 2017 were measured on the date of grant using Black-Scholes, with the following weighted average assumptions:

	2019	2018	2017
Expected volatility	89% - 100%	81%	78%
Risk free interest rate	1.55% - 2.85%	2.60%	1.80%
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 and forfeitures are recognized as they occur. 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 \$487 thousand in 2019 (2018: \$236 thousand; 2017: \$96 thousand). At December 31, 2019, the balance of unearned share-based compensation to be expensed in future periods related to unvested share-based awards is \$179 thousand. The period over which the unearned share-based compensation is expected to be earned is 0.9 years.

In June 2019, the Company recognized share based compensation of \$134 thousand related to the accelerated vesting and exercisable term change for options to purchase an aggregate of 153,940 shares for the Company's former CEO, who retired June 30, 2019. Each

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option granted was revalued as of June 30, 2019, using the following Black-Scholes values to determine the incremental charges for the option modification: expected volatility of 97%, risk free interest rate of 1.71% to 1.92%, expected dividend yield of 0.0%, and expected life of 1.5 to 5 years.

The following table summarizes the expense related to the options revalued in June 2019:

Grant date	Number of options	Previous	Accelerated	Incremental	Total
1/11/2011	16,667	\$ 109,769	\$ —	\$ 11,782	\$ 121,551
1/20/2014	6,667	120,712	—	7,621	128,333
2/27/2018	60,606	99,738	—	12,313	112,051
4/21/2017	20,000	70,346	20,736	13,485	104,567
4/30/2019	50,000	13,453	67,047	1,274	81,774
	153,940	\$ 414,018	\$ 87,783	\$ 46,475	\$ 548,276

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, 2019, 2018, and 2017:

	2019	2018	2017
Research and development	\$ 3,127	\$ 3,238	\$ 3,168
Sales and marketing	12,578	—	9,315
General and administrative	856,472	260,158	109,651
Total share-based compensation	\$ 872,177	\$ 263,396	\$ 122,134

10. Income taxes

The components of loss before income taxes for the years ended December 31, 2019, 2018, and 2017, are presented below:

	2019	2018	2017
Domestic	\$ (12,950,725)	\$ (9,702,869)	\$ (6,526,706)
Foreign	(276,917)	(679,190)	(2,731,941)
Loss before income taxes	\$ (13,227,642)	\$ (10,382,059)	\$ (9,258,647)

Income taxes computed using the federal statutory income tax rate differs from the Company's effective tax rate for the years ended December 31, 2019, 2018, and 2017, primarily due to the following:

	2019	2018	2017
Income tax benefit	\$ (2,777,805)	\$ (2,180,233)	\$ (3,147,940)
State and provincial income tax, net of federal benefit	397,081	(534,789)	(678,438)
Permanent differences	219,549	53,795	(2,923)
US-Foreign rate differential	38,776	(13,955)	371,551
Other, net	866,250	1,182,900	(98,947)
Effect of tax reform	—	—	3,687,844
	(1,256,149)	(1,492,282)	131,147
Change in valuation allowance	1,256,149	1,492,282	(131,147)
Total income tax	\$ —	\$ —	\$ —

As of December 31, 2019, the Company has domestic net operating loss carryforwards of approximately \$39 million, after consideration of limitations pursuant to section 382, to offset future federal taxable income, which begin to expire in 2031. The future utilization of certain historic 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 research loss carryforwards totaling approximately \$8.0 million and foreign research and development expense tax credits of approximately \$2.6 million at December 31, 2019, which expire at various times commencing in 2020. Since the Company has incurred only losses from inception and there is uncertainty related to the ultimate use of the loss carryforwards and

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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:

	2019	2018
Deferred tax assets:		
Net operating loss carryforwards	\$ 12,251,892	\$ 14,120,607
Foreign research and development tax credit carryforwards	2,564,679	2,628,190
Property and equipment	429,764	463,343
Intangibles	3,055,820	(75,269)
Other	185,829	94,964
Total deferred tax assets	\$ 18,487,984	\$ 17,231,835
Valuation allowance	\$ (18,487,984)	\$ (17,231,835)
Net deferred tax assets	\$ —	\$ —

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.

The Company is subject to legal proceedings and claims arising in the normal course of business. Management believes that final disposition of any such matters existing at December 31, 2019, will not have a material adverse effect on the Company's financial position or results of operations.

Lease commitments

In July 2017, the Company extended the lease for its office space in Maynard, Massachusetts. The new lease for 3,558 square feet of office space has a term of five years and seven months, ending March 2023. Lease payments over the term total \$333 thousand.

In 2017, the Company assumed a lease for well water rights as part of its purchase of certain assets of Bell Aquaculture. The lease has a thirty year term with auto-renewal for an additional twenty years. Semi-annual payments total \$7 thousand with annual increases of 3% over the term.

The Company leases office space in Brazil on a month-to-month basis.

Lease expense for the year ended December 31, 2019, amounted to \$140 thousand. The weighted average remaining lease term of the Company's operating leases was 22.8 years as of December 31, 2019. Lease payments included in operating cash flows totaled \$143 thousand for the year ended December 31, 2019.

The table below summarizes the Company's lease obligations and remaining payments at December 31, 2019:

	Lease Type	End Date	Remaining Years	December 31, 2019		January 1, 2019	
				Remaining Payments	Lease Liability	Remaining Payments	Lease Liability
Maynard Office Lease	Operating	Mar 2023	3.3	\$ 215,556	\$ 186,323	\$ 278,414	\$ 234,685
Panama Farm Lease	Operating	Apr 2019	—	—	—	60,000	59,013
Indiana Auto Lease	Operating	Feb 2021	1.2	5,999	5,533	10,842	9,897
Indiana Well Lease	Operating	Dec 2048	29.0	702,341	223,238	717,420	228,844
Total leases				\$ 923,896	\$ 415,094	\$ 1,066,676	\$ 532,439
Less: current portion				(85,011)	(62,286)	(142,780)	(117,345)
Long-term leases				\$ 838,885	\$ 352,808	\$ 923,896	\$ 415,094

The current portion of the lease liability is included as a component of other current liabilities in the consolidated balance sheets.

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Remaining payments under leases are as follows at December 31, 2019:

Year	Office	Auto	Well	Amount
2020	\$ 64,637	\$ 4,842	\$ 15,532	\$ 85,011
2021	66,416	1,157	15,998	83,571
2022	67,602	—	16,478	84,080
2023	16,901	—	16,972	33,873
2024	—	—	17,481	17,481
Thereafter	—	—	619,880	619,880
Total Lease Payments	\$ 215,556	\$ 5,999	\$ 702,341	\$ 923,896

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, 2019, amounted to \$64 thousand (2018: \$44 thousand; 2017: \$31 thousand).

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, 2019, amounted to \$28 thousand (2018: \$26 thousand; 2017: \$27 thousand).

13. Related Party Collaboration Agreement

In February 2013, the Company entered into an Exclusive Channel Collaboration Agreement with Precigen, its then majority shareholder, pursuant to which the Company will use Precigen's technology platforms to develop and commercialize additional bioengineered traits in finfish for human consumption.

The Company will pay Precigen 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 Precigen 50% of quarterly revenue obtained from a sublicensor in the event of a sublicensing arrangement. In addition, the Company will reimburse Precigen for the costs of certain services provided by Precigen. No royalties were paid to Precigen in 2019, and the Company does not expect to pay royalties in 2020.

Total Precigen service costs incurred under the terms of this agreement amounted to \$18 thousand in 2019 (2018: \$218 thousand; 2017: \$562 thousand), of which \$0 is included in accounts payable and accrued liabilities at December 31, 2019 (2018: \$1 thousand), and is included as a component of research and development expense in the Consolidated Statements of Operations and Comprehensive Loss.

14. Recently Issued Accounting Standards

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

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15. 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 2019			
	March 31	June 30	September 30	December 31
Revenue	\$ 97,885	\$ 42,486	\$ —	\$ 46,367
Operating loss	(2,755,694)	(4,019,719)	(2,999,592)	(3,403,639)
Net loss	(2,763,932)	(4,026,731)	(3,018,222)	(3,418,757)
Basic and diluted net loss per share attributable to common shareholders	\$ (0.17)	\$ (0.19)	\$ (0.14)	\$ (0.16)
	Three Months Ended 2018			
	March 31	June 30	September 30	December 31
Revenue	\$ 19,097	\$ 47,898	\$ 10,938	\$ 6,585
Operating loss	(2,443,472)	(2,784,583)	(2,720,027)	(2,417,714)
Net loss	(2,449,787)	(2,781,149)	(2,727,028)	(2,424,095)
Deemed dividend	—	—	—	(1,822,873)
Basic and diluted net loss per share attributable to common shareholders	\$(0.21)	\$(0.22)	\$(0.21)	\$(0.30)

16. Subsequent events

On February 13, 2020, the Company completed a public offering of 10,350,000 shares of common stock for net proceeds of approximately \$14.5 million.

On March 2, 2020, the Company settled an outstanding legal claim against a third party with gross proceeds to the Company of \$1.2 million.

AQUABOUNTY TECHNOLOGIES, INC.
DESCRIPTION OF SECURITIES

The following description of the securities of AquaBounty Technologies, Inc. (the “Company” or “our”) is only a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to the Third Amended and Restated Certificate of Incorporation, the Amended and Restated Bylaws, and the form of warrant that are included as exhibits to the Annual Report on Form 10-K of which this Exhibit forms a part, as well as the applicable provisions of the Delaware General Corporation Law, as amended (the “DGCL”).

Common Stock**General**

Our authorized capital stock consists of 50,000,000 shares of common stock, par value \$0.001 per share, of which 21,635,365 shares were outstanding as of December 31, 2019, and 5,000,000 shares of preferred stock, par value \$0.01 par value per share, of which zero shares were outstanding as of that date.

Our Board of Directors is authorized to issue additional shares of our capital stock without shareholder approval, except as required by the Nasdaq listing standards.

Dividends and Liquidation Rights

Subject to preferences that may be applicable to any outstanding shares of our preferred stock, holders of shares of our common stock are entitled to receive ratably such dividends, if any, as our Board of Directors may declare on the common stock out of funds legally available for that purpose. Upon our liquidation, dissolution, or winding up, holders of shares of our common stock would be entitled to share ratably in all assets remaining after the payment of all debts and other liabilities and the liquidation preferences of any outstanding shares of our preferred stock.

Voting Rights

Holders of shares of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of shareholders. A majority of the votes cast at a meeting of the shareholders by the holders of shares entitled to vote is required for any action by the shareholders except (a) as otherwise provided by law or the Third Amended and Restated Certificate of Incorporation and (b) that directors are to be elected by a plurality of the votes cast at elections. Holders of shares of our common stock do not have cumulative voting rights in the election of directors.

Our Third Amended and Restated Certificate of Incorporation provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting; that stockholders may not take any action by written consent in lieu of a meeting; that only the chairman of our Board of Directors, our chief executive officer, or a majority of the authorized number of directors may call special meetings of stockholders; and that only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our Amended and Restated Bylaws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

Other Rights

Holders of common stock have no preemptive, conversion, or subscription rights. There are no redemption or sinking fund provisions applicable to the common stock.

Future Issuance of Preferred Stock

There are no shares of preferred stock issued or outstanding. Our Board of Directors may, without further action by our shareholders, from time to time, direct the issuance of shares of preferred stock in one or more series and may, at the time of issuance, determine the rights, preferences, and limitations of each series. These shares of preferred stock may have conversion, dividend, liquidation, or voting rights that could adversely affect the holders of shares of our common stock, and they may render more difficult or tend to discourage a merger, tender offer, or proxy contest; the assumption of control by a holder of a large block of our securities; or the removal of incumbent management.

Changes in Control

Certain provisions of the DGCL and of our Third Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws could have the effect of delaying, deferring, or discouraging another party from acquiring control of us. These provisions might inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts, make it more difficult to accomplish transactions that stockholders might otherwise deem to be in their best interests, and prevent changes in our board of directors or management.

Advance Notice Procedures

The Amended and Restated Bylaws establish advance notice procedures for shareholders to make nominations of candidates for election as directors or bring other business before an annual meeting of our shareholders. If the officer presiding at a meeting determines that a person was not nominated, or other business was not brought before the meeting, in accordance with the notice procedure, that person will not be eligible for election as a director, or that business will not be conducted at the meeting.

Authorized but Unissued Shares

The authorized but unissued shares of our common stock are available for future issuance without shareholder approval. The existence of authorized but unissued shares of our common stock could render more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger, or otherwise.

Amendment to By-Laws and Third Amended and Restated Certificate of Incorporation

As required by the DGCL, any amendment of our certificate of incorporation must first be approved by a majority of our Board of Directors and, if required by law or our Third Amended and Restated Certificate of Incorporation, thereafter be approved by a majority of the outstanding shares entitled to vote on the amendment, and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of the provisions relating to directors, limitation of liability, and choice of forum must be approved by not less than 66 2/3% of the outstanding shares entitled to vote on the amendment. Our Amended and Restated Bylaws may be amended by the affirmative vote of a majority vote of the directors then in office, subject to any limitations set forth in the Amended and Restated Bylaws, and may also be amended by the affirmative vote of at least 66 2/3% of the outstanding shares entitled to vote on the amendment.

Board Composition and Filling Vacancies

In accordance with our Third Amended and Restated Certificate of Incorporation, directors may be removed without cause by the affirmative vote of the holders of 66 2/3% or more of the shares then entitled to vote at an election of directors, or with cause by the affirmative vote of a majority of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our Board of Directors, however occurring, including a vacancy resulting from an increase in the size of our Board of Directors, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum. Our Board of Directors is not divided into classes.

Forum

Our Third Amended and Restated Certificate of Incorporation provides that the Court of Chancery of the State of Delaware shall, to the fullest extent permitted by law, be the sole and exclusive forum for (1) any derivative action or proceeding brought on our behalf; (2) any action asserting a claim of breach of a fiduciary duty owed by any director, officer, or other employee to us or to our stockholders; (3) any action asserting a claim arising pursuant to any provision of the DGCL; or (4) any action asserting a claim governed by the internal affairs doctrine.

Transfer Agent

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

Listing

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

Warrants to Purchase Common Stock

General

As of December 31, 2019, we had outstanding warrants to purchase 1,622,304 shares of our common stock.

Term

The term of the warrants is five years from the date of original issuance.

Exercise Price

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

Exercisability

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

No Fractional Shares

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

Transferability

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

Authorized Shares

We have reserved from our authorized and unissued common stock a sufficient number of shares to provide for the issuance of shares of common stock underlying the warrants upon the exercise of the warrants.

Fundamental Transactions

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

Right as a Stockholder

Except as otherwise provided in the warrants or by virtue of such holder's ownership of shares of our common stock, the holders of the warrants do not have the rights or privileges of holders of our common stock until they exercise their warrants.

Waiver and Amendments

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

Beneficial Ownership Limitation

Subject to limited exceptions, a holder of warrants will not have the right to exercise any portion of its warrants if the holder (together with such holder's affiliates, and any persons acting as a group together with such holder or any of such holder's affiliates) would beneficially own a number of shares of our common stock in excess of 4.99% (or, at the election of the holder, 9.99%) of the shares of our common stock then outstanding immediately after giving effect to such exercise (the "Beneficial Ownership Limitation"); provided, however, that upon notice to us, the holder may increase or decrease the Beneficial Ownership Limitation; provided, further, that in no event shall the Beneficial Ownership Limitation exceed 9.99% and in no event shall any increase in the Beneficial Ownership Limitation be effective until 61 days following notice of such increase from the holder to us.

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
AquaBounty Brasil Participações Ltda.	Brazil
AQUA Bounty Canada Inc.	Canada
Aqua Bounty Farms Chile Limitada	Chile
AquaBounty Farms, Inc.	Delaware
AquaBounty Farms Indiana LLC	Delaware
AquaBounty Panama, S. de R.L.	Panama

Certification

I, Sylvia Wulf, 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) 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) designed such internal controls over financial reporting, or caused such internal controls over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) 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
 - (d) 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 controls 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 10, 2020

/s/ Sylvia Wulf

Chief Executive Officer

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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) 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) designed such internal controls over financial reporting, or caused such internal controls over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) 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
 - (d) 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 controls 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 10, 2020

/s/ David A. Frank

Chief Financial Officer

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). This certification is not to be deemed a part of the Report, nor is it deemed to be “filed” for any purpose whatsoever.

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, 2019, 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, 2019, fairly presents, in all material respects, the financial condition and results of operations of AquaBounty Technologies, Inc.

Dated as of this 10th day of March 2020.

/s/ Sylvia Wulf

/s/ David A. Frank

Sylvia Wulf
Chief Executive Officer

David A. Frank
Chief Financial Officer