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

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**AMENDMENT NO. 1 TO  
FORM S-1  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933**

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**AquaBounty Technologies, Inc.**  
(Exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction of  
incorporation or organization)

**0273**

(Primary Standard Industrial  
Classification Code Number)  
2 Mill & Main Place, Suite 395  
Maynard, Massachusetts 01754  
(978) 648-6000

**04-3156167**

(I.R.S. Employer  
Identification Number)

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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**David A. Frank**

Chief Financial Officer

AquaBounty Technologies, Inc.  
2 Mill & Main Place, Suite 395  
Maynard, Massachusetts 01754  
Telephone: (978) 648-6000

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**Approximate date of commencement of proposed sale to public:** As soon as practicable after this Registration Statement is declared effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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   
Non-accelerated filer

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 7(a)(2)(B) of the Securities Act.

## CALCULATION OF REGISTRATION FEE

<b>Title of Each Class of Securities to be Registered</b>	<b>Amount to Be Registered(1)</b>	<b>Proposed Maximum Offering Price Per Share(2)</b>	<b>Proposed Maximum Aggregate Offering Price(2)</b>	<b>Amount of Registration Fee(3)</b>
Common Stock, par value \$0.001 per share(4)	[5,637,254]	\$2.04	\$11,500,000	\$1,493

- (1) Includes [735,294] shares of common stock that the underwriters have an option to purchase.
- (2) Estimated solely for the purposes of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended, and based on the average of the high and low prices of the Registrant's common stock on January 31, 2020.
- (3) The Registrant previously paid \$1,500.00 of the registration fee.
- (4) Includes offering price of any additional shares of common stock that the underwriters have an option to purchase to cover over-allotments, if any.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment that specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, Dated February 3, 2020

PRELIMINARY PROSPECTUS

\$10,000,000



COMMON STOCK

We are offering \$10.0 million of shares of our common stock.

Our common stock is listed on the Nasdaq Capital Market under the symbol "AQB". On January 31, 2020, the closing sale price of our common stock on the Nasdaq Capital Market was \$2.04 per share.

We are an "emerging growth company" under applicable federal securities laws and will be subject to reduced public company reporting requirements for this prospectus and future filings with the Securities and Exchange Commission.

*Our business and investment in our common stock involves risks. See "Risk Factors" beginning on page 10 of this prospectus.*

*Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.*

	Per Share	Total
Public offering price	\$	\$
Underwriting discounts and commissions(1)(2)	\$	\$
Proceeds, before expenses, to us	\$	\$

- (1) The underwriters will receive no underwriting discount in respect of shares sold to a certain existing shareholder or its affiliates, if such shareholder or affiliates participate in this offering.
- (2) We have also agreed to reimburse certain expenses of the underwriters. See "Underwriting" beginning on page 67 of this prospectus for additional information regarding underwriting compensation.

We have granted the underwriters an option to purchase up to an additional \$1.5 million of shares of common stock from us at the public offering price, less the underwriting discounts and commissions, within 45 days from the date of this prospectus to cover over-allotments, if any.

Randal J. Kirk, our largest stockholder, through one or more of his affiliates, has indicated an interest in purchasing up to 50% of shares of our common stock being offered in this offering at the public offering price. Because indications of interest are not binding agreements or commitments to purchase, Mr. Kirk and his affiliates may determine to purchase fewer or more shares than they have indicated an interest in purchasing, or elect not to purchase any shares in this offering. The underwriters may also determine to sell fewer, more, or no shares in this offering to Mr. Kirk's affiliates.

The underwriters expect to deliver the shares of common stock to investors on or about \_\_\_\_\_, 2020, subject to customary closing conditions.

LAKE STREET

The date of this prospectus is \_\_\_\_\_, 2020

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You should rely only on the information contained in this prospectus or contained in any free writing prospectus filed with the Securities and Exchange Commission. Neither we nor the underwriters have authorized any person to provide you with any information or make any representations other than those contained in this prospectus or in any free writing prospectus filed with the Securities and Exchange Commission and that we authorize to be distributed to you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, unless the information specifically indicates that another date applies, regardless of the time of delivery of this prospectus or of any sale of the common stock. Our business, financial condition, results of operations and prospects may have changed since such date.

For investors outside of the United States: Neither we nor the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and to observe any restrictions relating to, this offering and the distribution of this prospectus outside of the United States.

In this prospectus, unless otherwise stated or the context otherwise requires, references to “AquaBounty,” the “Company,” “we,” “us,” “our,” and similar references refer to AquaBounty Technologies, Inc. and its consolidated subsidiaries. “AquAdvantage,” “Aqua Bounty,” and certain other marks are our registered trademarks in several jurisdictions. This prospectus contains additional trade names, trademarks, and service marks of other companies, and such tradenames, trademarks, and service marks are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus may be referred to without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend our use or display of other companies’ trade names, trademarks, or service marks to imply a relationship with, or endorsement or sponsorship of us by, these other companies.

## PROSPECTUS SUMMARY

*This summary highlights selected information that is presented in greater detail elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus carefully, including the sections titled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes included elsewhere in this prospectus, before making an investment decision.*

### 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 U.S. Food and Drug Administration (“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, recirculating aquaculture system (“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 New Animal Drug Application (“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 U.S. Department of Commerce (“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 the second quarter of 2020 and our first harvests of AquAdvantage Salmon expected in the fourth quarter 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.

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, 2018 and 2017, we experienced operating losses of \$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 United Nations Food and Agriculture Organization (“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 Analyse (“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

© FAO - Fisheries and Aquaculture Information and Statistics Service 12/17/2019

**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 U.S. Department of Agriculture (“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 non-governmental organizations (“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 (“Disclosure 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 was 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 (“ISA”) and sea lice. ISA is a viral disease in Atlantic salmon, and outbreaks have occurred in virtually every major salmon farming geography since 1984, including a major event in Chile in 2008 that impacted the country’s production for three years. There is currently no effective treatment for the disease, and the salmon farming industry relies on 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 used 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; 25% better feed conversion, which allows for us to produce approximately 70% more AquAdvantage Salmon each year in comparison to conventional Atlantic salmon; 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
<b>Annual Output</b>	5,000 mt	8,550 mt
<b>Annual Revenue*</b>	\$34m - \$37m	\$59m - \$64m
<b>Contribution Margin %</b>	27% - 31%	37% - 40%
<b>EBITDA</b>	\$12m - \$15m	\$25m - \$30m
<b>Payback Period</b>	8-10 years	4-5 years

\* Revenue assumes commodity pricing and 60% biomass yield at full production.

### 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 Competitive Strengths

We believe the following key competitive strengths are core to our ability to successfully commercialize our products and to grow the company within the aquaculture industry:

- Over 25 years of experience developing and breeding salmon in a land-based RAS facility.
- Successful regulatory review and approval of AquAdvantage Salmon by two of the most respected and rigorous regulatory agencies in the world.



- Pipeline of additional products in development.
- Experienced management team.

### **Our Strategy**

Our goal is to leverage our technology and our experience in raising fish in land-based RAS farms to become a leader in land-based, sustainable aquaculture. Key elements of our strategy include:

- Prove the profitability of the conventional Atlantic salmon grown at our Indiana RAS farm.
- Prove the economic benefit and consumer acceptance of AquAdvantage Salmon.
- Gain approval for AquAdvantage Salmon in additional markets.
- Increase our production output in North America.
- Seek partnerships and licensing arrangements to leverage our investment.
- Continue to leverage our technology leadership in land-based aquaculture and biotechnology.

To advance our strategy, we have progressed on the following activities:

- We established production farm sites in Indiana and Rollo Bay.
- We initiated construction of a broodstock facility in Rollo Bay for year-round egg production to stock our production facilities.
- We initiated field trials in Argentina and Brazil, the first step in seeking approval of our AquAdvantage Salmon in those countries.
- We received approval of our application to conduct field trials in China.

### **Risks Related to Our Business and Industry**

Our business, financial condition, results of operations, and prospects are subject to numerous risks. These risks are discussed more fully in the “Risk Factors” section of this prospectus. These risks, uncertainties and other factors include, but are not limited to:

- our limited operating history and track record of operating losses;
- our cash position and ability to raise additional capital to finance our activities;
- the anticipated benefits and characteristics of our AquAdvantage Salmon product;
- the ability to secure any necessary regulatory approvals to commercialize any products;
- our ability to adapt to changes in laws or regulations and policies;
- the uncertainty of achieving the business plan, future revenue and operating results;
- developments concerning our research projects;
- our ability to successfully enter new markets or develop additional products;
- competition from existing technologies and products or new technologies and products that may emerge;
- actual or anticipated variations in our operating results;
- market conditions in our industry;
- our ability to protect our intellectual property and other proprietary rights and technologies;
- 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;
- international business risks and exchange rate fluctuations;
- the possible volatility of our stock price; and
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing.

## **Corporate Information**

We were formed under the laws of the State of Delaware on December 17, 1991. Our principal executive offices are located at 2 Mill & Main Place, Suite 395, Maynard, Massachusetts 01754. Our telephone number is (978) 648-6000. We maintain a website at [www.aquabounty.com](http://www.aquabounty.com). The reference to our website is intended to be an inactive textual reference only. The information contained on, or that can be accessed through, our website is not a part of this prospectus. On January 19, 2017, our common stock began trading on the Nasdaq Capital Market under the symbol “AQB”.

## **Emerging Growth Company Status**

We are an “emerging growth company,” as defined in Section 2(a) of the Securities Act of 1933 (the “Securities Act”), as amended by the Jumpstart Our Business Startups Act (the “JOBS Act”) enacted on April 5, 2012. For as long as we are an “emerging growth company,” we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies.” These include, but are not limited to, not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act of 2002 (the “Sarbanes-Oxley Act”); an exemption from the adoption of new or revised financial accounting standards until they would apply to private companies; an exemption from compliance with any new requirements adopted by the Public Company Accounting Oversight Board (the “PCAOB”); reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements; and exemptions from the requirements of holding advisory “say-on-pay” votes on executive compensation and shareholder advisory votes on golden parachute compensation not previously approved.

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

We may take advantage of these exemptions for up to five years or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company upon the earliest to occur 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.

## The Offering

The following summary contains general information about this offering. The summary is not intended to be complete. You should read the full text and more specific details contained elsewhere in this prospectus.

Common stock offered by us	\$10 million of shares.
Underwriters' option to purchase additional shares	We have granted the underwriters a 45-day option to purchase up to an additional \$1.5 million of shares from us at the public offering price, less underwriting discounts and commissions, to cover over-allotments, if any.
Common stock to be outstanding immediately after this offering	25,364,720 shares (or 25,928,630 shares if the underwriters exercise their option to purchase additional shares in full).
Use of proceeds	We estimate that the net proceeds from the sale of shares of our common stock in this offering will be approximately \$9.2 million (or approximately \$10.6 million if the underwriters' option to purchase additional shares in this offering is exercised in full), based upon an assumed public offering price of \$2.66 per share, which was the closing sale price of our common stock on the Nasdaq Capital Market on January 14, 2020, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We currently intend to use the net proceeds of this offering to continue construction and renovation activities of our existing facilities in Rollo Bay and Indiana, for working capital costs associated with growing our first batches of fish at our Indiana and Rollo Bay farm sites; and other general corporate purposes, including investing further in our sales and marketing and research and development efforts and payment of anticipated general and administrative expenses. See the section of this prospectus titled "Use of Proceeds" for a more complete description of the intended use of proceeds from this offering.
Risk factors	See the section of this prospectus titled "Risk Factors" beginning on page 10 of this prospectus for a discussion of factors you should carefully consider before deciding to invest in our common stock.

The Nasdaq Capital Market trading symbol "AQB"

The number of shares of common stock to be outstanding after this offering is based on 21,605,322 shares of common stock outstanding as of September 30, 2019, and excludes:

- 538,925 shares of common stock issuable upon the exercise of stock options outstanding as of September 30, 2019, with a weighted-average exercise price of \$5.11 per share under our 2006 Equity Incentive Plan (the "2006 Plan"), and our 2016 Equity Incentive Plan (the "2016 Plan");
- 263,077 shares of common stock reserved for future issuance under our 2016 Plan, as more fully described in the section of this prospectus titled "Executive Compensation—Employee Benefit Plans"; and
- 1,662,304 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2019, with an exercise price of \$3.25 per share, which warrants were issued in January 2018 as part of a public offering of units consisting of our common stock and the warrants.

Except as otherwise indicated, the information in this prospectus reflects or assumes the following:

- no exercise of options or warrants outstanding as of September 30, 2019; and
- no exercise by the underwriters of their option to purchase up to an additional \$1.5 million of shares of our common stock in this offering.

Randal J. Kirk, our largest stockholder, through one or more of his affiliates, has indicated an interest in purchasing up to 50% of shares of our common stock being offered in this offering at the public offering price. Because indications of interest are not binding agreements or commitments to purchase, Mr. Kirk and his affiliates may determine to purchase fewer or more shares than they have indicated an interest in purchasing, or elect not to purchase any shares in this offering. The underwriters may also determine to sell fewer, more, or no shares in this offering to Mr. Kirk's affiliates.

## SUMMARY CONSOLIDATED FINANCIAL DATA

The summary consolidated statements of operations data for the years ended December 31, 2016, 2017, and 2018, and the consolidated balance sheet data as of December 31, 2018, have been derived from our audited consolidated financial statements included elsewhere in this prospectus. The summary consolidated statement of operations data for the nine months ended September 30, 2018 and 2019, and the summary condensed consolidated balance sheet data as of September 30, 2019, have been derived from our unaudited financial statements for such period, included elsewhere in this prospectus. In our opinion, these unaudited consolidated financial statements have been prepared on a basis consistent with our audited consolidated financial statements and contain all adjustments, consisting only of normal and recurring adjustments, necessary for a fair presentation of such consolidated financial data. Our historical results are not necessarily indicative of the results that may be expected in the future. The following summary consolidated financial data should be read in conjunction with the sections of this prospectus titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Selected Consolidated Financial Data” and our consolidated financial statements and related notes beginning on page F-1 of this prospectus.

	Nine Months Ended September 30,		Fiscal Years Ended December 31,	
	2019	2018	2018	2017
(in thousands, except share data)				
<b>Statement of Operations Data:</b>				
Revenues				
Product revenues	\$ 140	\$ 78	\$ 85	\$ 53
Costs and expenses:				
Product costs	121	72	78	51
Sales and marketing	382	223	298	799
Research and development	1,923	2,664	3,459	3,372
General and administrative	7,489	5,067	6,616	5,063
Total costs and expenses	9,915	8,026	10,451	9,285
Operating loss	(9,775)	(7,948)	(10,366)	(9,232)
Other income (expense):				
Gain on disposal of equipment	9	12	13	1
Interest expense	(46)	(16)	(22)	(22)
Other income (expense), net	3	(6)	(7)	(6)
Total other income (expense)	(34)	(10)	(16)	(27)
Net loss	(9,809)	\$ (7,958)	\$ (10,382)	\$ (9,259)
<b>Other comprehensive income:</b>				
Foreign currency translation income (loss)	134	(113)	(360)	72
Total other comprehensive income (loss)	134	(113)	(360)	72
Comprehensive loss	\$ (9,675)	\$ (8,071)	\$ (10,742)	\$ (9,187)
<b>Earnings per share</b>				
Net loss	\$ (9,809)	\$ (7,958)	\$ (10,382)	\$ (9,259)
Deemed dividend	\$ —	\$ —	\$ (1,823)	\$ —
Net loss attributable to common shareholders	\$ (9,809)	\$ (7,958)	\$ (12,205)	\$ (9,259)
<b>Basic and diluted net loss per share</b>	\$ (0.50)	\$ (0.64)	\$ (0.94)	\$ (1.06)
Weighted average number of common shares—basic and diluted	19,556,607	12,528,995	13,028,760	8,772,494

	As of September 30, 2019		As of December 31	
	Actual	As Adjusted(1)	2018	2017
	(unaudited)			
<b>Balance Sheet Data:</b>				
Cash and CD's	\$ 6,426	\$ 15,651	\$ 3,003	\$ 506
Total assets	\$ 32,959	\$ 42,184	\$ 27,671	\$ 23,732
Debt	\$ 4,547	\$ 4,547	\$ 3,591	\$ 3,084
Stockholders' equity (deficit)	\$ 26,880	\$ 36,105	\$ 23,234	\$ 17,981

- (1) The as-adjusted balance sheet data reflects the receipt by us of proceeds from the sale of \$10.0 million of shares of common stock by us in this offering, based on an assumed public offering price of \$2.66 per share, which was the closing price of our common stock on the Nasdaq Capital Market on January 14, 2020, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

A \$1.00 increase (decrease) in the assumed public offering price of \$2.66 per share, which was the closing price of our common stock on the Nasdaq Capital Market on January 14, 2020, would increase (decrease) cash and cash equivalents, total stockholders' equity, and total capitalization by \$3.6 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. Each increase of 1 million shares in the number of shares offered by us, assuming that the assumed public offering price remains the same, would increase cash, total stockholders' equity, and total capitalization by \$2.6 million. Similarly, each decrease of 1 million shares in the number of shares offered by us, assuming that the assumed public offering price remains the same, would decrease cash and cash equivalents, total stockholders' equity, and total capitalization by \$2.6 million.

## 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 prospectus, including our consolidated financial statements and the related notes thereto. 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.*

### **Risks Relating to our Business**

#### **We must raise additional capital in the first quarter of 2020 to fund our operations in order to continue as a going concern.**

Currently, we do not have sufficient capital to continue our operations after the first three months of 2020. If we are unable to generate additional funds through financings, sales of our products, government grants, loans, or from other sources or transactions, we would exhaust our resources and be unable to maintain our currently planned operations and continue as a going concern. We therefore plan to seek additional financing in the form of debt or equity to fund our cash requirements for the next twelve months. We may also cut operating costs or delay capital spend in order to preserve available cash. There can be no assurance that we will be successful in securing additional financing, and, if we do not, we would not be able to continue as a going concern, and our stockholders would likely lose most or all of their investment in us. You should not rely on our consolidated balance sheet as an indication of the amount of proceeds that would be available to satisfy claims of creditors, and potentially be available for distribution to shareholders, in the event of liquidation. Our consolidated financial statements included in this prospectus have been prepared assuming that we will continue as a going concern and do not include any adjustment to reflect the possible future effects on the recoverability and classification of assets, or the amounts and classification of liabilities that may result if we do not continue as a going concern.

#### **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 September 30, 2019, we have incurred net losses of approximately \$129 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 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 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.

**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 AquaAdvantage Salmon are not subject to the royalty.

In February 2013, we entered into an Exclusive Channel Collaboration Agreement (“ECC”) with Intrexon Corporation (to be renamed Precigen, Inc. as of February 1, 2020; “Precigen”), pursuant to which we are permitted to use Precigen’s UltraVector and other technology platforms to develop and commercialize additional bioengineered traits in finfish for human consumption. The ECC grants us a worldwide license to use certain patents and other intellectual property of Precigen in connection with the research, development, use, importing, manufacture, sale, and offer for sale of products involving DNA administered to finfish for human consumption. We agreed under the ECC to pay Precigen, on a quarterly basis, 16.66% of the gross profits calculated for each developed product. We also agreed to pay Precigen 50% of the quarterly revenue obtained from a sublicensee in the event of a sublicensing arrangement. In addition, we agreed to reimburse Precigen for the costs of certain services provided by Precigen. While we are winding down the activities under the ECC, and may renegotiate its terms, it remains in effect. These payments could negatively impact our ability to support our operations.

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

The majority of our employees, including our research personnel, are 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 AquaAdvantage 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 this Offering and 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 October 31, 2019, by Randal J. Kirk ("Mr. Kirk"), Third Security, LLC ("Third Security"), TS AquaCulture LLC ("TS AquaCulture"), and Precigen, as of issuance, TS AquaCulture owns 8,239,199 shares of our common stock, or approximately 38.1% of our outstanding shares. In addition, entities controlled by Mr. Kirk, including Third Security and its affiliates other than TS AquaCulture, currently hold 837,554 shares of our common stock, or approximately 3.9% of our outstanding shares. TS AquaCulture is managed by Third Security and 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 42.0% 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 percentage ownership of our common stock, TS AquaCulture will be able to significantly influence who serves on our Board of Directors and the outcome of matters required to be submitted to our shareholders for approval, including decisions relating to the outcome of any proposed merger or consolidation of our company. TS AquaCulture's interests may not be consistent with those of our other shareholders. Furthermore, TS AquaCulture's significant interest in us may discourage third parties from seeking to acquire control of us, which may adversely affect the market price of our common stock.

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

Although our common stock is currently traded on the Nasdaq Capital Market, an active trading market for our common stock may 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, 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.

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

If you purchase shares of our common stock in this offering, you will experience substantial and immediate dilution in the pro forma net tangible book value per share after giving effect to this offering, based on an assumed public offering price of \$2.66 per share, which was the closing sale price of our common stock on the Nasdaq Capital Market on January 14, 2020, because the price that you pay will be substantially greater than the pro forma net tangible book value per share of the common stock that you acquire. This dilution is due in large part to the fact that our earlier investors paid substantially less than the public offering price when they purchased their shares of our capital stock. You will experience additional dilution upon exercise of any warrant, upon exercise of options to purchase common stock under our equity incentive plans, vesting of restricted stock units issued to our employees, if we further issue restricted stock to our employees under our equity incentive plans, or if we otherwise issue additional shares of our common stock. For a further description of the dilution that you will experience immediately after this offering, see the section of this prospectus titled “Dilution.”

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

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

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

The existence of some provisions of our 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.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, particularly the sections of this prospectus titled “Prospectus 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 prospectus, 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 prospectus, 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 prospectus include, but are not limited to, statements about:

- the anticipated benefits and characteristics of our AquAdvantage Salmon product;
- the implementation and likelihood of achieving the business plan, future revenue, and operating results;
- 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 prospectus are subject. We may not actually achieve the plans, intentions, or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions, and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in this prospectus, 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 prospectus. 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.



## **MARKET, INDUSTRY AND OTHER DATA**

This prospectus includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties, including the U.S. Department of Commerce, Kontali Analyse, and the United Nations Food and Agriculture Organization. This information involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such information. Industry publications and third-party research, surveys, and studies generally indicate that their information has been obtained from sources believed to be reliable. While we believe that the third-party sources are reliable and the conclusions contained in the publications are reasonable, such information is inherently imprecise. Projections, assumptions, and estimates of our future performance and the future performance of the industry in which we operate is subject to a high degree of uncertainty and risks due to high variety of factors, including those included in the section of this prospectus titled “Risk Factors.” These and other factors could cause results to differ materially from those expressed in the estimates made by third parties and by us.

## USE OF PROCEEDS

We estimate that the net proceeds from the sale of shares of our common stock that we are selling in this offering will be approximately \$9.2 million, based upon an assumed public offering price of \$2.66 per share, which was the last reported sale price of our common stock on the Nasdaq Capital Market on January 14, 2020, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters' option to purchase additional shares from us is exercised in full, we estimate that our net proceeds would be approximately \$10.6 million, based on the same assumed public offering price, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

Each \$1.00 increase or decrease in the assumed public offering price of \$2.66 per share would increase or decrease the net proceeds that we receive from this offering by approximately \$3.6 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease of one million in the number of shares of common stock offered by us would increase or decrease the net proceeds that we receive from this offering by approximately \$2.6 million, assuming the assumed public offering price remains the same and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

We anticipate that we will use the net proceeds we receive from this offering, including any net proceeds we receive from the exercise of the underwriter's option to acquire additional shares of common stock in this offering for the following purposes:

- approximately \$2.0 million to continue construction and renovations at our Indiana and Rollo Bay farm sites;
- approximately \$2.0 million for working capital costs associated with the continued grow-out of our first batches of fish at our Indiana and Rollo Bay farm sites; and
- the balance of the funds for other general corporate purposes, including investing further in our sales and marketing and research and development efforts and payment of anticipated general and administrative expenses.

We anticipate that completion of all construction and renovation projects at our facilities in Rollo Bay and Indiana will require a total of \$11.0 million in expenses. These projects will allow us to conduct primary processing activities at our Indiana farm and produce ten million eyed eggs annually at our Rollo Bay farm. If our capital requirements are higher than we anticipate, we may need to seek alternative sources of capital, and we are currently seeking to secure debt financing in the form of a mortgage on our Indiana farm site and a provincial loan on the Rollo Bay farm site to finance these projects.

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

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

## **DIVIDEND POLICY**

We have never declared or paid any cash dividends on our common stock. We currently intend to retain earnings, if any, to finance the growth and development of our business. We 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.

## CAPITALIZATION

The following table sets forth our cash and capitalization as of September 30, 2019:

- on an actual basis; and
- on an as-adjusted basis to reflect our receipt of the net proceeds from our sale of \$10.0 million of shares of common stock in this offering at an assumed public offering price of \$2.66 per share, which was the closing sale price of our common stock on the Nasdaq Capital Market on January 14, 2020, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this table together with the section of this prospectus titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes thereto appearing elsewhere in this prospectus.

	As of September 30, 2019	
	Actual	As Adjusted(1)
	(in thousands, except for share numbers)	
Cash and CD’s	\$ 6,426	\$ 15,651
Current debt	149	149
Long-term debt	4,398	4,398
Total liabilities	6,079	6,079
Preferred stock, \$0.01 par value per share; 5 million shares authorized; no shares issued and outstanding	—	—
Common stock, \$0.001 par value per share; 50 million shares authorized, actual and as adjusted; 21,605,322 shares issued and outstanding, actual; 25,364,720 shares issued and outstanding, as adjusted	22	25
Additional paid-in capital	156,022	165,244
Accumulated other comprehensive loss	(441)	(441)
Accumulated deficit	(128,723)	(128,723)
Total stockholders’ equity	26,880	36,105
Total capitalization	\$ 32,959	\$ 42,184

- (1) A \$1.00 increase (decrease) in the assumed public offering price of \$2.66 per share, which was the closing price of our common stock on the Nasdaq Capital Market on January 14, 2020, would increase (decrease) cash and cash equivalents, total stockholders’ equity, and total capitalization by \$3.6 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Each increase of 1 million shares in the number of shares offered by us, assuming that the assumed public offering price remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, would increase cash, total stockholders’ equity, and total capitalization by \$2.6 million. Similarly, each decrease of 1 million shares in the number of shares offered by us, assuming that the assumed public offering price remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, would decrease cash and cash equivalents, total stockholders’ equity, and total capitalization by \$2.6 million.

The number of shares of common stock to be outstanding after this offering is based on 21,605,322 shares of common stock outstanding as of September 30, 2019, and excludes:

- 538,925 shares of common stock issuable upon the exercise of stock options outstanding as of September 30, 2019, with a weighted-average exercise price of \$5.11 per share under the 2006 Plan and the 2016 Plan;
- 263,077 shares of common stock reserved for future issuance under the 2016 Plan, as more fully described in the section of this prospectus titled “Executive Compensation—Employee Benefit Plans”; and
- 1,662,304 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2019, with an exercise price of \$3.25 per share, which warrants were issued in January 2018 as part of a public offering of units consisting of our common stock and the warrants.

## DILUTION

If you invest in our common stock in this offering, your ownership interest will be diluted to the extent of the difference between the public offering price per share of our common stock and the as-adjusted net tangible book value per share of our common stock immediately after this offering. Net tangible book value dilution per share to new investors represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the as-adjusted net tangible book value per share of common stock immediately after completion of this offering.

Net tangible book value per share is determined by dividing our total tangible assets, less our total liabilities, by the number of shares of common stock outstanding. Our historical net tangible book value as of September 30, 2019, was \$26.5 million, or \$1.23 per share.

After giving effect to the sale by us of \$10.0 million of shares of common stock in this offering at an assumed public offering price of \$2.66 per share, which was the closing sale price of our common stock on the Nasdaq Capital Market on January 14, 2020, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, our as-adjusted net tangible book value as of September 30, 2019, would have been \$35.7 million, or \$1.41 per share. This represents an immediate increase in as-adjusted net tangible book value of \$0.18 per share to our existing stockholders and immediate dilution of \$1.25 per share to investors purchasing shares of common stock in this offering at the public offering price. The following table illustrates this dilution:

Assumed public offering price per share	\$	2.66
Historical net tangible book value per share as of September 30, 2019	\$	1.23
Increase in net tangible book value per share attributable to new investors in this offering	\$	0.18
As adjusted net tangible book value per share after this offering	\$	1.41
Dilution per share to new investors in this offering	\$	1.25

If the underwriters exercise their option to purchase an additional \$1.5 million of shares in full, the as-adjusted net tangible book value per share of our common stock immediately after this offering would be \$1.43 per share, and the dilution in net tangible book value per share to new investors in this offering would be \$1.23 per share, assuming a public offering price of \$2.66 per share, which was the closing sale price of our common stock on the Nasdaq Capital Market on January 14, 2020, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

A \$1.00 increase (decrease) in the assumed public offering price of \$2.66 per share, which is the closing price of our common stock on the Nasdaq Capital Market on January 14, 2020, would increase (decrease) cash and cash equivalents, total stockholders' equity and total capitalization by \$3.6 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Each increase of 1 million shares in the number of shares offered by us, assuming that the assumed public offering price remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, would increase cash, total stockholders' equity, and total capitalization by \$2.6 million. Similarly, each decrease of 1 million shares in the number of shares offered by us, assuming that the assumed public offering price remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, would decrease cash and cash equivalents, total stockholders' equity, and total capitalization by \$2.6 million.

The number of shares of common stock to be outstanding after this offering is based on 21,605,322 shares of common stock outstanding as of September 30, 2019, and excludes:

- 538,925 shares of common stock issuable upon the exercise of stock options outstanding as of September 30, 2019, with a weighted-average exercise price of \$5.11 per share under the 2006 Plan and the 2016 Plan;
- 263,077 shares of common stock reserved for future issuance under the 2016 Plan, as more fully described in the section of this prospectus titled "Executive Compensation—Employee Benefit Plans"; and
- 1,662,304 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2019, with an exercise price of \$3.25 per share, which warrants were issued in January 2018 as part of a public offering of units consisting of our common stock and the warrants.

To the extent that outstanding options or warrants are exercised, you will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities may result in further dilution to our stockholders.

## SELECTED CONSOLIDATED FINANCIAL DATA

You should read the selected consolidated financial data below in conjunction with the section of this prospectus titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the consolidated financial statements, related notes, and other financial information included elsewhere in this prospectus. The selected consolidated financial data in this section are not intended to replace the consolidated financial statements and are qualified in their entirety by the consolidated financial statements and related notes included elsewhere in this prospectus.

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 prospectus and the section of this prospectus titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

The consolidated statement of operations data for the years ended December 31, 2018 and 2017, and the consolidated balance sheet data as of December 31, 2018 and 2017, 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. The summary consolidated statement of operations data for the nine months ended September 30, 2019 and 2018, and the summary consolidated balance sheet data as of September 30, 2019 and 2018, have been derived from our unaudited financial statements for such period, included elsewhere in this prospectus.

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

	Nine Months Ended September 30,		Fiscal Years Ended December 31,	
	2019	2018	2018	2017
(in thousands, except share data)	(unaudited)			
<b>Statement of Operations Data:</b>				
<b>Revenues</b>				
Product revenues	\$ 140	\$ 78	\$ 85	\$ 53
<b>Costs and expenses:</b>				
Product costs	121	72	78	51
Sales and marketing	382	223	298	799
Research and development	1,923	2,664	3,459	3,372
General and administrative	7,489	5,067	6,616	5,063
<b>Total costs and expenses</b>	<b>9,915</b>	<b>8,026</b>	<b>10,451</b>	<b>9,285</b>
Operating loss	(9,775)	(7,948)	(10,366)	(9,232)
<b>Other income (expense):</b>				
Gain on disposal of equipment	9	12	13	1
Interest expense	(46)	(16)	(22)	(22)
Other income (expense), net	3	(6)	(7)	(6)
<b>Total other income (expense)</b>	<b>(34)</b>	<b>(10)</b>	<b>(16)</b>	<b>(27)</b>
Net loss	(9,809)	\$ (7,958)	\$ (10,382)	\$ (9,259)
<b>Other comprehensive income:</b>				
Foreign currency translation income (loss)	134	(113)	(360)	72
<b>Total other comprehensive income (loss)</b>	<b>134</b>	<b>(113)</b>	<b>(360)</b>	<b>72</b>
Comprehensive loss	\$ (9,675)	\$ (8,071)	\$ (10,742)	\$ (9,187)
<b>Earnings per share</b>				
Net loss	\$ (9,809)	\$ (7,958)	\$ (10,382)	\$ (9,259)
Deemed dividend	\$ —	\$ —	\$ (1,823)	\$ —
Net loss attributable to common shareholders	\$ (9,809)	\$ (7,958)	\$ (12,205)	\$ (9,259)
<b>Basic and diluted net loss per share</b>	<b>\$ (0.50)</b>	<b>\$ (0.64)</b>	<b>\$ (0.94)</b>	<b>\$ (1.06)</b>
Weighted average number of common shares—basic and diluted	19,556,607	12,528,995	13,028,760	8,772,494

	As of September 30		As of December 31	
	2019	2018	2018	2017
	(unaudited)			
<b>Balance Sheet Data:</b>				
Cash and CD's	\$ 6,426	\$ 1,044	\$ 3,003	\$ 506
Total assets	\$ 32,959	\$ 26,043	\$ 27,671	\$ 23,732
Debt	\$ 4,547	\$ 3,030	\$ 3,591	\$ 3,084
Stockholders' equity (deficit)	\$ 26,880	\$ 21,529	\$ 23,234	\$ 17,981

## 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 prospectus. 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 prospectus, particularly in "Risk Factors" and elsewhere in this prospectus.*

### 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.

### 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.

### Cost of Products

Cost of products includes 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 September 30, 2019, we had twenty-seven employees engaged in production activities.

### Sales and Marketing Expenses

Our sales and marketing expenses currently include personnel costs, travel, and consulting fees for market-related activities. As of September 30, 2019, we had two employees dedicated to sales and marketing.

### Research and Development Expenses

As of September 30, 2019, we employed twenty-one 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 market maintenance, regulatory compliance, rent and utilities, insurance, and legal services, along with pre-production and capacity utilization costs for our Rollo Bay and Indiana farms, respectively. We had eleven employees in our general and administrative group at September 30, 2019.

### Other Income (Expense)

Interest expense includes the interest on our outstanding loans. Other income (expense) includes bank charges, fees, gain on disposal of equipment, and interest income.

### Significant Accounting Policies and Estimates

This Management's Discussion and Analysis of our Financial Condition and Results of Operations is based on our consolidated financial statements, which we have prepared in accordance with United States generally accepted accounting principles ("U.S. GAAP"). The preparation of our consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenues and expenses during the reporting periods. We evaluate these estimates and judgments on an ongoing



basis. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Our actual results may differ from these estimates under different assumptions or conditions. While our significant accounting policies are more fully described in Note 2 to our audited consolidated financial statements appearing elsewhere in this prospectus, we believe that the following accounting policies are the most critical for fully understanding and evaluating our financial condition and results of operations.

### Inventories

The Company measures inventory 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, disposal, and transportation. The Company also considers capacity utilization in calculating its inventory value with any excess capacity charged to general and administrative expenses as idle capacity.

### Valuation Allowance for Net Deferred Tax Assets

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

### Results of Operations

#### Comparison of the nine months ended September 30, 2019, to the nine months ended September 30, 2018.

The following table summarizes our results of operations for the nine months ended September 30, 2019 and 2018, together with the changes in those items in dollars and as a percentage (all dollar amounts in thousands):

	Nine Months Ended September 30,		Dollar Change	% Change
	2019	2018		
	(unaudited)			
Product revenue	\$ 140	\$ 78	\$ 62	79 %
Operating expenses:				
Product costs	121	72	49	68 %
Sales and marketing	382	223	159	71 %
Research and development	1,923	2,664	(741)	(28)%
General and administrative	7,489	5,067	2,422	48 %
Operating loss	9,775	7,948	1,827	23 %
Total other (income) expense	34	10	24	240 %
Net loss	\$ 9,809	\$ 7,958	\$ 1,851	23 %

#### *Product Revenue and Product Cost*

Product revenue for the nine months ended September 30, 2019, consisted primarily of sales of AquAdvantage Salmon and conventional Atlantic salmon eggs and byproducts. We expect that our sales will be modest and infrequent until our grow-out farms in Indiana and Rollo Bay commence harvesting in mid-2020.

#### *Sales and Marketing Expenses*

Sales and marketing expenses for the nine months ended September 30, 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 nine months ended September 30, 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 nine months ended September 30, 2019, were up significantly from the corresponding period in 2018 due to increases in personnel costs, stock compensation charges related to the hiring of our new CEO and the retirement of our previous CEO, travel costs associated with headcount additions to our management team, regulatory legal fees associated with the FDA legal challenge, and excess capacity charges at the Indiana and Rollo Bay farms as they continue their start-up.

*Total Other (Income) Expense*

Total other (income) expense is comprised of interest on debt, bank charges, a gain on disposal of equipment, and interest income for the nine months ended September 30, 2019 and 2018.

**Comparison of the year ended December 31, 2018, to the year ended December 31, 2017.**

The following table summarizes our results of operations for the year ended December 31, 2018 and 2017, together with the changes in those items in dollars and as a percentage (all dollar amounts in thousands):

	<b>Year Ended December 31,</b>		<b>Dollar Change</b>	<b>% Change</b>
	<b>2018</b>	<b>2017</b>		
Product revenue	\$ 85	\$ 53	\$ 32	60 %
<b>Operating expenses:</b>				
Product costs	78	51	27	53 %
Sales and marketing	298	799	(501)	(63)%
Research and development	3,459	3,372	87	3 %
General and administrative	6,616	5,063	1,553	31 %
Operating loss	(10,366)	(9,232)	(1,134)	12 %
Total other (income) expense, net	(16)	(27)	11	(41)%
Net loss	\$ (10,382)	\$ (9,259)	\$ (1,123)	12 %

*Product Revenue and Product Costs*

Product revenues for the year ended December 31, 2018, were up from the corresponding period in 2017, as a result of selling conventional Atlantic Salmon eggs and fry in addition to the sale of AquAdvantage Salmon.

Product costs on sales for the year ended December 31, 2018, were up from the corresponding period in 2017.

*Sales and Marketing Expenses*

Sales and marketing expenses for the year ended December 31, 2018, were down from the corresponding period in 2017 due to lower personnel and travel costs. We expect that our sales and marketing expenses will be relatively flat until we increase our production of AquAdvantage Salmon.

*Research and Development Expenses*

Research and development expenses for the year ended December 31, 2018, were slightly up from the corresponding period in 2017 due to increases in personnel and field trial costs, which were partially offset by a reduction in outside contracted research and development services. We expect that our research and development expenses will continue to increase as we further develop our Rollo Bay farm site and as we 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, 2018, were significantly higher than the corresponding period in 2017 due to increases in personnel, legal fees and Board costs, along with the pre-production and start-up costs at our Indiana site. We expect that our general and administrative expenses will decrease as production increases at the Indiana facility.

*Total Other (Income) Expense*

Total other (income) expense for 2018 and 2017 is comprised of interest on debt, bank charges, interest income, and a net gain on the disposal of assets.

**Comparison of the year ended December 31, 2017, to the year ended December 31, 2016.**

The following table summarizes our results of operations for the year ended December 31, 2017 and 2016, together with the changes in those items in dollars and as a percentage (all dollar amounts in thousands):

	<b>Year Ended December 31,</b>		<b>Dollar Change</b>	<b>% Change</b>
	<b>2017</b>	<b>2016</b>		
Product revenue	\$ 53	\$ —	\$ 53	— %
<b>Operating expenses:</b>				
Product costs	51	—	51	0 %
Sales and marketing	799	860	(61)	(7)%
Research and development	3,372	3,430	(58)	(2)%
General and administrative	5,063	3,775	1,288	34 %
Operating loss	(9,232)	(8,065)	(1,167)	14 %
Total other (income) expense, net	(27)	(406)	379	(93)%
Net loss	\$ (9,259)	\$ (8,471)	\$ (788)	9 %

*Product Revenue and Product Costs*

The first sales of AquAdvantage Salmon were recognized during the year ended December 31, 2017. Regulatory approval for the harvest and export of our fish from our Panama farm site was received during the year, and a batch of fish was sold and shipped to customers in Canada.

Product costs on sales consisted of the labor and related direct costs to grow out our fish, an application of overhead, and processing and shipping costs.

*Sales and Marketing Expenses*

Sales and marketing expenses for the year ended December 31, 2017, were down from the corresponding period in 2016 due to lower travel and outside service costs related to the exploratory design fees for a land-based recirculating aquaculture facility.

*Research and Development Expenses*

Research and development expenses for the year ended December 31, 2017, were down from the corresponding period in 2016 due to a reduction in outside contract research expenses and an allocation of cost to inventory, which were partly offset by an increase in compensation.

*General and Administrative Expenses*

General and administrative expenses for the year ended December 31, 2017, were significantly higher than the corresponding period in 2016 due to increased compensation charges and higher professional fees, corporate taxes, and the pre-production costs at the Indiana site, which were partially offset by a reduction in stock compensation charges and legal fees.

*Total Other (Income) Expense*

Total other (income) expense for 2017 is comprised of interest on debt, bank charges, interest income, and gains on asset disposals. Total other (income) expense for 2016 is comprised of interest on the convertible debt with Precigen, bank charges, interest income, and gains on asset disposals.

## Quarterly Results

The following tables set forth our unaudited consolidated quarterly statement of operations data for the seven quarters ended September 30, 2019. In our opinion, this unaudited information has been prepared on substantially the same basis as the consolidated financial statements appearing elsewhere in this prospectus and includes all adjustments necessary for a fair statement of the unaudited consolidated quarterly data. The unaudited consolidated quarterly data should be read together with the consolidated financial statements and related notes included elsewhere in this prospectus. The results for any quarter are not necessarily indicative of results for any future period, and you should not rely on them as such.

	2018				2019		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3
(in thousands)							
<b>Statement of Operations Data:</b>							
Product revenues	\$ 19	\$ 48	\$ 11	\$ 7	\$ 98	\$ 42	\$ —
Costs and expenses:							
Product costs	16	47	9	6	82	39	—
Sales and marketing	82	76	65	75	72	104	206
Research and development	978	881	805	795	664	813	446
General and administrative	1,387	1,828	1,852	1,549	2,036	3,106	2,347
Total costs and expenses	2,463	2,832	2,731	2,425	2,854	4,062	2,999
Operating loss	(2,444)	(2,784)	(2,720)	(2,418)	(2,756)	(4,020)	(2,999)
Total other income (expense)	(6)	3	(7)	(6)	(8)	(7)	(19)
Net loss	\$ (2,450)	\$ (2,781)	\$ (2,727)	\$ (2,424)	\$ (2,764)	\$ (4,027)	\$ (3,018)

## Liquidity and Capital Resources

### Sources of Liquidity

We have incurred losses from operations since our inception in 1991, and, as of September 30, 2019, we had an accumulated deficit of \$128.7 million. In January 2017, we completed a private placement of 2,421,073 shares of our common stock to Precigen, our majority shareholder at that time, for proceeds of approximately \$25.0 million. During 2017, we also received \$227 thousand in proceeds from the issuance of debt. In January 2018, we completed a public offering of 3,692,307 shares of common stock and warrants to purchase 4,246,153 shares of common stock. Net proceeds to the Company were \$10.6 million. Precigen participated in the offering, purchasing 1,538,461 shares of common stock and warrants to purchase 1,538,461 shares of common stock for gross proceeds of \$5.0 million. During the period of March 2018 to June 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. In October 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 2018, we also received \$772 thousand in proceeds from the issuance of debt. During the period of March 2019 to April 2019, we completed two public offerings totaling 6,246,360 shares of common stock with net proceeds to the Company of \$12.4 million. During the period of March 2019 to July 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. During 2019, we also received \$901 thousand in proceeds from the issuance of debt.

As of September 30, 2019, we had a cash balance of \$6.4 million.

### Cash Flows

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

	Nine Months Ended September 30,		Years Ended December 31,		
	2019	2018	2018	2017	2016
	(unaudited)				
Net cash provided by (used in):					
Operating activities	\$ (8,288)	\$ (7,469)	\$ (9,817)	\$ (9,101)	\$ (7,449)
Investing activities	(1,816)	(3,354)	(4,082)	(19,046)	(1,074)
Financing activities	13,511	11,385	16,449	25,238	10,541
Effect of exchange rate changes on cash	16	(24)	(53)	77	(7)
Net increase (decrease) in cash	\$ 3,423	\$ 538	\$ 2,497	\$ (2,832)	\$ 2,011

### *Cash Flows from Operating Activities*

Net cash used in operating activities during the nine months ended September 30, 2019, was primarily comprised of our \$9.8 million net loss, offset by non-cash depreciation and stock compensation charges of \$1.6 million, and increased by working capital uses of \$53 thousand. Net cash used in operating activities during the nine months ended September 30, 2018, was primarily comprised of our \$8.0 million net loss, offset by non-cash depreciation and stock compensation charges of \$738 thousand, and increased by working capital uses of \$249 thousand.

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.

Net cash used in operating activities during the year ended December 31, 2017, was primarily comprised of our \$9.3 million net loss, offset by non-cash depreciation and stock compensation charges of \$307 thousand, and increased by working capital uses of \$148 thousand. Spending on operations increased in 2017 due to headcount additions and renovation costs at our Indiana site, offset by a reduction in legal fees. The use of cash in working capital in 2017 was due to the establishment of inventory in Panama and Canada, deposits for insurance and utilities in Indiana, and costs of our public offering.

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

### *Cash Flows from Investing Activities*

During the nine months ended September 30, 2019, we used \$1.8 million for renovations to our Indiana farm site and for construction charges at our Rollo Bay site, offset by \$9 thousand in proceeds from the sale of equipment. During the same period in 2018, we used \$3.4 million for renovations to our Indiana farm site and for construction charges at our Rollo Bay site, offset by \$22 thousand in proceeds from the sale of equipment.

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. This was partly offset by the \$23 thousand in proceeds from the sale of existing assets. During 2017, we used \$19.0 million for property and equipment purchases, including \$14.7 million for the purchase and initial renovation work of our Indiana site and \$4.2 million for construction activities at our Rollo Bay site. During 2016, we used \$1.1 million for property and equipment purchases, primarily for the purchase of the Rollo Bay farm site, and \$6 thousand for patent charges. This was offset by \$24 thousand in proceeds from the sale of existing assets.

### *Cash Flows from Financing Activities*

During the nine months ended September 30, 2019, we received approximately \$12.4 million in net proceeds from the issuance of shares of common stock in a public offering and \$272 thousand from the exercise of warrants. In addition, we received \$901 thousand in proceeds from issuance of debt. This was offset by \$57 thousand in the repayment of debt. During the same period in 2018, we received approximately \$10.6 million in net proceeds from the issuance of shares of common stock and warrants in a public offering and \$812 thousand from the exercise of warrants. This was offset by \$43 thousand in the repayment of debt.

During 2018, we received approximately \$10.6 million in net proceeds from the issuance of shares of common stock and warrants in a public offering and \$5.1 million from the exercise of warrants, and \$716 thousand from the issuance of debt, net of repayments. During 2017, we received \$25.0 million in proceeds from the issuance of our common stock in a private placement of shares, \$28 thousand from the exercise of stock options, and \$221 thousand from the issuance of debt, net of repayments. During 2016, we received \$10.0 million in proceeds from the issuance of convertible debt, which was converted into common stock, and \$541 thousand in proceeds from the issuance of term debt, net of repayments.

### **Future Capital Requirements**

For the Company's fiscal year ended December 31, 2018, management previously stated that there was substantial doubt about the Company's ability to continue as a going concern due to its limited capital resources, and the Company's independent registered public accounting firm emphasized this matter in its report to the shareholders and the Board of Directors. At that time, management prepared a plan to mitigate this doubt, which included an equity raise that subsequently provided the Company with \$12.4 million of net new funds in 2019.

As discussed in Note 1 to the September 30, 2019, unaudited financial statements, as included elsewhere in this prospectus, the Company has experienced net losses and negative cash flows from operations since its inception and has cumulative losses attributable to common stockholders of \$129.0 million and a cash balance of \$6.4 million as of September 30, 2019. Management has evaluated

the Company’s cash resources in view of its planned spending for ongoing operations, capital expenditures, and working capital for the next twelve months from the filing date of this prospectus and has determined that its current funds will be exhausted by March 31, 2020. As a result, there is substantial doubt about the Company’s ability to continue as a going concern within one year after the date that these financial statements were issued.

Management plans to seek additional financing in the form of equity or debt, partnerships, or other non-dilutive transactions to fund the Company’s cash requirements. However, the Company may not be able to raise additional financing or to do so at terms that are acceptable. In this event, management has the ability to reduce expenditures, slow down or delay capital spending, and divest assets in order to ensure its cash will extend through the next twelve months.

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.

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

### Off-Balance Sheet Arrangements

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

### Contractual Obligations

The following table summarizes our significant contractual obligations and commercial commitments at December 31, 2018, 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
Prince Edward Island (“PEI”) Finance term loan	\$ 1,219	\$ 34	\$ 86	\$ 1,099	\$ —
Atlantic Canada Opportunities Agency (“ACOA”) term loan	204	27	55	55	67
Kubota Canada Ltd	61	10	20	20	11
ACOA Atlantic Innovation Fund (“AIF”) grant (1)	2,107	—	—	—	2,107
Maynard office lease	278	63	131	84	—
Panama site lease	60	60	—	—	—
Indiana auto lease	11	5	6	—	—
Indiana well lease	717	15	32	33	637
<b>Total</b>	<b>\$ 4,657</b>	<b>\$ 214</b>	<b>\$ 330</b>	<b>\$ 1,291</b>	<b>\$ 2,822</b>

(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.

### 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 September 30, 2019, December 31, 2018 and December 31, 2017, we had \$1.8 million, \$1.2 million and \$545 thousand, 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, AQUA Bounty Canada Inc. (the “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).

## 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 and fourth quarters of 2020, 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, 2018 and 2017, we experienced operating losses of \$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; 25% better feed conversion, which allows for us to produce approximately 70% more AquAdvantage Salmon each year in comparison to conventional Atlantic salmon; 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
<b>Annual Output</b>	5,000 mt	8,550 mt
<b>Annual Revenue*</b>	\$34m - \$37m	\$59m - \$64m
<b>Contribution Margin %</b>	27% - 31%	37% - 40%
<b>EBITDA</b>	\$12m - \$15m	\$25m - \$30m
<b>Payback Period</b>	8-10 years	4-5 years

\* Revenue assumes commodity pricing and 60% biomass yield at full production.

## 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 Argentinian trial has successfully completed, and we are pursuing approval for the sale of AquAdvantage Salmon in that country; the Brazilian trial is currently on-going. 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.

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

## **Seasonality**

Atlantic salmon spawn once per year, so there is a natural seasonality of three to five months in the production of Atlantic salmon eggs for commercial use. This natural seasonality can be lengthened through the use of photoperiod 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 prospectus 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 September 30, 2019, we had twenty-one 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., our former research group, which was spun-off and sold to Tethys Aquaculture Canada, Inc. (doing business as the Center for Aquaculture Technologies Canada) (“Tethys”) in 2012.

In February 2013, we entered into the ECC with Precigen pursuant to which we are permitted to use Precigen’s UltraVector® and other technology platforms to develop and commercialize additional bioengineered traits in finfish for human consumption. The ECC grants us a worldwide license to use certain patents and other intellectual property of Precigen in connection with the research, development, use, importing, manufacture, sale, and offer for sale of products involving DNA administered to finfish for human consumption. This license is exclusive with respect to any development, selling, offering for sale, or other commercialization of developed products, and otherwise is non-exclusive. We agreed to pay Precigen, on a quarterly basis, 16.66% of the gross profits

calculated for each developed product. We also agreed to pay Precigen 50% of the quarterly revenue obtained from a sublicensee in the event of a sublicensing arrangement. In addition, we agreed to reimburse Precigen for the costs of certain services provided by Precigen. Under the ECC, we and Precigen conducted two research projects, one of which led to a gene-edited line of tilapia that exhibits improvement in fillet yield, growth, and feed conversion efficiency. The second project focused on the use of germ cells to perform gene modification to reduce the time required to develop new traits in finfish. At present, no additional work is being conducted under the ECC, and we are winding down, and may renegotiate, the relationship with Precigen, but responsibilities under the agreement remain in place.

In addition to the projects under the ECC, we are exploring the potential development of a range of additional products, including a second generation of AquAdvantage Salmon to ensure 100% sterility, a line of AquAdvantage Trout that grows faster than 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 September 30, 2019, we had sixty-one employees. None of our employees are represented by a labor union, and we consider our employee relations to be good.

## **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.”

## **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.

## **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.

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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 \$6.1 million, and, on April 9, 2019, we completed a follow-on offering of 2,554,590 shares of our common stock for net proceeds of approximately \$5.8 million.



## MANAGEMENT

### Directors and Executive Officers

The following table sets forth certain information regarding our directors and executive officers as of February 2, 2020:

Name	Age	Position(s)
Richard J. Clothier	74	Chairman
Richard L. Huber	83	Director
Jeffrey T. Perez	48	Director
Christine St.Clare	69	Director
Rick Sterling	55	Director
James C. Turk, Jr.	63	Director
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 board of directors is currently composed of seven members. Our directors are elected for a one-year term to hold office until the next annual general meeting of our shareholders or until removed from office in accordance with our Third Amended and Restated Certificate of Incorporation and our Amended and Restated Bylaws. Certain of our directors were elected pursuant to board composition provisions of the Relationship Agreement we entered with Precigen, which is described in the section entitled “Certain Relationships and Related Party Transactions—Agreements with Precigen—Relationship Agreement.” 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.

*Richard J. Clothier.* Mr. Clothier has served as Chairman of the Board of Directors of AquaBounty since April 2006. He also has served as the Chairman of Robinson Plc from 2004 until 2018, of Spearhead International Ltd from 2005 to 2015, and of Exosect Ltd from 2013 to 2015. Mr. Clothier retired as Group Chief Executive of PGI Group Plc, an international agricultural products producer, following 20 years with Dalgety Plc, where he was chief executive officer of the genetics firm Pig Improvement Company until 1992 and then Group Chief Executive Officer until 1997. He holds a Bachelor of Science in Agriculture from Natal University and attended the Advanced Management Program at Harvard Business School. Mr. Clothier’s extensive experience, both as an executive in the food industry and as a director of public and private companies, provides considerable operating, strategic, and policy knowledge to our Board of Directors.

*Richard L. Huber.* Mr. Huber joined the Board of Directors of AquaBounty after our public offering in 2006. Mr. Huber is the former Chairman, President, and Chief Executive Officer of Aetna, a major U.S. health insurer, and is currently an independent investor in a number of companies operating in a wide range of businesses, mainly in South America. Following a 40-year career in the financial services industry, Mr. Huber now serves as a director of Viña San Rafael and Invina, SA, both non-public wine producers in Chile. Previously he served on the boards of Gafisa, the largest integrated residential housing developer in Brazil, and Antarctic Shipping, SA of Chile, as well as several other companies in the U.S. and elsewhere in the world. He holds a Bachelor of Arts in Chemistry from Harvard University. Mr. Huber brings unique knowledge and experience in strategic planning, organizational leadership, accounting, and legal and governmental affairs to our Board of Directors.

*Jeffrey T. Perez.* Mr. Perez joined the Board of Directors of AquaBounty in April 2019. He has served as Senior Vice President, Intellectual Property Affairs of Precigen since August 2014, and, prior to joining Precigen, Mr. Perez was Managing Director and Associate General Counsel at Third Security, LLC, where he evaluated potential investments of Third Security’s managed investment funds. Additionally, Mr. Perez worked with Third Security portfolio companies in evaluating and developing their intellectual property strategies and general corporate activities. Prior to joining Third Security, Mr. Perez practiced law in the area of intellectual property with the law firm of Hunton & Williams LLP in Washington D.C. Mr. Perez received a B.S. from Cornell University and his J.D. from George Mason University School of Law.

*Christine St.Clare.* Ms. St.Clare joined the Board of Directors of AquaBounty in May 2014. She retired as a partner of KPMG LLP in 2010, where she worked for a total of 35 years. While at KPMG, Ms. St.Clare worked as an Audit Partner serving publicly held companies until 2005, when she transferred to the Advisory Practice, serving in the Internal Audit, Risk and Compliance practice until her retirement; she also served a four-year term on KPMG’s Board of Directors. She currently serves on the boards, and chairs the Audit Committees, of Fibrocell Science, Inc., a company that specializes in the development of personalized biologics, and Tilray, Inc., a leading cannabis research and cultivation company, and formerly served on the board of Polymer Group, Inc., a global manufacturer of engineered materials. Ms. St.Clare has a Bachelor of Science from California State University at Long Beach and has been a licensed Certified Public Accountant in California, Texas, and Georgia. Ms. St.Clare’s background in accounting and support of publicly held companies, as well as her experience with biotechnology, makes her well suited for service on our Board of Directors.

*Rick Sterling.* Mr. Sterling joined the Board of Directors of AquaBounty in September 2013. He is the Chief Financial Officer of Precigen, a position he has held since 2007. Prior to joining Precigen, he was with KPMG LLP, where he worked in the audit practice for over 17 years, with a client base primarily in the healthcare, technology, and manufacturing industries. Mr. Sterling's experience includes serving clients in both the private and public sector, including significant experience with SEC filings and compliance with the Sarbanes-Oxley Act. He has a Bachelor of Science in Accounting and Finance from Virginia Tech and is a licensed Certified Public Accountant. Mr. Sterling's background in audit and finance, as well as his experience with technology companies, make him well suited for service on our Board of Directors.

*James C. Turk, Jr.* Mr. Turk joined the Board of Directors of AquaBounty in February 2013. Mr. Turk has served as a partner in the law firm Harrison & Turk, P.C. since 1987, having practiced two years before that with other firms. He has previously served as a member of the board of directors for multiple companies and foundations including Precigen, the New River Community College Education Foundation, the Virginia Student Assistance Authorities and Synchrony Inc. before it was acquired by Dresser-Rand in January, 2012. He presently serves as a member of Roanoke/New River Valley Advisory Council of SunTrust Bank, a director of the Virginia Tech Athletic Foundation and a member of the Roanoke College President's advisory board. Mr. Turk received a Bachelor of Arts from Roanoke College and a Juris Doctor from Cumberland School of Law at Samford University. Mr. Turk's legal background and his experience on multiple boards make him well qualified for service on our Board of Directors.

*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.

## **Director Independence**

As required by the Nasdaq listing rules, our Board of Directors evaluates the independence of its members at least once annually and at other appropriate times when a change in circumstances could potentially impact the independence or effectiveness of one of our directors.

In March 2019, our Board of Directors undertook a review of the composition of our Board of Directors and its committees and the independence of each director. Based upon information requested from and provided by each director concerning his or her background, employment, and affiliations, including family relationships, our Board of Directors has determined each of Messrs. Clothier, Huber, and Turk and Ms. St.Clare is an "independent director" as defined under Nasdaq Listing Rule 5605(a)(2). The remaining members of our Board of Directors may not satisfy these "independence" definitions because they are employed by AquaBounty or have been chosen by and/or are affiliated with our largest stockholder, TS AquaCulture LLC, in a non-independent capacity. Our Board of Directors has three standing committees: the Audit Committee, the Compensation Committee, and the

Nominating and Corporate Governance (“NCG”) Committee. As discussed below, each member of the Audit Committee satisfies the special independence standards for such committee established by the SEC and Nasdaq.

### **Board Leadership Structure and Role of the Board in Risk Oversight**

Our Board of Directors understands that board structures vary greatly among U.S. public corporations, and our Board of Directors does not believe that any one leadership structure is more effective at creating long-term stockholder value. Our Board of Directors believes that an effective leadership structure could be achieved either by combining or separating the Chairman and Chief Executive Officer positions, so long as the structure encourages the free and open dialogue of competing views and provides for strong checks and balances. Specifically, the Board of Directors believes that, to be effective, the governance structure must balance the powers of the Chief Executive Officer and the independent directors and ensure that the independent directors are fully informed, able to discuss and debate the issues that they deem important, and able to provide effective oversight of management.

Currently, Ms. Wulf serves as our Chief Executive Officer and President, and Mr. Clothier serves as our Chairman of the Board of Directors. Our Board of Directors believes that this leadership structure, which separates the Chairman and Chief Executive Officer roles, is appropriate for the company at this time because it allows Ms. Wulf to focus on operating and managing the company. At the same time, Mr. Clothier can focus on leadership of the Board of Directors, including calling and presiding over Board meetings and executive sessions of the independent directors, preparing meeting agendas in collaboration with the Chief Executive Officer, serving as a liaison and supplemental channel of communication between independent directors and the Chief Executive Officer, and serving as a sounding board and advisor to the Chief Executive Officer. Nevertheless, the Board of Directors believes that “one size” does not fit all, and the decision of whether to combine or separate the positions of Chairman and Chief Executive Officer will vary from company to company and depend upon a company’s particular circumstances at a given point in time. Accordingly, the Board of Directors will continue to consider from time to time whether the Chairman and Chief Executive Officer positions should be combined based on what the Board of Directors believes is best for our company and stockholders.

Our Board of Directors is primarily responsible for assessing risks associated with our business. However, our Board of Directors delegates certain of such responsibilities to other groups. The Audit Committee is responsible for reviewing with management our company’s policies and procedures with respect to risk assessment and risk management, including reviewing certain risks associated with our financial and accounting systems, accounting policies, investment strategies, regulatory compliance, insurance programs, and other matters. In addition, under the direction of our Board of Directors and certain of its committees, our legal department assists in the oversight of corporate compliance activities. The Compensation Committee also reviews certain risks associated with our overall compensation program for employees to help ensure that the program does not encourage employees to take excessive risks.

### **Board Committees**

Our Board of Directors has determined that a board consisting of between six and ten members is appropriate and has currently set the number at seven members. Our Board of Directors will evaluate the appropriate size of our Board of Directors from time to time. Our Board of Directors has three standing committees: the Audit Committee, the Compensation Committee, and the NCG Committee, each of which operate pursuant to a charter adopted by our Board of Directors.

During 2019, each director attended or participated in 75% or more of the aggregate of (i) the total number of meetings of the Board of Directors and (ii) the total number of meetings held by all committees of the Board of Directors on which such director served. We do not have a formal policy with regard to board members’ attendance at annual meetings of security holders, but encourage our directors to attend annual meetings. All directors attended our annual meetings in 2018 and 2019. Members of the Board of Directors and its committees also consulted informally with management from time to time. Additionally, non-management Board members met in executive sessions without the presence of management periodically during 2018 and 2019.

**Audit Committee.** Messrs. Huber and Turk and Ms. St.Clare serve as members of our Audit Committee, and Ms. St.Clare serves as its chair. Each member of the Audit Committee satisfies the special independence standards for such committee established by the SEC and Nasdaq, as applicable. Ms. St.Clare is an “audit committee financial expert,” as that term is defined by the SEC in Item 407(d) of Regulation S-K. Stockholders should understand that this designation is an SEC disclosure requirement relating to Ms. St.Clare’s experience and understanding of certain accounting and auditing matters, which the SEC has stated does not impose on the director so designated any additional duty, obligation, or liability than otherwise is imposed generally by virtue of serving on the Audit Committee and/or our Board of Directors. Our Audit Committee is responsible for, among other things, oversight of our independent auditors and the integrity of our financial statements. Our Audit Committee held five meetings in 2018 and four meetings in 2019.

**Compensation Committee.** Messrs. Clothier and Huber serve as members of our Compensation Committee, and Mr. Huber serves as its chair. Our Compensation Committee is responsible for, among other things, establishing and administering our policies, programs, and procedures for compensating our executive officers and board of directors. Our Compensation Committee held one meeting in 2018 and five meetings in 2019.

**Compensation Committee Interlocks and Insider Participation.** None of our executive officers serves, or in the past has served, as a member of our Board of Directors or Compensation Committee, or other committee serving an equivalent function, of any entity that has one or more executive officers who serve as members of our Board of Directors or our Compensation Committee. None

of the members of our Compensation Committee is also an officer or employee of AquaBounty, nor have any of them ever been an officer or employee of AquaBounty.

**Nominating and Corporate Governance Committee.** Mr. Clothier is the sole member of our NCG Committee and serves as its chair, inviting other directors to participate in meetings of the Committee as necessary. Our NCG Committee is responsible for, among other things, evaluating new director candidates and incumbent directors and recommending directors to serve as members of our Board committees. Our NCG Committee held one meeting in 2018 and one meeting in 2019.

**Director Nominees**

Our Board of Directors believes that the Board should be composed of individuals with varied, complementary backgrounds who have exhibited proven leadership capabilities within their chosen fields. Directors should have the ability to quickly grasp complex principles of business and finance, particularly those related to our industry. Directors should possess the highest personal and professional ethics, integrity, and values and should be committed to representing the long-term interests of our stockholders. When considering a candidate for director, the NCG Committee will take into account a number of factors, including, without limitation, the following: depth of understanding of our industry; education and professional background; judgment, skill, integrity, and reputation; existing commitments to other businesses as a director, executive, or owner; personal conflicts of interest, if any; diversity; and the size and composition of the existing Board. Although the Board of Directors does not have a policy with respect to consideration of diversity in identifying director nominees, among the many other factors considered by the NCG Committee are the benefits of diversity in board composition, including with respect to age, gender, race, and specialized background. When seeking candidates for director, the NCG Committee may solicit suggestions from incumbent directors, management, stockholders, and others. Additionally, the NCG Committee may use the services of third-party search firms to assist in the identification of appropriate candidates. The NCG Committee will also evaluate the qualifications of all candidates properly nominated by stockholders, in the same manner and using the same criteria. A stockholder desiring to nominate a person for election to the Board of Directors must comply with the advance notice procedures of our Amended and Restated Bylaws.

**Director Compensation**

For fiscal year 2019, the Chairman of our Board of Directors received annual compensation of £50,000 (approximately \$65,925 using the pound sterling to U.S. Dollar spot exchange rate of 1.3185 published in The Wall Street Journal as of December 31, 2019), payable in one annual installment. He also received an annual grant of restricted shares of our common stock valued at £20,000 (approximately \$26,318) (based on the fair market value on the date of grant), which vest over three years.

For fiscal year 2019, all non-employee directors, except for directors who are employees of Precigen per the Relationship Agreement described under “Related Party Transactions, Policies and Procedures—Other Agreements with Precigen—Relationship Agreement” received an annual cash retainer of \$40,000, payable in one annual installment. The Chair of the Audit Committee received an additional \$20,000, the Chair of the Compensation Committee received an additional \$15,000, and members of a board committee, except for directors employed and appointed by Precigen per the Relationship Agreement, received an additional \$5,000. All cash retainers are paid in one annual installment. All non-employee directors, except for directors employed and appointed by Precigen per the Relationship Agreement, received an annual grant of options to purchase 2,500 shares of our common stock (with an exercise price equal to the fair market value on the date of grant), with vesting after one year.

The following table discloses all compensation provided to the non-employee directors for the most recently completed fiscal year ended December 31, 2019:

**Director Summary Compensation Table**

Name	Fees earned or paid in cash (\$)	Stock Awards (\$)	Option Awards (\$)	Total (\$)
R. Clothier (1)	65,925	26,318		92,243
R. Huber (2)	60,000		3,694	63,694
J. Perez (3)	—			—
C. St.Clare (2)	65,000		3,694	68,694
R. Sterling (3)	—			—
J. Turk (2)	45,000		3,694	48,694
<b>Total</b>	<b>235,925</b>	<b>26,318</b>	<b>11,082</b>	<b>273,325</b>

(1) As of December 31, 2019, Mr. Clothier held 13,446 unvested restricted shares of our common stock.

(2) As of December 31, 2019, each of Ms. St.Clare, Mr. Huber, and Mr. Turk held an unexercised option to purchase 5,800, 9,000, and 6,600 shares of our common stock, respectively.

(3) Messrs. Perez and Sterling are employees of Precigen and do not receive any compensation from AquaBounty at this time.

### **Code of Business Conduct and Ethics**

Our Code of Business Conduct and Ethics applies to all of our outside directors, officers, and employees, including, but not limited to, our Chief Executive Officer and Chief Financial Officer. The Code of Business Conduct and Ethics constitutes our “code of ethics” within the meaning of Section 406 of the Sarbanes-Oxley Act and is our “code of conduct” within the meaning of the Nasdaq listing standards.

### **Corporate Governance Principles**

We are committed to having sound corporate governance principles. Having such principles is essential to maintaining our integrity in the marketplace. Our Code of Business Conduct and Ethics and the charters for each of the Audit, Compensation, and Nominating and Corporate Governance Committees are available on the investor relations section of our corporate website ([www.aquabounty.com](http://www.aquabounty.com)). A copy of our Code of Business Conduct and Ethics and the committee charters may also be obtained upon request to Corporate Secretary, AquaBounty Technologies, Inc., 2 Mill & Main Place, Suite 395, Maynard, Massachusetts 01754.

## EXECUTIVE COMPENSATION

AquaBounty is an “emerging growth company,” as defined under the JOBS Act. As an emerging growth company, under SEC rules, we are not required to include a Compensation Discussion and Analysis section in this prospectus and have elected to comply with the scaled disclosure requirements applicable to emerging growth companies. We annually review all elements of our executive and director compensation program, including the function and design of our equity incentive programs. As part of the annual review, we evaluate the need for revisions to our executive compensation program to ensure our program is competitive with those of the companies with which we compete for executive talent and is appropriate for a public company.

### Executive Officers

The tables and discussion below present compensation information for our chief executive officer; our two other most highly compensated officers for the year ended December 31, 2019 (“fiscal year 2019”); and our most highly compensated employee for the fiscal year who would have otherwise been one of the two most highly compensated officers for fiscal year 2019 had he been an officer as of December 1, 2019, all of whom we refer to collectively as our named executive officers. These officers are:

Name	Age	Positions
Sylvia A. Wulf	62	Chief Executive Officer and President
Ronald L. Stotish	70	Chief Technology Officer (retired in 2019)
David A. Frank	59	Chief Financial Officer and Treasurer
Alejandro Rojas	58	Chief Operating Officer, AquaBounty Farms

### Summary Compensation Table

The following table provides certain summary information concerning the compensation earned by our named executive officers in the fiscal years ended December 31, 2019 and 2018.

Name and Position	Year	Salary (\$) <sup>(1)</sup>	Bonus (\$) <sup>(2)</sup>	Stock Awards (\$)	Option Awards (\$) <sup>(3)</sup>	All other Compensation (\$) <sup>(4)</sup>	Total (\$)
S. Wulf	2019	375,000	—	350,000	240,825	8,172	973,997
CEO and President	2018	—	—	—	—	—	—
R. Stotish	2019	469,309	100,000	—	80,275	7,393	656,977
CTO (retired 2019)	2018	365,148	—	—	100,000	6,968	472,116
D. Frank	2019	275,600	—	—	32,110	7,203	314,913
CFO and Treasurer	2018	275,600	—	—	25,000	6,953	307,553
A. Rojas	2019	228,900	—	—	48,165	5,204	282,269
COO, AquaBounty Farms	2018	228,900	—	—	50,000	5,003	283,903

(1) Represents salaries before any employee contributions under our 401(k) plan.

(2) Represents discretionary cash incentive awards during the applicable fiscal year. The amount earned for fiscal year 2019 has not yet been determined for any individual other than Dr. Stotish and is expected to be determined and paid in the first quarter of 2020.

(3) The Option Awards included for each individual consists of stock option awards granted under the 2016 Plan. The value for each of these awards is its grant date fair value calculated by multiplying the number of shares subject to the award by the fair value of the stock option award on the date such award was granted, computed in accordance with Financial Accounting Standards Board (“FASB”) Accounting Standards Codification Topic 718. The assumptions used in calculating the grant date fair value are set forth in the notes to our consolidated financial statements included elsewhere in this prospectus.

(4) Amounts in this column reflect 401(k) matching contributions.

In fiscal year 2019, we paid base salaries to Ms. Wulf, Dr. Stotish, Mr. Frank, and Dr. Rojas of \$375,000, \$469,309, \$275,600, and \$228,900, respectively. As of December 31, 2018, the base salaries of Dr. Stotish, Mr. Frank and Dr. Rojas were \$365,148, \$275,600, and \$228,900, respectively; Ms. Wulf was not an employee of the Company until January 1, 2019. Base salaries are used to recognize the experience, skills, knowledge, and responsibilities required of all of our employees, including our named executive officers. Certain of our named executive officers are currently party to an employment agreement that provides for the continuation of certain compensation upon termination of employment. See “–Employment Agreements.”

Our Board of Directors may, at its discretion, award bonuses to our named executive officers from time to time. We typically establish bonus targets for our named executive officers and evaluate their performance based on the achievement of specified company and individual goals and objectives. Our management may propose bonus awards to the Compensation Committee of the Board of Directors primarily based on such achievements. Our Board of Directors makes the final determination of the eligibility requirements

for and the amounts of such bonus awards. Our Board of Directors has not yet made bonus determinations with respect to fiscal year 2019, other than for Dr. Stotish, who retired on June 30, 2019.

### Outstanding Equity Awards at Fiscal Year End

The following table provides certain summary information concerning outstanding equity awards held by our named executive officers as of December 31, 2019.

Name and Position	Grant Date	Option Awards (1)			Option Exercise Price	Option Expiration Date
		Number of securities underlying unexercised options				
		Exercisable	Unexercisable			
S. Wulf CEO and President	April 30, 2019	87,945	62,055	(2)	\$ 2.22	April 30, 2029
R. Stotish CTO (retired in 2019)	January 11, 2011	16,667			\$ 6.90	January 10, 2021
	January 20, 2014	6,667			\$ 23.40	January 20, 2024
	April 21, 2017	20,000		(3)	\$ 14.20	April 21, 2027
	February 27, 2018	60,606		(4)	\$ 2.50	February 27, 2028
	April 30, 2019	50,000		(2)	\$ 2.22	April 29, 2029
D. Frank CFO and Treasurer	January 11, 2011	5,000			\$ 6.90	January 11, 2021
	April 27, 2013	6,667			\$ 7.50	April 27, 2023
	January 20, 2014	6,667			\$ 23.40	January 20, 2024
	April 21, 2017	9,166	834	(3)	\$ 14.20	April 21, 2027
	February 27, 2018	15,152		(4)	\$ 2.50	February 27, 2028
	April 30, 2019	11,726	8,274	(2)	\$ 2.22	April 30, 2029
A. Rojas COO, AquaBounty Farms	January 20, 2014	6,667			\$ 23.40	January 20, 2024
	April 21, 2017	5,500	500	(3)	\$ 14.20	April 21, 2027
	February 27, 2018	30,303		(4)	\$ 2.50	February 27, 2028
	April 30, 2019	17,589	12,411	(2)	\$ 2.22	April 30, 2029

- (1) Unless otherwise set forth below, each option was granted pursuant to the 2006 Plan and vests over three years on a daily basis following the grant date.
- (2) This option was granted pursuant to the 2016 Plan. Subject to continued service, vesting shall occur monthly over one year, ending April 30, 2020.
- (3) This option was granted pursuant to the 2016 Plan. Subject to continued service, vesting shall occur monthly over three years, ending February 27, 2020, with the first year's vesting prorated between April 22, 2017, and February 27, 2018.
- (4) This option was granted pursuant to the 2016 Plan and has fully vested.

### Employment Agreements

We have entered into employment agreements with each of Ms. Wulf, Dr. Rojas, and Mr. Frank. Each agreement provides for the payment of a base salary; an annual bonus based on a percentage of the executive's salary, determined at the discretion of our Board of Directors based on achievement of financial targets and other performance criteria; and certain other forms of benefits and compensation. Ms. Wulf's agreement also included a one-time grant of an option to purchase 150,000 shares of our common stock and restricted shares of our common stock worth \$350,000. Each agreement also contains confidentiality and noncompetition provisions. In addition, under each agreement, we may terminate the employee's employment without notice or payment at any time for cause.

#### Sylvia Wulf

The employment agreement with Ms. Wulf will remain in effect unless and until terminated in accordance with the terms and conditions set forth in the agreement. Ms. Wulf's agreement provides that employment may be terminated by either us or Ms. Wulf with no less than thirty days' notice to the other party. If Ms. Wulf's employment is terminated by us without cause or by her for good reason, as those terms are defined in her employment agreement, Ms. Wulf would be paid one year of continued base salary, starting on the date of termination. Ms. Wulf's agreement also provided for 100% acceleration of her stock option and restricted share grants upon the occurrence of a change in control (as such term is defined in her employment agreement).

### **Dr. Alejandro Rojas**

Dr. Rojas' agreement provides that employment may be terminated by us after giving to Dr. Rojas not less than twelve months' notice, and by Dr. Rojas after giving to us not less than one month's notice. During these notice periods, we have the right to terminate employment prior to expiration of the notice period by paying Dr. Rojas a sum equal to his base salary and benefits during the notice period.

### **David Frank**

Mr. Frank's agreement provides that employment may be terminated by either us or him after giving the other not less than twelve months' notice. During these notice periods, we have the right to terminate employment prior to expiration of the notice period by paying Mr. Frank a sum equal to his base salary and benefits during the notice period.

### **Delinquent Section 16(a) Reports**

Section 16(a) of the Exchange Act requires that our executive officers and directors, and persons who own more than 10% of a registered class of our equity securities, file reports of ownership and changes in ownership (Forms 3, 4, and 5) with the SEC. Executive officers, directors, and greater than 10% beneficial owners are required to furnish us with copies of all of the forms that they file.

Based solely on our review of these reports or written representations from certain reporting persons, we believe that during fiscal year 2019, our officers, directors, greater than 10% beneficial owners, and other persons subject to Section 16(a) of the Exchange Act filed on a timely basis all reports required of them under Section 16(a), with the exception of one Form 4 that was not timely filed on behalf of Ms. Olsen with respect to an onboarding grant of an option to purchase our common stock.

### **AquaBounty Technologies 2016 Equity Incentive Plan**

The 2016 Plan was first adopted by our Board of Directors and our stockholders in April 2016. The 2016 Plan provides for the issuance of incentive stock options to our employees and non-qualified stock options and awards of stock appreciation rights, restricted stock, restricted stock units, and other stock awards to our directors, officers, employees, and consultants.

Under the 2016 Plan, we reserved 900,000 shares of common stock. The number of shares of common stock reserved for issuance is subject to automatic adjustment in the event of a stock split, stock dividend, or other change in our capitalization. Shares of common stock underlying any awards that are forfeited, canceled, withheld upon exercise or settlement of an award to cover the exercise price or tax withholding, reacquired by us, or otherwise terminated (other than by exercise) will be added to the shares of common stock available for issuance under the 2016 Plan.

In accordance with the terms of the 2016 Plan, the Compensation Committee of the Board of Directors administers the 2016 Plan and, subject to any limitations, approves the recipients of awards and determines, among other things:

- the number of shares of our common stock covered by options and the dates upon which those options become exercisable;
- the exercise prices of options;
- the duration of options (subject to certain limitations set forth in the plan);
- the methods of payment of the exercise price of options;
- the number of shares of our common stock subject to any restricted stock awards and the terms and conditions of those awards, including the price (if any), restriction period (subject to certain limitations set forth in the plan), and conditions for repurchase (with respect to restricted stock awards);
- the number of shares of our common stock subject to any restricted stock unit awards and the terms and conditions of those awards, including the vesting schedule, the consideration (if any) to be paid by the recipient, and the settlement of the award upon vesting; and
- the number of shares of our common stock subject to any stock appreciation right awards and the terms and conditions of those awards, including the vesting schedule, exercise price, and payment terms (subject to certain limitations set forth in the plan).

In the event of a change in control, as defined in the 2016 Plan, awards under the 2016 Plan may be assumed, continued, or substituted by the acquirer, accelerate the vesting of outstanding awards or cancel outstanding awards in exchange for such consideration as the Board, in its discretion, deems appropriate.

Our board of directors may amend or discontinue the 2016 Plan or may amend or cancel outstanding awards, but no such action may adversely affect rights under an award without the holder's consent. The compensation committee is specifically authorized to exercise its discretion to reduce the exercise price of outstanding stock options or stock appreciation rights or effect the repricing of such awards through cancellation and re-grants without stockholder approval. Certain amendments to the 2016 Plan require the approval of our stockholders.



The 2016 Plan will terminate and no incentive stock options may be granted after the date that is ten years from the date the Board approved the 2016 Plan.

As of December 31, 2019, there were options to purchase an aggregate of 479,561 shares of our common stock outstanding under the 2016 Plan at a weighted-average price of \$3.60.

#### **AquaBounty Technologies 2006 Equity Incentive Plan**

The 2006 Plan was first adopted by our Board of Directors and our stockholders in June 2007. The 2006 Plan provided for the issuance of stock options and awards of stock appreciation rights, restricted stock, deferred stock, and other stock awards to our directors, officers, employees, and consultants. In accordance with the terms of the 2006 Plan, the Compensation Committee of the Board of Directors administered the 2006 Plan and, subject to any limitations, approved the recipients of awards and determined, among other things:

- the number of shares of our common stock covered by options and the dates upon which those options become exercisable;
- the exercise prices of options;
- the duration of options (subject to certain limitations set forth in the plan);
- the methods of payment of the exercise price of options;
- the number of shares of our common stock subject to any restricted stock awards and the terms and conditions of those awards, including the price (if any), restriction period (subject to certain limitations set forth in the plan), and conditions for repurchase (with respect to restricted stock awards);
- the number of shares of our common stock subject to any restricted stock unit awards and the terms and conditions of those awards, including the vesting schedule, the consideration (if any) to be paid by the recipient, and the settlement of the award upon vesting; and
- the number of shares of our common stock subject to any stock appreciation right awards and the terms and conditions of those awards, including the vesting schedule, exercise price, and payment terms (subject to certain limitations set forth in the plan).

Under the 2006 Plan, we had reserved 185,591 shares of common stock.

In the event of a change of control, as defined in the 2006 Plan, all awards under the 2006 Plan, subject to the reasonable discretion of the Board of Directors, will become vested and exercisable.

Our board of directors may amend or cancel outstanding awards at any time, but no such action may adversely affect rights under an award without the holder's consent. The 2006 Plan terminated in March 2016.

As of December 31, 2019, there were options to purchase an aggregate of 94,364 shares of our common stock outstanding under the 2006 Plan at a weighted-average exercise price of \$11.74 per share. The 2006 Plan terminated on March 18, 2016, and the Board of Directors has ceased making awards under the 2006 Plan; accordingly, there are no shares of our common stock reserved for future awards under the 2006 Plan.

#### **401(k) Plan**

We provide an employee retirement plan under Section 401(k) of the Internal Revenue Code (the "401(k) plan"), to all U.S. employees who are eligible employees as defined in the 401(k) plan. Subject to annual limits set by the Internal Revenue Service, we match 50% of eligible employee contributions up to a maximum of 3% of an employee's salary, and vesting in our match is immediate. We made contributions in connection with the 401(k) plan during the years ended December 31, 2019 and 2018, of \$63,604 and \$43,866, respectively.

#### **Registered Retirement Savings Plan**

We also have a Registered Retirement Savings Plan for our Canadian employees. Subject to annual limits set by the Canadian government, we match 50% of eligible employee contributions up to a maximum of 3% of an employee's salary, and vesting in our match is immediate. We made contributions in connection with this plan during the years ended December 31, 2019 and 2018, of \$28,474 and \$25,900, respectively.

#### **Indemnification of Officers and Directors**

We have agreed to indemnify our directors and officers in certain circumstances. See the section of this prospectus titled "Certain Relationships and Related Party Transactions—Agreements with Our Directors and Executive Officers."

## **Compensation Risk Assessment**

We believe that although a portion of the compensation provided to our executive officers and other employees is performance-based, our executive compensation program does not encourage excessive or unnecessary risk taking. This is primarily due to the fact that our compensation programs are designed to encourage our executive officers and other employees to remain focused on both short-term and long-term strategic goals, in particular in connection with our pay-for-performance compensation philosophy. As a result, we do not believe that our compensation programs are reasonably likely to have a material adverse effect on us.

## CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

In addition to the director and executive compensation arrangements discussed above in the sections of this prospectus titled “Management” and “Executive Compensation,” we have been a party to the following transactions since January 1, 2016, in which the amount involved exceeded or will exceed \$120,000, and in which any director, executive officer, or holder of more than 5% of any class of our voting stock, or any member of the immediate family of or entities affiliated with any of them, had or will have a material interest. We also describe below certain transactions and series of similar transactions since January 1, 2016, with our directors, executive officers, holders of more than 5% of any class of our voting securities, or any member of the immediate family of or any entities affiliated with any of the foregoing persons to which we are party.

### Agreements with Our Directors and Executive Officers

For more information regarding employment agreements with certain of our executive officers, see the section of this prospectus titled “Management—Compensation of Directors and Executive Officers—Employment Agreements.”

We have entered into agreements to indemnify our directors and executive officers. These agreements will, among other things, require us to indemnify these individuals for certain expenses (including attorneys’ fees), judgments, fines, and settlement amounts reasonably incurred by such person in any action or proceeding, including any action by or in our right, on account of any services undertaken by such person on behalf of our company or that person’s status as a member of our board of directors to the maximum extent allowed under Delaware law.

### Participation in this Offering

Randal J. Kirk, our largest stockholder, through one or more of his affiliates, has indicated an interest in purchasing up to 50% of shares of our common stock being offered in this offering at the public offering price. Because indications of interest are not binding agreements or commitments to purchase, Mr. Kirk and his affiliates may determine to purchase fewer or more shares than they have indicated an interest in purchasing, or elect not to purchase any shares in this offering. The underwriters may also determine to sell fewer, more, or no shares in this offering to Mr. Kirk’s affiliates.

### Agreements with Precigen

#### Relationship Agreement

On October 29, 2019, Precigen and TS AquaCulture LLC (“TS AquaCulture”), a Virginia limited liability company that is managed by Third Security, LLC (“Third Security”), entered into a stock purchase agreement, pursuant to which TS AquaCulture purchased from Precigen all shares of our common stock held by Precigen, and Precigen assigned to TS AquaCulture all of Precigen’s rights and obligations under a Relationship Agreement Precigen entered into with us in December 2012 (the “Relationship Agreement”). The Relationship Agreement was entered into in connection with the acquisition in October 2012 by Precigen of 57.56% of our outstanding share capital from Linnaeus Capital Partners B.V. and Tethys, our former major stockholders.

Based on public filings made by Precigen as of October 1, 2019, Randal J. Kirk and shareholders affiliated with him beneficially own approximately 46.2% of Precigen’s voting stock. Mr. Kirk is Chairman of Precigen’s board of directors and currently serves as the Senior Managing Director and Chief Executive Officer of Third Security and owns 100% of the equity interests of Third Security. Third Security directly owns shares of Precigen common stock and is also the manager of certain entities that directly own shares of Precigen common stock and therefore may be deemed to beneficially own approximately 34.7% of Precigen’s common stock.

The Relationship Agreement sets forth certain matters relating to TS AquaCulture’s relationship with us as a major stockholder. Pursuant to the Relationship Agreement, so long as the Relationship Agreement remains in effect and TS AquaCulture and its affiliates together control 25% or more of the voting rights exercisable at meetings of our stockholders, we will (a) nominate such number of TS AquaCulture nominees as may be designated by TS AquaCulture for election to our Board of Directors at each annual meeting of our stockholders so that TS AquaCulture will have representation on our Board of Directors proportional to TS AquaCulture’s percentage shareholding, rounded up to the nearest whole person, and (b) recommend that stockholders vote to elect such TS AquaCulture nominees at the next annual meeting of stockholders occurring after the date of nomination.

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

- we will maintain at our principal place of business (i) a copy of our certificate of incorporation and any amendments thereto; (ii) a copy of the Relationship Agreement; (iii) copies of our federal, state, and local income tax returns and reports; and (iv) minutes of our Board of Director and stockholder meetings and actions by written consent in lieu thereof, redacted as necessary to exclude sensitive or confidential information;
- we will keep our books and records consistent with U.S. GAAP;

- TS AquaCulture may examine any information that it may reasonably request; make copies of and abstracts from our financial and operating records and books of account; and discuss our affairs, finances, and accounts with us and our independent auditors;
- as soon as available, but no later than ninety days after the end of each fiscal year, we will furnish to TS AquaCulture an audited balance sheet, income statement, and statements of cash flows and stockholders' equity as of and for the fiscal year then ended, together with a report of our independent auditor that such financial statements have been prepared in accordance with U.S. GAAP and present fairly, in all material respects, our financial position, results of operation, and cash flows;
- as soon as available, but no later than forty-five days after the end of each calendar quarter, we will furnish to TS AquaCulture an unaudited balance sheet, income statement, and statements of cash flows and stockholders' equity for such period, in each case prepared in accordance with U.S. GAAP; and
- as requested by TS AquaCulture, but no more than quarterly, we will provide to TS AquaCulture (i) a certificate of our Chief Executive Officer or Chief Financial Officer certifying as to the accuracy of our books and records and the adequacy of our internal control over financial reporting and disclosure controls and procedures and (ii) any information requested by TS AquaCulture for purposes of its compliance with applicable law.

The Relationship Agreement and related documents also provide for certain confidentiality obligations between the two parties. The Relationship Agreement will continue in full force and effect until TS AquaCulture and its affiliates cease to control 10% or more of the voting rights exercisable at meetings of our stockholders.

#### **Exclusive Channel Collaboration Agreement**

In February 2013, we entered into the ECC with Precigen, pursuant to which we are permitted to use certain technology platforms of Precigen to develop and commercialize additional genetically modified traits in finfish for human consumption. The ECC grants us a worldwide license to use certain patents and other intellectual property of Precigen in connection with the research, development, use, importing, manufacture, sale, and offer for sale of products involving DNA administered to finfish for human consumption. This license is exclusive with respect to any development, selling, offering for sale, or other commercialization of developed products but otherwise is non-exclusive.

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

We agreed to pay Precigen, on a quarterly basis, 16.66% of the gross profits calculated for each developed product. We also agreed to pay Precigen 50% of the quarterly revenue obtained from a sublicensee in the event of a sublicensing arrangement. In addition, we agreed to reimburse Precigen for the costs of certain services provided by Precigen. The total Precigen service costs incurred under the ECC during fiscal year 2019 were approximately \$12,550, with no portion reflected as an account payable in the consolidated balance sheet as of December 31, 2019.

The ECC may be terminated by either party in the event of a material breach by the other. Precigen may terminate the ECC (a) if we elect not to pursue the development of a "superior animal product" identified by Precigen or (b) under certain circumstances if we assign our rights under the ECC without Precigen's consent. We may voluntarily terminate the ECC at any time upon 90 days' written notice to Precigen. Upon termination of the ECC, we may continue to develop and commercialize any collaboration product that, at the time of termination, (x) is being sold by us, (y) has received regulatory approval, or (z) is the subject of an application for regulatory approval. Our obligation to pay 16.66% of the gross profits and 50% of the quarterly revenue obtained from a sublicensee with respect to these "retained" products will survive termination of the ECC.

At present, no additional work is being conducted under the ECC, and we are winding down, and may renegotiate, the relationship with Precigen, but responsibilities under the agreement remain in place.

#### **Policies and Procedures for Review of Related Person Transactions**

Our Board of Directors has adopted a written policy with respect to related person transactions. This policy governs the review, approval, and ratification of covered related person transactions. The Audit Committee of the Board of Directors manages this policy.

For purposes of this policy, a "related person transaction" is a transaction, arrangement, or relationship (or any series of similar transactions, arrangements, or relationships) in which we (or any of our subsidiaries) were, are, or will be a participant, and in which any related person had, has, or will have a direct or indirect interest. For purposes of determining whether a transaction is a related person transaction, the Audit Committee relies upon Item 404 of Regulation S-K promulgated under the Exchange Act.

A “related person” is defined as:

- any person who is, or at any time since the beginning of our last fiscal year was, one of our directors or executive officers or a nominee to become one of our directors;
- any person who is known to be the beneficial owner of more than 5% of any class of our voting securities;
- any immediate family member of any of the foregoing persons, which means any child, stepchild, parent, stepparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law of the director, executive officer, nominee, or more-than-five-percent beneficial owner and any person (other than a tenant or employee) sharing the household of such director, executive officer, nominee, or more-than-five-percent beneficial owner; and
- any firm, corporation, or other entity in which any of the foregoing persons is employed or is a general partner or principal or in a similar position or in which such person has a 10% or greater beneficial ownership interest.

The policy generally provides that we may enter into a related person transaction only if:

- the Audit Committee pre-approves such transaction in accordance with the guidelines set forth in the policy;
- the transaction is on terms comparable to those that could be obtained in arm’s-length dealings with an unrelated third party, and the Audit Committee (or the chairperson of the Audit Committee) approves or ratifies such transaction in accordance with the guidelines set forth in the policy;
- the transaction is approved by the disinterested members of the Board of Directors; or
- the transaction involves compensation approved by the Compensation Committee of the Board of Directors.

If a related person transaction is not pre-approved by the Audit Committee, and our management determines to recommend such related person transaction to the Audit Committee, such transaction must be reviewed by the Audit Committee. After review, the Audit Committee will approve or disapprove such transaction. In addition, the Audit Committee reviews the policy at least annually and recommends amendments to the policy to the Board of Directors from time to time.

The policy provides that all related person transactions will be disclosed to the Audit Committee and all material related person transactions will be disclosed to the Board of Directors. Additionally, all related person transactions requiring public disclosure will be properly disclosed in our public filings.

The Audit Committee will review all relevant information available to it about the related person transaction. The policy provides that the Audit Committee may approve or ratify the related person transaction only if the Audit Committee determines that, under all of the circumstances, the transaction is in, or is not inconsistent with, our best interests. The policy provides that the Audit Committee may, in its sole discretion, impose such conditions as it deems appropriate on us or the related person in connection with approval of the related person transaction.

## PRINCIPAL STOCKHOLDERS

The following table sets forth certain information known to us with respect to the beneficial ownership of our common stock as of December 31, 2019, by (i) each person who, to our knowledge, beneficially owns 5% or more of the outstanding shares of our common stock, (ii) each of our directors and nominees for director, (iii) each named executive officer (as listed in the Summary Compensation Table, which appears in this prospectus under the heading titled “Executive Compensation—Summary Compensation Table”), and (iv) all current directors and executive officers as a group. Except for shares of our common stock held in brokerage accounts that may, from time to time, together with other securities held in those accounts, serve as collateral for margin loans made from such accounts, none of the shares reported as beneficially owned by our directors or executive officers are currently pledged as security for any outstanding loan or indebtedness.

We have determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws.

The calculation of the percentage of beneficial ownership after this offering gives effect to the issuance by us of shares of common stock in this offering. The percentage ownership information assumes no exercise of the underwriters’ over-allotment option.

Randal J. Kirk, our largest stockholder, through one or more of his affiliates, has indicated an interest in purchasing up to 50% of shares of our common stock being offered in this offering at the public offering price. Because indications of interest are not binding agreements or commitments to purchase, Mr. Kirk and his affiliates may determine to purchase fewer or more shares than they have indicated an interest in purchasing, or elect not to purchase any shares in this offering. The underwriters may also determine to sell fewer, more, or no shares in this offering to Mr. Kirk’s affiliates.

Name and address of beneficial owner(1)	Shares beneficially owned prior to offering		Shares beneficially owned after offering	
	Number of Shares Beneficially Owned(2)	Percent of Class	Number of Shares Beneficially Owned	Percent of Class
<b>5% Stockholders:</b>				
Randal J. Kirk(3) The Governor Tyler 1881 Grove Avenue Radford, Virginia 24141	9,076,753	42.0%	9,076,753	35.8%
Archon Capital Management LLC(4) 1100 19th Avenue E Seattle, Washington 98112	1,812,100	8.4%	1,812,100	7.1%
<b>Named Executive Officers and Directors:</b>				
Sylvia A. Wulf	276,691	1.3%	276,691	1.1%
David A. Frank	58,214	*	58,214	*
Alejandro Rojas	65,319	*	65,319	*
Richard J. Clothier	62,374	*	62,374	*
Richard L. Huber	37,784	*	37,784	*
Jeffrey T. Perez	—	*	—	*
Christine St.Clare	13,273	*	13,273	*
Rick Sterling	95	*	95	*
James C. Turk	19,037	*	19,037	*
Executive officers and directors as a group (10 persons)	574,432	2.6%	574,432	2.3%

\* Indicates beneficial ownership of less than one percent of the total outstanding shares of our common stock.

(1) Unless otherwise indicated, the address for each beneficial owner is c/o AquaBounty Technologies, Inc., 2 Mill & Main Place, Suite 395, Maynard, MA 01754.

(2) Amounts include options to purchase shares of our common stock that are exercisable within 60 days of December 31, 2019.

(3) Based solely on a Schedule 13D/A filed on October 31, 2019, by Randal J. Kirk, Third Security, TS AquaCulture, and Precigen, TS AquaCulture owns 8,239,199 shares of our common stock, or approximately 38.1% of our outstanding shares. In addition, entities controlled by Mr. Kirk, including Third Security and its affiliates other than TS AquaCulture, currently hold 837,554 shares of our common stock, or approximately 3.9% of our outstanding shares. TS AquaCulture is managed by Third Security and

is successor-in-interest to Precigen under 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 42.0% of our outstanding shares.

- (4) Based solely on a Schedule 13G filed on June 19, 2019, by Archon Capital Management LLC, Constantinos Christofilis, and Strategos Fund, L.P., Strategos Fund, L.P. owns 1,304,790 shares of our common stock, or approximately 6.0% of our outstanding shares, and its General Partner, Archon Capital Management LLC, owns an additional 507,310 shares of our common stock, or approximately 2.4% of our outstanding shares. Constantinos Christofilis serves as the Managing Member of Archon Capital Management LLC.

## DESCRIPTION OF CAPITAL STOCK

*The following description summarizes certain important terms of our common stock. Because this description is only a summary, it does not contain all the information that may be important to you. For a complete description of the matters set forth in this section, you should refer to the Third Amended and Restated Certificate of Incorporation and the Amended and Restated Bylaws, forms of which are included as exhibits to the registration statement of which this prospectus forms a part.*

### 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 are outstanding and held of record by 328 stockholders 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 are outstanding.

In 2014, we sought and obtained the approval of our shareholders of the amendment and restatement of our then-existing Second Amended and Restated Certificate of Incorporation to effect a 1-for-10 reverse stock split and certain changes to the corporate governance procedures and voting thresholds set forth therein. In 2015, we sought and obtained the approval of our shareholders to adjust the reverse stock split ratio, either keeping it at 1-for-10, or changing it to 1-for-20, 1-for-30, 1-for-40, or 1-for-50, at the discretion of our Board of Directors. In May 2015, we adopted our Third Amended and Restated Certificate of Incorporation.

In connection with Precigen's distribution of 1,776,557 shares of our common stock that Precigen held prior to the closing via a share dividend to its shareholders, the registration of our common stock on Form 10-12B, dated December 29, 2016, and our application to list our common stock on the Nasdaq Capital Market, we convened a special meeting of our shareholders and submitted proposals for the reapproval by our shareholders to effect a reverse stock split (the "Reverse Stock Split"). The stockholders approved Reverse Stock Split ratios of 1-for-10, 1-for-20, 1-for-30, or 1-for-40, respectively, and provided our Board of Directors the flexibility to implement the most appropriate Reverse Stock Split to meet the initial listing standards of the Nasdaq Capital Market. Our Board of Directors approved a 1-for-30 reverse stock split in December 2016 that took effect on January 5, 2017. The Reverse Stock Split did not change our authorized share capital, affected all shareholders uniformly, and did not affect any shareholder's percentage ownership interest in AquaBounty, except to the extent that the Reverse Stock Split resulted in any shareholders owning a fractional share. All share and per share data in this prospectus has been revised to reflect the effect of the Reverse Stock Split.

On May 1, 2018, our stockholders approved a proposal to amend our Third Amended and Restated Certificate of Incorporation to reduce the number of authorized shares of our common stock from 200,000,000 to 50,000,000 and the number of authorized shares of our preferred stock, from 40,000,000 to 5,000,000.

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.

### Common Stock

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

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.

### 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. Satisfaction of any dividend preferences of outstanding shares of preferred stock would reduce the amount of funds available for the payment of dividends on shares of our common stock.

Holders of shares of preferred stock may be entitled to receive a preference payment in the event of our liquidation, dissolution, or winding up before any payment is made to the holders of shares of our common stock. Under certain circumstances, the issuance of shares of preferred stock 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. Our Board of Directors may, without shareholder approval, issue shares of preferred stock with voting and conversion rights that could adversely affect the holders of shares of our common stock.

### **Certain Provisions of the Third Amended and Restated Certificate of Incorporation and the Amended and Restated Bylaws**

Certain provisions of the Delaware General Corporation Law (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, which are summarized below, are expected to discourage certain types of coercive takeover practices and inadequate takeover bids and, as a consequence, they might also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions are also designed in part to encourage anyone seeking to acquire control of us to first negotiate with our Board of Directors. These provisions might also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders might otherwise deem to be in their best interests. However, we believe that the advantages gained by protecting our ability to negotiate with any unsolicited and potentially unfriendly acquirer outweigh the disadvantages of discouraging such proposals, including those priced above the then-current market value of our common stock, because, among other reasons, the negotiation of such proposals could improve their terms.

#### **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. These procedures provide that only persons who are nominated by or at the direction of our Board of Directors or by a shareholder who has given timely notice in proper written form that is received at our principal executive offices prior to the applicable annual meeting will be eligible for election as directors. These procedures also require that, in order to raise matters at an annual meeting, those matters be raised before the meeting pursuant to the notice of meeting we deliver or by, or at the direction of, our Board of Directors or by a shareholder who is entitled to vote at the meeting and who has given timely notice in proper written form to our Corporate Secretary of the shareholder’s intention to raise those matters at the annual meeting. 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. We may use these additional shares for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions, and as incentive compensation. 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.

#### **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.

**No Written Consent of Stockholders**

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 and that stockholders may not take any action by written consent in lieu of a meeting.

**Meetings of Stockholders**

Our Third Amended and Restated Certificate of Incorporation provides 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.

**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."

## SHARES ELIGIBLE FOR FUTURE SALE

Future sales of substantial amounts of common stock in the public market, or the perception that such sales may occur, could adversely affect the market price of our common stock. We cannot assure you that there will be an active public market for our common stock.

Following the completion of this offering, based on the number of shares of our capital stock outstanding as of December 31, 2019, we will have a total of 25,394,764 shares of our common stock outstanding, or 25,928,630 shares of common stock if the underwriters exercise their option to purchase additional shares of common stock in this offering in full. Of these outstanding shares, all of the shares of common stock sold in this offering by us, as well as the shares of common stock registered on our Registration Statement on Form 10-12B, dated December 29, 2016; our Registration Statement on Form S-8, dated April 4, 2017; our Registration Statement on Form S-1, dated January 12, 2018; and our Registration Statement on Form S-3, dated April 27, 2018, will be freely tradable, except that any shares held by our affiliates, as that term is defined in Rule 144 under the Securities Act, would only be able to be sold in compliance with the Rule 144 limitations described below.

### Lock-Up Agreements

In connection with this offering, our executive officers and directors and certain of our shareholders have signed lock-up agreements under which they have agreed not to dispose of or hedge any shares or any securities convertible into or exchangeable for shares of our capital stock without the prior written consent of Lake Street Capital Markets, LLC (“Lake Street”) for a period of 90 days after the effective date of this prospectus. These agreements are described in the section of this prospectus titled “Underwriting.”

### Rule 144

In general, under Rule 144 as currently in effect, a person who is not deemed to have been one of our affiliates for purposes of the Securities Act at any time during the 90 days preceding a sale and who has beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than our affiliates, is entitled to sell those shares without complying with the manner of sale, volume limitation, or notice provisions of Rule 144, subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than our affiliates, then that person would be entitled to sell those shares without complying with any of the requirements of Rule 144.

In general, under Rule 144, as currently in effect, our affiliates or persons selling shares on behalf of our affiliates are entitled to sell upon expiration of the lock-up agreements described above, within any three-month period, a number of shares that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately \_\_\_\_\_ shares immediately after this offering; or
- the average weekly trading volume of our common stock during the four calendar weeks preceding the filing of a notice on Form 144 with respect to that sale.

Sales under Rule 144 by our affiliates or persons selling shares on behalf of our affiliates are also subject to certain manner of sale provisions and notice requirements and to the availability of current public information about us.

### Rule 701

Rule 701 generally allows most of our employees, directors, officers, consultants, or advisors who purchased shares of our common stock pursuant to a written compensatory plan or contract and who are not deemed to have been one of our affiliates during the immediately preceding 90 days to sell these shares in reliance upon Rule 144, but without being required to comply with the public information, holding period, volume limitation, or notice provisions of Rule 144. Rule 701 also permits our affiliates to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144.

### Registration Statement on Form S-8

We filed a registration statement on Form S-8 under the Securities Act to register shares that may be issued pursuant to the 2006 Plan and the 2016 Plan. The registration statement on Form S-8 became effective immediately upon filing, and shares covered by the registration statement then became eligible for sale in the public market, subject to the Rule 144 limitations applicable to affiliates, vesting restrictions, and any applicable lock-up agreements and market standoff agreements. See “Executive Compensation—Employee Benefits Plans” for a description of our equity incentive plans.

### Registration Statement on Form S-1

We filed a registration statement on Form S-1 under the Securities Act to register shares of our common stock and warrants exercisable for common stock to be offered to the public. The registration statement on Form S-1 became effective on January 12,

2018, and shares covered by the registration statement then became eligible for sale in the public market, subject to the Rule 144 limitations applicable to affiliates, vesting restrictions, and any applicable lock-up agreements and market standoff agreements.

**Registration Statement on Form S-3**

We filed a registration statement on Form S-3 under the Securities Act to register shares of our common stock to be issued in connection with one or more public offerings. The registration statement on Form S-3 became effective on April 7, 2018, and shares covered by the registration statement then became eligible for sale in the public market, subject to the Rule 144 limitations applicable to affiliates, vesting restrictions, and any applicable lock-up agreements and market standoff agreements.

## CERTAIN MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS

The following is a summary of material U.S. federal income tax considerations to U.S. holders and non-U.S. holders (each as defined below) relating to the acquisition, ownership, and disposition of common stock pursuant to this offering. This summary deals only with common stock held as a capital asset (within the meaning of Section 1221 of the Code by a holder and does not discuss the U.S. federal income tax considerations applicable to a holder that is subject to special treatment under U.S. federal income tax laws, including, but not limited to: a dealer or trader in securities, currencies, commodities, or notional principal contracts; a bank or financial institution; a regulated investment company; a real estate investment trust; a grantor trust; a tax-exempt organization; a governmental organization; an insurance company; a person holding common stock as part of a hedging, integrated, conversion, or straddle transaction; a person deemed to sell common stock under the constructive sale provisions of the Code; a trader in securities that has elected the mark-to-market method of accounting; an entity or arrangement that is treated as a partnership for U.S. federal income tax purposes or owners of such entity or arrangement; a person that received such common stock in connection with the performance of services; a pension fund or retirement account; a qualified pension fund or an entity that is wholly owned by one or more qualified foreign pension funds; a “controlled foreign corporation;” a “passive foreign investment company;” a corporation that accumulates earnings to avoid U.S. federal income tax; or a former citizen or long-term resident of the United States.

This summary is based upon provisions of the Code, applicable U.S. Treasury regulations promulgated thereunder, published rulings, and judicial decisions, all as in effect as of the date hereof. Those authorities may be changed, perhaps retroactively, or may be subject to differing interpretations, which could result in U.S. federal income tax consequences different from those discussed below. This summary does not address all aspects of U.S. federal income tax; does not deal with all tax considerations that may be relevant to stockholders in light of their personal circumstances; and does not address the Medicare tax imposed on certain investment income, the rules regarding qualified small business stock within the meaning of Section 1202 of the Code, any election to apply Section 1400Z-2 of the Code to gains recognized with respect to shares of our common stock or any state, local, foreign, gift, estate, or alternative minimum tax considerations. We have not sought any ruling from the Internal Revenue Service (“IRS”) with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS or a court will agree with such statements and conclusions.

For purposes of this discussion, a “U.S. holder” is a beneficial owner of common stock that is: an individual citizen or resident of the United States; a corporation (or any other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any state thereof, or the District of Columbia; an estate the income of which is subject to U.S. federal income taxation regardless of its source; or a trust if it (1) is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

For purposes of this discussion a “non-U.S. holder” is a beneficial owner of common stock that is neither a U.S. holder nor a partnership (or any other entity or arrangement that is treated as a partnership) for U.S. federal income tax purposes. If a partnership (or an entity or arrangement that is treated as a partnership for U.S. federal income tax purposes) holds common stock, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. A partner of a partnership holding common stock is urged to consult its own tax advisors.

**PROSPECTIVE INVESTORS ARE URGED TO CONSULT THEIR OWN TAX ADVISORS CONCERNING THEIR PARTICULAR U.S. FEDERAL INCOME TAX CONSEQUENCES IN LIGHT OF THEIR SPECIFIC SITUATIONS, AS WELL AS THE TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL, OR NON-U.S. TAX LAWS AND ANY OTHER U.S. FEDERAL TAX LAWS (INCLUDING THE U.S. FEDERAL ESTATE AND GIFT TAX LAWS).**

### **Certain U.S. Federal Income Tax Considerations for U.S. Holders of Common Stock**

#### **Dividends on our Common Stock**

We do not expect to declare or pay any distributions on our common stock in the foreseeable future. If we do make any distributions on shares of our common stock, however, such distributions will be includible in the gross income of a U.S. holder as ordinary dividend income to the extent paid out of current or accumulated earnings and profits, as determined for U.S. federal income tax purposes. Any portion of a distribution in excess of current or accumulated earnings and profits would be treated as a return of the holder’s tax basis in its common stock and then as gain from the sale or exchange of the common stock. Under current law, if certain requirements are met, a preferential U.S. federal income tax rate will apply to any dividends paid to a holder of common stock who is a U.S. individual.

Distributions to U.S. holders that are corporate shareholders, constituting dividends for U.S. federal income tax purposes, may qualify for the dividends received deduction, or DRD, which is generally available to corporate shareholders. No assurance can be given that we will have sufficient earnings and profits (as determined for U.S. federal income tax purposes) to cause any distributions to be eligible for a DRD. In addition, a DRD is available only if certain holding periods and other taxable income requirements are satisfied.

## **Sale of Common Stock**

A U.S. holder of common stock will generally recognize gain or loss on the taxable sale, exchange, or other taxable disposition of such stock in an amount equal to the difference between such U.S. holder's amount realized on the sale and its adjusted tax basis in the common stock sold. A U.S. holder's amount realized should equal the amount of cash and the fair market value of any property received in consideration of its stock. The gain or loss should be capital gain or loss and should be long-term capital gain or loss if the common stock are held for more than one year at the time of disposition. The deductibility of capital losses for U.S. federal income tax purposes is subject to limitations under the Code. Under current law, long-term capital gain recognized by an individual U.S. holder is generally eligible for a preferential U.S. federal income tax rate.

### **Information Reporting and Backup Withholding**

Information reporting requirements generally will apply to payments of dividends on shares of common stock and to the proceeds of a sale of common stock unless a U.S. holder is an exempt recipient, such as a corporation.

Backup withholding will apply to those payments if a U.S. holder fails to provide its correct taxpayer identification number and certification of exempt status, or fails to report in full dividend income. Any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

## **Certain U.S. Federal Income Tax Considerations for Non-U.S. Holders of Common Stock**

### **Dividends on our Common Stock**

We do not expect to declare or pay any distributions on our common stock in the foreseeable future. If we do make any distributions on shares of our common stock, however, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Distributions in excess of our current and accumulated earnings and profits will constitute a return of capital that is applied against and reduces, but not below zero, a non-U.S. holder's adjusted tax basis in shares of our common stock. Any remaining excess will be treated as gain realized on the sale or other disposition of our common stock. See "-Sale of Common Stock." Any dividend paid to a non-U.S. holder on our common stock will generally be subject to U.S. withholding tax at a 30% rate. The withholding tax might not apply, however, or might apply at a reduced rate, under the terms of an applicable income tax treaty between the United States and the non-U.S. holder's country of residence. Non-U.S. holders should consult their own tax advisors regarding their entitlement to benefits under a relevant income tax treaty. Generally, in order for us or our paying agent to withhold tax at a lower treaty rate, a non-U.S. holder must certify its entitlement to treaty benefits. A non-U.S. holder generally can meet this certification requirement by providing to us or our paying agent an applicable IRS Form W-8 (which generally remains valid for three years, after which time a new properly completed and executed form must be provided to us or our paying agent). If the holder holds the stock through a financial institution or other agent acting on the holder's behalf, the holder will be required to provide appropriate documentation to the agent. The holder's agent will then be required to provide certification to us or our paying agent, either directly or through other intermediaries. If a non-U.S. holder is eligible for a reduced rate of U.S. federal withholding tax under an income tax treaty, such non-U.S. holder may obtain a refund or credit of any excess amounts withheld by filing an appropriate claim for a refund with the IRS in a timely manner.

Dividends received by a non-U.S. holder that are effectively connected with a U.S. trade or business conducted by the non-U.S. holder, or, if an income tax treaty between the United States and the non-U.S. holder's country of residence applies, are attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder in the United States, are not subject to such withholding tax. To obtain this exemption, a non-U.S. holder must provide us or our paying agent with an IRS Form W-8ECI properly certifying such exemption. Such effectively connected dividends, although not subject to withholding tax, are taxed at the same graduated rates applicable to U.S. persons, as defined under the Code, net of certain deductions and credits, subject to any applicable income tax treaty providing otherwise. In addition to the graduated tax described above, dividends received by corporate non-U.S. holders that are effectively connected with a U.S. trade or business of the corporate non-U.S. holder may also be subject to a branch profits tax at a rate of 30% or such lower rate as may be specified by an applicable income tax treaty.

### **Sale of Common Stock**

Non-U.S. holders will generally not be subject to U.S. federal income tax on any gains realized on the sale, exchange, or other disposition of common stock unless:

- (1) the gain is effectively connected with the conduct by the non-U.S. holder of a U.S. trade or business and (2) if an income tax treaty between the United States and the non-U.S. holder's country of residence applies, the gain is attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder in the United States, in which case the special rules described below apply;
- the non-U.S. holder is an individual who is present in the United States for 183 days or more in the taxable year of the sale, exchange, or other disposition of our common stock, and certain other requirements are met, in which case the gain would be subject to a flat 30% tax, or such reduced rate as may be specified by an applicable income tax treaty, which may be offset by U. S. source capital losses, even though the individual is not considered a resident of the United States; or

- if we are, or were within the shorter of the five-year period preceding the disposition and the non-U.S. holder's holding period, a "U.S. real property holding corporation," or USRPHC.

We do not believe that we are a USRPHC and we do not anticipate becoming one in the future. Even if we are or become a USRPHC, as long as our common stock is regularly traded on an established securities market, then only a non-U.S. holder that actually or constructively owns (at any time during the shorter of the five-year period preceding the date of disposition or the holder's holding period) more than 5% of our outstanding common stock will be subject to U.S. federal income tax on the disposition of our common stock.

Any gain described in the first bullet point above will be subject to U.S. federal income tax at the regular graduated rates. If the non-U.S. holder is a corporation, under certain circumstances that portion of its earnings and profits that is effectively connected with its U.S. trade or business, subject to certain adjustments, generally would be subject to a "branch profits tax." The branch profits tax rate is generally 30%, although an applicable income tax treaty between the United States and the non-U.S. holder's country of residence might provide for a lower rate.

### **Information Reporting and Backup Withholding**

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

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

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

### **Withholding on Foreign Accounts**

Legislation known as the Foreign Account Tax Compliance Act and guidance issued thereunder ("FATCA") imposes withholding taxes on certain types of payments made to "foreign financial institutions" and certain other foreign entities (including financial intermediaries). FATCA generally imposes withholding at a rate of 30% on payments to certain foreign entities of dividends on our common stock, unless various U.S. information reporting and due diligence requirements (generally relating to ownership by U.S. persons of interests in or accounts with those entities) have been satisfied or the entity otherwise qualifies for an exemption. Currently proposed regulations provide that FATCA withholding does not apply to gross proceeds from the disposition of property of a type that can produce U.S. source dividends or interest; however, prior versions of the rules would have made such gross proceeds subject to FATCA withholding. Taxpayers (including withholding agents) can currently rely on the proposed regulations until final regulations are issued. An intergovernmental agreement between the United States and an applicable foreign country may modify these requirements. These withholding rules generally apply to payments of dividends on common stock, and to payments of gross proceeds from a sale or other disposition our common stock made on or after January 1, 2019. You should consult your tax advisor regarding the application of FATCA.

**THE PRECEDING DISCUSSION OF U.S. FEDERAL TAX CONSIDERATIONS IS FOR GENERAL INFORMATION ONLY. IT IS NOT TAX ADVICE. EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE PARTICULAR U.S. FEDERAL, STATE AND LOCAL AND NON-U.S. TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAWS.**

## UNDERWRITING

We are offering the shares of common stock described in this prospectus through the underwriters listed below. Lake Street is acting as the sole book-running manager of this offering and representative of the underwriters. The underwriters named below have agreed to buy, subject to the terms of the underwriting agreement, the number of shares of common stock listed opposite their names below. The underwriters are committed to purchase and pay for all of the shares if any are purchased, other than those shares covered by the over-allotment option described below.

Underwriter	Number of Shares
Lake Street Capital Markets, LLC	
Total	

The underwriters have advised us that they propose to offer the shares of common stock to the public at a price of \$ \_\_\_\_\_ per share. The underwriters propose to offer the shares of common stock to certain dealers at the same price, less a concession of not more than \$ \_\_\_\_\_ per share. After the offering, these figures may be changed by the underwriters.

The shares sold in this offering are expected to be ready for delivery on or about \_\_\_\_\_, 2020, against payment in immediately available funds. The underwriters may reject all or part of any order.

We have granted to the underwriters an option to purchase up to an additional \_\_\_\_\_ shares of common stock from us at the same price to the public, and with the same underwriting discount, as set forth in the table below. The underwriters may exercise this option any time during the 45-day period after the date of this prospectus, but only to cover over-allotments, if any. To the extent the underwriters exercise the option, the underwriters will become obligated, subject to certain conditions, to purchase the shares for which they exercise the option.

The table below summarizes the underwriting discounts that we will pay to the underwriters. These amounts are shown assuming both no exercise and full exercise of the over-allotment option. In addition to the underwriting discount, we have agreed to pay up to \$150,000 of the fees and expenses of the underwriters, which may include the fees and expenses of counsel to the underwriters. The fees and expenses of the underwriters that we have agreed to reimburse are not included in the underwriting discounts set forth in the table below.

We granted Lake Street a right of participation to serve as joint bookrunner (in the case of a public offering) or lead financial advisor (in the case of a merger, acquisition, or sale transaction) in the event that we determine to undertake such transaction within one year following the effective date of this offering. In accordance with applicable rules of the Financial Industry Regulatory Authority, Inc. (“FINRA”), Lake Street does not have more than one opportunity to waive or terminate the right of participation in consideration of any payment or fee, and any payment or fee to waive or terminate the right of participation must be paid in cash and have a value not in excess of the greater of 1% of the proceeds in this offering (or, if greater, the maximum amount permitted by FINRA rules for compensation in connection with this offering) or 5% of the underwriting discount or commission paid in connection with any future financing subject to right of participation (including any overallotment option that may be exercised). This right of participation is not reflected in the table below.

Except as disclosed in this prospectus, the underwriters have not received and will not receive from us any other item of compensation or expense in connection with this offering considered by FINRA to be underwriting compensation under FINRA Rule 5110. The underwriting discount and reimbursable expenses the underwriters will receive were determined through arms’ length negotiations between us and the underwriters.

	Per Share	Total with no Over- Allotment	Total with Over- Allotment
Underwriting discount to be paid by us(1)	\$	\$	\$

(1) The underwriters will receive no underwriting discount in respect of shares sold to a certain existing shareholder or its affiliates, if such shareholder or affiliates participate in this offering.

We estimate that the total expenses of this offering, excluding underwriting discounts, will be approximately \$400,000. This includes \$150,000 of fees and expenses of the underwriters. These expenses are payable by us.

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



Randal J. Kirk, our largest stockholder, through one or more of his affiliates, has indicated an interest in purchasing up to 50% of shares of our common stock being offered in this offering at the public offering price. Because indications of interest are not binding agreements or commitments to purchase, Mr. Kirk and his affiliates may determine to purchase fewer or more shares than they have indicated an interest in purchasing, or elect not to purchase any shares in this offering. The underwriters may also determine to sell fewer, more, or no shares in this offering to Mr. Kirk's affiliates.

### **No Sales of Similar Securities**

We, each of our directors and officers, and certain of our stockholders have agreed not to offer, sell, agree to sell, directly or indirectly, or otherwise dispose of any shares of common stock or any securities convertible into or exchangeable for shares of common stock without the prior written consent of Lake Street for a period of 90 days after the date of this prospectus. These lock-up agreements provide limited exceptions and their restrictions may be waived at any time by Lake Street.

### **Price Stabilization, Short Positions, and Penalty Bids**

To facilitate this offering, the underwriters may engage in transactions that stabilize, maintain, or otherwise affect the price of our common stock during and after the offering. Specifically, the underwriters may over-allot or otherwise create a short position in our common stock for their own account by selling more shares of common stock than we have sold to the underwriters. The underwriters may close out any short position by either exercising their option to purchase additional shares or purchasing shares in the open market.

In addition, the underwriters may stabilize or maintain the price of our common stock by bidding for or purchasing shares in the open market and may impose penalty bids. If penalty bids are imposed, selling concessions allowed to broker-dealers participating in this offering are reclaimed if shares previously distributed in this offering are repurchased, whether in connection with stabilization transactions or otherwise. The effect of these transactions may be to stabilize or maintain the market price of our common stock at a level above that which might otherwise prevail in the open market. The imposition of a penalty bid may also affect the price of our common stock to the extent that it discourages resales of our common stock. The magnitude or effect of any stabilization or other transactions is uncertain. These transactions may be effected on the Nasdaq Capital Market or otherwise and, if commenced, may be discontinued at any time.

In connection with this offering, the underwriters and selling group members may also engage in passive market-making transactions in our common stock on the Nasdaq Capital Market. Passive market-making consists of displaying bids on the Nasdaq Capital Market limited by the prices of independent market makers and effecting purchases limited by those prices in response to order flow. Rule 103 of Regulation M promulgated by the SEC limits the amount of net purchases that each passive market maker may make and the displayed size of each bid. Passive market-making may stabilize the market price of our common stock at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

Neither we nor the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. In addition, neither we nor the underwriters make any representation that the underwriters will engage in these transactions or that any transaction, if commenced, will not be discontinued without notice.

### **Affiliations**

The underwriters and their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing, and brokerage activities. The underwriters may in the future engage in investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. The underwriters may in the future receive customary fees and commissions for these transactions.

In the ordinary course of their various business activities, the underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments of the issuer. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

The underwriters may facilitate the marketing of this offering online directly or through one of their affiliates. In those cases, prospective investors may view offering terms and a prospectus online and place orders online or through their financial advisors.

### **Electronic Offer, Sale, and Distribution**

In connection with this offering, the underwriters or certain of the securities dealers may distribute prospectuses by electronic means, such as e-mail. In addition, the underwriters may facilitate Internet distribution for this offering to certain of its Internet subscription customers. The underwriters may allocate a limited number of securities for sale to its online brokerage customers. An electronic

prospectus is available on the Internet websites maintained by any such underwriter. Other than the prospectus in electronic format, the information on the websites of the underwriters is not part of this prospectus.

## **Listing**

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

## **Transfer Agent and Registrar**

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

## **Selling Restrictions**

### ***Canada***

The securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser’s province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser’s province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

### ***European Economic Area***

In relation to each Member State of the European Economic Area that has implemented the Prospectus Directive (each, a “Relevant Member State”), an offer to the public of any shares of our common stock may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any shares of our common stock may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- to any legal entity that is a qualified investor as defined in the Prospectus Directive;
- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares of our common stock shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an “offer to the public” in relation to any shares of our common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of our common stock to be offered so as to enable an investor to decide to purchase any shares of our common stock, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression “Prospectus Directive” means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State, and the expression “2010 PD Amending Directive” means Directive 2010/73/EU.

### ***United Kingdom***

Each underwriter has represented and agreed that:

- it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 (the “FSMA”)) received by it in connection with the issue or sale of the shares of our common stock in circumstances in which Section 21(1) of the FSMA does not apply to us; and
- it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of our common stock in, from or otherwise involving the United Kingdom.

### **Switzerland**

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (the “SIX”) or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, or the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes (“CISA”). Accordingly, no public distribution, offering or advertising, as defined in CISA and its implementing ordinances and notices, and no distribution to any non-qualified investor, as defined in CISA and its implementing ordinances and notices, shall be undertaken in or from Switzerland, and the investor protection afforded to acquirers of interests in collective investment schemes under CISA does not extend to acquirers of shares.

### **Australia**

No placement document, prospectus, product disclosure statement, or other disclosure document has been lodged with the Australian Securities and Investments Commission (“ASIC”), in relation to the offering.

This prospectus does not constitute a prospectus, product disclosure statement, or other disclosure document under the Corporations Act 2001 (the “Corporations Act”), and does not purport to include the information required for a prospectus, product disclosure statement, or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons (the “Exempt Investors”) who are “sophisticated investors” (within the meaning of section 708(8) of the Corporations Act), “professional investors” (within the meaning of section 708(11) of the Corporations Act), or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document that complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives, and circumstances, and, if necessary, seek expert advice on those matters.

## LEGAL MATTERS

Goodwin Procter LLP, Boston, Massachusetts, which has acted as our counsel in connection with this offering, will pass upon the validity of the shares of common stock being offered by this prospectus. The underwriters have been represented by Faegre Drinker Biddle & Reath LLP, Minneapolis, Minnesota.

## EXPERTS

The consolidated financial statements as of December 31, 2017 and 2018, and for each of the three years in the period ended December 31, 2018, included in this prospectus have been audited by Wolf & Company, P.C., an independent registered public accounting firm, as stated in their report appearing herein. Such consolidated financial statements have been so included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

## ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of common stock offered by this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement, some of which is contained in exhibits to the registration statement as permitted by the rules and regulations of the SEC. For further information with respect to us and our common stock, we refer you to the registration statement, including the exhibits filed as a part of the registration statement. Statements contained in this prospectus concerning the contents of any contract or any other document are not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, please see the copy of the contract or document that has been filed. Each statement in this prospectus relating to a contract or document filed as an exhibit is qualified by the filed exhibit. The SEC also maintains an Internet website that contains reports, proxy statements and other information about issuers, like us, that file electronically with the SEC. The address of that website is [www.sec.gov](http://www.sec.gov).

We are subject to the information and reporting requirements of the Exchange Act and, in accordance with this law, we are required to file periodic reports, proxy statements, and other information with the SEC. These periodic reports, proxy statements, and other information are available for inspection and copying at the website of the SEC referred to above. All of these documents are available free of charge on our website, [www.aquabounty.com](http://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 prospectus.

**AQUABOUNTY TECHNOLOGIES, INC.**  
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## 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, 2018 and 2017, the related consolidated statements of operations and comprehensive loss, changes in stockholders’ equity (deficit), and cash flows, for each of the three years in the three-year period ended December 31, 2018, 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, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the three-year period ended December 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

### Emphasis of a Matter Regarding Going Concern

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses and negative cash flows from operations. These conditions raise substantial doubt about the Company’s ability to continue as a going concern. Management’s plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

### 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 7, 2019

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

**Consolidated Financial Statements**  
for the years ended December 31, 2018, 2017, and 2016

**AquaBounty Technologies, Inc.**  
**Consolidated Balance Sheets**

	As of December 31,	
	2018	2017
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 2,990,196	\$ 492,861
Certificate of deposit	12,361	13,422
Other receivables	115,982	183,926
Inventory	76,109	172,363
Prepaid expenses and other current assets	315,969	527,322
<b>Total current assets</b>	<b>3,510,617</b>	<b>1,389,894</b>
Property, plant and equipment, net	23,716,768	21,802,976
Definite-lived intangible assets, net	171,292	184,995
Indefinite-lived intangible assets	191,800	191,800
Other assets	80,583	162,093
<b>Total assets</b>	<b>\$ 27,671,060</b>	<b>\$ 23,731,758</b>
<b>Liabilities and stockholders' equity</b>		
Current liabilities:		
Accounts payable and accrued liabilities	\$ 845,323	\$ 2,666,855
Current debt	71,613	49,794
<b>Total current liabilities</b>	<b>916,936</b>	<b>2,716,649</b>
Long-term debt	3,519,821	3,034,420
<b>Total liabilities</b>	<b>4,436,757</b>	<b>5,751,069</b>
Commitments and contingencies		
Stockholders' equity:		
Common stock, \$0.001 par value, 50,000,000 shares authorized; 15,098,837, (2017: 8,895,094) shares outstanding	15,099	8,895
Additional paid-in capital	142,707,957	126,718,186
Accumulated other comprehensive loss	(574,186)	(213,884)
Accumulated deficit	(118,914,567)	(108,532,508)
<b>Total stockholders' equity</b>	<b>23,234,303</b>	<b>17,980,689</b>
<b>Total liabilities and stockholders' equity</b>	<b>\$ 27,671,060</b>	<b>\$ 23,731,758</b>

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

**Consolidated Financial Statements**  
for the years ended December 31, 2018, 2017, and 2016

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

	Years ended December 31,		
	2018	2017	2016
<b>Revenues</b>			
Product Revenues	\$ 84,518	\$ 53,278	\$ —
<b>Costs and expenses</b>			
Product costs	78,155	50,777	—
Sales and marketing	297,687	799,009	860,365
Research and development	3,458,564	3,371,767	3,429,400
General and administrative	6,615,908	5,063,824	3,775,289
Total costs and expenses	10,450,314	9,285,377	8,065,054
<b>Operating loss</b>	<b>(10,365,796)</b>	<b>(9,232,099)</b>	<b>(8,065,054)</b>
<b>Other income (expense)</b>			
Gain on disposal of equipment	13,233	941	2,861
Interest expense	(22,257)	(21,537)	(402,554)
Other income (expense), net	(7,239)	(5,952)	(5,914)
Total other income (expense)	(16,263)	(26,548)	(405,607)
<b>Net loss</b>	<b>\$ (10,382,059)</b>	<b>\$ (9,258,647)</b>	<b>\$ (8,470,661)</b>
<b>Other comprehensive income (loss):</b>			
Foreign currency translation gain (loss)	(360,302)	72,388	(59,840)
Total other comprehensive income (loss)	(360,302)	72,388	(59,840)
<b>Comprehensive loss</b>	<b>\$ (10,742,361)</b>	<b>\$ (9,186,259)</b>	<b>\$ (8,530,501)</b>
<b>Earnings per share</b>			
Net loss	(10,382,059)	(9,258,647)	(8,470,661)
Deemed dividend	(1,822,873)	—	—
Net loss attributable to common shareholders	(12,204,932)	(9,258,647)	(8,470,661)
Basic and diluted net loss per share attributable to common shareholders	\$ (0.94)	\$ (1.06)	\$ (1.60)
Weighted average number of common shares -basic and diluted	13,028,760	8,772,494	5,303,114

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



**Consolidated Financial Statements**  
for the years ended December 31, 2018, 2017, and 2016

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

	Common stock issued and outstanding	Par value	Additional paid- in capital	Accumulated other comprehensive loss	Accumulated deficit	Total
Balance at December 31, 2015	5,247,605	\$ 5,248	\$ 90,968,813	\$ (226,432)	\$ (90,803,200)	\$ (55,571)
Net loss					(8,470,661)	(8,470,661)
Other comprehensive loss				(59,840)		(59,840)
Conversion of debt and accrued interest to common stock	1,212,908	1,213	10,394,620			10,395,833
Cashless exercise of options for common stock	524	—	—			—
Share based compensation	2,899	3	218,291			218,294
Balance at December 31, 2016	6,463,936	\$ 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
<b>Net loss</b>					<b>(10,382,059)</b>	<b>(10,382,059)</b>
<b>Other comprehensive loss</b>				<b>(360,302)</b>		<b>(360,302)</b>
<b>Issuance of common stock and warrants, net of expenses</b>	<b>3,692,307</b>	<b>3,692</b>	<b>10,612,354</b>			<b>10,616,046</b>
<b>Exercise of warrants for common stock, net of expenses</b>	<b>2,500,285</b>	<b>2,501</b>	<b>5,114,032</b>			<b>5,116,533</b>
<b>Share based compensation</b>	<b>11,151</b>	<b>11</b>	<b>263,385</b>			<b>263,396</b>
<b>Balance at December 31, 2018</b>	<b>15,098,837</b>	<b>\$ 15,099</b>	<b>\$ 142,707,957</b>	<b>\$ (574,186)</b>	<b>\$ (118,914,567)</b>	<b>\$ 23,234,303</b>

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

**Consolidated Financial Statements  
for the years ended December 31, 2018, 2017, and 2016**

**AquaBounty Technologies, Inc.  
Consolidated Statements of Cash Flows**

	Years ended December 31,		
	2018	2017	2016
<b>Operating activities</b>			
Net loss	\$ (10,382,059)	\$ (9,258,647)	\$ (8,470,661)
Adjustment to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	843,387	184,946	153,996
Share-based compensation	263,396	122,134	218,294
Gain on disposal of equipment	(13,233)	(941)	(2,861)
Non-cash interest and other expenses	(1,364)	—	395,833
Changes in operating assets and liabilities:			
Other receivables	56,212	(11,440)	(121,640)
Inventory	93,956	(169,991)	—
Prepaid expenses and other assets	289,868	(592,602)	38,054
Accounts payable and accrued liabilities	(966,928)	625,763	340,092
Net cash used in operating activities	(9,816,765)	(9,100,778)	(7,448,893)
<b>Investing activities</b>			
Purchase of property, plant and equipment	(4,009,736)	(18,893,264)	(934,495)
Deposits on equipment purchases	(95,001)	(153,663)	(156,982)
Proceeds from sale of equipment	23,233	941	23,844
Payment of patent costs	—	—	(5,664)
Net cash used in investing activities	(4,081,504)	(19,045,986)	(1,073,297)
<b>Financing activities</b>			
Proceeds from issuance of debt	771,858	256,807	547,142
Repayment of term debt	(55,615)	(35,812)	(6,268)
Proceeds from the issuance of convertible debt	—	—	10,000,000
Proceeds from the issuance of common stock and warrants, net	10,616,046	24,989,257	—
Proceeds from exercise of stock options and warrants, net	5,116,533	27,502	—
Net cash provided by financing activities	16,448,822	25,237,754	10,540,874
Effect of exchange rate changes on cash and cash equivalents	(53,218)	77,262	(7,496)
Net change in cash and cash equivalents	2,497,335	(2,831,748)	2,011,188
Cash and cash equivalents at beginning of period	492,861	3,324,609	1,313,421
<b>Cash and cash equivalents at the end of period</b>	<b>\$ 2,990,196</b>	<b>\$ 492,861</b>	<b>\$ 3,324,609</b>
<b>Supplemental disclosure of cash flow information and non-cash transactions:</b>			
Interest paid in cash	\$ 22,257	\$ 21,537	\$ 6,721
Conversion of convertible debt and accrued interest to common stock	\$ —	\$ —	\$ 10,395,833
Property and equipment included in accounts payable and accrued liabilities	\$ 193,378	\$ 1,036,240	\$ 50,132
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, 2018, 2017, and 2016**

**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.

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.

**Going Concern Uncertainty and Management's Plan**

The accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business.

The Company has experienced net losses and negative cash flows from operations since its inception and has cumulative losses attributable to common stockholders of \$119 million as of December 31, 2018. At December 31, 2018, the Company had limited capital to fund its operations. This raises substantial doubt about the Company’s ability to continue as a going concern within one year after the date that the accompanying consolidated financial statements are issued.

The Company plans to raise capital through equity and/or debt financings. There is no assurance, however, that the Company will be successful in raising the needed capital and, if funding is available, that it will be available on terms acceptable to the Company. The Company may also cut operating costs or delay capital spend in order to preserve available cash. The accompanying consolidated financial statements do not include any adjustments that might result from the outcome of the above uncertainty.

**2. Summary of significant accounting policies**

**Use of estimates**

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

**AquaBounty Technologies, Inc.**  
**Notes to the Consolidated Financial Statements**  
**for the years ended December 31, 2018, 2017, and 2016**

**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.

**Short-term investments**

The Company considers all liquid investments with maturities greater than three months but less than one year when purchased to be short-term investments. The Company has a six-month certificate of deposit at December 31, 2018 and 2017. It is renewable semi-annually in January and July.

**Inventories**

The Company measures inventory 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, disposal, and transportation. The Company also considers capacity utilization in calculating its inventory value with any excess capacity charged to general and administrative expenses.

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

**Impairment of long-lived assets**

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

Indefinite-lived intangible assets are subject to impairment testing annually or more frequently if impairment indicators arise. The Company's impairment testing utilizes a discounted cash flow analysis that requires significant management judgment with respect to

**AquaBounty Technologies, Inc.**  
**Notes to the Consolidated Financial Statements**  
**for the years ended December 31, 2018, 2017, and 2016**

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.

#### **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. Generally, the Company is no longer subject to federal and state tax examinations by tax authorities for years before 2015.

#### **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 minimized by the Company’s policy of investing in financial instruments with short-term maturities issued by highly rated financial institutions. The Company’s cash balances may at times exceed insurance limitations. The Company holds cash balances in bank accounts located in Canada to fund its local operations. These amounts are subject to foreign currency exchange risk, which is minimized by the Company’s policy to limit the balances held in these accounts. Balances in Canadian bank accounts totaled \$230,677 at December 31, 2018.

**AquaBounty Technologies, Inc.**  
**Notes to the Consolidated Financial Statements**  
**for the years ended December 31, 2018, 2017, and 2016**

### Financial instruments

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

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

### 4. Inventory

Major classifications of inventory are summarized as follows for December 31, 2018 and 2017:

	2018	2017
Feed	\$ 24,288	60,161
Eggs	—	73,967
Packaging	8,913	—
Fish in process	42,908	38,235
<b>Total inventory</b>	<b>\$ 76,109</b>	<b>\$ 172,363</b>

### 5. Property, plant and equipment

Major classifications of property, plant and equipment are summarized as follows for December 31, 2018 and 2017:

	2018	2017
Land	\$ 704,567	\$ 676,083
Building and improvements	9,244,737	9,187,160
Construction in process	6,091,265	5,119,961
Equipment	9,713,030	8,211,510
Office furniture and equipment	192,606	136,091
Vehicles	26,832	29,135
<b>Total property and equipment</b>	<b>\$ 25,973,037</b>	<b>\$ 23,359,940</b>
Less accumulated depreciation and amortization	(2,256,269)	(1,556,964)
<b>Property, plant and equipment, net</b>	<b>\$ 23,716,768</b>	<b>\$ 21,802,976</b>

Depreciation and amortization expense for 2018 on property, plant and equipment was \$829,684 (2017: \$171,242; 2016: 140,649).

In July 2016, the Company purchased the property, plant and equipment of the former Atlantic Sea Smolt plant in Rollo Bay West on Prince Edward Island for \$717,225, including legal and other expenses incurred. The Company allocated the purchase price to land, building, and equipment based on valuations and management's estimates. Included in construction in process is \$5.7 million for renovation and new construction costs incurred at our Rollo Bay farm site. An additional \$785 thousand has been committed.

In June 2017, the Company purchased the aquaculture facility of Bell Fish Company LLC in Albany, Indiana, for \$14.2 million, including legal and other expenses incurred. Through December 31, 2018, the Company has invested \$2.6 million to upgrade the facility for use to grow out its AquAdvantage Salmon for harvest and sale in the United States. The Company currently has an additional \$122 thousand committed to this project. This facility is operational, although the Company expects that upgrades will continue through 2020.

**AquaBounty Technologies, Inc.**  
**Notes to the Consolidated Financial Statements**  
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## 6. Prepaid expenses and other current assets

Prepaid expenses and other current assets include the following at December 31, 2018 and 2017:

	2018	2017
Prepaid insurance	\$ 90,754	\$ 84,801
Prepaid supplies	19,422	33,132
Prepaid professional services	38,375	16,059
Prepaid rent and lease deposits	13,508	5,852
Other current assets	153,910	387,478
<b>Total prepaid expenses and other current assets</b>	<b>\$ 315,969</b>	<b>\$ 527,322</b>

## 7. Accounts payable and accrued liabilities

Accounts payable and accrued liabilities include the following at December 31, 2018 and 2017:

	2018	2017
Accounts payable	\$ 366,917	\$ 1,089,919
Accrued payroll including vacation	223,481	364,368
Accrued professional fees and contract services	185,992	443,178
Accrued taxes	23,678	240,880
Accrued construction costs	13,716	509,950
Accrued other	31,539	18,560
<b>Accounts payable and accrued liabilities</b>	<b>\$ 845,323</b>	<b>\$ 2,666,855</b>

## 8. Debt

The current terms and conditions of long-term debt outstanding at December 31, 2018 and 2017, are as follows:

	Interest rate	Monthly repayment	Maturity date	2018	2017
ACOA AIF grant (C\$2,871,919)	0%	Royalties	-	\$ 2,106,840	\$ 2,287,771
ACOA term loan (C\$337,000)	0%	C\$3,120	June 2026	203,735	251,056
Kubota Canada Ltd (C\$95,961)	0%	C\$1,142	Jan 2025	61,178	—
PEI Finance term loan (C\$2,717,093)	4%	C\$4,333	July 2021	1,219,681	545,387
<b>Total debt</b>				<b>\$ 3,591,434</b>	<b>\$ 3,084,214</b>
less: current portion				(71,613)	(49,794)
<b>Long-term debt</b>				<b>\$ 3,519,821</b>	<b>\$ 3,034,420</b>

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

Year	AIF	ACOA	Kubota	FPEI	Total
2019	\$ —	\$ 27,466	\$ 10,057	\$ 34,090	\$ 71,613
2020	—	27,466	10,057	42,034	79,557
2021	—	27,466	10,057	43,746	81,269
2022	—	27,466	10,057	45,529	83,052
2023	—	27,466	10,057	1,054,282	1,091,805
Thereafter	2,106,840	66,405	10,893	—	2,184,138
<b>Total</b>	<b>\$ 2,106,840</b>	<b>\$ 203,735</b>	<b>\$ 61,178</b>	<b>\$ 1,219,681</b>	<b>\$ 3,591,434</b>

### 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.

**AquaBounty Technologies, Inc.**  
**Notes to the Consolidated Financial Statements**  
**for the years ended December 31, 2018, 2017, and 2016**

**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 AquAdvantage 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.

On November 13, 2018, the Canadian Subsidiary executed a second agreement with ACOA to partially finance the renovations to the Rollo Bay site. The terms of the agreement include funding up to C\$500 thousand (\$367 thousand) with repayment commencing after the final draw-down of the funds. The loan term is nine years with a zero percent interest rate. No funds were drawn during 2018.

**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.

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.

On October 16, 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, 2018, C\$1.0 million (\$734 thousand) has been drawn down. Payments will commence once all funds have been drawn. 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 2018 of \$22,185 (2017: \$21,520; 2016: \$402,554) on its interest-bearing debt.

**9. Stockholders’ equity**

In May 2018, the Company’s shareholders approved a reduction in the number of authorized shares from 240 million to 55 million shares of stock, of which 5 million are authorized as preferred stock and 50 million as common stock. At December 31, 2018, the Company had zero shares (2017: zero) of preferred stock and 15,098,837 shares (2017: 8,895,094) of common stock, issued and outstanding.

In December 2016, the shareholders approved a reverse share split ratio of 1-for-30 to be implemented on January 5, 2017. All share balances in the Financial Statements and accompanying notes have been restated to reflect this change.

**Common stock**

The holders of the common stock are entitled to one vote for each share held at all meetings of stockholders. Dividends and distribution of assets of the Company in the event of liquidation are subject to the preferential rights of any outstanding preferred shares. At December 31, 2018, the Company had reserved 339,964 shares of common stock for the exercise of options and 1,745,868 shares of common stock for the exercise of warrants.

**Recent issuances**

In January 2017, the Company closed an equity subscription of \$25 million with Intrexon 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. Intrexon Corporation, the Company’s 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.



**AquaBounty Technologies, Inc.**  
**Notes to the Consolidated Financial Statements**  
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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. Intrexon participated in the exercise, converting warrants for the issuance of 1,538,461 Common Shares, resulting in gross proceeds of \$3.1 million.

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

The following table summarizes information about outstanding warrants at December 31, 2018:

	Number of warrant shares	Weighted average exercise price
Outstanding at December 31, 2017	—	\$—
Issued	4,246,153	3.25
Exercised	(2,500,285)	2.12
Outstanding at December 31, 2018	1,745,868	\$3.25
Exercisable at December 31, 2018	1,745,868	\$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 aggregate number of shares of common stock that may be issued pursuant to awards granted under the 2016 Plan cannot exceed 450,000. The 2016 Plan was approved by the Company’s shareholders at its Annual Meeting on April 26, 2016.

#### *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, 2017	2,697	\$ 11.37
Granted	11,151	2.50
Vested	(4,981)	5.50
Unvested at December 31, 2018	8,867	\$ 3.51

During 2018, the Company expensed \$27,298 (2017: \$26,400; 2016: \$18,070) related to restricted stock awards. At December 31, 2018, the balance of unearned share-based compensation to be expensed in future periods related to the restricted stock awards is \$31,015. The period over which the unearned share-based compensation is expected to be earned is approximately 2.2 years.

**AquaBounty Technologies, Inc.**  
**Notes to the Consolidated Financial Statements**  
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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, 2017	227,203	\$ 9.39
Issued	113,561	2.50
Expired	(800)	9.90
Outstanding at December 31, 2018	339,964	\$ 7.09
Exercisable at December 31, 2018	303,986	\$ 6.94

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 2018 was \$2.50 (2017: \$4.55; 2016: \$4.46). There were no options exercised in 2018. The total intrinsic value of options exercised in 2017 was \$43,420 (2016: \$6,338). At December 31, 2018, the total intrinsic value of all options outstanding was \$0 (2017: \$17,454; 2016: \$602,773), the total intrinsic value of exercisable options was \$0 (2017: \$17,454; 2016: \$597,872), and the total number of shares available for grant under the 2016 Plan was 268,138 (2017: 397,500; 2016: 450,000).

The following table summarizes information about options outstanding and exercisable at December 31, 2018:

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
\$2.50 - \$5.70	204,034	5.6	185,985	
\$6.90 - \$9.60	53,175	3.7	53,175	
\$10.50 - \$10.80	4,000	5.1	4,000	
\$14.20 - \$23.40	78,755	7.2	60,826	
	339,964		303,986	\$6.94

The fair values of stock option grants to employees and members of the Board of Directors during 2018, 2017, and 2016 were measured on the date of grant using Black-Scholes, with the following weighted average assumptions:

	2018	2017	2016
Expected volatility	81%	78%	53%
Risk free interest rate	2.60%	1.80%	1.31%
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 \$236,098 in 2018 (2017: \$95,734; 2016: \$200,224). At December 31, 2018, the balance of unearned share-based compensation to be expensed in future periods related to unvested share-based awards is \$111,243. The period over which the unearned share-based compensation is expected to be earned is 1.2 years.

**AquaBounty Technologies, Inc.**  
**Notes to the Consolidated Financial Statements**  
**for the years ended December 31, 2018, 2017, and 2016**

*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, 2018, 2017, and 2016:

	2018	2017	2016
Research and development	\$ 3,238	\$ 3,168	\$ 2,115
Sales and marketing	—	9,315	65,517
General and administrative	260,158	109,651	150,662
Total share-based compensation	\$ 263,396	\$ 122,134	\$ 218,294

**10. Income taxes**

The components of loss before income taxes for the years ended December 31, 2018, 2017, and 2016, are presented below:

	2018	2017	2016
Domestic	\$ (9,702,869)	\$ (6,526,706)	\$ (5,950,862)
Foreign	(679,190)	(2,731,941)	(2,519,799)
Loss before income taxes	\$ (10,382,059)	\$ (9,258,647)	\$ (8,470,661)

Income taxes computed using the federal statutory income tax rate differs from the Company's effective tax rate for the years ended December 31, 2018, 2017, and 2016, primarily due to the following:

	2018	2017	2016
Income tax benefit	\$ (2,180,233)	\$ (3,147,940)	\$ (2,880,025)
State and provincial income tax, net of federal benefit	(534,789)	(678,438)	(604,354)
Permanent differences	53,795	(2,923)	234,247
US-Foreign rate differential	(13,955)	371,551	359,729
Other, net	1,182,900	(98,947)	73,220
Effect of tax reform	0	3,687,844	—
	(1,492,282)	131,147	(2,817,183)
Change in valuation allowance	1,492,282	(131,147)	2,817,183
Total income tax	\$ —	\$ —	\$ —

Included in Other for 2018 are \$0.4 million related to state tax rate changes and \$0.6 million related to foreign currency changes.

As of December 31, 2018, the Company has domestic net operating loss carryforwards of approximately \$37.8 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 net operating loss carryforwards and research loss carryforwards totaling approximately \$14.0 million and foreign research and development expense tax credits of approximately \$2.6 million at December 31, 2018, which expire at various times commencing in 2019. Since the Company has incurred only losses from inception and there is uncertainty related to the ultimate use of the loss carryforwards and tax credits, a valuation allowance has been recognized to offset the Company's deferred tax assets, and no benefit for income taxes has been recorded.

**AquaBounty Technologies, Inc.**  
**Notes to the Consolidated Financial Statements**  
**for the years ended December 31, 2018, 2017, and 2016**

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

	2018	2017
Deferred tax assets:		
Net operating loss carryforwards	\$ 14,120,607	\$ 12,411,425
Foreign research and development tax credit carryforwards	2,628,190	2,832,340
Property and equipment	463,343	482,161
Other	19,695	13,627
Total deferred tax assets	\$ 17,231,835	\$ 15,739,553
Valuation allowance	\$ (17,231,835)	\$ (15,739,553)
Net deferred tax assets	\$ —	\$ —

The valuation allowance increased by \$1.5 million during 2018 and increased by \$131,147 during 2017. The increase in 2018 is primarily due to increases in net operating loss carryforwards.

The increase in 2017 was primarily due to increases in foreign research and development tax credits and property and equipment, partially offset by a reduction in the U.S. deferred tax assets resulting from the impact of U.S. tax reform.

## 11. Commitments and contingencies

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

### Lease commitments

In 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 \$332,824.

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 \$7,320 with annual increases of 3% over the term.

In May 2018, the Company extended its lease for its Panama farm site. The lease has a term of twelve months, ending in April 2019.

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

Total rent expense in 2018 was \$238,131 (2017: \$214,634; 2016: \$202,788). Future minimum commitments under the Company's operating leases are \$338,414 with \$122,858 in 2019 and \$64,637 in 2020.

The following table summarizes our significant contractual obligations and commercial commitments at December 31, 2018, 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
Maynard office lease	\$ 278	\$ 63	\$ 131	\$ 84	\$ —
Panama site lease	60	60	—	—	—
Indiana auto lease	11	5	6	—	—
Indiana well lease	717	15	32	33	637
Total	\$ 1,066	\$ 143	\$ 169	\$ 117	\$ 637

### Employment agreements

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

## 12. Retirement plan

The Company has a savings and retirement plan for its US employees that qualifies under Section 401(k) of the Internal Revenue Code. The plan covers substantially all employees and provides for voluntary contributions by participating employees up to the maximum contribution allowed under the Internal Revenue Code. Contributions by the Company can be made, as determined by the Board of Directors, provided the amount does not exceed the maximum permitted by the Internal Revenue Code. Company

**AquaBounty Technologies, Inc.**  
**Notes to the Consolidated Financial Statements**  
**for the years ended December 31, 2018, 2017, and 2016**

contributions made and expensed in operations in connection with the plan during the year ended December 31, 2018, amounted to \$43,866 (2017: \$31,308; 2016: \$33,422).

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, 2018, amounted to \$25,900 (2017: \$26,578; 2016: \$21,777).

### **13. Related Party Collaboration Agreement**

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

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

The Company will pay Intrexon quarterly 16.66% of the gross profits calculated under the terms of the agreement for each developed product. The Company has likewise agreed to pay Intrexon 50% of quarterly revenue obtained from a sublicensee in the event of a sublicensing arrangement. In addition, the Company will reimburse Intrexon for the costs of certain services provided by Intrexon. No royalties were paid to Intrexon in 2018, and the Company does not expect to pay royalties in 2018.

Total Intrexon service costs incurred under the terms of this agreement amounted to \$217,833 in 2018 (2017: \$562,039; 2016: \$912,182), of which \$800 is included in accounts payable and accrued liabilities at December 31, 2018 (2017: \$135,301), 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**

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

In February 2016, the FASB issued ASU 2016-02, "Leases," which requires a lessee to recognize lease liabilities for the lessee's obligation to make lease payments arising from a lease, measured on a discounted basis, and right-of-use assets, representing the lessee's right to use, or control the use of, specified assets for the lease term. Additionally, the new guidance has simplified accounting for sale and leaseback transactions. Lessor accounting is largely unchanged. The ASU is effective for fiscal years beginning after December 15, 2018. We will adopt the ASU effective January 1, 2019 and based on our current portfolio of leases, approximately \$532 thousand of lease assets and liabilities will be recognized on our balance sheet, primarily relating to real estate.

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

**AquaBounty Technologies, Inc.**  
**Notes to the Consolidated Financial Statements**  
**for the years ended December 31, 2018, 2017, and 2016**

**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.

	<b>Three Months Ended 2018</b>			
	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)

	<b>Three Months Ended 2017</b>			
	March 31	June 30	September 30	December 31
Revenue	\$ —	\$ 53,278	\$ —	\$ —
Operating loss	(2,049,098)	(2,087,074)	(2,439,230)	(2,655,756)
Net loss	(2,055,743)	(2,093,436)	(2,446,219)	(2,663,249)
Basic and diluted net loss per share attributable to common shareholders	\$ (0.24)	\$ (0.24)	\$ (0.28)	\$ (0.30)

**16. Subsequent events**

On January 3, 2019, the Company issued 164,088 restricted Common Shares to Sylvia Wulf, its new Chief Executive Officer, per the terms of her employment agreement. The shares vest over a one-year period.

On March 5, 2019, the Company issued 12,473 restricted Common Shares to Richard Clothier, Chair of the Board of Directors, per the terms of his compensation plan. The shares vest over a three-year period.

On March 7, 2019, the Canadian Subsidiary received C\$500 thousand in debt funding from ACOA (Note 8).

**Consolidated Financial Statements**  
**for the nine months ended September 30, 2019 and 2018 (unaudited)**

**AquaBounty Technologies, Inc.**  
**Consolidated Balance Sheets**  
**(Unaudited)**

	As of	
	September 30, 2019	December 31, 2018
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 6,412,921	\$ 2,990,196
Certificate of deposit	12,712	12,361
Other receivables	73,340	115,982
Inventory	477,077	76,109
Prepaid expenses and other current assets	391,561	315,969
Total current assets	7,367,611	3,510,617
Property, plant and equipment, net	24,780,705	23,716,768
Right of use assets, net	413,235	—
Definite-lived intangible assets, net	161,014	171,292
Indefinite-lived intangible assets	191,800	191,800
Other assets	45,001	80,583
Total assets	\$ 32,959,366	\$ 27,671,060
<b>Liabilities and stockholders' equity</b>		
Current liabilities:		
Accounts payable and accrued liabilities	\$ 1,102,621	\$ 824,900
Other current liabilities	61,315	20,423
Current debt	149,069	71,613
Total current liabilities	1,313,005	916,936
Long-term lease obligations	368,739	—
Long-term debt	4,397,539	3,519,821
Total liabilities	6,079,283	4,436,757
Commitments and contingencies		
Stockholders' equity:		
Common stock, \$0.001 par value, 50,000,000 shares authorized; 21,605,322 (2018: 15,098,837) shares outstanding	21,605	15,099
Additional paid-in capital	156,022,668	142,707,957
Accumulated other comprehensive loss	(440,738)	(574,186)
Accumulated deficit	(128,723,452)	(118,914,567)
Total stockholders' equity	26,880,083	23,234,303
Total liabilities and stockholders' equity	\$ 32,959,366	\$ 27,671,060

See accompanying notes to these unaudited interim consolidated financial statements.

**Consolidated Financial Statements**  
**for the nine months ended September 30, 2019 and 2018 (unaudited)**

**AquaBounty Technologies, Inc.**  
**Consolidated Statements of Operations and Comprehensive Loss**  
**(Unaudited)**

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
<b>Revenues</b>				
Product revenues	\$ —	\$ 10,938	\$ 140,371	\$ 77,933
<b>Costs and expenses</b>				
Product costs	—	8,874	120,605	72,393
Sales and marketing	206,256	64,971	381,637	222,999
Research and development	446,582	804,758	1,923,512	2,663,397
General and administrative	2,346,754	1,852,362	7,489,622	5,067,226
Total costs and expenses	2,999,592	2,730,965	9,915,376	8,026,015
<b>Operating loss</b>	<b>(2,999,592)</b>	<b>(2,720,027)</b>	<b>(9,775,005)</b>	<b>(7,948,082)</b>
<b>Other income (expense)</b>				
Gain on disposal of equipment	—	—	8,548	11,745
Interest expense	(17,933)	(5,169)	(45,483)	(15,854)
Other income (expense), net	(697)	(1,832)	3,055	(5,773)
Total other income (expense)	(18,630)	(7,001)	(33,880)	(9,882)
<b>Net loss</b>	<b>\$ (3,018,222)</b>	<b>\$ (2,727,028)</b>	<b>\$ (9,808,885)</b>	<b>\$ (7,957,964)</b>
<b>Other comprehensive income (loss):</b>				
Foreign currency translation income (loss)	(38,892)	84,711	133,448	(113,218)
Total other comprehensive income (loss)	(38,892)	84,711	133,448	(113,218)
<b>Comprehensive loss</b>	<b>\$ (3,057,114)</b>	<b>\$ (2,642,317)</b>	<b>\$ (9,675,437)</b>	<b>\$ (8,071,182)</b>
<b>Basic and diluted net loss per share</b>				
	<b>\$ (0.14)</b>	<b>\$ (0.21)</b>	<b>\$ (0.50)</b>	<b>\$ (0.64)</b>
<b>Weighted average number of common shares -</b>				
basic and diluted	21,604,072	12,848,376	19,556,607	12,528,995

See accompanying notes to these unaudited interim consolidated financial statements.



**Consolidated Financial Statements**  
**for the nine months ended September 30, 2019 and 2018 (unaudited)**

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

	Common stock issued and outstanding	Par value	Additional paid- in capital	Accumulated other comprehensive loss	Accumulated deficit	Total
Balance at December 31, 2017	8,895,094	\$ 8,895	\$ 126,718,186	\$ (213,884)	\$ (108,532,508)	\$ 17,980,689
Net loss					(2,449,787)	(2,449,787)
Other comprehensive income (loss)				(112,118)		(112,118)
Issuance of common stock, net	3,692,307	3,692	10,612,356			10,616,048
Exercise of warrants	76,981	77	250,111			250,188
Share based compensation	11,151	11	48,534			48,545
Balance at March 31, 2018	12,675,533	\$ 12,675	\$ 137,629,187	\$ (326,002)	\$ (110,982,295)	\$ 26,333,565
Net loss					(2,781,149)	(2,781,149)
Other comprehensive income (loss)				(85,811)		(85,811)
Exercise of warrants	172,843	173	561,567			561,740
Share based compensation			71,544			71,544
Balance at June 30, 2018	12,848,376	\$ 12,848	\$ 138,262,298	\$ (411,813)	\$ (113,763,444)	\$ 24,099,889
Net loss					(2,727,028)	(2,727,028)
Other comprehensive income (loss)				84,711		84,711
Share based compensation			71,593			71,593
Balance at September 30, 2018	12,848,376	\$ 12,848	\$ 138,333,891	\$ (327,102)	\$ (116,490,472)	\$ 21,529,165
	Common stock issued and outstanding	Par value	Additional paid- in capital	Accumulated other comprehensive loss	Accumulated deficit	Total
Balance at December 31, 2018	15,098,837	\$ 15,099	\$ 142,707,957	\$ (574,186)	\$ (118,914,567)	\$ 23,234,303
Net loss					(2,763,932)	(2,763,932)
Other comprehensive income (loss)				87,552		87,552
Issuance of common stock, net	3,345,282	3345	6,606,310			6,609,655
Exercise of warrants	76,797	77	250,347			250,424
Share based compensation	176,561	176	138,322			138,498
Balance at March 31, 2019	18,697,477	\$ 18,697	\$ 149,702,936	\$ (486,634)	\$ (121,678,499)	\$ 27,556,500
Net loss					(4,026,731)	(4,026,731)
Other comprehensive income (loss)				84,788		84,788
Issuance of common stock, net	2,901,078	2,901	5,782,792			5,785,693
Share based compensation			318,218			318,218
Balance at June 30, 2019	21,598,555	\$ 21,598	\$ 155,803,946	\$ (401,846)	\$ (125,705,230)	\$ 29,718,468
Net loss					(3,018,222)	(3,018,222)

<b>Other comprehensive income (loss)</b>					<b>(38,892)</b>		<b>(38,892)</b>
<b>Exercise of warrants</b>	<b>6,767</b>	<b>7</b>	<b>21,986</b>				<b>21,993</b>
<b>Share based compensation</b>			<b>196,736</b>				<b>196,736</b>
<b>Balance at September 30, 2019</b>	<b>21,605,322</b>	<b>\$ 21,605</b>	<b>\$ 156,022,668</b>	<b>\$</b>	<b>(440,738)</b>	<b>\$ (128,723,452)</b>	<b>\$ 26,880,083</b>

See accompanying notes to these unaudited interim consolidated financial statements.

**Consolidated Financial Statements**  
for the nine months ended September 30, 2019 and 2018 (unaudited)

**AquaBounty Technologies, Inc.**  
**Consolidated Statements of Cash Flows**  
**(Unaudited)**

	Nine Months Ended September 30,	
	2019	2018
<b>Operating activities</b>		
Net loss	\$ (9,808,885)	\$ (7,957,964)
Adjustment to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	928,476	557,718
Share-based compensation	653,452	191,682
Gain on disposal of equipment	(8,548)	(11,745)
Changes in operating assets and liabilities:		
Other receivables	45,880	97,353
Inventory	(400,716)	97,897
Prepaid expenses and other assets	(43,404)	210,796
Accounts payable and accrued liabilities	345,569	(654,997)
<b>Net cash used in operating activities</b>	<b>(8,288,176)</b>	<b>(7,469,260)</b>
<b>Investing activities</b>		
Purchase of property, plant and equipment	(1,824,831)	(3,375,306)
Proceeds from sale of equipment	8,548	21,758
Other investing activities	12	—
<b>Net cash used in investing activities</b>	<b>(1,816,271)</b>	<b>(3,353,548)</b>
<b>Financing activities</b>		
Proceeds from issuance of debt	900,767	—
Repayment of term debt	(57,001)	(43,437)
Proceeds from the issuance of common stock and warrants, net	12,395,348	10,616,048
Proceeds from the exercise of stock options and warrants, net	272,416	811,928
<b>Net cash provided by financing activities</b>	<b>13,511,530</b>	<b>11,384,539</b>
Effect of exchange rate changes on cash and cash equivalents	15,642	(23,921)
<b>Net change in cash and cash equivalents</b>	<b>3,422,725</b>	<b>537,810</b>
Cash and cash equivalents at beginning of period	2,990,196	492,861
<b>Cash and cash equivalents at the end of period</b>	<b>\$ 6,412,921</b>	<b>\$ 1,030,671</b>

**Supplemental disclosure of cash flow information and**

**non-cash transactions:**

Interest paid in cash	\$ 45,483	\$ 15,854
Property and equipment included in accounts payable and accrued liabilities	\$ 119,541	\$ 512,497
Acquisition of equipment under debt arrangement	\$ —	\$ 74,555

See accompanying notes to these unaudited interim consolidated financial statements.

**Notes to the consolidated financial statements for the  
nine months ended September 30, 2019 and 2018 (unaudited)**

## **1. Nature of business and organization**

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 traditional 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.

## **2. Basis of presentation**

The unaudited interim 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 Participações Ltda. All inter-company transactions and balances have been eliminated upon consolidation.

The unaudited interim consolidated financial statements have been prepared in conformity with generally accepted accounting principles in the United States (“GAAP”) consistent with those applied in, and should be read in conjunction with, the Company’s audited financial statements and related footnotes for the year ended December 31, 2018. The unaudited interim consolidated financial statements reflect all adjustments, consisting only of normal recurring adjustments, which are, in the opinion of management, necessary for a fair presentation of the Company’s financial position as of September 30, 2019, and its results of operations and cash flows for the interim periods presented and are not necessarily indicative of results for subsequent interim periods or for the full year. The unaudited interim consolidated financial statements do not include all of the information and footnotes required by GAAP for complete financial statements, as allowed by the relevant SEC rules and regulations; however, the Company believes that its disclosures are adequate to ensure that the information presented is not misleading.

### **Going Concern Uncertainty and Management’s Plan**

The accompanying financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business.

In the Company’s Annual Report on Form 10-K for December 31, 2018, management stated that there was substantial doubt about the Company’s ability to continue as a going concern due to its limited capital resources, and the Company’s independent registered public accounting firm emphasized this matter in its report to the shareholders and the Board of Directors. At that time, management prepared a plan to mitigate this doubt, which included an equity raise that subsequently provided the Company with \$12.4 million of net new funds in 2019.

At September 30, 2019, the Company’s cash balance totaled \$6.4 million. Management has evaluated the Company’s cash resources in view of its planned spending for ongoing operations, capital expenditures, and working capital for the next twelve months from the filing date and has determined that its current funds will be exhausted by June 30, 2020. As a result, there is substantial doubt about the Company’s ability to continue as a going concern within one year after the date that these financial statements are issued.

**Notes to the consolidated financial statements for the  
nine months ended September 30, 2019 and 2018 (unaudited)**

To mitigate this doubt, management plans to seek additional financing in the form of equity or debt, partnerships, or other non-dilutive transactions to fund the Company's cash requirements. However, the Company may not be able to raise additional financing or to do so at terms that are acceptable. In this event, management has the ability to reduce expenditures, slow down or delay capital spending, and divest assets in order to ensure its cash will extend through the next twelve months.

The accompanying consolidated financial statements do not include any adjustments that might result from the outcome of the above uncertainty.

#### **Net loss per share**

Basic and diluted net loss per share available to common stockholders has been calculated by dividing net loss by the weighted average number of common shares outstanding during the period. Basic net loss is based solely on the number of Common Shares outstanding during the period. 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.

#### **Accounting Pronouncements**

In February 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standard Update ("ASU") 2016-02, "Leases," which requires a lessee to recognize lease liabilities for the lessee's obligation to make lease payments arising from a lease, measured on a discounted basis, and right-of-use assets, representing the lessee's right to use, or control the use of, specified assets for the lease term. The ASU is effective for fiscal years beginning after December 15, 2018.

The Company adopted FASB ASU 2016-02 for lease accounting 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.

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.

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.

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.

### **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. In addition, as disclosed in "Item 1A. Risk Factors," below, and in "Item 1A. Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2018, which was filed on March 7, 2019, there are a number of other risks and uncertainties that may have a material effect on the operating results of our business and our financial condition.

#### **Concentration of credit risk**

Financial instruments that potentially subject the Company to credit risk consist principally of cash and cash equivalents and certificates of deposit. This risk is minimized by the Company's policy of investing in financial instruments with short-term maturities issued by highly rated financial institutions. The Company's cash balances may at times exceed insurance limitations. The Company holds cash balances in bank accounts located in Canada to fund its local operations. These amounts are subject to foreign currency exchange risk, which is mitigated by the Company's policy to limit the balances held in these accounts. Balances in Canadian bank accounts totaled \$242,324 at September 30, 2019.

**Notes to the consolidated financial statements for the  
nine months ended September 30, 2019 and 2018 (unaudited)**

**4. Inventory**

Major classifications of inventory are summarized as follows:

	September 30, 2019	December 31, 2018
Feed	\$ 120,639	\$ 24,288
Eggs	65,325	—
Packaging	—	8,913
Fish in process	291,113	42,908
Total inventory	\$ 477,077	\$ 76,109

**5. Property, plant and equipment**

Major classifications of property, plant and equipment are summarized as follows:

	September 30, 2019	December 31, 2018
Land	\$ 713,703	\$ 704,567
Building and improvements	13,119,001	9,244,737
Construction in process	2,010,705	6,091,265
Equipment	11,930,465	9,713,030
Office furniture and equipment	201,194	192,606
Vehicles	27,621	26,832
Total property and equipment	\$ 28,002,689	\$ 25,973,037
Less accumulated depreciation and amortization	(3,221,984)	(2,256,269)
Property, plant and equipment, net	\$ 24,780,705	\$ 23,716,768

During the quarter ended September 30, 2019, a significant portion of the Rollo Bay facility was placed in service. 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. Remaining in construction in process is \$1.7 million for construction costs to complete the farm site and another \$374 thousand has been committed.

**6. Accounts payable and accrued liabilities**

Accounts payable and accrued liabilities include the following:

	September 30, 2019	December 31, 2018
Accounts payable	\$ 373,775	\$ 366,917
Accrued compensation	279,607	223,481
Accrued professional fees and research costs	289,885	185,992
Accrued franchise and excise taxes	91,665	23,678
Accrued construction costs	67,171	13,716
Accrued other	518	11,116
Accounts payable and accrued liabilities	\$ 1,102,621	\$ 824,900

**Notes to the consolidated financial statements for the  
nine months ended September 30, 2019 and 2018 (unaudited)**

## 7. Debt

The current material terms and conditions of debt outstanding are as follows:

Original loan amount	Interest rate	Monthly repayment	Maturity date	September 30, 2019	December 31, 2018
ACOA AIF grant (C\$2,871,919)	0%	Royalties	-	\$ 2,168,873	\$ 2,106,840
ACOA term loan (C\$337,000)	0%	C\$3,120	June 2026	188,528	203,735
ACOA term loan (C\$500,000)	0%	C\$4,630	November 2028	377,600	—
Kubota Canada Ltd. (C\$95,961)	0%	C\$1,142	January 2025	55,215	61,178
Finance PEI term loan (C\$2,717,093)	4%	C\$16,313	November 2023	1,756,392	1,219,681
Total debt				\$ 4,546,608	\$ 3,591,434
less: current portion				(149,069)	(71,613)
Long-term debt				\$ 4,397,539	\$ 3,519,821

Estimated principal payments remaining on loan debt are as follows:

Year	AIF	ACOA	FPEI	Kubota	Total
2019	\$ —	\$ 7,069	\$ 19,507	\$ 2,588	\$ 29,164
2020	—	70,234	79,808	10,353	160,395
2021	—	70,234	83,064	10,353	163,651
2022	—	70,234	86,448	10,353	167,035
2023	—	70,234	1,487,565	10,353	1,568,152
Thereafter	2,168,873	278,123	—	11,215	2,458,211
Total	\$ 2,168,873	\$ 566,128	\$ 1,756,392	\$ 55,215	\$ 4,546,608

On March 7, 2019, the Canadian Subsidiary received C\$500 thousand under a credit facility with the Atlantic Canada Opportunities Agency (“ACOA”). The proceeds of the loan are to be used to partially finance the construction at the Rollo Bay site. The loan will be repaid over a term of nine years and has a zero percent interest rate.

In 2018, the Canadian Subsidiary obtained a new loan from Finance PEI (“FPEI”), which incorporated the existing loan and provides C\$2.0 million (\$1.5 million) of additional funds. As of December 31, 2018, C\$1.0 million (\$734 thousand) had been drawn down. On May 17, 2019, an additional C\$700 thousand (\$535 thousand) had been drawn down. The final C\$300 thousand (\$230 thousand) is anticipated to be drawn down during the fourth quarter of 2019. Payments commenced in June 2019. 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.

Other than these loans, there have been no material changes to the Company’s debt arrangements as disclosed in our annual report on Form 10-K for the year ended December 31, 2018.

The Company recognized interest expense of \$44,415 and \$15,782 for the nine months ended September 30, 2019 and 2018, respectively, on its interest-bearing debt.

## 8. Leases

Lease expense for the nine months ended September 30, 2019, amounted to \$102,385. The weighted average remaining lease term of the Company’s operating leases was 22.8 years as of September 30, 2019. Lease payments included in operating cash flows totaled \$121,788 for the nine months ended September 30, 2019.

**Notes to the consolidated financial statements for the  
nine months ended September 30, 2019 and 2018 (unaudited)**

The table below summarizes the Company's lease obligations and remaining payments at September 30, 2019:

	Lease Type	End Date	Remaining Years	September 30, 2019		January 1, 2019	
				Remaining Payments	Lease Liability	Remaining Payments	Lease Liability
Maynard Office Lease	Operating	Mar 2023	3.5	\$ 231,568	\$ 198,758	\$ 278,414	\$ 234,685
Panama Farm Lease	Operating	Apr 2019	0	—	—	60,000	59,013
Indiana Auto Lease	Operating	Feb 2021	1.4	7,210	6,656	10,842	9,897
Indiana Well Lease	Operating	Dec 2048	29.3	706,110	224,640	717,420	228,844
<b>Total leases</b>				<b>\$ 944,888</b>	<b>\$ 430,054</b>	<b>\$ 1,066,676</b>	<b>\$ 532,439</b>
Less: current portion				(84,453)	(61,315)	(142,780)	(117,345)
<b>Long-term leases</b>				<b>\$ 860,435</b>	<b>\$ 368,739</b>	<b>\$ 923,896</b>	<b>\$ 415,094</b>

Remaining payments under leases are as follows at September 30, 2019:

Year	Office	Auto	Well	Amount
2019	\$ 16,011	\$ 1,211	\$ 3,770	\$ 20,992
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	16,902	—	16,972	33,874
Thereafter	—	—	637,360	637,360
<b>Total Lease Payments</b>	<b>\$ 231,568</b>	<b>\$ 7,210</b>	<b>\$ 706,110</b>	<b>\$ 944,888</b>

## 9. Stockholders' equity

### Recent issuances

On March 21, 2019, the Company completed a public offering of 3,345,282 Common Shares. Net proceeds to the Company were \$6.6 million after deducting discounts, fees, and expenses.

On April 5, 2019, the Company completed a public offering of 2,554,590 Common Shares. Net proceeds to the Company were \$5.2 million after deducting discounts, fees, and expenses.

On April 17, 2019, the Company issued 346,488 Common Shares in conjunction with the overallotment exercise by the Company's investment banker. Net proceeds to the Company were \$696 thousand after deducting discounts, fees, and expenses.

### Warrants

The following table summarizes information about outstanding warrants at September 30, 2019:

	Number of warrant shares	Weighted average exercise price
Outstanding at December 31, 2018	1,745,868	\$3.25
Exercised	(83,564)	3.25
Outstanding at September 30, 2019	1,662,304	\$3.25
Exercisable at September 30, 2019	1,662,304	\$3.25

During the nine months ended September 30, 2019, the Company issued 83,564 Common Shares at \$3.25 per share in conjunction with the exercise of warrants, with total proceeds of \$272 thousand.



**Notes to the consolidated financial statements for the  
nine months ended September 30, 2019 and 2018 (unaudited)**

**Share-based compensation**

*Restricted stock*

A summary of the Company's shares of restricted stock as of September 30, 2019, is as follows:

	Shares	Weighted average grant date fair value
Balance at December 31, 2018	8,867	\$3.51
Granted	176,561	2.13
Vested	(127,133)	2.19
Balance at September 30, 2019	58,295	\$2.21

During the nine months ended September 30, 2019 and 2018, the Company expensed \$279,026 and \$20,421, respectively, related to the restricted stock awards. At September 30, 2019, the balance of unearned share-based compensation to be expensed in future periods related to the restricted stock awards is \$128,307. The period over which the unearned share-based compensation is expected to be earned is approximately 2.5 years.

*Stock options*

The Company's option activity is summarized as follows:

	Number of options	Weighted average exercise price
Outstanding at December 31, 2018	339,964	\$7.09
Issued	278,500	2.21
Expired	(79,539)	3.41
Outstanding at September 30, 2019	538,925	\$5.11
Exercisable at September 30, 2019	401,847	\$5.99

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

	March 2019	April 2019	June 2019
Expected volatility	89%	94%	96%
Risk free interest rate	2.53%	2.28%	1.85%
Expected dividend yield	0%	0%	0%
Expected life (in years)	5	5	5

The weighted average fair value of stock options granted during the nine months ended September 30, 2019, was \$2.21.

The total intrinsic value of all options outstanding was \$80,305 and \$0 at September 30, 2019, and December 31, 2018, respectively. The total intrinsic value of exercisable options was \$41,492 and \$0 at September 30, 2019, and December 31, 2018, respectively.

The following table summarizes information about options outstanding and exercisable at September 30, 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 exercise price of outstanding and exercisable options
\$2.50 - \$5.70	403,663	9.1	270,120	
\$6.90 - \$9.60	52,841	3.0	52,841	
\$10.50 - \$10.80	4,000	4.4	4,000	
\$14.20 - \$23.40	78,421	6.5	74,886	
	538,925		401,847	\$5.99

**Notes to the consolidated financial statements for the  
nine months ended September 30, 2019 and 2018 (unaudited)**

Total share-based compensation on stock options amounted to \$374,426 and \$171,261 for the nine months ended September 30, 2019 and 2018, respectively. At September 30, 2019, the balance of unearned share-based compensation to be expensed in future periods related to unvested share-based awards was \$229,807. The period over which the unearned share-based compensation is expected to be earned is approximately 0.8 years.

During the period ended June 30, 2019, the Company recognized share based compensation of \$134,258 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 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 at June 30, 2019:

Grant date	Number of options	Expense			Total
		Previous	Accelerated	Incremental	
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

#### 10. 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.

See Note 5 for commitments related to our renovation and construction costs.

There have been no other material changes to the commitments and contingencies disclosed in our Annual Report on Form 10-K as of and for the year ended December 31, 2018.

#### 11. Related Party Collaboration Agreement

In February 2013, the Company entered into an Exclusive Channel Collaboration Agreement ("ECC") with Intrexon Corporation ("Intrexon") pursuant to which the Company will use Intrexon's UltraVector and other technology platforms to develop and commercialize additional bioengineered traits in finfish for human consumption.

Total Intrexon service costs incurred under the terms of this agreement for the nine months ended September 30, 2019 and 2018, amounted to \$18,550 and \$190,195, respectively, and are included as a component of research and development expense in our Consolidated Statements of Operations and Comprehensive Loss. For the three months ended September 30, 2019 and 2018, service costs incurred amounted to \$2,816 and \$54,154, respectively. Included in accounts payable and accrued liabilities at September 30, 2019, and December 31, 2018, are amounts due to Intrexon under the ECC totaling \$1,000 and \$800, respectively.

**\$10,000,000**



**Common Stock**

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**PROSPECTUS**

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**LAKE STREET**

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The date of this prospectus is \_\_\_\_\_, 2020

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## PART II

### INFORMATION NOT REQUIRED IN PROSPECTUS

**Item 13. Other Expenses of Issuance and Distribution.**

The following table sets forth the costs and expenses, other than the underwriting discounts and commissions, payable by the Registrant in connection with the sale of common stock being registered. All amounts are estimates except for the Securities and Exchange Commission (the “SEC”), registration fee, the Financial Industry Regulatory Authority Inc. (“FINRA”) filing fee and the Nasdaq listing fee.

Item	Amount to be paid
SEC registration fee	\$ 1,947
FINRA filing fee	\$ 2,750
Nasdaq listing fee	\$ —
Printing expenses	\$ 29,303
Legal fees and expenses	\$ 300,000
Accounting fees and expenses	\$ 55,000
Blue Sky fees and expenses (including legal fees)	\$ 1,000
Transfer agent and registrar fees and expenses	\$ 10,000
Miscellaneous	\$ —
Total	\$ 400,000

**Item 14. Indemnification of Directors and Officers.**

Section 145 of the Delaware General Corporation Law authorizes a corporation’s board of directors to grant, and authorizes a court to award, indemnity to officers, directors, and other corporate agents.

Our third amended and restated certificate of incorporation contains provisions that limit the liability of our directors for monetary damages to the fullest extent permitted by Delaware law. Consequently, our directors will not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for the following:

- any breach of their duty of loyalty to our company or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- any transaction from which they derived an improper personal benefit.

Any amendment to, or repeal of, these provisions will not eliminate or reduce the effect of these provisions in respect of any act, omission, or claim that occurred or arose prior to that amendment or repeal. If the Delaware General Corporation Law is amended to provide for further limitations on the personal liability of directors of corporations, then the personal liability of our directors will be further limited to the greatest extent permitted by the Delaware General Corporation Law.

In addition, our amended and restated bylaws provide that we will indemnify, to the fullest extent permitted by law, any person who is or was a party or is threatened to be made a party to any action, suit, or proceeding by reason of the fact that he or she is or was one of our directors or officers or is or was serving at our request as a director or officer of another corporation, partnership, joint venture, trust, or other enterprise. Our amended and restated bylaws provide that we may indemnify to the fullest extent permitted by law any person who is or was a party or is threatened to be made a party to any action, suit, or proceeding by reason of the fact that he or she is or was one of our employees or agents or is or was serving at our request as an employee or agent of another corporation, partnership, joint venture, trust, or other enterprise. Our amended and restated bylaws also provide that we must advance expenses incurred by or on behalf of a director or officer in advance of the final disposition of any action or proceeding, subject to very limited exceptions.

Further, we have entered into indemnification agreements with each of our directors and executive officers that may be broader than the specific indemnification provisions contained in the Delaware General Corporation Law. These indemnification agreements require us, among other things, to indemnify our directors and executive officers against liabilities that may arise by reason of their status or service. These indemnification agreements also require us to advance all expenses incurred by the directors and executive officers in investigating or defending any such action, suit, or proceeding. We believe that these agreements are necessary to attract and retain qualified individuals to serve as directors and executive officers.

The limitation of liability and indemnification provisions that are included in our third amended and restated certificate of incorporation, amended and restated bylaws, and in indemnification agreements that we have entered into with our directors and executive officers may discourage stockholders from bringing a lawsuit against our directors and executive officers for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against our directors and executive officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be harmed to the extent that we pay the costs of settlement and damage awards against directors and executive officers as required by these indemnification provisions. At present, we are not aware of any pending litigation or proceeding involving any person who is or was one of our directors, officers, employees, or other agents or is or was serving at our request as a director, officer, employee, or agent of another corporation, partnership, joint venture, trust, or other enterprise, for which indemnification is sought, and we are not aware of any threatened litigation that may result in claims for indemnification.

We have obtained insurance policies under which, subject to the limitations of the policies, coverage is provided to our directors and executive officers against loss arising from claims made by reason of breach of fiduciary duty or other wrongful acts as a director or executive officer, including claims relating to public securities matters, and to us with respect to payments that may be made by us to these directors and executive officers pursuant to our indemnification obligations or otherwise as a matter of law.

In any underwriting agreement we enter into in connection with the sale of common stock being registered hereby, the underwriter will agree to indemnify, under certain conditions, us, our directors, our officers, and persons who control us within the meaning of the Securities Act of 1933, as amended, against certain liabilities.

**Item 15. Recent Sales of Unregistered Securities.**

None.

**Item 16. Exhibits and Financial Statement Schedules.**

**(a) Exhibits.**

<u>Exhibit Number</u>	<u>Exhibit Description</u>
<a href="#">1.1</a>	<a href="#">Form of Underwriting Agreement.</a>
<a href="#">3.1*</a>	<a href="#">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).</a>
<a href="#">3.2*</a>	<a href="#">Certificate of Amendment of Third Amended and Restated Certificate of Incorporation 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).</a>
<a href="#">3.3*</a>	<a href="#">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).</a>
<a href="#">3.4*</a>	<a href="#">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).</a>
<a href="#">4.1*</a>	<a href="#">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).</a>
<a href="#">5.1*</a>	<a href="#">Form of Opinion of Goodwin Procter LLP (incorporated by reference to Exhibit 5.1 to the Registrant's Registration Statement on Form S-1, filed on January 15, 2020).</a>
<a href="#">10.1*</a>	<a href="#">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).</a>
<a href="#">10.2*†</a>	<a href="#">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).</a>
<a href="#">10.3*†</a>	<a href="#">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).</a>
<a href="#">10.4*†</a>	<a href="#">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).</a>
<a href="#">10.5*†</a>	<a href="#">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).</a>
<a href="#">10.6*†</a>	<a href="#">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).</a>
<a href="#">10.7*†</a>	<a href="#">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).</a>

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<u>Exhibit Number</u>	<u>Exhibit Description</u>
<a href="#"><u>10.8*†</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.9*†</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.10*</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.11*</u></a>	<a href="#"><u>Exclusive Channel Collaboration Agreement, by and between AquaBounty Technologies, Inc. and Intrexon Corporation, dated February 14, 2013 (incorporated by reference to Exhibit 10.8 to the Registrant’s Registration Statement on Form 10, filed on November 7, 2016).</u></a>
<a href="#"><u>10.12*</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.13*</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.14*</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.15*</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.16*</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.17*</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.18*</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.19*</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.20*</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.21*</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.22*</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.23*</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.24*†</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.25*†</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.26*†</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.27*</u></a>	<a href="#"><u>Collaborative Research Agreement, by and between AQUA Bounty Canada Inc. and Tethys Aquaculture Canada, Inc., dated March 22, 2012 (incorporated by reference to Exhibit 10.18 to the Registrant’s Registration Statement on Form 10, filed on November 7, 2016).</u></a>

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<u>Exhibit Number</u>	<u>Exhibit Description</u>
<a href="#"><u>10.28*</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>10.29*</u></a>	<a href="#"><u>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).</u></a>
<a href="#"><u>21.1</u></a>	<a href="#"><u>List of Subsidiaries of AquaBounty Technologies, Inc.</u></a>
<a href="#"><u>23.1</u></a>	<a href="#"><u>Consent of Wolf &amp; Company, P.C.</u></a>
<a href="#"><u>23.2*</u></a>	<a href="#"><u>Consent of Goodwin Procter LLP (incorporated by reference to Exhibit 5.1 to the Registrant's Registration Statement on Form S-1, filed on January 15, 2020, into which this Consent was included).</u></a>
<a href="#"><u>24.1</u></a>	<a href="#"><u>Powers of attorney (included on the signature page to this Registration Statement).</u></a>

\* Incorporated herein by reference as indicated.

† Management contract or compensatory plan or arrangement.

### **(b) Financial Statement Schedules.**

Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the consolidated financial statements or notes thereto.

### **Item 17. Undertakings.**

The undersigned Registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended (the "Securities Act"), may be permitted to directors, officers, and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer, or controlling person of the Registrant in the successful defense of any action, suit, or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

- (1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective.
- (2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

### SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Amendment No. 1 to Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Maynard, Commonwealth of Massachusetts, on the 3rd day of February, 2020.

#### AQUABOUTY TECHNOLOGIES, INC.

By: /s/ Sylvia A. Wulf  
Sylvia A. Wulf  
Chief Executive Officer, President, and Director

### SIGNATURES

Pursuant to the requirements of the Securities Act, this Amendment No. 1 to Registration Statement on Form S-1 has been signed by the following persons in the capacities and on the dates indicated.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
<u>/s/ Sylvia A. Wulf</u> Sylvia A. Wulf	President, Chief Executive Officer and Director (Principal Executive Officer)	February 3, 2020
<u>/s/ David A. Frank</u> David A. Frank	Chief Financial Officer and Treasurer (Principal Financial Officer and Principal Accounting Officer)	February 3, 2020
<u>*</u> Richard J. Clothier	Chairman of the Board, Director	February 3, 2020
<u>*</u> Richard L. Huber	Director	February 3, 2020
<u>*</u> Jeffrey T. Perez	Director	February 3, 2020
<u>*</u> Christine St.Clare	Director	February 3, 2020
<u>*</u> Rick Sterling	Director	February 3, 2020
<u>*</u> James C. Turk	Director	February 3, 2020
<u>*By: /Sylvia A. Wulf/</u> Sylvia A. Wulf <i>Attorney-in-Fact</i>		



**[•] SHARES OF COMMON STOCK**  
**OF**  
**AQUABOUTY TECHNOLOGIES, INC.**  
**UNDERWRITING AGREEMENT**

[•], 2020

LAKE STREET CAPITAL MARKETS, LLC  
As Representative of the several  
Underwriters named in Schedule I hereto  
c/o Lake Street Capital Markets, LLC  
920 Second Ave South, Suite 700  
Minneapolis, Minnesota 55402

Ladies and Gentlemen:

The undersigned, AquaBounty Technologies, Inc., a company incorporated under the laws of Delaware (collectively with its subsidiaries and affiliates, including, without limitation, all entities disclosed or described in the Registration Statement as being subsidiaries or affiliates of AquaBounty Technologies, Inc., the “Company”), hereby confirms its agreement (this “Agreement”) with the several underwriters (such underwriters, including the Representative (as defined below), the “Underwriters” and each an “Underwriter”) named in Schedule I hereto for which Lake Street Capital Markets, LLC is acting as representative to the several Underwriters (the “Representative” and if there are no Underwriters other than the Representative, references to multiple Underwriters shall be disregarded and the term Representative as used herein shall have the same meaning as Underwriter) on the terms and conditions set forth herein.

It is understood that the several Underwriters are to make a public offering of the Public Shares as soon as the Representative deems it advisable to do so. The Public Shares are to be initially offered to the public at the initial public offering price set forth in the Prospectus. The Representative may from time to time thereafter change the public offering price and other selling terms.

It is further understood that you will act as the Representative for the Underwriters in the offering and sale of the Closing Shares and, if any, the Option Shares in accordance with this Agreement.

**ARTICLE I.**  
**DEFINITIONS**

1.1 Definitions. In addition to the terms defined elsewhere in this Agreement, for all purposes of this Agreement, the following terms have the meanings set forth in this Section 1.1:

“Action” shall have the meaning ascribed to such term in Section 3.1(k).

“Affiliate” means with respect to any Person, any other Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with such Person as such terms are used in and construed under Rule 405 under the Securities Act.

“Board of Directors” means the board of directors of the Company.

“Business Day” means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

“Closing” means the closing of the purchase and sale of the Closing Shares pursuant to Section 2.1.

“Closing Date” means the hour and the date on the Trading Day on which all conditions precedent to (i) the Underwriters’ obligations to pay the Closing Purchase Price and (ii) the Company’s obligations to deliver the Closing Shares, in each case, have been satisfied or waived, but in no event later than 10:00 a.m. (New York City time) on the second (2<sup>nd</sup>) Trading Day following the date hereof or at such earlier time as shall be agreed upon by the Representative and the Company.

“Closing Purchase Price” shall have the meaning ascribed to such term in Section 2.1(b), which aggregate purchase price shall be net of the underwriting discounts and commissions.

“Closing Shares” shall have the meaning ascribed to such term in Section 2.1(a).

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the common stock of the Company, par value \$0.001 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“Company Auditor” means Wolf & Company, P.C., with offices located at 99 High Street, Boston, MA 02110.

“Company Counsel” means Goodwin Procter LLP, with offices located at 100 Northern Avenue, Boston, Massachusetts 02210.

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Execution Date” shall mean the date on which the parties execute and enter into this Agreement.

“Exempt Issuance” means the issuance of (a) shares of Common Stock or options to employees, officers or directors of the Company pursuant to any stock or option plan (including any award granted under such plan) duly adopted for such purpose by a majority of the non-employee members of the Board of Directors or a majority of the members of a committee of non-employee directors established for such purpose, (b) securities upon the exercise or exchange of or conversion of any securities issued hereunder and/or other securities exercisable or exchangeable for or convertible into shares of Common Stock issued and outstanding on the date of this Agreement,

provided that such securities have not been amended since the date of this Agreement to increase the number of such securities or to decrease the exercise price, exchange price or conversion price of such securities (other than in connection with stock splits or combinations) or to extend the terms of such securities, (c) securities issued pursuant to acquisitions or strategic transactions approved by a majority of the disinterested directors of the Company, provided that such securities are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights that require or permit the filing of any registration statement in connection therewith within ninety (90) days following the Closing Date, and provided that any such issuance shall only be to a Person (or to the equity holders of a Person) which is, itself or through its subsidiaries, an operating company or an owner of an asset in a business synergistic with the business of the Company and shall provide to the Company additional benefits in addition to the investment of funds, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities, (d) shares of Common Stock pursuant to this Agreement, and (e) up to \$10,000,000 of securities issued to the Specified Investors, provided that such securities are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights that require or permit the filing of any registration statement in connection therewith within ninety (90) days following the Closing Date.

“Faegre” means Faegre Baker Daniels LLP, with offices located at 2200 Wells Fargo Center, 90 South Seventh Street, Minneapolis, Minnesota 55402

“FCPA” means the Foreign Corrupt Practices Act of 1977, as amended.

“FINRA” means the Financial Industry Regulatory Authority.

“GAAP” shall have the meaning ascribed to such term in Section 3.1(i).

“Indebtedness” means (a) any liabilities for borrowed money or amounts owed in excess of \$100,000 (other than trade accounts payable incurred in the ordinary course of business), (b) all guaranties, endorsements and other contingent obligations in respect of indebtedness of others, whether or not the same are or should be reflected in the Company’s consolidated balance sheet (or the notes thereto), except guaranties by endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business; and (c) the present value of any lease payments in excess of \$50,000 due under leases required to be capitalized in accordance with GAAP.

“Intellectual Property Rights” shall have the meaning ascribed to such term in Section 3.1(o).

“Liens” means a lien, charge, pledge, security interest, encumbrance, right of first refusal, preemptive right or other restriction.

“Lock-Up Agreements” means the lock-up agreements that are delivered on the date hereof by each of the Company’s officers and directors and Randal J. Kirk, in form and substance reasonably satisfactory to the Representative.

“Material Adverse Effect” means (i) a material adverse effect on the legality, validity or enforceability of any Transaction Document, (ii) a material adverse effect on the results of operations, assets, business, prospects, management, properties, operations, or condition (financial or otherwise) of the Company and the Subsidiaries, taken as a whole or (iii) a material adverse effect on the

Company's ability to perform in any material respect on a timely basis its obligations under any Transaction Document.

“Offering” shall have the meaning ascribed to such term in Section 2.1(c).

“Option Closing Date” shall have the meaning ascribed to such term in Section 2.2(c).

“Option Closing Purchase Price” shall have the meaning ascribed to such term in Section 2.2(b), which aggregate purchase price shall be net of the underwriting discounts and commissions.

“Option Shares” shall have the meaning ascribed to such term in Section 2.2(a)(ii).

“Option Shares” shall have the meaning ascribed to such term in Section 2.2(a).

“Over-Allotment Option” shall have the meaning ascribed to such term in Section 2.2.

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Preliminary Prospectus” means any preliminary prospectus relating to the Public Shares included in the Registration Statement or filed with the Commission pursuant to Rule 424(a) and each prospectus that omits Rule 430A information used after the effective time of the Registration Statement.

“Proceeding” means an action, claim, suit, investigation or proceeding (including, without limitation, an informal investigation or partial proceeding, such as a deposition), whether commenced or threatened.

“Prospectus” means the prospectus that discloses the public offering price and other final terms of the Public Shares and the offering and otherwise satisfies Section 10(a) of the Securities Act.

“Public Shares” means, collectively, the Closing Shares and, if any, the Option Shares.

“Registration Statement” means, collectively, the various parts of the registration statement prepared by the Company on Form S-1 (File No. [●]) with respect to the Public Shares, each as amended as of the date hereof, including the Prospectus and the Preliminary Prospectus, and all exhibits filed with or incorporated by reference into such registration statement [and includes the Rule 462(b) Registration Statement].

“Required Approvals” shall have the meaning ascribed to such term in Section 3.1(e).

“Rule 144” means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

“Rule 424” means Rule 424 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

[“Rule 462(b) Registration Statement” means the registration statement prepared by the Company as a post-effective amendment to the Registration Statement, which was filed with the Commission on or prior to the date hereof and became automatically effective pursuant to Rule 462(b) promulgated by the Commission pursuant to the Securities Act.]

“SEC Reports” shall have the meaning ascribed to such term in Section 3.1(i).

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Share Purchase Price” shall have the meaning ascribed to such term in Section 2.1(b).

“Shares” means, collectively, the shares of Common Stock delivered to the Underwriters in accordance with Section 2.1(a) and Section 2.2(a).

“Specified Investors” means investors set forth on Schedule II hereto.

“Subsidiary” means any subsidiary of the Company and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

“Trading Day” means a day on which the principal Trading Market is open for trading.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, or the New York Stock Exchange (or any successors to any of the foregoing).

“Transaction Documents” means this Agreement and any other documents or agreements executed in connection with the transactions contemplated hereunder.

“Transfer Agent” means Computershare Trust Company, N.A., with offices located at 480 Washington Blvd., Jersey City, NJ 07310, and any successor transfer agent of the Company.

“Variable Rate Transaction” shall have the meaning ascribed to such term in Section 4.18(b).

## **ARTICLE II. PURCHASE AND SALE**

### **2.1 Closing.**

(a) Upon the terms and subject to the conditions set forth herein, the Company agrees to sell in the aggregate [●] shares of Common Stock, and each Underwriter agrees to purchase, severally and not jointly, at the Closing, the number of shares of Common Stock (the “Closing Shares”) set forth opposite the name of such Underwriter on Schedule I hereof; and

(b) The aggregate purchase price for the Closing Shares shall equal the amount set forth opposite the name of such Underwriter on Schedule I hereto (the “Closing Purchase Price”). The purchase price for one Share shall be \$[●] (the “Share Purchase Price”); and

(c) On the Closing Date, each Underwriter shall deliver or cause to be delivered to the Company, via wire transfer, immediately available funds equal to such Underwriter's Closing Purchase Price and the Company shall deliver to, or as directed by, such Underwriter its respective Closing Shares and the Company shall deliver the other items required pursuant to Section 2.3 deliverable at the Closing. Upon satisfaction of the covenants and conditions set forth in Sections 2.3 and 2.4, the Closing shall occur at the offices of Faegre or such other location as the Company and Representative shall mutually agree. The Public Shares are to be offered initially to the public at the offering price set forth on the cover page of the Prospectus (the "Offering").

## 2.2 Over-Allotment Option.

(a) For the purposes of covering any over-allotments in connection with the distribution and sale of the Closing Shares, the Representative is hereby granted an option (the "Over-Allotment Option") to purchase, in the aggregate, up to [●] shares of Common Stock (the "Option Shares").

(b) In connection with an exercise of the Over-Allotment Option, the purchase price to be paid for the Option Shares is equal to the product of the Share Purchase Price multiplied by the number of Option Shares to be purchased (the aggregate purchase price to be paid on an Option Closing Date, the "Option Closing Purchase Price").

(c) The Over-Allotment Option granted pursuant to this Section 2.2 may be exercised by the Representative as to all (at any time) or any part (from time to time) of the Option Shares within 45 days after the Execution Date. An Underwriter will not be under any obligation to purchase any Option Shares prior to the exercise of the Over-Allotment Option by the Representative. The Over-Allotment Option granted hereby may be exercised by the giving of oral notice to the Company from the Representative, which must be confirmed in writing by overnight mail or facsimile or other electronic transmission setting forth the number of Option Shares to be purchased and the date and time for delivery of and payment for the Option Shares (each, an "Option Closing Date"), which will not be later than two (2) full Business Days after the date of the notice or such other time as shall be agreed upon by the Company and the Representative, at the offices of Faegre or at such other place (including remotely by facsimile or other electronic transmission) as shall be agreed upon by the Company and the Representative. If such delivery and payment for the Option Shares does not occur on the Closing Date, each Option Closing Date will be as set forth in the notice. Upon exercise of the Over-Allotment Option, the Company will become obligated to convey to the Underwriters, and, subject to the terms and conditions set forth herein, the Underwriters will become obligated to purchase, the number of Option Shares specified in such notice. The Representative may cancel the Over-Allotment Option at any time prior to the expiration of the Over-Allotment Option by written notice to the Company.

2.3 Deliveries. The Company shall deliver or cause to be delivered to each Underwriter (if applicable) the following:

(i) At the Closing Date, the Closing Shares and, as to each Option Closing Date, if any, the applicable Option Shares, which shares shall be delivered via The Depository Trust Company Deposit or Withdrawal at Custodian system for the accounts of the several Underwriters;

(ii) At the Closing Date, a legal opinion and negative assurance letter of Company Counsel addressed to the Underwriters, including, without limitation, a negative assurance letter, substantially in the form of Exhibit A attached hereto and as to the Closing Date and as to each

Option Closing Date, if any, a bring-down opinion and negative assurance letter from Company Counsel in form and substance reasonably satisfactory to the Representative;

(iii) At the Closing Date, opinions of IP legal counsel and FDA legal counsel to the Company, including, without limitation, a negative assurance letter, addressed to the Underwriters and in form and substance satisfactory to the Representative and as to each Option Closing Date, if any, a bring-down opinion and negative assurance letter from IP legal counsel and FDA legal counsel in form and substance reasonably satisfactory to the Representative;

(iv) Contemporaneously herewith, a comfort letter, addressed to the Underwriters and in form and substance reasonably satisfactory in all respects to the Representative from the Company Auditor dated, respectively, as of the date of this Agreement and a bring-down letter dated as of the Closing Date and each Option Closing Date, if any;

(v) [On the Closing Date and on each Option Closing Date, the duly executed and delivered Officer's Certificate, in form and substance reasonably satisfactory to the Representative;

(vi) On the Closing Date and on each Option Closing Date, the duly executed and delivered Secretary's Certificate, in form and substance reasonably satisfactory to the Representative;] [and]

(vii) Contemporaneously herewith, the duly executed and delivered Lock-Up Agreements; [and]

(viii) [On the date hereof and on each Closing Date, the Company shall have furnished to you, as Representative of the several Underwriters, a certificate, dated as of such date, signed on behalf of the Company by its chief financial officer, regarding certain financial information in, or incorporated by reference in, the Prospectus, in form and substance reasonably satisfactory to the Representative;]

2.4 Closing Conditions. The respective obligations of each Underwriter hereunder in connection with the Closing and each Option Closing Date, if any, are subject to the following conditions being met:

(i) the accuracy in all material respects when made and on the date in question (other than representations and warranties of the Company already qualified by materiality, which shall be true and correct in all respects) of the representations and warranties of the Company contained herein (unless as of a specific date therein);

(ii) all obligations, covenants and agreements of the Company required to be performed at or prior to the date in question shall have been performed;

(iii) the delivery by the Company of the items set forth in Section 2.3 of this Agreement;

(iv) the Registration Statement shall be effective on the date of this Agreement and at each of the Closing Date and each Option Closing Date, if any, no stop order suspending the effectiveness of the Registration Statement shall have been issued and no proceedings for that purpose shall have been instituted or shall be pending or contemplated by the Commission and any request on the part of the Commission for additional information shall have been complied with to the reasonable satisfaction of the Representative;

(v) by the Execution Date, if required by FINRA, the Underwriters shall have received clearance from FINRA as to the amount of compensation allowable or payable to the Underwriters as described in the Registration Statement;

(vi) the Closing Shares and the Option Shares have been approved for listing on the Trading Market, subject to official notice of issuance; and

(vii) prior to and on each of the Closing Date and each Option Closing Date, if any: (i) there shall have been no material adverse change or development involving a prospective material adverse change in the condition or prospects or the business activities, financial or otherwise, of the Company from the latest dates as of which such condition is set forth in the Registration Statement and Prospectus; (ii) no action suit or proceeding, at law or in equity, shall have been pending or threatened against the Company or any Affiliate of the Company before or by any court or federal or state commission, board or other administrative agency wherein an unfavorable decision, ruling or finding would reasonably be expected to materially adversely affect the business, operations, prospects or financial condition or income of the Company, except as set forth in the Registration Statement and Prospectus; (iii) no stop order shall have been issued under the Securities Act and no proceedings therefor shall have been initiated or threatened by the Commission; and (iv) the Registration Statement and the Prospectus and any amendments or supplements thereto shall contain all material statements which are required to be stated therein in accordance with the Securities Act and the rules and regulations thereunder and shall conform in all material respects to the requirements of the Securities Act and the rules and regulations thereunder, and neither the Registration Statement nor the Prospectus nor any amendment or supplement thereto shall contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

**ARTICLE III.  
REPRESENTATIONS AND WARRANTIES**

3.1 Representations and Warranties of the Company. The Company represents and warrants to the Underwriters as of the Execution Date, as of the Closing Date and as of each Option Closing Date, if any, as follows:

(a) Subsidiaries. All of the direct and indirect Subsidiaries of the Company are set forth in the SEC Reports. The Company owns, directly or indirectly, all of the capital stock or other equity interests of each Subsidiary free and clear of any Liens, and all of the issued and outstanding shares of capital stock of each Subsidiary are validly issued and are fully paid, non-assessable and free of preemptive and similar rights to subscribe for or purchase securities.

(b) Organization and Qualification. The Company and each of the Subsidiaries is an entity duly incorporated or otherwise organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization, with the requisite corporate power and authority to own and use its properties and assets and to carry on its business as currently conducted. Neither the Company nor any Subsidiary is in violation nor default of any of the provisions of its respective certificate or articles of incorporation, bylaws or other organizational or charter documents. Each of the Company and the Subsidiaries is duly qualified to conduct business and is in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, would not, individually or in



the aggregate, reasonably be expected to result in a Material Adverse Effect and no Proceeding has been instituted in any such jurisdiction revoking, limiting or curtailing or seeking to revoke, limit or curtail such power and authority or qualification.

(c) Authorization; Enforcement. The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by this Agreement and each of the other Transaction Documents to which it is a party and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of this Agreement and each of the other Transaction Documents by the Company and the consummation by it of the transactions contemplated hereby and thereby have been duly authorized by all necessary action on the part of the Company and no further action is required by the Company, the Board of Directors or the Company's stockholders in connection herewith or therewith other than in connection with the Required Approvals. This Agreement and each other Transaction Document to which the Company is a party has been (or upon delivery will have been) duly executed by the Company and, when delivered in accordance with the terms hereof and thereof, will constitute the valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

(d) No Conflicts. The execution, delivery and performance by the Company of this Agreement and the other Transaction Documents to which it is a party, the issuance and sale of the Shares and the consummation by it of the transactions contemplated hereby and thereby do not and will not (i) conflict with or violate any provision of the Company's or any Subsidiary's certificate or articles of incorporation, bylaws or other organizational or charter documents, or (ii) conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, result in the creation of any Lien upon any of the properties or assets of the Company or any Subsidiary, or give to others any rights of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) of, any agreement, credit facility, debt or other instrument (evidencing a Company or Subsidiary debt or otherwise) or other understanding to which the Company or any Subsidiary is a party or by which any property or asset of the Company or any Subsidiary is bound or affected, or (iii) subject to the Required Approvals, conflict with or result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any court or governmental authority to which the Company or a Subsidiary is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company or a Subsidiary is bound or affected; except in the case of each of clauses (ii) and (iii), such as would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(e) Filings, Consents and Approvals. The Company is not required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other governmental authority or other Person in connection with the execution, delivery and performance by the Company of the Transaction Documents, other than: (i) the filing with the Commission of the Prospectus, (ii) the application to the applicable Trading Market for the listing of the Closing Shares and Option Shares for trading thereon in the time and manner required thereby, and (iii) such filings as are required to be made under applicable state securities laws (collectively, the "Required Approvals").

(f) Registration Statement. The Company has filed with the Commission the Registration Statement, including any related Prospectus, for the registration of the Securities under the Securities Act, which Registration Statement has been prepared by the Company in all material respects in conformity with the requirements of the Securities Act and the rules and regulations of the Commission under the Securities Act. The Registration Statement has been declared effective by the Commission on [●], 2020 [and was post-effectively amended by the Rule 462(b) Registration Statement which is effective on the date hereof]. The Company has advised the Representative of all further information (financial and other) with respect to the Company required to be set forth therein in the Registration Statement and Prospectus. Any reference in this Agreement to the Registration Statement, the Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the documents incorporated by reference therein; and any reference in this Agreement to the terms “amend,” “amendment” free writing prospectus” has the meaning set forth in Rule 405 under the Securities Act. The Company will not, without the prior consent of the Representative, prepare, use or refer to, any free writing prospectus.

(g) Issuance of Shares. The Public Shares are duly authorized and, when issued and paid for in accordance with the applicable Transaction Documents, will be duly and validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The Company has reserved from its duly authorized capital stock the maximum number of shares of Common Stock issuable pursuant to this Agreement. The holder of the Shares will not be subject to personal liability by reason of being such holders. The Shares are not and will not be subject to the preemptive rights of any holders of any security of the Company or similar contractual rights granted by the Company. All corporate action required to be taken for the authorization, issuance and sale of the Shares has been duly and validly taken. The Shares conform in all material respects to all statements with respect thereto contained in the Registration Statement.

(h) Capitalization. The capitalization of the Company is as set forth in the SEC Reports. The Company has not issued any capital stock since its most recently filed periodic report under the Exchange Act, other than pursuant to the exercise of employee stock options under the Company’s stock option plans, the issuance of shares of Common Stock to employees pursuant to the Company’s employee stock purchase plans and pursuant to the conversion and/or exercise of Common Stock Equivalents outstanding as of the date of the most recently filed periodic report under the Exchange Act. No Person has any right of first refusal, preemptive right, right of participation, or any similar right to participate in the transactions contemplated by the Transaction Documents. Except as set forth in the SEC Reports or a result of the purchase and sale of the Shares, there are no outstanding options, warrants, scrip rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exercisable or exchangeable for,

or giving any Person any right to subscribe for or acquire, any shares of Common Stock, or contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to issue additional shares of Common Stock or Common Stock Equivalents. The issuance and sale of the Shares will not obligate the Company to issue shares of Common Stock or other securities to any Person (other than the Underwriters) and will not result in a right of any holder of Company securities to adjust the exercise, conversion, exchange or reset price under any of such securities. There are no outstanding securities or instruments of the Company or any Subsidiary that contain any redemption or similar provisions, and there are no contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to redeem a security of the Company or such Subsidiary. The Company does not have any stock appreciation rights or “phantom stock” plans or agreements or any similar plan or agreement. All of the outstanding shares of capital stock of the Company are duly authorized, validly issued, fully paid and nonassessable, have been issued in compliance with all federal and state securities laws, and none of such outstanding shares was issued in violation of any preemptive rights or similar rights to subscribe for or purchase securities. The authorized shares of the Company conform in all material respects to all statements relating thereto contained in the Registration Statement and the Prospectus. The offers and sales of the Company’s securities were at all relevant times either registered under the Securities Act and the applicable state securities or Blue Sky laws or, based in part on the representations and warranties of the purchasers, exempt from such registration requirements. No further approval or authorization of any stockholder, the Board of Directors or others is required for the issuance and sale of the Shares. Other than those filed in SEC Reports, there are no stockholders agreements, voting agreements or other similar agreements with respect to the Company’s capital stock to which the Company is a party or, to the knowledge of the Company, between or among any of the Company’s stockholders.

(i) SEC Reports; Financial Statements. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company under the Securities Act and the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the two years preceding the date hereof (or such shorter period as the Company was required by law or regulation to file such material) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, together with the Preliminary Prospectus and the Prospectus, being collectively referred to herein as the “SEC Reports”) on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Company has never been an issuer subject to Rule 144(i) under the Securities Act. The financial statements of the Company included in the SEC Reports comply in all material respects with applicable accounting requirements and the rules and regulations of the Commission with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with United States generally accepted accounting principles applied on a consistent basis during the periods involved (“GAAP”), except as may be otherwise specified in such financial statements or the notes thereto and except that unaudited financial statements may not contain all footnotes required by GAAP, and fairly present in all material respects the financial position of the Company and its consolidated Subsidiaries as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial, year-end audit adjustments. The agreements and documents described in the Registration Statement, the Preliminary Prospectus, the

Prospectus and the SEC Reports conform in all material respects to the descriptions thereof contained therein and there are no agreements or other documents required by the Securities Act and the rules and regulations thereunder to be described in the Registration Statement, the Prospectus, or the SEC Reports or to be filed with the Commission as exhibits to the Registration Statement, that have not been so described or filed. Each agreement or other instrument (however characterized or described) to which the Company is a party or by which it is or may be bound or affected and (i) that is referred to in the Registration Statement, the Prospectus or the SEC Reports, or (ii) is material to the Company's business, has been duly authorized and validly executed by the Company, is in full force and effect in all material respects and is enforceable against the Company and, to the Company's knowledge, the other parties thereto, in accordance with its terms, except (x) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally, (y) as enforceability of any indemnification or contribution provision may be limited under the federal and state securities laws, and (z) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefore may be brought. None of such agreements or instruments has been assigned by the Company, and neither the Company nor, to the best of the Company's knowledge, any other party is in default thereunder and, to the best of the Company's knowledge, no event has occurred that, with the lapse of time or the giving of notice, or both, would constitute a default thereunder. To the best of the Company's knowledge, performance by the Company of the material provisions of such agreements or instruments will not result in a violation of any existing applicable law, rule, regulation, judgment, order or decree of any governmental agency or court, domestic or foreign, having jurisdiction over the Company or any of its assets or businesses, including, without limitation, those relating to environmental laws and regulations, except for violations which would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(j) Material Changes; Undisclosed Events, Liabilities or Developments. Since the date of the latest audited financial statements included within the SEC Reports, except as specifically disclosed in a subsequent SEC Report filed prior to the date hereof, (i) there has been no event, occurrence or development that has had or that would reasonably be expected to result in a Material Adverse Effect, (ii) the Company has not incurred any liabilities (contingent or otherwise) that are material to the Company other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and (B) liabilities not required to be reflected in the Company's financial statements pursuant to GAAP or disclosed in the SEC Reports, (iii) the Company has not altered its method of accounting, (iv) the Company has not declared or made any dividend or distribution of cash or other property to its stockholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock, (v) the Company has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing Company stock option plans and (vi) no officer or director of the Company has resigned from any position with the Company. The Company does not have pending before the Commission any request for confidential treatment of information. Except for the issuance of the Shares contemplated by this Agreement, no event, liability, fact, circumstance, occurrence or development has occurred or exists or is reasonably expected to occur or exist with respect to the Company or its Subsidiaries or their respective businesses, prospects, properties, operations, assets or financial condition that would be required to be disclosed by the Company under applicable securities laws at the time this representation is made or deemed made that has not been publicly disclosed at least 1 Trading Day prior to the date that this representation is made. Unless otherwise disclosed in an SEC Report filed prior to the date hereof, the Company has not: (i) issued any securities or incurred any liability or

obligation, direct or contingent, for borrowed money; or (ii) declared or paid any dividend or made any other distribution on or in respect to its capital stock.

(k) Litigation. Except as disclosed in the Registration Statement, there is no action, suit, inquiry, notice of violation, proceeding or investigation pending or, to the knowledge of the Company, threatened against or affecting the Company, any Subsidiary or any of their respective properties before or by any court, arbitrator, governmental or administrative agency or regulatory authority (federal, state, county, local or foreign) (collectively, an “Action”) which (i) adversely affects or challenges the legality, validity or enforceability of any of the Transaction Documents or the Shares or (ii) would, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect. Neither the Company nor any Subsidiary, nor, to the knowledge of the Company, any director or officer thereof, is or has been the subject of any Action involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty. There has not been, and to the knowledge of the Company, there is not pending or contemplated, any investigation by the Commission involving the Company or any current or former director or officer of the Company. The Commission has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company or any Subsidiary under the Exchange Act or the Securities Act.

(l) Labor Relations. No labor dispute exists or, to the knowledge of the Company, is imminent with respect to any of the employees of the Company, which would, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect. None of the Company’s or its Subsidiaries’ employees is a member of a union that relates to such employee’s relationship with the Company or such Subsidiary, and neither the Company nor any of its Subsidiaries is a party to a collective bargaining agreement, and the Company and its Subsidiaries believe that their relationships with their employees are good. To the knowledge of the Company, no executive officer of the Company or any Subsidiary, is, or is now expected to be, in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other contract or agreement or any restrictive covenant in favor of any third party, and the continued employment of each such executive officer does not subject the Company or any of its Subsidiaries to any liability with respect to any of the foregoing matters. The Company and its Subsidiaries are in compliance with all U.S. federal, state, local and foreign laws and regulations relating to employment and employment practices, terms and conditions of employment and wages and hours, except where the failure to be in compliance would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(m) Compliance. Neither the Company nor any Subsidiary: (i) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any Subsidiary under), nor has the Company or any Subsidiary received notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (ii) is in violation of any judgment, decree or order of any court, arbitrator or other governmental authority or (iii) is or has been in violation of any statute, rule, ordinance or regulation of any governmental authority, including without limitation all foreign, federal, state and local laws relating to taxes, environmental protection, occupational health and safety, product quality and safety and employment and labor matters, except in each case as would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(n) Regulatory Permits. The Company and the Subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state, local or foreign regulatory authorities necessary to conduct their respective businesses as described in the SEC Reports, except where the failure to possess such permits would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect (each, a "Material Permit"), and neither the Company nor any Subsidiary has received any notice of proceedings relating to the revocation or modification of any Material Permit. The disclosures in the Registration Statement concerning the effects of Federal, State, local and all foreign regulation on the Company's business as currently contemplated are correct in all material respects.

(o) Title to Assets. The Company and the Subsidiaries have good and marketable title in fee simple to, or have valid and marketable rights to lease or otherwise use, all real property and all personal property that is material to the business of the Company and the Subsidiaries, in each case free and clear of all Liens, except for (i) Liens as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries and (ii) Liens for the payment of federal, state or other taxes, for which appropriate reserves have been made in accordance with GAAP, and the payment of which is neither delinquent nor subject to penalties. Any real property and facilities held under lease by the Company and the Subsidiaries are held by them under valid, subsisting and enforceable leases with which the Company and the Subsidiaries are in material compliance.

(p) Intellectual Property. The Company and the Subsidiaries have, or have rights to use, all patents, patent applications, trademarks, trademark applications, service marks, trade names, trade secrets, inventions, copyrights, licenses and other intellectual property rights and similar rights necessary or required for use in connection with their respective businesses as described in the SEC Reports and which the failure to so have would, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect (collectively, the "Intellectual Property Rights"). None of, and neither the Company nor any Subsidiary has received a written notice that any of, the Intellectual Property Rights has expired, terminated or been abandoned, or is expected to expire or terminate or be abandoned, within two (2) years from the date of this Agreement, except for expirations, terminations, or abandonments which would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. Neither the Company nor any Subsidiary has received, since the date of the latest audited financial statements included within the SEC Reports, a written notice of a claim or otherwise has any knowledge that the Intellectual Property Rights violate or infringe upon the rights of any Person, except as would not reasonably be expected to have a Material Adverse Effect. To the knowledge of the Company, all such Intellectual Property Rights are enforceable and there is no existing infringement by another Person of any of the Intellectual Property Rights except for infringements which would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. The Company and its Subsidiaries have taken reasonable security measures to protect the secrecy, confidentiality and value of all of their intellectual properties, except where failure to do so would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(q) Insurance. The Company and the Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are prudent and customary in the businesses in which the Company and the Subsidiaries are engaged, including, but not limited to, directors and officers insurance coverage. Neither the Company nor any Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and

when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business without a significant increase in cost.

(r) Transactions With Affiliates and Employees. Except as set forth in the SEC Reports, none of the officers or directors of the Company or any Subsidiary and, to the knowledge of the Company, none of the employees of the Company or any Subsidiary is presently a party to any transaction with the Company or any Subsidiary (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, providing for the borrowing of money from or lending of money to or otherwise requiring payments to or from, any officer, director or such employee or, to the knowledge of the Company, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee, stockholder, member or partner, in each case in excess of \$120,000 other than for (i) payment of salary or consulting fees for services rendered, (ii) reimbursement for expenses incurred on behalf of the Company and (iii) other employee benefits, including stock option agreements under any stock option plan of the Company.

(s) Sarbanes-Oxley; Internal Accounting Controls. The Company and the Subsidiaries are in material compliance with any and all applicable requirements of the Sarbanes-Oxley Act of 2002 that are effective as of the date hereof, and any and all applicable rules and regulations promulgated by the Commission thereunder that are effective as of the date hereof and as of the Closing Date. The Company and the Subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company and the Subsidiaries have established disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the Company and the Subsidiaries and designed such disclosure controls and procedures to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms. The Company's certifying officers have evaluated the effectiveness of the disclosure controls and procedures of the Company and the Subsidiaries as of the end of the period covered by the most recently filed periodic report under the Exchange Act (such date, the "Evaluation Date"). The Company presented in its most recently filed periodic report under the Exchange Act the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date. Since the Evaluation Date, there have been no changes in the internal control over financial reporting (as such term is defined in the Exchange Act) of the Company and its Subsidiaries that have materially affected, or is reasonably likely to materially affect, the internal control over financial reporting of the Company and its Subsidiaries.

(t) Certain Fees. Except as set forth in the Preliminary Prospectus, no brokerage or finder's fees or commissions are or will be payable by the Company, any Subsidiary or Affiliate of the Company to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by the Transaction Documents. To the Company's knowledge, there are no other arrangements, agreements or understandings of the Company or, to the Company's knowledge, any of its stockholders that may

affect the Underwriters' compensation, as determined by FINRA. Except as set forth in the Registration Statement, the Company has not made any direct or indirect payments (in cash, securities or otherwise) in connection with the Offering to: (i) any person, as a finder's fee, consulting fee or otherwise, in consideration of such person raising capital for the Company or introducing to the Company persons who raised or provided capital to the Company; (ii) any FINRA member; or (iii) any person or entity that has any direct or indirect affiliation or association with any FINRA member, within the twelve months prior to the Execution Date. None of the net proceeds of the Offering will be paid by the Company to any participating FINRA member or its affiliates, except as specifically authorized herein.

(u) Investment Company. The Company is not, and is not an Affiliate of, and immediately after receipt of payment for the Shares will not be or be an Affiliate of, an "investment company" within the meaning of the Investment Company Act of 1940, as amended. The Company shall conduct its business in a manner so that it will not become an "investment company" subject to registration under the Investment Company Act of 1940, as amended.

(v) Registration Rights. No Person has any right to cause the Company or any Subsidiary to effect the registration under the Securities Act of any securities of the Company or any Subsidiary other than those rights that have been waived.

(w) Listing and Maintenance Requirements. The Common Stock is registered pursuant to Section 12(b) of the Exchange Act, and the Company has taken no action designed to, or which to its knowledge is likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act nor has the Company received any notification that the Commission is contemplating terminating such registration. The Company has not, in the 12 months preceding the date hereof, received notice from any Trading Market on which the Common Stock is or has been listed or quoted to the effect that the Company is not in compliance with the listing or maintenance requirements of such Trading Market. The Company is, and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with all such listing and maintenance requirements. The Common Stock is currently eligible for electronic transfer through the Depository Trust Company or another established clearing corporation and the Company is current in payment of the fees of the Depository Trust Company (or such other established clearing corporation) in connection with such electronic transfer.

(x) Application of Takeover Protections. The Company and the Board of Directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Company's certificate of incorporation (or similar charter documents) or the laws of its state of incorporation that is or could become applicable as a result of the Underwriters and the Company fulfilling their obligations or exercising their rights under the Transaction Documents.

(y) Disclosure; 10b-5. The Registration Statement (and any further documents to be filed with the Commission) contains all exhibits and schedules as required by the Securities Act. Each of the Registration Statement and any post-effective amendment thereto, if any, at the time it became effective, complied in all material respects with the Securities Act and the Exchange Act and the applicable rules and regulations under the Securities Act and did not and, as amended or supplemented, if applicable, will not, contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading.



The Preliminary Prospectus and Prospectus, each as of its respective date, comply in all material respects with the Securities Act and the Exchange Act and the applicable rules and regulations. Each of the Preliminary Prospectus and the Prospectus, as amended or supplemented, did not and will not contain as of the date thereof any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The SEC Reports, when they were filed with the Commission, conformed in all material respects to the requirements of the Exchange Act and the applicable rules and regulations, and none of such documents, when they were filed with the Commission, contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein (with respect to the SEC Reports incorporated by reference in the Preliminary Prospectus or the Prospectus), in light of the circumstances under which they were made not misleading; and any further documents so filed and incorporated by reference in the Preliminary Prospectus or the Prospectus, when such documents are filed with the Commission, will conform in all material respects to the requirements of the Exchange Act and the applicable rules and regulations, as applicable, and will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made not misleading. No post-effective amendment to the Registration Statement reflecting any facts or events arising after the date thereof which represent, individually or in the aggregate, a fundamental change in the information set forth therein is required to be filed with the Commission. There are no documents required to be filed with the Commission in connection with the transaction contemplated hereby that (x) have not been filed as required pursuant to the Securities Act or (y) will not be filed within the requisite time period. There are no contracts or other documents required to be described in the Preliminary Prospectus or the Prospectus, or to be filed as exhibits or schedules to the Registration Statement, which have not been described or filed as required. The press releases disseminated by the Company during the twelve months preceding the date of this Agreement taken as a whole do not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made and when made, not misleading.

(z) No Integrated Offering. Neither the Company, nor any of its Affiliates, nor any Person acting on its or their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause this offering of the Shares to be integrated with prior offerings by the Company for purposes of any applicable shareholder approval provisions of any Trading Market on which any of the securities of the Company are listed or designated.

(aa) Solvency. Based on the consolidated financial condition of the Company as of the Closing Date, after giving effect to the receipt by the Company of the proceeds from the sale of the Shares hereunder, (i) the fair saleable value of the Company's assets exceeds the amount that will be required to be paid on or in respect of the Company's existing debts and other liabilities (including known contingent liabilities) as they mature, (ii) the Company's assets do not constitute unreasonably small capital to carry on its business as now conducted and as proposed to be conducted including its capital needs taking into account the particular capital requirements of the business conducted by the Company, consolidated and projected capital requirements and capital availability thereof, and (iii) the current cash flow of the Company, together with the proceeds the Company would receive, were it to liquidate all of its assets, after taking into account all anticipated uses of the cash, would be sufficient to pay all amounts on or in respect of its liabilities when such amounts are required to be paid. The Company does not intend to incur debts beyond its ability to pay such debts as they mature (taking into account the timing and amounts of cash to be payable on or in respect

of its debt). The Company has no knowledge of any facts or circumstances which lead it to believe that it will file for reorganization or liquidation under the bankruptcy or reorganization laws of any jurisdiction within one year from the Closing Date. The SEC Reports sets forth as of the date hereof all outstanding secured and unsecured Indebtedness of the Company or any Subsidiary, or for which the Company or any Subsidiary has commitments.

(bb) Tax Status. Except for matters that would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect, the Company and its Subsidiaries each (i) has made or filed all material United States federal, state and local income and all foreign income and franchise tax returns, reports and declarations required by any jurisdiction to which it is subject, (ii) has paid all taxes and other governmental assessments and charges that are material in amount, shown or determined to be due on such returns, reports and declarations and (iii) has set aside on its books provision reasonably adequate for the payment of all material taxes for periods subsequent to the periods to which such returns, reports or declarations apply. There are no unpaid taxes in any material amount claimed to be due by the taxing authority of any jurisdiction, and the officers of the Company or of any Subsidiary know of no basis for any such claim. The provisions for taxes payable, if any, shown on the financial statements filed with or as part of the Registration Statement are sufficient for all accrued and unpaid taxes, whether or not disputed, and for all periods to and including the dates of such consolidated financial statements. The term “taxes” mean all federal, state, local, foreign, and other net income, gross income, gross receipts, sales, use, ad valorem, transfer, franchise, profits, license, lease, service, service use, withholding, payroll, employment, excise, severance, stamp, occupation, premium, property, windfall profits, customs, duties or other taxes, fees, assessments, or charges of any kind whatsoever, together with any interest and any penalties, additions to tax, or additional amounts with respect thereto. The term “returns” means all returns, declarations, reports, statements, and other documents required to be filed in respect to taxes.

(cc) Foreign Corrupt Practices. Neither the Company nor any Subsidiary, nor to the knowledge of the Company or any Subsidiary, any agent or other person acting on behalf of the Company or any Subsidiary, has (i) directly or indirectly, used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses related to foreign or domestic political activity, (ii) made any unlawful payment to foreign or domestic government officials or employees or to any foreign or domestic political parties or campaigns from corporate funds, (iii) failed to disclose fully any contribution made by the Company or any Subsidiary (or made by any person acting on its behalf of which the Company is aware) which is in violation of law, or (iv) violated in any material respect any provision of FCPA. The Company has taken reasonable steps to ensure that its accounting controls and procedures are sufficient to cause the Company to comply in all material respects with the FCPA.

(dd) Accountants. To the knowledge and belief of the Company, the Company Auditor (i) is an independent registered public accounting firm as required by the Exchange Act and (ii) the financial statements of the Company and related schedules filed as a part of the Registration Statement and included in the Registration Statement, the Preliminary Prospectus and the Prospectus. Other than services related to the Company’s tax compliance, the Company Auditor has not, during the periods covered by the financial statements included in the Prospectus, provided to the Company any non-audit services, as such term is used in Section 10A(g) of the Exchange Act.

(ee) FDA. As to each product subject to the jurisdiction of the U.S. Food and Drug Administration (“FDA”) under the Federal Food, Drug and Cosmetic Act, as amended, and the regulations thereunder (“FDCA”) that is manufactured, packaged, labeled, tested, distributed, sold,

and/or marketed by the Company or any of its Subsidiaries (each such product, a “Pharmaceutical Product”), such Pharmaceutical Product is being manufactured, packaged, labeled, tested, distributed, sold and/or marketed by the Company in compliance with all applicable requirements under FDCA and similar laws, rules and regulations relating to registration, investigational use, premarket clearance, licensure, or application approval, good manufacturing practices, good laboratory practices, good clinical practices, product listing, quotas, labeling, advertising, record keeping and filing of reports, except where the failure to be in compliance would not result in a Material Adverse Effect. There is no pending, completed or, to the Company's knowledge, threatened, action (including any lawsuit, arbitration, or legal or administrative or regulatory proceeding, charge, complaint, or investigation) against the Company or any of its Subsidiaries, and none of the Company or any of its Subsidiaries has received any written notice, warning letter or other communication from the FDA or any other governmental entity, which (i) contests the premarket clearance, licensure, registration, or approval of, the uses of, the distribution of, the manufacturing or packaging of, the testing of, the sale of, or the labeling and promotion of any Pharmaceutical Product, (ii) withdraws its approval of, requests the recall, suspension, or seizure of, or withdraws or orders the withdrawal of advertising or sales promotional materials relating to, any Pharmaceutical Product, (iii) imposes a clinical hold on any clinical investigation by the Company or any of its Subsidiaries, (iv) enjoins production at any facility of the Company or any of its Subsidiaries, (v) enters or proposes to enter into a consent decree of permanent injunction with the Company or any of its Subsidiaries, or (vi) otherwise alleges any violation of any laws, rules or regulations by the Company or any of its Subsidiaries, and which, either individually or in the aggregate, would reasonably be expected to result in a Material Adverse Effect. The properties, business and operations of the Company have been and are being conducted in all material respects in accordance with all applicable laws, rules and regulations of the FDA. Other than as disclosed in the Registration Statement, the Company has not been informed by the FDA that the FDA will prohibit the marketing, sale, license or use in the United States of any product proposed to be developed, produced or marketed by the Company nor has the FDA expressed any concern as to approving or clearing for marketing any product being developed or proposed to be developed by the Company.

(ff) Office of Foreign Assets Control. Neither the Company nor any Subsidiary nor, to the Company's knowledge, any director, officer, agent, employee or affiliate of the Company or any Subsidiary is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department.

(gg) U.S. Real Property Holding Corporation. The Company is not and, to the knowledge of the Company, has never been a U.S. real property holding corporation within the meaning of Section 897 of the Internal Revenue Code of 1986, as amended, and the Company shall so certify upon the Representative's reasonable request.

(hh) Bank Holding Company Act. Neither the Company nor any of its Subsidiaries or Affiliates is subject to the Bank Holding Company Act of 1956, as amended (the “BHCA”) and to regulation by the Board of Governors of the Federal Reserve System (the “Federal Reserve”). Neither the Company nor any of its Subsidiaries or Affiliates owns or controls, directly or indirectly, five percent (5%) or more of the outstanding shares of any class of voting securities or twenty-five percent (25%) or more of the total equity of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve. Neither the Company nor any of its Subsidiaries or Affiliates exercises a controlling influence over the management or policies of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve.

(ii) Money Laundering. The operations of the Company and its Subsidiaries are and have been conducted at all times in material compliance with applicable financial record-keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, applicable money laundering statutes and applicable rules and regulations thereunder (collectively, the “Money Laundering Laws”), and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any Subsidiary with respect to the Money Laundering Laws is pending or, to the knowledge of the Company or any Subsidiary, threatened.

(jj) D&O Questionnaires. To the Company’s knowledge, all information contained in the questionnaires that were most recently completed by each of the Company’s directors and officers and in the Lock-Up Agreements provided to the Underwriters is true and correct in all respects and the Company has not become aware of any information which would cause the information disclosed in such questionnaires become inaccurate and incorrect.

(kk) FINRA Affiliation. To the Company’s knowledge, no officer, director or any beneficial owner of 5% or more of the Company’s unregistered securities has any direct or indirect affiliation or association with any FINRA member (as determined in accordance with the rules and regulations of FINRA) that is participating in the Offering. The Company will advise the Representative and Faegre if it learns that any officer, director or owner of 5% or more of the Company’s outstanding shares of Common Stock or Common Stock Equivalents is or becomes an affiliate or associated person of a FINRA member firm.

(ll) Officers’ Certificate. Any certificate signed by any duly authorized officer of the Company and delivered to the Representative or Faegre shall be deemed a representation and warranty by the Company to the Underwriters as to the matters covered thereby.

(mm) Board of Directors. The Board of Directors is comprised of the persons set forth in the Company’s definitive proxy statement filed with the Commission on March 21, 2019, captioned “Matters to be Considered at Annual Meeting: Proposal One: Election of Directors”. The qualifications of the persons serving as board members and the overall composition of the Board of Directors comply with the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder applicable to the Company and the rules of the Trading Market. At least one member of the Board of Directors qualifies as a “financial expert” as such term is defined under the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder and the rules of the Trading Market. In addition, at least a majority of the persons serving on the Board of Directors qualify as “independent” as defined under the rules of the Trading Market.

(nn) Environmental Laws. The Company and its Subsidiaries (i) are in material compliance with all federal, state, local and foreign laws relating to pollution or protection of human health or the environment (including ambient air, surface water, groundwater, land surface or subsurface strata), including laws relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, or toxic or hazardous substances or wastes (collectively, “Hazardous Materials”) into the environment, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials, as well as all authorizations, codes, decrees, demands, or demand letters, injunctions, judgments, licenses, notices or notice letters, orders, permits, plans or regulations, issued, entered, promulgated or approved thereunder (“Environmental Laws”); (ii) have received all material permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective

businesses; and (iii) are in material compliance with all terms and conditions of any such permit, license or approval where in each clause (i), (ii) and (iii), the failure to so comply would be reasonably expected to result in, individually or in the aggregate, a Material Adverse Effect.

(oo) Stock Option Plans. Each stock option granted by the Company under the Company's stock option plan was granted (i) in accordance with the terms of the Company's stock option plan, and (ii) with an exercise price at least equal to the fair market value of the Common Stock on the date such stock option would be considered granted under GAAP and applicable law. No stock option granted under the Company's stock option plan has been backdated. The Company has not knowingly granted, and there is no and has been no Company policy or practice to knowingly grant, stock options prior to, or otherwise knowingly coordinate the grant of stock options with, the release or other public announcement of material information regarding the Company or its Subsidiaries or their financial results or prospects.

#### **ARTICLE IV. OTHER AGREEMENTS OF THE PARTIES**

4.1 Amendments to Registration Statement. The Company has delivered, or will as promptly as practicable deliver, to the Underwriters complete conformed copies of the Registration Statement and of each consent and certificate of experts, as applicable, filed as a part thereof, and conformed copies of the Registration Statement (without exhibits), the Preliminary Prospectus and the Prospectus, as amended or supplemented, in such quantities and at such places as an Underwriter reasonably requests. Neither the Company nor any of its directors and officers has distributed and none of them will distribute, prior to the Closing Date, any offering material in connection with the offering and sale of the Shares other than the Prospectus, the Preliminary Prospectus, the Registration Statement, any Permitted Free Writing Prospectus, and copies of the documents incorporated by reference therein. The Company shall not file any such amendment or supplement to which the Representative shall reasonably object in writing.

#### 4.2 Federal Securities Laws.

(a) Compliance. During the time when a Prospectus is required to be delivered under the Securities Act, the Company will use its best efforts to comply with all requirements imposed upon it by the Securities Act and the rules and regulations thereunder and the Exchange Act and the rules and regulations thereunder, as from time to time in force, so far as necessary to permit the continuance of sales of or dealings in the Shares in accordance with the provisions hereof and the Prospectus. If at any time when a Prospectus relating to the Shares is required to be delivered under the Securities Act, any event shall have occurred as a result of which, in the opinion of counsel for the Company or counsel for the Underwriters, the Prospectus, as then amended or supplemented, includes an untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, or if it is necessary at any time to amend the Prospectus to comply with the Securities Act, the Company will notify the Underwriters promptly and prepare and file with the Commission, subject to Section 4.1 hereof, an appropriate amendment or supplement in accordance with Section 10 of the Securities Act.

(b) Filing of Final Prospectus. The Company will file the Prospectus (in form and substance reasonably satisfactory to the Representative) with the Commission pursuant to the requirements of Rule 424 that discloses the information previously omitted from the prospectus in

the Registration Statement in reliance upon Rule 430A, which information will be deemed retroactively to be a part of the Registration Statement in accordance with Rule 430A.

(c) Exchange Act Registration. For a period of three years from the Execution Date, the Company will use its reasonable best efforts to maintain the registration of the Common Stock under the Exchange Act. During such three year period, the Company will not deregister the Common Stock under the Exchange Act without the prior written consent of the Representative.

(d) Free Writing Prospectuses. The Company represents and agrees that it has not made and will not make any offer relating to the Shares that would constitute an issuer free writing prospectus, as defined in Rule 433 of the rules and regulations under the Securities Act, without the prior written consent of the Representative. Any such free writing prospectus consented to by the Representative is herein referred to as a “Permitted Free Writing Prospectus.” The Company represents that it will treat each Permitted Free Writing Prospectus as an “issuer free writing prospectus” as defined in rule and regulations under the Securities Act, and has complied and will comply with the applicable requirements of Rule 433 of the Securities Act, including timely Commission filing where required, legending and record keeping.

4.3 Delivery to the Underwriters of Prospectuses. The Company will deliver to the Underwriters, without charge, from time to time during the period when the Prospectus is required to be delivered under the Securities Act or the Exchange Act such number of copies of each Prospectus as the Underwriters may reasonably request.

4.4 Effectiveness and Events Requiring Notice to the Underwriters. The Company will use its reasonable best efforts to cause the Registration Statement to remain effective with a current prospectus until nine (9) months from the Execution Date, and will notify the Underwriters promptly and confirm the notice in writing: (i) of the effectiveness of the Registration Statement and any amendment thereto; (ii) of the issuance by the Commission of any stop order or of the initiation, or the threatening, of any proceeding for that purpose; (iii) of the issuance by any state securities commission of any proceedings for the suspension of the qualification of the Shares for offering or sale in any jurisdiction or of the initiation, or the threatening, of any proceeding for that purpose; (iv) of the mailing and delivery to the Commission for filing of any amendment or supplement to the Registration Statement or Prospectus; (v) of the receipt of any comments or request for any additional information from the Commission; and (vi) of the happening of any event during the period described in this Section 4.4 that, in the judgment of the Company, makes any statement of a material fact made in the Registration Statement or the Prospectus untrue or that requires the making of any changes in the Registration Statement or the Prospectus in order to make the statements therein, in light of the circumstances under which they were made, not misleading. If the Commission or any state securities commission shall enter a stop order or suspend such qualification at any time, the Company will make every reasonable effort to obtain promptly the lifting of such order.

4.5 Expenses.

(a) General Expenses Related to the Offering. The Company hereby agrees to pay on each of the Closing Date and each Option Closing Date, if any, to the extent not paid at the Closing Date, all expenses incident to the performance of the obligations of the Company under this Agreement, including, but not limited to: (a) all filing fees relating to the registration of the Shares to be sold in the Offering (including the Option Shares) with the Commission; (b) all actual FINRA Public Offering Filing System fees associated with the review of the Offering by FINRA; (c) all fees

and expenses relating to the listing of such Closing Shares and Option Shares on the Trading Market and such other stock exchanges as the Company and the Representative together determine; (d) all actual and reasonable fees, expenses and disbursements relating to the registration or qualification of such Shares under the “blue sky” securities laws of such states and other foreign jurisdictions as the Representative may reasonably designate; (e) the costs of all mailing and printing of the Registration Statements, Prospectuses and all amendments, supplements and exhibits thereto and as many preliminary and final Prospectuses as the Representative may reasonably deem necessary; (f) the costs and expenses of the Company’s public relations firm; (g) the costs of preparing, printing and delivering the Shares; (h) fees and expenses of the Transfer Agent for the Shares (including, without limitation, any fees required for same-day processing of any instruction letter delivered by the Company); (i) stock transfer and/or stamp taxes, if any, payable upon the transfer of securities from the Company to the Underwriters; (j) the fees and expenses of the Company’s accountants; (k) the fees and expenses of the Company’s legal counsel and other agents and representatives; and (l) the fees and expenses of the Representative’s clearing firm. The Underwriters may also deduct from the net proceeds of the Offering payable to the Company on the Closing Date, or each Option Closing Date, if any, the expenses set forth herein to be paid by the Company to the Underwriters.

(b) Expenses of the Representative. The Company further agrees that, in addition to the expenses payable pursuant to Section 4.5(a), on the Closing Date, the Company will reimburse the Representative up to the sum of \$150,000 for its reasonable out-of-pocket expenses incurred in connection with the Offering for its legal and other expenses by deduction of such sum from the proceeds of the Offering contemplated herein.

4.6 Application of Net Proceeds. The Company will apply the net proceeds from the Offering received by it in a manner consistent with the application described under the caption “Use of Proceeds” in the Prospectus.

4.7 Delivery of Earnings Statements to Security Holders. The Company will make generally available to its security holders as soon as practicable, but not later than the first day of the fifteenth full calendar month following the Execution Date, an earnings statement (which need not be certified by independent public or independent certified public accountants unless required by the Securities Act or the Rules and Regulations under the Securities Act, but which shall satisfy the provisions of Rule 158(a) under Section 11(a) of the Securities Act) covering a period of at least twelve consecutive months beginning after the Execution Date, provided that reports, schedules, forms, statements and other documents that are filed by the Company with the Commission after the Execution Date are deemed to be delivered pursuant to Rule 172 under the Securities Act.

4.8 Stabilization. Neither the Company, nor, to its knowledge, any of its employees, directors or shareholders (without the consent of the Representative) has taken or will take, directly or indirectly, any action designed to or that has constituted or that might reasonably be expected to cause or result in, under the Exchange Act, or otherwise, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Shares.

4.9 Internal Controls. The Company will maintain a system of internal accounting controls sufficient to provide reasonable assurances that: (i) transactions are executed in accordance with management’s general or specific authorization; (ii) transactions are recorded as necessary in order to permit preparation of financial statements in accordance with GAAP and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management’s general or specific authorization;

and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

4.10 Accountants. The Company shall continue to retain a nationally recognized independent certified public accounting firm for a period of at least three years after the Execution Date. The Underwriters acknowledge that the Company Auditor is acceptable to the Underwriters.

4.11 FINRA. The Company shall advise the Underwriters (who shall make an appropriate filing with FINRA) if it is aware that any 5% or greater shareholder of the Company becomes an affiliate or associated person of an Underwriter.

4.12 No Fiduciary Duties. The Company acknowledges and agrees that the Underwriters' responsibility to the Company is solely contractual and commercial in nature, based on arms-length negotiations and that neither the Underwriters nor their Affiliates or any selected dealer shall be deemed to be acting in a fiduciary capacity, or otherwise owes any fiduciary duty to the Company or any of its Affiliates in connection with the Offering and the other transactions contemplated by this Agreement. Notwithstanding anything in this Agreement to the contrary, the Company acknowledges that the Underwriters may have financial interests in the success of the Offering that are not limited to the difference between the price to the public and the purchase price paid to the Company by the Underwriters for the shares and the Underwriters have no obligation to disclose, or account to the Company for, any of such additional financial interests. The Company hereby waives and releases, to the fullest extent permitted by law, any claims that the Company may have against the Underwriters with respect to any breach or alleged breach of fiduciary duty.

4.13 Board Composition and Board Designations. The Company shall ensure that: (i) the qualifications of the persons serving as board members and the overall composition of the Board of Directors comply with the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder that are applicable to the Company and with the listing requirements of the Trading Market and (ii) if applicable to the Company, at least one member of the Board of Directors qualifies as a "financial expert" as such term is defined under the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder.

4.14 Securities Laws Disclosure; Publicity. At the request of the Representative, by 10:00 p.m. (New York City time) on the date hereof, the Company shall issue a press release disclosing the material terms of the Offering. The Company and the Representative shall consult with each other in issuing any other press releases with respect to the Offering, and neither the Company nor any Underwriter shall issue any such press release nor otherwise make any such public statement without the prior consent of the Company, with respect to any press release of such Underwriter, or without the prior consent of such Underwriter, with respect to any press release of the Company, which consent shall not unreasonably be withheld or delayed, except if such disclosure is required by law, in which case the disclosing party shall promptly provide the other party with prior notice of such public statement or communication. The Company will not issue press releases or engage in any other publicity, without the Representative's prior written consent, for a period ending at 5:00 p.m. (New York City time) on the first business day following the 30th day following the Closing Date, other than normal and customary releases issued in the ordinary course of the Company's business.

4.15 Shareholder Rights Plan. No claim will be made or enforced by the Company or, with the consent of the Company, any other Person, that any Underwriter of the Shares is an "Acquiring Person" under any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or similar anti-takeover plan or arrangement in effect or hereafter adopted by the Company,



or that any Underwriter of Shares could be deemed to trigger the provisions of any such plan or arrangement, by virtue of receiving Shares.

4.16 Reservation of Common Stock. As of date hereof, the Company has reserved and the Company shall continue to reserve and keep available at all times, free of preemptive rights, a sufficient number of shares of Common Stock for the purpose of enabling the Company to issue Option Shares pursuant to the Over-Allotment Option.

4.17 Listing of Common Stock. The Company hereby agrees to use reasonable best efforts to maintain the listing or quotation of the Common Stock on the Trading Market on which it is currently listed, and concurrently with the Closing, the Company shall apply to list or quote all of the Closing Shares and Option Shares on such Trading Market and promptly secure the listing of all of the Closing Shares and Option Shares on such Trading Market. The Company further agrees, if the Company applies to have the Common Stock traded on any other Trading Market, it will then include in such application all of the Closing Shares and Option Shares, and will take such other action as is necessary to cause all of the Closing Shares and Option Shares to be listed or quoted on such other Trading Market as promptly as possible. For a period of twelve (12) months following the Execution Date, the Company will then take all action reasonably necessary to continue the listing and trading of its Common Stock on a Trading Market and will comply in all respects with the Company's reporting, filing and other obligations under the bylaws or rules of the Trading Market. For a period of twelve (12) months following the Execution Date, the Company agrees to maintain the eligibility of the Common Stock for electronic transfer through the Depository Trust Company or another established clearing corporation, including, without limitation, by timely payment of fees to the Depository Trust Company or such other established clearing corporation in connection with such electronic transfer.

4.18 Subsequent Equity Sales.

(a) From the date hereof until ninety (90) days following the Closing Date, neither the Company nor any Subsidiary shall issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of Common Stock or Common Stock Equivalents.

(b) From the date hereof until twelve (12) months following the Closing Date, the Company shall be prohibited from effecting or entering into an agreement to effect any issuance by the Company or any of its Subsidiaries of Common Stock or Common Stock Equivalents (or a combination of units thereof) involving a Variable Rate Transaction. "Variable Rate Transaction" means a transaction in which the Company (i) issues or sells any debt or equity securities that are convertible into, exchangeable or exercisable for, or include the right to receive, additional shares of Common Stock either (A) at a conversion price, exercise price or exchange rate or other price that is based upon, and/or varies with, the trading prices of or quotations for the shares of Common Stock at any time after the initial issuance of such debt or equity securities or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such debt or equity security or upon the occurrence of specified or contingent events directly or indirectly related to the business of the Company or the market for the Common Stock or (ii) enters into, or effects a transaction under, any agreement, including, but not limited to, an equity line of credit or an at-the-market offering, whereby the Company may issue securities at a future determined price. Any Underwriter shall be entitled to obtain injunctive relief against the Company to preclude any such issuance, which remedy shall be in addition to any right to collect damages.

(c) Notwithstanding the foregoing, this Section 4.18 shall not apply in respect of an Exempt Issuance, except that no Variable Rate Transaction shall be an Exempt Issuance.

4.19 Research Independence. The Company acknowledges that each Underwriter's research analysts and research departments, if any, are required to be independent from their respective investment banking divisions and are subject to certain regulations and internal policies, and that such Underwriter's research analysts may hold and make statements or investment recommendations and/or publish research reports with respect to the Company and/or the offering that differ from the views of its investment bankers. The Company hereby waives and releases, to the fullest extent permitted by law, any claims that the Company may have against such Underwriter with respect to any conflict of interest that may arise from the fact that the views expressed by their independent research analysts and research departments may be different from or inconsistent with the views or advice communicated to the Company by such Underwriter's investment banking divisions. The Company acknowledges that the Representative is a full-service securities firm and as such from time to time, subject to applicable securities laws, may effect transactions for its own account or the account of its customers and hold long or short position in debt or equity securities of the Company.

#### **ARTICLE V. DEFAULT BY UNDERWRITERS**

If on the Closing Date or any Option Closing Date, if any, any Underwriter shall fail to purchase and pay for the portion of the Closing Shares or Option Shares, as the case may be, which such Underwriter has agreed to purchase and pay for on such date (otherwise than by reason of any default on the part of the Company), the Representative, or if the Representative is the defaulting Underwriter, the non-defaulting Underwriters, shall use their reasonable efforts to procure within 36 hours thereafter one or more of the other Underwriters, or any others, to purchase from the Company such amounts as may be agreed upon and upon the terms set forth herein, the Closing Shares or Option Shares, as the case may be, which the defaulting Underwriter or Underwriters failed to purchase. If during such 36 hours the Representative shall not have procured such other Underwriters, or any others, to purchase the Closing Shares or Option Shares, as the case may be, agreed to be purchased by the defaulting Underwriter or Underwriters, then (a) if the aggregate number of Closing Shares or Option Shares, as the case may be, with respect to which such default shall occur does not exceed 10% of the Closing Shares or Option Shares, as the case may be, covered hereby, the other Underwriters shall be obligated, severally, in proportion to the respective numbers of Closing Shares or Option Shares, as the case may be, which they are obligated to purchase hereunder, to purchase the Closing Shares or Option Shares, as the case may be, which such defaulting Underwriter or Underwriters failed to purchase, or (b) if the aggregate number of Closing Shares or Option Shares, as the case may be, with respect to which such default shall occur exceeds 10% of the Closing Shares or Option Shares, as the case may be, covered hereby, the Company or the Representative will have the right to terminate this Agreement without liability on the part of the non-defaulting Underwriters or of the Company except to the extent provided in Article VI hereof. In the event of a default by any Underwriter or Underwriters, as set forth in this Article V, the applicable Closing Date may be postponed for such period, not exceeding seven days, as the Representative, or if the Representative is the defaulting Underwriter, the non-defaulting Underwriters, may determine in order that the required changes in the Prospectus or in any other documents or arrangements may be effected. The term "Underwriter" includes any person substituted for a defaulting Underwriter. Any action taken under this Section shall not relieve any defaulting Underwriter from liability in respect of any default of such Underwriter under this Agreement.

#### **ARTICLE VI. INDEMNIFICATION**

6.1 Indemnification of the Underwriters. Subject to the conditions set forth below, the Company agrees to indemnify and hold harmless the Underwriters, and each dealer selected by each Underwriter that

participates in the offer and sale of the Shares (each a “Selected Dealer”) and each of their respective directors, officers and employees and each Person, if any, who controls such Underwriter or any Selected Dealer (“Controlling Person”) within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, against any and all loss, liability, claim, damage and expense whatsoever (including but not limited to any and all legal or other expenses reasonably incurred in investigating, preparing or defending against any litigation, commenced or threatened, or any claim whatsoever, whether arising out of any action between such Underwriter and the Company or between such Underwriter and any third party or otherwise) to which they or any of them may become subject under the Securities Act, the Exchange Act or any other statute or at common law or otherwise or under the laws of foreign countries, arising out of or based upon any untrue statement or alleged untrue statement of a material fact contained in (i) the Preliminary Prospectus, the Registration Statement or the Prospectus (as from time to time each may be amended and supplemented); (ii) any materials or information provided to investors by, or with the approval of, the Company in connection with the marketing of the offering of the Shares, including any “road show” or investor presentations made to investors by the Company (whether in person or electronically); or (iii) any application or other document or written communication (in this Article VI, collectively called “application”) executed by the Company or based upon written information furnished by the Company in any jurisdiction in order to qualify the Shares under the securities laws thereof or filed with the Commission, any state securities commission or agency, Trading Market or any securities exchange; or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, unless such statement or omission was made in reliance upon and in conformity with written information furnished to the Company with respect to the applicable Underwriter by or on behalf of such Underwriter expressly for use in the Preliminary Prospectus, the Registration Statement or Prospectus, or any amendment or supplement thereto, or in any application, as the case may be. With respect to any untrue statement or omission or alleged untrue statement or omission made in the Preliminary Prospectus, the indemnity agreement contained in this Section 6.1 shall not inure to the benefit of an Underwriter to the extent that any loss, liability, claim, damage or expense of such Underwriter results from the fact that a copy of the Prospectus was not given or sent to the Person asserting any such loss, liability, claim or damage at or prior to the written confirmation of sale of the Shares to such Person as required by the Securities Act and the rules and regulations thereunder, and if the untrue statement or omission has been corrected in the Prospectus, unless such failure to deliver the Prospectus was a result of non-compliance by the Company with its obligations under this Agreement. The Company agrees promptly to notify each Underwriter of the commencement of any litigation or proceedings against the Company or any of its officers, directors or Controlling Persons in connection with the issue and sale of the Public Shares or in connection with the Registration Statement or Prospectus.

6.2 Procedure. If any action is brought against an Underwriter, a Selected Dealer or a Controlling Person in respect of which indemnity may be sought against the Company pursuant to Section 6.1, such Underwriter, such Selected Dealer or Controlling Person, as the case may be, shall promptly notify the Company in writing of the institution of such action and the Company shall assume the defense of such action, including the employment and fees of counsel (subject to the reasonable approval of such Underwriter or such Selected Dealer, as the case may be) and payment of actual expenses. Such Underwriter, such Selected Dealer or Controlling Person shall have the right to employ its or their own counsel in any such case, but the fees and expenses of such counsel shall be at the expense of such Underwriter, such Selected Dealer or Controlling Person unless (i) the employment of such counsel at the expense of the Company shall have been authorized in writing by the Company in connection with the defense of such action, or (ii) the Company shall not have employed counsel to have charge of the defense of such action, or (iii) such indemnified party or parties shall have reasonably concluded that there may be defenses available to it or them which are different from or additional to those available to the Company (in which case the Company shall not have the right to direct the defense of such action on behalf of the indemnified party or parties), in any of which

events the reasonable fees and expenses of not more than one additional firm of attorneys selected by such Underwriter (in addition to local counsel), Selected Dealer and/or Controlling Person shall be borne by the Company. Notwithstanding anything to the contrary contained herein, if any Underwriter, Selected Dealer or Controlling Person shall assume the defense of such action as provided above, the Company shall have the right to approve the terms of any settlement of such action which approval shall not be unreasonably withheld.

6.3 Indemnification of the Company. Each Underwriter severally and not jointly agrees to indemnify and hold harmless the Company, its directors, officers and employees and agents who control the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act against any and all loss, liability, claim, damage and expense described in the foregoing indemnity from the Company to such Underwriter, as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions made in any Preliminary Prospectus, if any, the Registration Statement or Prospectus or any amendment or supplement thereto or in any application, in reliance upon, and in strict conformity with, written information furnished to the Company with respect to such Underwriter by or on behalf of such Underwriter expressly for use in such Preliminary Prospectus, if any, the Registration Statement or Prospectus or any amendment or supplement thereto or in any such application. In case any action shall be brought against the Company or any other Person so indemnified based on any Preliminary Prospectus, if any, the Registration Statement or Prospectus or any amendment or supplement thereto or any application, and in respect of which indemnity may be sought against such Underwriter, such Underwriter shall have the rights and duties given to the Company, and the Company and each other Person so indemnified shall have the rights and duties given to such Underwriter by the provisions of this Article VI. Notwithstanding the provisions of this Section 6.3, no Underwriter shall be required to indemnify the Company for any amount in excess of the underwriting discounts and commissions applicable to the Shares purchased by such Underwriter. The Underwriters' obligations in this Section 6.3 to indemnify the Company are several in proportion to their respective underwriting obligations and not joint.

6.4 Contribution.

(a) Contribution Rights. In order to provide for just and equitable contribution under the Securities Act in any case in which (i) any Person entitled to indemnification under this Article VI makes a claim for indemnification pursuant hereto but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case notwithstanding the fact that this Article VI provides for indemnification in such case, or (ii) contribution under the Securities Act, the Exchange Act or otherwise may be required on the part of any such Person in circumstances for which indemnification is provided under this Article VI, then, and in each such case, the Company and each Underwriter, severally and not jointly, shall contribute to the aggregate losses, liabilities, claims, damages and expenses of the nature contemplated by said indemnity agreement incurred by the Company and such Underwriter, as incurred, in such proportions that such Underwriter is responsible for that portion represented by the percentage that the underwriting discount appearing on the cover page of the Prospectus bears to the initial offering price appearing thereon and the Company is responsible for the balance; provided, that, no Person guilty of a fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation. For purposes of this Section, each director, officer and employee of such Underwriter or the Company, as applicable, and each Person, if any, who controls such Underwriter or the Company, as applicable, within the meaning of Section 15 of the Securities Act shall have the same rights to contribution as such Underwriter or the Company, as applicable.

Notwithstanding the provisions of this Section 6.4, no Underwriter shall be required to contribute any amount in excess of the underwriting discounts and commissions applicable to the Shares purchased by such Underwriter. The Underwriters' obligations in this Section 6.4 to contribute are several in proportion to their respective underwriting obligations and not joint.

(b) Contribution Procedure. Within fifteen days after receipt by any party to this Agreement (or its representative) of notice of the commencement of any action, suit or proceeding, such party will, if a claim for contribution in respect thereof is to be made against another party ("contributing party"), notify the contributing party of the commencement thereof, but the failure to so notify the contributing party will not relieve it from any liability which it may have to any other party other than for contribution hereunder. In case any such action, suit or proceeding is brought against any party, and such party notifies a contributing party or its representative of the commencement thereof within the aforesaid fifteen days, the contributing party will be entitled to participate therein with the notifying party and any other contributing party similarly notified. Any such contributing party shall not be liable to any party seeking contribution on account of any settlement of any claim, action or proceeding affected by such party seeking contribution without the written consent of such contributing party. The contribution provisions contained in this Section 6.4 are intended to supersede, to the extent permitted by law, any right to contribution under the Securities Act, the Exchange Act or otherwise available.

## **ARTICLE VII. MISCELLANEOUS**

### **7.1 Termination.**

(a) Termination Right. The Representative shall have the right to terminate this Agreement at any time prior to any Closing Date, (i) if any domestic or international event or act or occurrence has materially disrupted, or in its opinion will in the immediate future materially disrupt, general securities markets in the United States; or (ii) if trading on any Trading Market shall have been suspended or materially limited, or minimum or maximum prices for trading shall have been fixed, or maximum ranges for prices for securities shall have been required by FINRA or by order of the Commission or any other government authority having jurisdiction, or (iii) if the United States shall have become involved in a new war or an increase in major hostilities, or (iv) if a banking moratorium has been declared by a New York State or federal authority, or (v) if a moratorium on foreign exchange trading has been declared which materially adversely impacts the United States securities markets, or (vi) if the Company shall have sustained a material loss by fire, flood, accident, hurricane, earthquake, theft, sabotage or other calamity or malicious act which, whether or not such loss shall have been insured, will, in the Representative's opinion, make it inadvisable to proceed with the delivery of the Shares, or (vii) if the Company is in material breach of any of its representations, warranties or covenants hereunder, or (viii) if the Representative shall have become aware after the date hereof of such a material adverse change in the conditions or prospects of the Company, or such adverse material change in general market conditions as in the Representative's judgment would make it impracticable to proceed with the offering, sale and/or delivery of the Shares or to enforce contracts made by the Underwriters for the sale of the Shares.

(b) Indemnification. Notwithstanding any contrary provision contained in this Agreement, any election hereunder or any termination of this Agreement, and whether or not this Agreement is otherwise carried out, the provisions of Article VI shall not be in any way effected by such election or termination or failure to carry out the terms of this Agreement or any part hereof.

7.2 Entire Agreement. The Transaction Documents, together with the exhibits and schedules thereto, the Prospectus and the Preliminary Prospectus, contain the entire understanding of the parties with respect to the subject matter hereof and thereof and supersede all prior agreements and understandings, oral or written, with respect to such matters, which the parties acknowledge have been merged into such documents, exhibits and schedules. Notwithstanding anything herein to the contrary, the Engagement Agreement, dated January 10, 2020, by and between the Company and Lake Street Capital Markets, LLC ("Engagement Agreement") shall continue to be effective and the terms therein, including, without limitation, Section E with respect to any future offerings and transactions of the Company, shall continue to survive and be enforceable by the Representative in accordance with its terms, provided that, in the event of a conflict between the terms of the Engagement Agreement and this Agreement, the terms of this Agreement shall prevail.

7.3 Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of: (a) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number or e-mail attachment at the email address set forth on the signature pages attached hereto at or prior to 5:30 p.m. (New York City time) on a Trading Day, (b) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number or e-mail attachment at the e-mail address as set forth on the signature pages attached hereto on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (c) the second (2<sup>nd</sup>) Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service or (d) upon actual receipt by the party to whom such notice is required to be given. The address for such notices and communications shall be as set forth on the signature pages attached hereto.

7.4 Amendments; Waivers. No provision of this Agreement may be waived, modified, supplemented or amended except in a written instrument signed, in the case of an amendment, by the Company and the Representative. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any party to exercise any right hereunder in any manner impair the exercise of any such right.

7.5 Headings. The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof.

7.6 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their successors and permitted assigns.

7.7 Governing Law. All questions concerning the construction, validity, enforcement and interpretation of the Transaction Documents shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement and any other Transaction Documents (whether brought against a party hereto or its respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any action, suit or proceeding, any claim that it is not personally subject to the jurisdiction of any such

court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action or proceeding to enforce any provisions of the Transaction Documents, then, in addition to the obligations of the Company and Underwriters under Article VI, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for its reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

7.8 Survival. The representations and warranties contained herein shall survive the Closing and the Option Closing, if any, and the delivery of the Shares.

7.9 Execution. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to each other party, it being understood that the parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or ".pdf" signature page were an original thereof.

7.10 Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use their commercially reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

7.11 Remedies. In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, the Underwriters and the Company will be entitled to specific performance under the Transaction Documents. The parties agree that monetary damages may not be adequate compensation for any loss incurred by reason of any breach of obligations contained in the Transaction Documents and hereby agree to waive and not to assert in any action for specific performance of any such obligation the defense that a remedy at law would be adequate.

7.12 Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then such action may be taken or such right may be exercised on the next succeeding Business Day.

7.13 Construction. The parties agree that each of them and/or their respective counsel have reviewed and had an opportunity to revise the Transaction Documents and, therefore, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of the Transaction Documents or any amendments thereto. In addition, each and every reference to share prices and shares of Common Stock in any Transaction Document shall be

subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the Common Stock that occur after the date of this Agreement.

**7.14 WAIVER OF JURY TRIAL. IN ANY ACTION, SUIT, OR PROCEEDING IN ANY JURISDICTION BROUGHT BY ANY PARTY AGAINST ANY OTHER PARTY ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY, THE PARTIES EACH KNOWINGLY AND INTENTIONALLY, TO THE GREATEST EXTENT PERMITTED BY APPLICABLE LAW, HEREBY ABSOLUTELY, UNCONDITIONALLY, IRREVOCABLY AND EXPRESSLY WAIVE FOREVER ANY RIGHT TO TRIAL BY JURY.**

*(Signature Pages Follow)*



If the foregoing correctly sets forth the understanding between the Underwriters and the Company, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement among the Company and the several Underwriters in accordance with its terms.

Very truly yours,

**AQUABOUNTY TECHNOLOGIES, INC.**

By: \_\_  
Name:  
Title:

Address for Notice:  
2 Mill and Main Place, Suite 305  
Maynard, Massachusetts 01754  
Attention: Christopher Martin  
E-Mail: cmartin@aquabounty.com

Copy to:  
Goodwin Procter LLP  
100 Northern Avenue  
Boston, Massachusetts 02210  
Attention: Jocelyn Arel; Michael Minahan  
E-Mail: JArel@goodwinlaw.com; MMinahan@goodwinlaw.com

Accepted on the date first above written.

**Lake Street Capital Markets, LLC**  
As the Representative of the several  
Underwriters listed on Schedule I

By: \_\_  
Name:  
Title:

Address for Notice:  
Lake Street Capital Markets, LLC  
920 Second Ave South, Suite 700  
Minneapolis, Minnesota 55402  
Attention: Mike Townley  
Email: mike.townley@lakestreetcm.com

Copy to:  
Faegre Baker Daniels LLP, 2200 Wells Fargo Center  
90 South Seventh Street  
Minneapolis, Minnesota 55402  
Attention: Jonathan R. Zimmerman  
Email: jon.zimmerman@FaegreBD.com

SCHEDULE I

SCHEDULE OF UNDERWRITERS

<b>Underwriters</b>	<b>Closing Shares</b>	<b>Closing Purchase Price</b>
Lake Street Capital Markets, LLC		
<b>Total</b>		

**SCHEDULE II**

**SPECIFIED INVESTORS**

Randal J. Kirk and his Affiliates

**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:

<b><u>Name</u></b>	<b><u>Jurisdiction of Organization</u></b>
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

## **Consent of Independent Registered Public Accounting Firm**

We consent to the use in this Registration Statement on Form S-1 of AquaBounty Technologies, Inc. of our report dated March 7, 2019, relating to the consolidated financial statements of AquaBounty Technologies, Inc., appearing in the Prospectus, which is part of this Registration Statement.

We also consent to the reference to our firm under the caption “Experts” in such Prospectus.

/s/ Wolf & Company, P.C.

Boston, Massachusetts

February 3, 2020