Table of Contents

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)**
OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2020

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)**
OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____
Commission file number: 001-36426

AquaBounty Technologies, Inc.

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

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

2 Mill & Main Place, Suite 395
Maynard, Massachusetts 01754
(978) 648-6000
(Address and telephone number of the registrant's principal executive offices)

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

Title of each class	Trading Symbol(s)	Name of exchange on which registered
Common Stock, par value $0.001 per share	**AQB**	**The NASDAQ Stock Market LLC**

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act of 1933.
Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act.
Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.
Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or such shorter period that the registrant was required to submit such files).
Yes ☒ No ☐

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

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

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.
Yes ☐ No ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

At June 30, 2020, the aggregate market value of the 12,381,621 shares of common stock held by non-affiliates of the registrant was approximately $39.9 million. At March 5, 2021, the registrant had 70,939,065 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for its Annual Meeting of Shareholders to be held on April 27, 2021 (the "2021 Proxy Statement"), are incorporated by reference into Part III of this Annual Report on Form 10-K.

Table of Contents

ANNUAL REPORT ON FORM 10-K

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2020

Table of Contents

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, particularly the sections titled “Summary,” “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business,” contains forward looking statements. All statements other than present and historical facts and conditions contained in this Annual Report on Form 10-K, including statements regarding our future results of operations and financial positions, business strategy, plans, and our objectives for future operations, are forward-looking statements. When used in this Annual Report on Form 10-K, the words “anticipate,” “believe,” “can,” “could,” “estimate,” “expect,” “intend,” “is designed to,” “may,” “might,” “plan,” “potential,” “predict,” “objective,” “should,” or the negative of these and similar expressions identify forward-looking statements. These forward-looking statements include statements that are not historical facts, including statements regarding management’s expectations for future financial and operational performance and operating expenditures, expected growth, and business outlook; the nature of and progress toward our commercialization plan; the future introduction of our products to consumers; the countries in which we may obtain regulatory approval and the progress toward such approvals; the volume of eggs or fish we may be able to produce; the timeline for our production of saleable fish; the expected advantages of land-based systems over sea cage production; the validity and impact of legal actions; the completion of renovations at our farms; and the establishment of a larger-scale grow-out facility.

We have based these forward-looking statements on our current expectations, assumptions, estimates, and projections. While we believe these expectations, assumptions, estimates, and projections are reasonable, such forward-looking statements are only predictions and involve known and unknown risks, uncertainties, and other factors, many of which are outside of our control, which could cause our actual results, performance, or achievements to differ materially from any results, performance, or achievements expressed or implied by such forward-looking statements. Forward-looking statements in this Annual Report on Form 10-K include, but are not limited to, statements about:

- the anticipated benefits and characteristics of our AquAdvantage salmon product;
- the implementation and likelihood of achieving the business plan, future revenue, and operating results;
- our plans for (including without limitation, projected costs, locations and third-party involvement) 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;
- the impact of the COVID-19 coronavirus outbreak (the “COVID-19 pandemic”) on our business, operations and financial results, any of which could be significantly impaired by the COVID-19 pandemic;
- our ability to protect our intellectual property and other proprietary rights and technologies;
- the impact of and our ability to adapt to changes in laws or regulations and policies;
- the ability to secure any necessary regulatory approvals to commercialize any products;
- the rate and degree of market acceptance of any products developed through the application of bioengineering, including bioengineered fish;
- our ability to retain and recruit key personnel;
- the success of any of our future acquisitions or investments;
- our expectations regarding the time during which we will be an emerging growth company under the Jumpstart Our Business Startups Act (the “JOBS Act”);
- our estimates regarding expenses, future revenue, capital requirements, and needs for additional financing; and
- other risks and uncertainties referenced under “Risk Factors” below and in any documents incorporated by reference herein.

We caution you that the foregoing list may not contain all of the risks to which the forward-looking statements made in this Annual Report on Form 10-K are subject. We may not actually achieve the plans, intentions, or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ

materially from the plans, intentions, and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included, particularly in the section titled “Risk Factors,” that could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures, or investments that we may make.

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

SUMMARY OF THE MATERIAL RISKS ASSOCIATED WITH OUR BUSINESS

Our business is subject to numerous risks and uncertainties that you should be aware of in evaluating our business, including those described in the "Risk Factors" section in Part I, Item 1A. of this Annual Report on Form 10-K. These risks and uncertainties include, but are not limited to, the following:

- We have a history of net losses and will likely incur future losses and may not achieve or maintain profitability.
- We may need substantial additional capital in the future in order to fund our business plans.
- Ethical, legal, and social concerns about genetically engineered products could limit or prevent the use of our products and limit our revenues.
- We may have limited success in gaining consumer acceptance of our products.
- Our business is affected by the quality and quantity of the salmon that we harvest.
- A shutdown, damage to any of our farms, or lack of availability of power, fuel, oxygen, eggs, water, or other key components needed for our operations, could result in our prematurely harvesting fish, a loss of a material percentage of our fish in production, a delay in our commercialization plans, and a material adverse effect on our operations, business results, reputation, and the value of our brands.
- 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.
- The successful development of our business depends on our ability to efficiently and cost-effectively produce and sell salmon at large commercial scale.
- 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.
- We will be required to continue to comply with FDA and foreign regulations.
- We remain dependent on third parties for the processing, distribution and sale of our products.
- We may be required to write-down the value of our inventory if its net realizable value is less than its accumulated cost at the end of a reporting period.
- If our products become contaminated, we may be subject to product liability claims and product recalls, which could adversely affect our financial results and damage our reputation.
- The loss of AquAdvantage salmon broodstock could result in the loss of our commercial technology.
- Business, political, or economic disruptions or global health concerns, such as the COVID-19 pandemic, could seriously harm our current or planned business and increase our costs and expenses.
- The construction and potential benefits of our new facilities are subject to risks and uncertainties.
- Industry volatility can affect our earnings, especially due to fluctuations in commodity prices of salmon.
- The significant share ownership position of Randal J. Kirk and his affiliates allows him to influence corporate matters.
- The price of our shares of common stock is likely to be volatile.
- 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.
- Atlantic salmon farming is subject to disease outbreaks, which can increase the cost of production and/or reduce production harvests.

The summary risk factors described above should be read together with the text of the full risk factors below, in the section entitled "Risk Factors" and in the other information set forth in this Annual Report on Form 10-K, including our financial statements and the related notes, as well as in other documents that we file with the U.S. Securities and Exchange Commission, or the SEC. If any such risks and uncertainties actually occur, our business, prospects, financial condition and results of operations could be materially and adversely affected. The risks summarized above or described in full below are not the only risks that we face. Additional risks and uncertainties not currently known to us, or that we currently deem to be immaterial may also materially adversely affect our business, prospects, financial condition and results of operations.

Where You Can Find More Information

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

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

Part I

Item 1. Business

Overview

Feed a growing world by developing and deploying new aquaculture technologies.

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 growing global consumer demand, while addressing critical production constraints in one of the most popular farmed species. We are committed to feeding the world efficiently, sustainably and profitably.

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 the Food and Agriculture Organization of the United Nations ("FAO"), aquaculture was a $250 billion industry in 2018, and we are targeting the $17 billion salmon farming segment of that industry.

Our genetically engineered AquAdvantage salmon is based upon proprietary salmon genetics and grows to harvest size faster than conventional Atlantic salmon. Our salmon was approved for production, sale, and consumption in the United States on November 19, 2015 by the Food and Drug Administration ("FDA"). This was followed by an approval from Health Canada for the production, sale, and consumption of AquAdvantage salmon in Canada on May 19, 2016. 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 farm AquAdvantage salmon in land-based, recirculating aquaculture systems ("RAS"), which allow inland fish farms to be established close to major demand centers in a profitable and environmentally sustainable manner. We believe that our 25 years of experience growing salmon in land-based farms, coupled with the unique genetics of our faster-growing AquAdvantage salmon, provides us with a competitive advantage and an opportunity to establish multiple salmon farms throughout North America and the world.

We currently have two salmon farms in production – a 1,200 metric ton facility in Indiana and a 250 metric ton demonstration facility on Prince Edward Island. Our plans include the construction of a new 10,000 metric ton farm in the Midwest United States during the next eighteen months and an additional three to four new 10,000 metric ton farms in North America at sites close to consumer consumption over the next seven-to-ten years. We are also pursuing regulatory approval for AquAdvantage salmon in Brazil, China, and Israel, with the goal of entering those markets with local partners in the form of joint ventures or licensing arrangements. Additionally, we plan to utilize our expertise in biotechnology and RAS operations to enter complimentary areas of the aquaculture industry.

Our strategy is to continually strengthen our core capabilities, scale our business and pursue growth opportunities.

Market Drivers

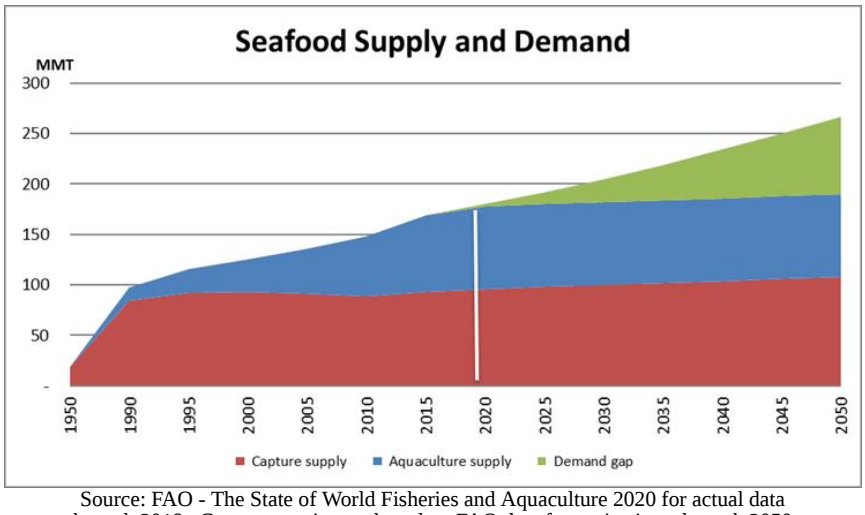
Population Growth Drives Demand for Food Protein

According to FAO, the global population is projected to exceed 9 billion people by 2050, or roughly 26% growth over the next 30 years. Along with this increase is a growing middle class with more disposable income, which is driving increased demand for protein food sources. And according to FAO, global fish consumption has been growing faster than all other animal protein foods.

Traditional Fisheries Cannot Meet the Demand

The increased demand for fish protein cannot be satisfied from traditional capture fisheries. FAO states that over 90% of the world's fisheries are fully fished or overfished. Total production from global capture fisheries has been relatively stable since the late-1980s, with catches generally fluctuating between 86 million metric tons and 93 million metric tons per year, reaching 96 million metric tons in 2018. In contrast, aquaculture fish production has grown from 14 million metric tons to a level of 82 million metric tons in 2018 and now accounts for 46% of global fish production. Feeding the growing population and meeting the demand for fish protein will require aquaculture production to almost double by 2050.

The chart below depicts the projected gap between supply and demand over the next 30 years.



Source: FAO - The State of World Fisheries and Aquaculture 2020 for actual data through 2018. Company estimates based on FAO data for projections through 2050.

Salmon Farming

Atlantic salmon farming is a major industry in the cold-water countries of the northern and southern hemispheres. According to FAO, global tonnage of Atlantic salmon aquaculture production grew by approximately 3.3% annually between 2013 and 2018, reaching 2.4 million metric tons with a value of over $17 billion. We believe that the aquaculture industry-and in particular salmon farming-is poised for significant growth in the coming years, as the global population expands and consumers seek out high-quality proteins. However, the near-term outlook will continue to be influenced by the COVID-19 pandemic and its impact on both production and demand.

Below is a break-down by major producing country for the time period 2013 through 2018, which is the last year for which data is readily available from FAO.

Worldwide Atlantic Salmon Production by Country (in metric tons)

Country	2013	2014	2015	2016	2017	2018
Norway	1,168,324	1,258,356	1,303,346	1,233,619	1,236,353	1,282,003
Chile	492,329	644,459	608,546	532,225	614,180	661,138
United Kingdom	163,518	179,397	172,146	163,135	189,707	166,000
Canada	97,629	86,347	121,926	123,522	120,553	123,184
Faroe Islands	75,821	86,454	80,600	83,300	86,800	78,900
Australia	42,825	41,591	48,331	56,115	52,580	61,227
Ireland	9,125	9,368	13,116	16,300	18,342	11,984
United States	18,866	18,719	18,719	16,185	14,685	16,107
All other	25,549	23,376	14,849	22,892	25,463	35,405
Volume-Worldwide (mt)	2,093,986	2,348,067	2,381,579	2,247,293	2,358,663	2,435,948

Source: FAO - Fisheries and Aquaculture Information and Statistics Service - 2/9/2021

Limitations of Conventional Sea-Cage Salmon Farming

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 such as this is a universally accepted fact in human and animal health. Such disease agents in these uncontrolled water currents can result in infection and spread of infection within the captive population. The risks and outcomes of conventional, open sea-cage systems are well established, including the susceptibility to extreme weather conditions, 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.

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.

Another limitation of the conventional salmon production system is that the farms are not located near the ultimate consumers and thus an additional carbon footprint is created in transporting the fish from its production to its consumption location.

We believe we offer a better, more sustainable alternative to conventional salmon production.

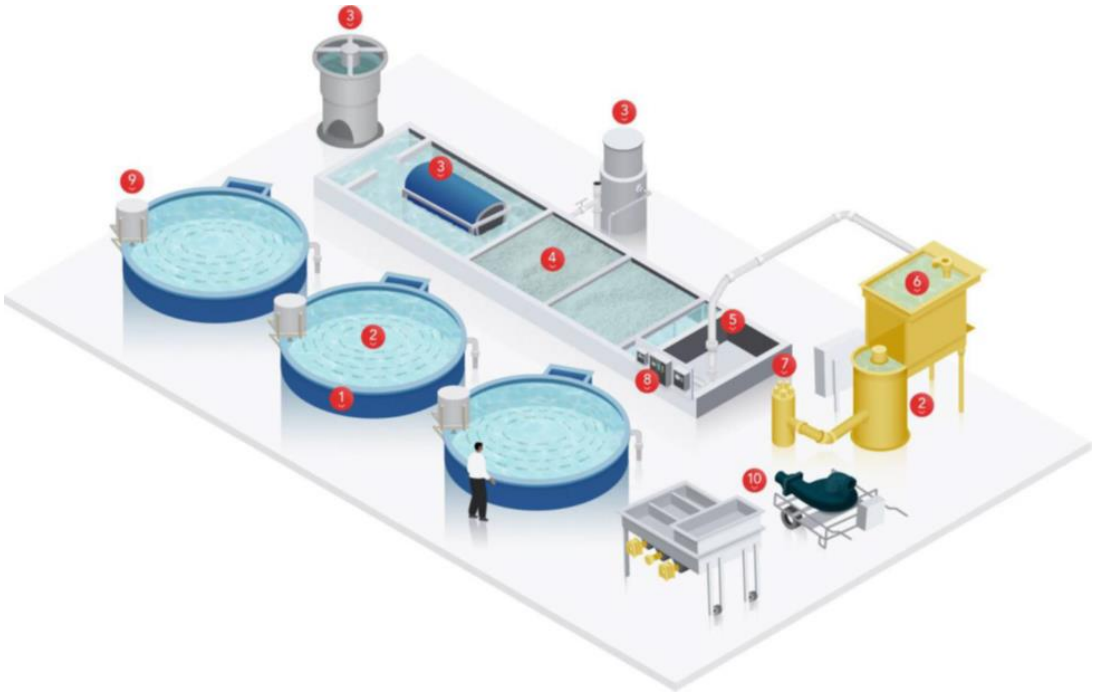
AquaBounty Solution

Land-Based RAS Production

The closed, contained, land-based production systems using RAS technology that we use for the grow-out of our fish are less susceptible to the disease-related pressures of conventional salmon farming, 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 our fish 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. Further, stocking our RAS farms with disease-free eggs from our own hatchery results in a much higher degree of biosecurity and protection from disease.

In addition to biosecurity measures to optimize fish health, our farms feature multiple layers of containment designed to prevent escapes. We have been growing fish in RAS facilities for decades and we have never experienced an escape. The multiple layers of containment redundancy, coupled with the fact that our salmon are sterile female fish, pose a much-needed solution to raising fresh, healthy seafood in a manner that prevents harming native fish populations. The method of land-based fish farming that we employ has been promoted by many environmental NGOs and it does not pose a threat to wild salmon populations.

We have significant experience in operating land-based RAS facilities. Our operating practices and procedures have been developed and honed over several decades and are geared towards meeting stringent regulatory requirements. Our experience operating land-based RAS salmon farms enables us to protect both the fish and the environment.



1. Fish culture tanks	6. Pumping system	11. Automatic feeders
2. Tank emergency aeration	7. CO2 degassing (Gas management)	12. Primary solids effluent treatment
3. Microscreen filter (Solids filtration)	8. Oxygen injection (Gas management)	13. Fish handling
4. Protein skimmer (Fine solids filtration)	9. Ozone disinfection (WQ control)	14. Monitoring and Control system
5. MBBR (Biofiltration)	10. UV disinfection	

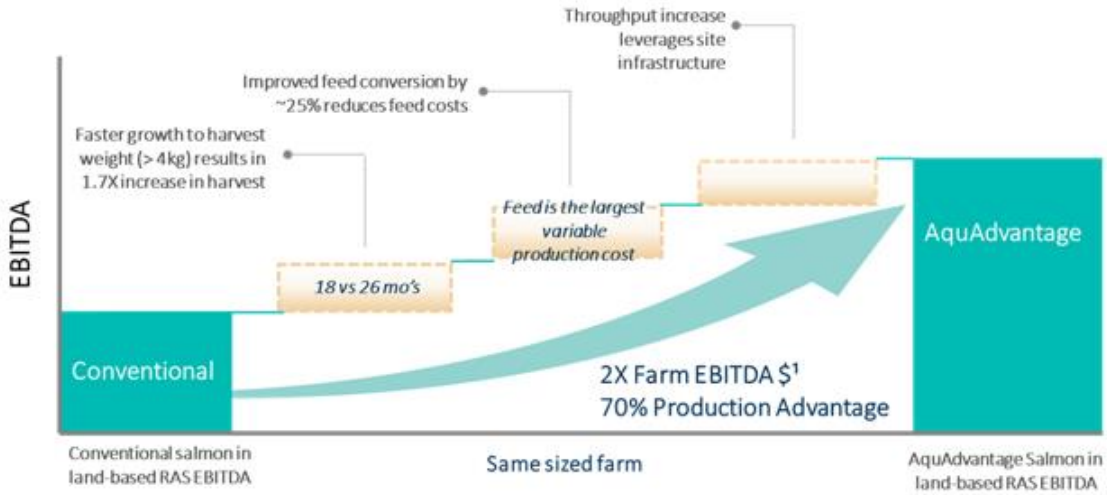
Source: Innovasea

AquAdvantage Salmon

Our AquAdvantage fish program began over 30 years ago and is based upon a single, specific molecular modification in our salmon that results in more rapid growth during early development. The result is a genetically engineered Atlantic salmon that can grow to market size faster than a 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 in a RAS facility from roughly 26 to 28 months for conventional Atlantic salmon to roughly 18 to 20 months for AquAdvantage salmon.

This accelerated growth has economic and environmental advantages. The faster life cycle from birth to harvesting of our salmon, as compared to conventional salmon, allows it to be produced more economically in contained, land-based RAS farms. Although RAS farms require greater capital investment than the sea cage approach, we believe that the higher costs are offset by more efficient growth and a shorter transportation distance to market. Compared to conventional salmon grown in a RAS farm with a similar capital investment, we can produce approximately 70% more AquAdvantage salmon each year. Our fish are also 25% more efficient at converting their feed to biomass, which represents a significant cost advantage as feed is the largest variable cost of growing salmon.



Source: AquaBounty - Management estimates based on current assumptions. EBITDA is 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.

Further, with our plan to locate our farms nearer to the major food markets, we expect savings on transportation of the harvested stock, a reduced carbon footprint, and an improved ability to get fresh product to market faster.

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. The patent for the AquAdvantage technology, which had been issued in certain salmon producing countries, expired in August 2013 and we currently hold a global, perpetual, royalty-free, fully paid, sub-licensable, assignable, non-exclusive right to the technology covering genetically engineered salmonid fish that express endogenous growth hormone under the control of a protein gene promoter from an edible fish. Despite the expiration of the patent for the licensed technology, we believe that the degree of know-how in the molecular modification process and the regulatory timescales associated with approval of genetically engineered fish present significant barriers to entry and a competitive advantage.

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. Subsequently, the maternal sterility patent has been issued in Australia, Brazil, Canada, Chile, Japan, and the Republic of Korea. 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.

Regulatory Aspects of Genetically Engineered Fish

The genetic engineering of food using the tools of modern biotechnology is regulated in the United States by two government organizations, the U.S Department of Agriculture (“USDA”) for genetically engineered plants and the FDA for genetically engineered animals.

The regulatory process for genetically engineered food and animal feed is based upon the Coordinated Framework, issued by the Office of Science and Technology Policy in 1986, but the enabling legislation is the Federal Food, Drug, and Cosmetic Act (“FFDCA”). The FDA is also required to determine the environmental impact of a proposed application under the National Environmental Policy Act (“NEPA”). In the case of animals intended 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, with ongoing oversight following approval.

We opened an Investigational New Animal Drug file for AquAdvantage salmon with the FDA in 1995. At that time, there was no defined regulatory framework for the regulation of 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 New Animal Drug Application (“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, along with a final Environmental Assessment ("EA") and a finding of No Significant Impact on the EA under NEPA.

Regulatory Legal Challenge

On March 30, 2016, a coalition of non-governmental organizations ("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, AquaBounty joined the case as an intervenor to protect our interests. Shortly thereafter, the Fish and Wildlife Service was dismissed from the case. The NGOs, including the Center for Food Safety and Friends of the Earth, claimed that the FDA had no statutory authority to regulate genetically engineered animals, and, if it did, that the agency failed to adequately 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. In December 2019 the court found that the FDA did have authority/jurisdiction over genetically engineered animals under the FFDCA, and in November 2020, the court remanded the EA to the FDA for further work on its NEPA and Endangered Species Act assessments. In December 2020, the plaintiffs filed a motion to alter or amend the judgment. In February 2021, the judge denied that motion. The court's decisions do not have a current business impact on AquaBounty's egg production on Prince Edward Island, Canada or AquaBounty's salmon production in Albany, Indiana.

On-going Regulatory Requirements

In addition to the 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 operate 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 on Prince Edward Island, is currently registered with the FDA, and the FDA has performed inspections and site visits at each of those facilities.

Going forward, 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 also need to comply with USDA disclosure requirements pertaining to bioengineered foods under the National Bioengineered Food Disclosure Law. 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.

Production of AquAdvantage salmon in the United States also requires compliance with environmental regulations and local site permitting statutes. In addition, every production site for AquAdvantage salmon in the United States requires approval by the FDA of both a Supplemental NADA and satisfaction of corresponding obligations under NEPA, as well as compliance with local permitting requirements for construction of grow-out facilities. We expect that we may incur significant costs to comply with these environmental and regulatory requirements, which could take several years to complete for each production site.

U.S. Market

According to the U.S. Department of Commerce ("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 FAO, a total of only 35 million pounds (16 thousand metric tons) of farmed Atlantic salmon was produced in the United States in 2018, 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 2013 to 2018, annual seafood consumption in the United States ranged between 14 and 16 pounds per capita, significantly behind consumption

of poultry (70 to 78 pounds), beef (51 to 55 pounds), and pork (43 to 47 pounds). In comparison, according to FAO, average seafood consumption worldwide was 45 pounds per capita in 2018.

Consumer Sentiment Regarding Genetically Engineered Fish

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

However, currently 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 the FDA approval reinforces the message that AquAdvantage salmon is a safe and nutritious seafood product that is identical to conventional farmed Atlantic salmon.

We believe that consumer sentiment towards genetically engineered foods is evolving. Based on market research that we commissioned, the top attributes for consumer selection of farm-raised salmon are: availability, affordability, freshness, safety, and taste. According to the poll conducted, 53% of respondents had a first impression of genetically engineered food that was neutral to very positive; 60% were neutral to very likely to purchase genetically engineered products they buy regularly if labeled as such; 70% were neutral to very likely to purchase genetically engineered products they buy regularly if labeled with the USDA Bioengineered Disclosure Symbol; 81% were neutral to very positive to the AquaBounty and AquAdvantage story and product benefits; and 70% were likely to purchase and try AquAdvantage salmon at least once.

Labeling

There have been surveys cited by various NGOs that indicate that consumers are reluctant to purchase genetically engineered food and that they would like to see labeling in order to avoid it. Many states reacted to this by enacting genetically engineered food labeling laws. Consequently, in response to the potential for state-by-state labeling laws, Congress passed the National Bioengineered Food Disclosure Law (“Disclosure Standard”) 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 Disclosure Standard will come into effect on January 1, 2022, but entities can begin complying sooner on a voluntary basis.

We plan to commence early compliance with the Disclosure Standard, starting immediately from the first sales of AquAdvantage salmon to our customers in 2021. In conjunction with the bioengineered disclosure, we also 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.

In December 2019, the 2020 Appropriations Act was signed into law, which was reintroduced and passed in 2021, which contained an amendment that requires that any genetically 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 we believe that this labeling requirement is unnecessary and redundant to the requirement of the Disclosure Standard, we will comply with all applicable laws.

Sales Plan

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 with an initial focus on broadline distributors and seafood distributors.

Competition

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, Aquachile, Cermaq, Leroy Seafood Group, SalMar, Cooke Aquaculture, and Bakkafrost. According to Kontali, these seven companies accounted for approximately 46% of the Atlantic salmon produced in 2018. Since salmon is primarily sold as a commodity in the United States, we will compete against these well-established, sea-cage production companies.

In addition, new entrants to salmon production have emerged that plan to use land-based RAS facilities. A number of projects are either planned, under construction or in operation. Atlantic Sapphire is operating a ten thousand metric ton facility in Florida, with stated plans to increase production to over 220 thousand metric tons. Other entrants include Nordic Aquafarms, with plans for facilities in Maine and California, and Whole Oceans and Aquabanq, both with plans for farms in Maine.

Operations

Current Production

We currently have two salmon farms in production – a refurbished 1,200 metric ton facility in Indiana and a 250 metric ton demonstration facility on Prince Edward Island. Our first harvests of conventional salmon in Indiana commenced in June 2020. At December 31, 2020, we had a total farm biomass of 636 metric tons.

Farm	Fish Type	Status	Number	Biomass	Expected Harvest
Indiana	Conventional	Growers	69,500	366 mt	Q1 2021
	AAS Batch 1	Growers	49,000	108 mt	Q1/Q2 2021
	AAS Batch 2	Pre-Grow	75,300	74 mt	Q2/Q3 2021
	AAS Batch 3	Fingerling	100,200	42 mt	Q3/Q4 2021
	AAS Batch 4	Fingerling	60,400	8 mt	Q1 2022
PEI	AAS Batch 1	Growers	15,900	28 mt	Q2 2021
	AAS Batch 2	Fry	15,100	10 mt	Q3 2021

Impact of COVID-19 on Demand

In March 2020, the World Health Organization declared the outbreak of a novel coronavirus, SARS-CoV-2, as a pandemic, which continues to spread throughout the United States and worldwide. Because infections of this virus and the incidences of the disease it causes, certain national, provincial, state, and local governmental authorities in the United States and Canada have issued proclamations and directives aimed at minimizing the spread of the virus. Additional, more restrictive proclamations and directives may be issued in the future.

The ultimate impact of the COVID-19 pandemic on our operations is unknown and will depend on future developments, which are highly uncertain and cannot be predicted with confidence, including the duration of the COVID-19 pandemic, new information which may emerge concerning the severity of the COVID-19 pandemic, and any additional preventative and protective actions that governments, or we, may direct, which may result in an extended period of continued business disruption and reduced operations.
To date, our farm operations have not been materially affected by the pandemic, although we have made modifications to biosecurity procedures and our farm sites to adapt to local requirements and to provide a safe work environment. Our current preventative and protective measures include, but are not limited to, segregating farm workers to specific locations, rotating shifts, and monitoring worker temperatures upon arrival at our facilities. To the extent possible, work-from-home is utilized for employees that do not have fish care responsibilities.

We have experienced delays in capital projects due to the pandemic, including a six-month delay in the completion of the processing facility at our Indiana farm, which did not become operational until November 2020. We utilized third party alternatives for fish processing during the delay.

We have been primarily impacted by a reduction in the market price and demand for Atlantic salmon due to the pandemic's impact on the food service sector. This had and continues to have a negative impact on our revenue and inventory value, as we are not yet an

established vendor and customers do not need a new supplier during a period of depressed demand. Consequently, in December 2020, we made the decision to donate substantially all of our conventional salmon to local food charities, which are experiencing unprecedented need during the pandemic. This decision was made in order to ease the capacity constraints at our Indiana farm to provide space for our growing biomass of AquAdvantage salmon. The donation program commenced in February 2021.

We believe the financial impact of the pandemic is likely to continue through at least the first half of 2021, as the industry waits for the roll-out of COVID-19 vaccines and the subsequent reopening of the food service sector. Any financial impacts beyond the near-term cannot be reasonably estimated at this time but may continue to have a material adverse impact on our business, financial condition, and results of operations in 2021.

North America Plan

Our 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. Our target is to achieve an annual production output of at least 50,000 metric tons within the next seven to ten years.

We are currently in the process of selecting the site location and finalizing the engineering design and cost for the first of our planned 10,000 metric ton farms, which we believe will range from $140 million to $175 million to build. Our target is to commence construction on the new farm in the first half of 2021 and begin operation in 2023.

Egg Production

We have scaled-up our egg production capability at our Fortune and Rollo Bay hatcheries on Prince Edward Island and we can now produce over 10 million eyed eggs annually, which is more than our current internal demand. As there is a shortage of supply of salmon eggs in the market, we plan to sell our excess conventional salmon eggs and fry to other salmon farmers. We are also planning to increase our egg production capacity over the next twelve to eighteen months to 30 million eyed eggs annually, which would be sufficient to stock six 10,000 metric ton farms.

International Plans

While our primary focus is on North America, we also plan to expand internationally, targeting those markets that are net salmon importers, unable to supply their domestic needs and where we believe we will have success in gaining further regulatory approvals and consumer acceptance. Consequently, we are seeking regulatory approval for AquAdvantage salmon in Brazil, Israel, and China. We have already received approval from regulators to conduct field trials for AquAdvantage salmon in Brazil and China. The field trial in Brazil has been successfully completed, and we are pursuing approval for the sale of AquAdvantage in that country, while the field trial in China is expected to begin in 2021. Once approved in these locations, we plan to commercialize through a combination of partnerships, joint ventures, and licensing arrangements.

Growth Strategy

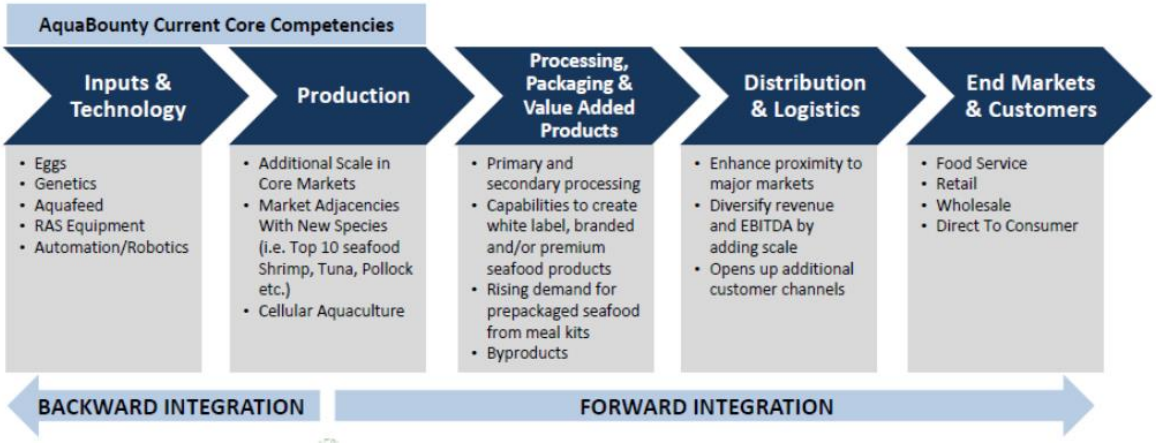
Optimizing Technology and Innovating for the Future

We are exploring the potential development of a range of additional products, including a second generation of AquAdvantage salmon to help ensure 100% sterility, molecular sterility systems to provide an improved means of sterility for farmed fish, and improved methods for generating genetically engineered fish.

Our primary research and development operations are located in our owned hatcheries on Prince Edward Island. As of December 31, 2020, we employed 15 scientists and technicians to oversee our broodstock, as well as the lines of fish we maintain for research and development purposes. In addition, we contract some research activities to third parties. In the future, we may enter into other partnerships and collaboration agreements to advance our research and development efforts.

Vertical and horizontal integration

We may have multiple opportunities to vertically integrate and strategically increase our value-added capabilities within the seafood industry. These capabilities can be obtained by building and developing in-house, forming partnerships, direct investment or through acquisition.



We could also seek to expand our production capabilities in adjacent markets, including:

- Diversify into additional high value species such as shrimp, trout, or tuna.
- Evaluate markets for inputs and by-products such as animal feed, fish meal and fish oil.
- Acquire new production technologies such as cellular aquaculture in the rapidly growing bio-engineered food market.

Human Capital Resources

As of December 31, 2020, we had 72 employees. None of our employees are represented by a labor union, and we consider our employee relations to be good.

Recent Events

During 2019, we completed two public offerings totaling 6,246,360 Common Shares for net proceeds of approximately $12.4 million and we issued 83,564 Common Shares through the conversion of outstanding warrants for total proceeds of $0.3 million.

During 2020, we completed three public offerings totaling 33,028,000 Common Shares for net proceeds of approximately $104.6 million and we issued 713,449 Common Shares through the conversion of outstanding warrants for total proceeds of $2.3 million.

On February 8, 2021, we completed a public offering of 14,950,000 Common Shares for net proceeds of approximately $119.2 million.

As of December 31, 2020, we had a cash and cash equivalents balance of $95.8 million.

Item 1A. Risk Factors

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

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

Risks Relating to our Business and Operations

We have a history of net losses and will likely incur future losses and may not achieve or maintain profitability.

In the period from incorporation to December 31, 2020, we have incurred cumulative net losses of approximately $149 million. These losses reflect our personnel, research and development, production 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 revenues to be modest and infrequent for at least the first half of 2021 until the U.S. economy begins to recover from the COVID-19 pandemic and food service operations begin to return to normal capacity. 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 may need substantial additional capital in the future in order to fund our business plans.

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 may 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 $140 million to $175 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.

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

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

The subject of genetically engineered products has received negative publicity, which has aroused public debate. This adverse publicity could lead to lawsuits against the production, distribution, and sale of genetically engineered products; greater regulation of those products; and trade restrictions on their importation. Further, there is a concern that products produced using our technologies could be perceived to cause adverse events, which could also lead to negative publicity.

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

There is an active and vocal group of opponents to genetically engineered 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 genetically engineered products, as well as application of pressure to consumer retail outlets seeking a commitment not to carry genetically engineered 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.

Our business is affected by the quality and quantity of the salmon that we harvest.

We sell our products in a highly competitive market. Our ability to successfully sell our products, and the price that we receive, is highly dependent on the quality of the salmon that we produce. A number of factors can negatively affect the quality of the salmon that we sell, including the quality of our broodstock, water conditions in our farms, the food and additives consumed by our fish, population levels in the tanks, and the amount of time that it takes to bring a fish to harvest, including transportation and processing. We have experience operating RAS facilities and raising salmon, and while we actively monitor these factors, we cannot always ensure optimal growing conditions. Although fish grown in RAS production systems are not subject to the disease and parasite issues that can affect salmon grown in ocean pens, there is the potential for organisms that are ubiquitous to freshwater environments to become pathogenic if the fish are subjected to stressful conditions or there is an issue with biomass management.

We maintain high standards for the quality of our product and if we determine that a harvest has not met such standards, we may be required to reduce our inventory and write down the value of the harvest to reflect net realizable value. Sub-optimal conditions could lead to smaller harvests and or lower quality fish. Conversely, if we experience better than expected growth rates, we may not be able to process and bring our fish to market in a timely manner, which may result in overcrowding that can cause negative health impacts and/or require culling our fish population.

Further, if our salmon is perceived by the market to be of lower quality than other available sources of salmon or other fish, we may experience reduced demand for our product and may not be able to sell our products at the prices that we expect or at all. For example, we concluded 2020 with a conventional Atlantic salmon harvest that met our high standards for nutrition, taste and texture. However, unlike our AquAdvantage salmon, the conventional salmon did not achieve the same high level of color consistency, due in part to the maturity of the male population and the quality of the color additive in the feed. We identified and successfully addressed the source of the color inconsistency in the conventional salmon, and our production plans call for only raising our all-female AquAdvantage salmon moving forward. However, we reduced the net realizable value of our conventional salmon to $0 as of December 31, 2020 as we anticipate donation of the entire conventional salmon biomass in the first quarter of 2021. As we continue to expand our operations and build new farms, we potentially may face additional challenges with maintaining the quality of our products. We cannot guarantee that we will not face quality issues again in the future, any of which could cause damage to our reputation, and a loss of consumer confidence in our products, which could have a material adverse effect on our business results and the value of our brands.

A shutdown, damage to any of our farms, or lack of availability of power, fuel, oxygen, eggs, water, or other key components needed for our operations, could result in our prematurely harvesting fish, a loss of a material percentage of our fish in production, a delay in our commercialization plans, and a material adverse effect on our operations, business results, reputation, and the value of our brands.

At present, we only have farms in Albany, Indiana, and Prince Edward Island, Canada. As an interruption in the power, fuel, oxygen supply, water quality systems, or other critical infrastructure of an aquaculture facility for more than a short period of time can lead to the loss of a large number of fish, any shutdown of or damage to either of our farms—for example, due to natural disaster, shortages of key components to our operations due to a pandemic, reduction in water supply, contamination of our aquifers, interruption in services beyond our backup capacity, or human interference—could require us to prematurely harvest some or all of the fish at that farm or could result in a loss of a material percentage of our fish in production.

We also are dependent on egg availability and being able to ship genetically engineered Atlantic salmon eggs from Canada to the United States for production. If we had a disruption in our ability to produce our eggs in Canada or ship our eggs to the United States, due to border closings or some other event that would prevent us from importing the eggs to the United States, we would not be able to continue to stock our Indiana Farm with genetically engineered Atlantic salmon eggs. We cannot guarantee that any of these disruptions might not occur in the future, any of which could cause loss of salmon to sell, damage to our reputation, loss of consumer confidence in our products and company, and lost revenues, all of which could have a material adverse effect on our business results and the value of our brands.

Security breaches, cyber-attacks 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; and to operate our farm equipment. The security of our network and the storage and maintenance of sensitive information is critical to our operations. Despite our security measures, our information technology and infrastructure may be vulnerable to cyber-attacks by hackers or breached due to employee error or malfeasance. A breach of our

security could compromise our networks and the information stored on our servers could be accessed, manipulated, publicly disclosed, lost, or stolen, and our farm operations could be interrupted. Any such access, manipulation, disclosure, or loss of information could result in errors in our records, fraudulent use of our financial information or theft of assets, 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.

The successful development of our business depends on our ability to efficiently and cost-effectively produce and sell salmon at large commercial scale.

Although we have over two decades of experience in successfully raising Atlantic salmon in land-based systems, we have only begun to produce them at commercial scale. Our business plans depend on our ability to increase our production capacity through the development of larger farms. We have limited experience constructing, ramping up, and managing such large, commercial-scale facilities, and we may not have anticipated all of the factors or costs that could affect our production, harvest, sale, and delivery of salmon at such a scale. For example, our salmon may not perform as expected when raised at very large commercial scale, we may encounter operational challenges for which we are unable to identify a workable solution, control deficiencies may surface, our vendors may experience capacity constraints, or our production cost and timeline projections may prove to be inaccurate. Any of these could decrease process efficiency, create delays, and increase our costs. We are also subject to volatility in market demand and prices, such as the disruption to the salmon market and the resulting reduction in market prices for salmon caused by the COVID-19 pandemic.

In addition, competitive pressures, customer volatility and the possible inability to secure established and ongoing customer partnerships and contracts, may result in a lack of buyers for our fish. Customers of our fish may not wish to follow our terms and conditions of sale, potentially resulting in a violation of labeling or disclosure laws, improper food handling, nonpayment for product, and similar issues. The competitive landscape for salmon may create challenges in securing competitive pricing for our salmon to reach our competitive goals. In addition, it is possible that we may not be able to service our customers to meet their expectations regarding fish quality, ongoing harvest supply availability, order processing fill rate, on time or correct deliveries, potential issues with third party processors, and other factors, which could impact our relationships with customers, our reputation, and our business results.

We remain dependent on third parties for the processing, distribution, and sale of our products.

At present, we rely on third parties to process our fish, deliver them to seafood vendors, and ultimately sell them to consumers. While we carefully select processors or other intermediaries in the supply chain, any failure on their part to maintain quality standards or proper food handling processes could subject us to product liability claims, product recalls, increased scrutiny from regulators, and loss of consumer confidence in the safety and quality of our products. Seafood vendors may reject our products due to their particular product or volume requirements, extract pricing concessions that reduce our margins, or fail to adequately promote and sell our products. Our reliance on third parties could therefore result in a reduction in our revenues, an increase in our costs, delays in commercialization, additional regulatory requirements, or negative public opinion that could impact future sales and growth.

We may be required to write-down the value of our inventory if its net realizable value is less than its accumulated cost at the end of a reporting period.

Our fish-in-process inventory is a biological asset and is stated on our balance sheet at the lower of cost or net realizable value, where the net realizable value is calculated as the estimated market price less the estimated costs of processing, packaging and transportation. Any adjustments to the carrying value of inventory are reported as a component of production costs on our income statement. Such adjustments may be material in any given period and could adversely affect our financial condition and results of operations. Until such time as our net realizable value is consistently in excess of inventory costs, our inventory may be subject to significant market value risk.

If our products become contaminated, we may be subject to product liability claims and product recalls, which could adversely affect our financial results and damage our reputation.

Food safety issues (both actual and perceived) may have a negative impact on, the reputation of and demand for, our products. In addition to the need to comply with relevant food safety regulations, it is of critical importance that our products are safe and perceived as safe and healthy in all relevant markets.

Our products may be subject to contamination by foreign materials or disease-producing organisms or pathogens, such as Listeria monocytogenes, Salmonella and E. coli. These organisms and pathogens are found generally in the environment and there is a risk that

one or more, as a result of food processing, could be present in our products. These organisms and pathogens also can be introduced to our products as a result of improper handling at the further-processing, foodservice or consumer level. These risks may be controlled, but may not be eliminated, by adherence to good manufacturing practices and finished product testing. We have little, if any, control over handling procedures once our products have been shipped for distribution. Even an inadvertent shipment of contaminated products may be a violation of law and may lead to increased risk of exposure to product liability claims, increased scrutiny and penalties, including but not limited to, injunctive relief and plant closings, by federal and state regulatory agencies, and adverse publicity, which could exacerbate the associated negative consumer reaction. Any of these occurrences may have an adverse effect on our financial results and the value of our brands.

In addition, we may be required to recall some of our products if they spoil, become contaminated, are tampered with or are mislabeled. A widespread product recall could result in significant losses due to the costs of a recall, the destruction of product inventory and lost sales due to the unavailability of product for a period of time. Such a product recall also could result in adverse publicity, damage to our reputation, and a loss of consumer confidence in our products, which could have a material adverse effect on our business results and the value of our brands.

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 broodstock by whatever means would result in a significant delay to our operations while the broodstock was replenished. 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.

Business, political, or economic disruptions or global health concerns, such as the COVID-19 pandemic, could seriously harm our current or planned business and increase our costs and expenses.

Broad-based business or economic disruptions, political instability, or global health concerns could adversely affect our current or planned production, sale, distribution, research and development, and expansion. For example, the COVID-19 pandemic has continued to spread, and the related adverse public health developments, including orders to shelter-in-place, travel restrictions, and mandated business closures, have adversely affected workforces, organizations, customers, economies, and financial markets globally, leading to an economic downturn and increased market volatility. It has also disrupted the normal operations of many businesses, including ours.

Global health concerns like the coronavirus pandemic could in themselves result in social, economic, and labor instability in the countries in which we or the third parties with whom we engage operate. The COVID-19 pandemic and government measures taken in response have also had a significant impact, both direct and indirect, on businesses and commerce, as worker shortages have occurred; supply chains have been disrupted; facilities and production have been suspended; and demand for certain goods and services, such as medical services and supplies, has spiked, while demand for other goods and services, including salmon in the institutional sales chain that includes restaurants, has fallen, with a resulting drop in the prices for those goods and services. We have been impacted by the reduction in food service demand for salmon due to the pandemic in the form of significantly lower than expected sales and a reduction in the value of our inventory. In response to the COVID-19 pandemic, we have provided our administrative employees with the option to work remotely, and we have limited the number of staff in any given area of our farm sites. We have also implemented policies and procedures at our farms to react to any outbreak of the virus.

As a result of the COVID-19 pandemic, we have and may continue to experience disruptions that could severely impact our business, including disruptions or restrictions on our ability to travel, obtain regulatory approvals from the FDA and other regulators, pursue partnerships and other business transactions, conduct production activities, and make shipments, as well as be impacted by the temporary closure of the facilities of suppliers. While we have taken steps to address the impact of the coronavirus on our operations, and we believe that our suppliers and potential customers continue to operate in the ordinary course in all material respects, we cannot presently predict the scope and severity of any additional business shutdowns or disruptions or the future impact on consumer demand. For example, we have been primarily impacted by a reduction in the market price and demand for Atlantic salmon due to the pandemic's impact on the food service sector. This had and continues to have a negative impact on our revenue and inventory value. If we or any of the third parties with whom we engage, including suppliers, distributors, service providers, regulators, and overseas business partners, experience additional or continued shutdowns or other disruptions, or consumer demand remains materially reduced, our ability to conduct our business in the manner and on the timelines presently planned could be materially and negatively

impacted, our anticipated revenues could decrease, and our costs and expenses could rise as a result of our efforts to address such disruptions.

In addition, the trading prices for our common stock and the stock of other biotechnology and food companies have been highly volatile as a result of the COVID-19 pandemic. As a result, we may face difficulties raising capital through sales of our common stock or such sales may be on unfavorable terms. The COVID-19 pandemic continues to rapidly evolve, and the extent to which it may impact our business and planned programs will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the ultimate geographic spread of the disease; the duration of the pandemic; travel restrictions and other actions to contain the pandemic or address its impact, such as social distancing and quarantines or lock-downs in the United States, Canada, and other countries; business closures or business disruptions; and the effectiveness of actions taken in the United States, Canada, and other countries to contain and address the disease.

The construction and potential benefits of our new facilities are subject to risks and uncertainties.

For any new facility that we build, our ability to complete construction on a timely basis and within budget is subject to a number of risks and uncertainties described below. In addition, when a new facility becomes operational, it may not generate the benefits we expect if demand for the products to be produced by the facility is different from what we had expected or if we do not operate the facility efficiently.

In order to complete construction of a new facility, we need to take a significant number of steps and obtain a number of approvals and permits, none of which is assured of attainment. If we are unable to complete construction on schedule, run the facility efficiently, or otherwise achieve the expected benefits of our new facilities, our business could be negatively affected.

Industry volatility can affect our earnings, especially due to fluctuations in commodity prices of salmon.

Profitability in the salmon industry is materially affected by the commodity price of salmon, and to a lesser extent, alternative proteins. These prices are determined by supply and demand factors and can fluctuate by season. For example, the COVID-19 pandemic impacted market demand for salmon, which resulted in market prices falling by up to 40% for certain product presentations. Conversely, given the long grow-out cycle for raising salmon, disruptions in production can depress market supply and result in price increases.

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 offer excellent potential sites for AquAdvantage salmon production farms, 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.

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.

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

Our success depends substantially on the efforts and abilities or our officers and other key employees. The loss of any key members of our management, or the failure to attract or retain other key employees who possess the requisite expertise for the conduct of our business, could prevent us from developing and commercializing our products and executing on our business strategy. We may not be able to attract or retain qualified employees in the future due to the intense competition for qualified personnel among aquaculture,

biotechnology, and other technology-based businesses, or due to the unavailability of personnel with the particular qualifications or experience necessary for our business. For production positions, effective training will be needed for new hires due to the overall lack of industry experience in land-based aquaculture in North America. If we are not able to attract, train, 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 or trained in RAS-based aquaculture, and our product development programs are dependent on our ability to attract and retain highly skilled scientists. Competition for experienced production staff, scientists, and other technical personnel from numerous companies and academic and other research institutions may limit our ability to attract and retain such personnel on acceptable terms.

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

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

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

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

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

Acquisitions involve numerous risks, including:

- difficulties integrating the purchased operations, technologies, or products;
- unanticipated costs and other liabilities;
- diversion of management’s attention from our core business;
- adverse effects on existing business relationships with current and/or prospective customers and/or suppliers;
- risks associated with entering markets in which we have no or limited prior experience; and
- potential loss of key employees.

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

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

In 2009, we received a grant from the Atlantic Canada Opportunities Agency to fund a research program. A total of C$2.9 million was made available under the grant, and we received the entire amount through December 31, 2015. Once we begin to generate revenue from any of the products from the research program, we must commence repayment of the outstanding loan in the form of a

10% royalty. These payments could negatively impact our ability to support our operations. Revenues from sales of our AquAdvantage salmon are not subject to the royalty.

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

The majority of our employees, including our research personnel, are currently located outside of the United States. As a consequence of the international nature of our business, we are exposed to risks associated with international operations. For example, we are based in the United States and present our financial statements in U.S. dollars, and the majority of our cash resources are held in U.S. dollars or in Canadian dollars. Some of our future expenses and revenues are expected to be denominated in currencies other than in U.S. dollars. Other risks include possible governmental restrictions of the movement of funds, limitation of contractual rights, or expropriation of assets without fair compensation. Therefore, movements in exchange rates to translate to foreign currencies and other international operational risks may have a negative impact on our reported results of operations, financial position, and cash flows.

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

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

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 Regulated Products

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 genetically engineered 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.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels and statutory, regulatory, and policy changes. Average review times at the agency have fluctuated in recent years as a

result. In addition, government funding of other agencies on which our operations may rely is subject to the political process, which is inherently fluid and unpredictable.

Disruptions at the FDA and other agencies may also slow the time necessary for new applications to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, on March 10, 2020, the FDA announced its intention to postpone most inspections of foreign manufacturing facilities and products through April 2020. On March 18, 2020, the FDA announced its intention to temporarily postpone routine surveillance inspections of domestic manufacturing facilities. Regulatory authorities outside the United States may adopt similar restrictions or other policy measures in response to the COVID-19 pandemic. If a prolonged disruption occurs, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Future disruptions could also affect other government agencies, such as the SEC, which may also impact our business by delaying review of our public filings, to the extent such review is necessary, and our ability to access the public markets.

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.

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 genetically engineered 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 genetically engineered 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, contained 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 will comply with all applicable laws.

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 genetically engineered products.

There are many organizations in the United States and elsewhere that are fundamentally opposed to the development of genetically engineered 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.

On March 30, 2016, a coalition of non-governmental organizations 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, and AquaBounty joined the case as an intervenor to protect AquaBounty’s interests. The coalition, including the Center for Food Safety and Friends of the Earth, claims that the FDA had no statutory authority to regulate genetically engineered 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. In December 2019 the court found that FDA had authority/jurisdiction over genetically engineered animals and in November 2020, the judge remanded the Environmental Assessment (the approval) to FDA on National Environmental Protection Act (NEPA) and Endangered Species Act (ESA) grounds. The decision does not have a current business impact on AquaBounty’s egg production on Prince Edward Island or AquaBounty’s salmon production in Indiana. In December 2020, the plaintiffs filed a motion to alter or amend the judgment. In February 2021, the judge denied that motion.

Though we believe this legal action lacked merit, it is possible that similar legal actions may be filed by plaintiffs and they 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 genetically engineering 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, which was reintroduced and passed in 2021, contained 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 will comply with all applicable laws. 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.

Risks Relating to Intellectual Property

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, and may require that we grant interests in, our technologies. If our technologies or products were stolen, misappropriated, or reverse engineered, or if we are forced to grant broad interests in our technologies, 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. In addition, third parties granted interests in our technologies could seek to prevent or limit our use or commercialization of those technologies based on claims of partial ownership.

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 provides us with a competitive advantage. 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.

Risks Relating to our Common Stock

The significant share ownership position of Randal J. Kirk and his affiliates allows him to influence corporate matters

Based solely on a Schedule 13D/A filed December 21, 2020, by Randal J. Kirk (“Mr. Kirk”), Third Security, LLC (“Third Security”), TS AquaCulture LLC (“TS AquaCulture”), and TS Biotechnology Holdings, LLC (“TS Biotechnology”), as of March 5, 2021: TS AquaCulture owns 8,239,199 shares of our common stock, or approximately 11.6% of our outstanding shares, and TS Biotechnology Holdings, LLC owns 9,175,000 shares of our common stock, or approximately 12.9% of our outstanding shares. In addition, Mr. Kirk and entities controlled by him, including Third Security and its affiliates other than TS AquaCulture and TS Biotechnology, currently hold 805,625 shares of our common stock, or approximately 1.1% of our outstanding shares. TS AquaCulture and TS Biotechnology are managed by Third Security, and TS AquaCulture is successor-in-interest to Precigen, Inc. (“Precigen”) under the Relationship Agreement entered into by AquaBounty and Precigen dated as of December 5, 2012 (the “Relationship Agreement”), which among other things, allows for representation on our Board proportional to its shareholding. The Relationship Agreement will remain in effect until Third Security’s ownership percentage is reduced to 10%. Further, Alana Kirk, a member of the Company’s Board of Directors, is married to Randal J. Kirk and has reported that she owns 3,754 shares of our common stock, which includes 1,595 shares of common stock underlying outstanding stock options that are or will be immediately exercisable within 60 days of December 31, 2020, in her own name, which is less than one percent of our outstanding shares. Based on these holdings, Mr. Kirk, Third Security’s Chairman and Senior Managing Director, and Mrs. Kirk have each reported control over approximately 25.7% of our outstanding shares. Mr. and Mrs. Kirk each disclaim beneficial ownership of the shares owned directly by the other, and Mrs. Kirk disclaims beneficial ownership of the shares deemed beneficially owned by Mr. Kirk, other than those that she owns directly.

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, future sales of our common stock or the perception that such sales could occur and general economic conditions. Certain of these events and factors are outside of our control. Stock markets have from time to time experienced severe price and volume fluctuations, which, if recurring, could adversely affect the market prices for our common stock.

If 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.

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.

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.

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, achieving our quality standards 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.

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.

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. Certain of these reduced reporting requirements and exemptions were also

available to us due to the fact that we qualify as a "smaller reporting company" under SEC rules. For instance, smaller reporting companies are not required to obtain an auditor attestation and report regarding management's assessment of internal control over financial reporting, are not required to provide a compensation discussion and analysis, are not required to provide a pay-for-performance graph or CEO pay ratio disclosure and may present only two years of audited financial statements and related MD&A disclosure.

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 31, 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. Under current SEC rules, however, we will continue to qualify as a "smaller reporting company" for so long as we have a public float (i.e., the market value of common equity held by non-affiliates) of less than $250 million as of the last business day of our most recently completed second fiscal quarter.

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.

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.

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 by-laws;
- 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.

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 make some activities more time-consuming and costly. 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.

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.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our corporate headquarters are located in Maynard, Massachusetts, and consist of approximately 3,500 square feet of office space under a lease that expires in March 2023. We own a production grow-out farm in Indiana, which is capable of producing 1,200 metric tons of our fish annually. On Prince Edward Island, Canada, we own a hatchery in Fortune Bay and a salmon farm in Rollo Bay, that consists of a hatchery, a grow-out facility, and a broodstock facility that is currently under construction. We believe that the spaces that we lease and own are sufficient to meet our current and near-term needs. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations-Contractual Obligations.”

Item 3. Legal Proceedings

Lawsuit Against the FDA Approval of AquAdvantage salmon

On March 30, 2016, a coalition of non-governmental organizations 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, and AquaBounty joined the case as an intervenor to protect AquaBounty’s interests. The coalition, including the Center for Food Safety and Friends of the Earth, claimed 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. In December 2019 the court found that FDA had authority/jurisdiction over genetically engineered animals, and in November 2020, the judge remanded the Environmental Assessment (the approval) to FDA on National Environmental Protection Act (NEPA) and Endangered Species Act (ESA) grounds. The decision does not have a current business impact on AquaBounty’s egg production in Prince Edward Island, Canada or AquaBounty’s salmon production in Albany, Indiana. In December 2020, the plaintiffs filed a motion to alter or amend the judgment. In February 2021, the judge denied that motion.

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

Item 4. Mine Safety Disclosures

Not applicable.

Part II

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

Market Information

Our common stock is currently traded on the Nasdaq Capital Market under the symbol "AQB." As of March 5, 2021, 70,939,065 shares of our common stock were issued and outstanding.

As of March 5, 2021, there were approximately 281 holders of record of our common stock. The actual number of shareholders is greater than this number and includes shareholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. The transfer agent for our common stock is Computershare Trust Company, N.A.

Dividends

We have never declared or paid any cash dividends on our common stock. We currently intend to retain earnings, if any, to finance the growth and development of our business. We do not expect to pay any cash dividends on our common stock in the foreseeable future. Payment of future dividends, if any, will be at the discretion of our Board of Directors and will depend on our financial condition, results of operations, capital requirements, restrictions contained in current or future financing instruments, provisions of applicable law, and other factors the Board of Directors deems relevant.

Securities Authorized for Issuance Under Equity Compensation Plans

The information under "Equity Compensation Plan Information" to be included in our definitive proxy statement relating to our 2021 annual meeting of stockholders to be filed with the SEC within 120 days after the end of our fiscal year ended December 31, 2020, is incorporated herein by reference.

Item 6. Selected Financial Data

Reserved.

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

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

Overview

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

COVID-19

In March 2020, the World Health Organization declared the outbreak of a novel coronavirus, SARS-CoV-2, as a pandemic, which continues to spread throughout the United States and worldwide. Because infections of this virus and the incidences of the disease it causes, certain national, provincial, state, and local governmental authorities in the United States and Canada have issued proclamations and directives aimed at minimizing the spread of the virus. Additional, more restrictive proclamations and directives may be issued in the future.

The ultimate impact of the COVID-19 pandemic on our operations is unknown and will depend on future developments, which are highly uncertain and cannot be predicted with confidence, including the duration of the COVID-19 pandemic, new information which may emerge concerning the severity of the COVID-19 pandemic, and any additional preventative and protective actions that governments, or we, may direct, which may result in an extended period of continued business disruption and reduced operations.

To date, our farm operations have not been materially affected by the pandemic, although we have made modifications to biosecurity procedures and our farm sites to adapt to local requirements and to provide a safe work environment. Our current preventative and protective measures include, but are not limited to, segregating farm workers to specific locations, rotating shifts, and monitoring worker temperatures upon arrival at our facilities. To the extent possible, work-from-home is utilized for employees that do not have fish care responsibilities.

We have experienced delays in capital projects due to the pandemic, including a six-month delay in the completion of the processing facility at our Indiana farm, which did not become operational until November 2020. We utilized third party alternatives for fish processing during the delay.

We have been primarily impacted by a reduction in the market price and demand for Atlantic salmon due to the pandemic's impact on the food service sector. This had and continues to have a negative impact on our revenue and inventory value, as we are not yet an established vendor and customers do not need a new supplier during a period of depressed demand. Consequently, in December 2020, we made the decision to donate substantially all of our conventional salmon to local food charities, which are experiencing unprecedented need during the pandemic. This decision was made to ease the capacity constraints at our Indiana farm to provide space for our growing biomass of AquAdvantage salmon. The donation program commenced in February 2021.

The financial impact of the pandemic is likely to continue through at least the first half of 2021, as the industry waits for the roll-out of COVID-19 vaccines and the subsequent reopening of the food service sector. Any financial impact beyond the near-term cannot be reasonably estimated at this time but may have a material adverse impact on our business, financial condition, and results of operations in 2021.

We remain focused on maintaining a strong balance sheet, liquidity, and financial flexibility and continue to monitor developments as we deal with the disruptions and uncertainties from a business and financial perspective relating to the COVID-19 pandemic.

Financial Overview

We have incurred significant losses since our inception. We expect to continue to incur significant losses for the foreseeable future, and we may never achieve or maintain profitability. We expect to generate product revenue primarily through the sales of our AquAdvantage salmon. We also sell conventional Atlantic salmon, salmon eggs, fry, and byproducts. We expect revenues to be

modest and infrequent in the first half of 2021 until the U.S. economy begins to recover from the COVID-19 pandemic and food service operations begin to return to normal capacity.

We expect our future capital requirements may be substantial, particularly as we continue to develop our business and expand our commercial activities, as discussed in “Liquidity and Capital Resources”. During the next several years, we expect that our working capital requirements and our capital expenditures will increase substantially due to our plans to construct four to five new land-based production farms.

Product Revenue

We currently generate product revenue through the sales of our conventional Atlantic salmon, salmon eggs, fry, and byproducts. We expect revenues in 2021 to include our AquAdvantage salmon, but to be modest and infrequent for at least the first half of the year until the U.S. economy begins to recover from the COVID-19 pandemic and food service operations begin to return to normal capacity.

In the future, we believe that our revenue will depend upon the number and capacity of grow-out farms we have in operation and the market acceptance we achieve.

Production Costs

Production costs include the labor and related costs to grow out our fish, including feed, oxygen, and other direct costs; an application of overhead; and the cost to process and ship our products to customers. A portion of production costs are absorbed into inventory as fish in process to the extent that these costs do not exceed the net realizable value of the fish in process. The costs that are not absorbed into inventory, as well as any valuation reserves against inventory are classified as other production costs. As of December 31, 2020, we had forty-three employees engaged in production activities.

Sales and Marketing Expenses

Our sales and marketing expenses currently include consulting fees for market-related activities. As of December 31, 2020, we had no employees dedicated to sales and marketing. We expect our sales and marketing expenses to increase as our production output and revenues grow.

Research and Development Expenses

As of December 31, 2020, we employed fifteen scientists and technicians at our facilities on Prince Edward Island to oversee our broodstock of AquAdvantage salmon, as well as the lines of fish we maintain for research and development purposes. We recognize research and development expenses as they are incurred. Our research and development expenses consist primarily of:

- salaries and related overhead expenses for personnel in research, development functions, and brood-stock husbandry;
- fees paid to contract research organizations and consultants who perform research for us;
- costs related to laboratory supplies used in our research and development efforts; and
- costs related to the operation of our field trials.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related costs for employees in executive, corporate, and finance functions. Other significant general and administrative expenses include corporate governance and public company costs, regulatory compliance, rent and utilities, insurance, and legal service. We had fourteen employees in our general and administrative group at December 31, 2020.

Other Income (Expense), Net

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

Critical Accounting Policies and Estimates

This Management's Discussion and Analysis of Financial Condition and Results of Operations is based on our consolidated financial statements, which we have prepared in accordance with GAAP. The preparation of our consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenues and expenses during the reporting periods. We evaluate these estimates and judgments on an ongoing basis. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Our actual results may differ from these estimates under different assumptions or conditions. While our significant accounting policies are more fully described in Note 2 to our audited consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K, we believe that the following accounting policies and estimates are the most critical for fully understanding and evaluating our financial condition and results of operations.

Inventories

Inventories are mainly comprised of feed, eggs, fish in process and packaging materials. Fish in process inventory is a biological asset that is measured based on the estimated biomass of fish on hand. The Company has established a standard procedure to estimate the biomass of fish on hand using counting and sampling techniques.

As of December 31, 2020, all of our fish in process is carried at net realizable value (NRV). Our NRV calculation contains various estimates and assumptions in regard to the calculation of the biomass, including expected yield, the market value of the biomass and estimated costs of completion and transportation. As of December 31, 2020, the NRV of our conventional salmon biomass was valued at $0 as a result of our intent to harvest and donate this fish. The NRV of our AquAdvantage salmon biomass was valued at $1.2 million.

The Company also considers capacity utilization in calculating its inventory value with any excess capacity charged to production costs as idle capacity. Inventory reserves are recorded as needed to represent the difference between the carrying value and the NRV calculation, taking into consideration the expected timing and disposition of the inventory.

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. 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.

Results of Operations

Comparison of the year ended December 31, 2020 to the year ended December 31, 2019.

The following table summarizes our results of operations for the years ended December 31, 2020 and 2019, together with the changes in those items in dollars (in thousands) and as a percentage:

	Year Ended December 31,		Dollar Change	% Change
	2020	2019		
Product revenue	$ 128	$ 187	$ (59)	(32)%
Operating expenses:				
Production costs	6,680	3,574	3,106	87%
Sales and marketing	533	709	(176)	(25)%
Research and development	2,365	2,360	5	—%
General and administrative	6,798	6,723	75	1%
Operating loss	(16,248)	(13,179)	(3,069)	23%
Total other (income) expense, net	(152)	(49)	(103)	210%
Net loss	$ (16,400)	$ (13,228)	$ (3,172)	24%

Product Revenue

Product revenue for the year ended December 31, 2020 consisted of conventional Atlantic salmon, fry and eggs. For the comparative period in 2019, revenue included the sale of AquAdvantage salmon from our Panama demonstration farm.

Production Costs

Production costs for the year ended December 31, 2020, were up from the corresponding period in 2019, due to production cost increases related to increasing fish biomass at the Indiana and Rollo Bay farms as they continued their ramp-up.

Costs for the current year include a $1.53 million reserve against the carrying value of the conventional salmon biomass due to management's plans to donate substantially all of its conventional salmon to local food charities during Q1 2021. This decision was made in order to ease the capacity constraints at our Indiana farm to provide space for our growing biomass of AquAdvantage salmon. In addition, current year costs include charges of $900 thousand to reduce the carrying value of all other fish-in-process biomass to its NRV as a result of reduced market price expectations due primarily to the impact of COVID-19 on the food service industry.

Sales and Marketing Expenses

Sales and marketing expenses for the year ended December 31, 2020, were down from the corresponding period in 2019 due to a decrease in personnel cost, partially offset by an increase in charges related to the commencement of marketing activities for our salmon.

Research and Development Expenses

Research and development expenses for the year ended December 31, 2020, were slightly up from the corresponding period in 2019 due to an increase in outside contract service fees, offset by lower personnel costs and lower field trial costs, primarily related to the closing of our demonstration farm in Panama.

General and Administrative Expenses

General and administrative expenses for the year ended December 31, 2020, were slightly up from the corresponding period in 2019 due to an increase in personnel costs, regulatory legal fees associated with the FDA legal challenge, and outside consulting fees, offset by a decrease in travel and stock compensation charges.

Total Other (Income) Expense

Total other (income) expense for 2020 is comprised of interest on debt, bank charges, interest income, and a net gain on the disposal of assets. Total other (income) expense for 2019 is comprised of interest on debt, bank charges, and interest income.

Liquidity and Capital Resources

Sources of Liquidity

We have incurred losses from operations since our inception in 1991, and, as of December 31, 2020, we had an accumulated deficit of $149 million.

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

During 2018, 249,824 Common Shares were issued through the conversion of outstanding warrants for total proceeds of $0.8 million and on October 24, 2018, 2,250,461 Common Shares were issued through the exercise of outstanding warrants at a discounted price of $2.00. Net proceeds to the Company were $4.3 million. Precigen participated in the exercise, converting warrants for 1,538,461 Common Shares, resulting in gross proceeds of $3.1 million.

During 2019, we completed two public offerings totaling 6,246,360 Common Shares for net proceeds of approximately $12.4 million and we issued 83,564 Common Shares through the conversion of outstanding warrants for total proceeds of $0.3 million.

During 2020, we completed three public offerings totaling 33,028,000 Common Shares for net proceeds of approximately $104.6 million and we issued 713,449 Common Shares through the conversion of outstanding warrants for total proceeds of $2.3 million.

On February 8, 2021, we completed a public offering of 14,950,000 Common Shares for net proceeds of approximately $119.2 million.

As of December 31, 2020, we had a cash and cash equivalents balance of $95.8 million.

Cash Flows

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

	Years Ended December 31,	
	2020	**2019**
Net cash provided by (used in):		
Operating activities	$ (14,289)	$ (11,249)
Investing activities	(3,239)	(2,461)
Financing activities	111,003	13,483
Effect of exchange rate changes on cash	(23)	23
Net increase (decrease) in cash	$ 93,452	$ (204)

Cash Flows from Operating Activities

Net cash used in operating activities during the year ended December 31, 2020, was primarily comprised of our $16.4 million net loss, offset by non-cash depreciation and stock compensation charges of $1.9 million and by working capital sources of $136 thousand. Spending on operations increased in 2020 due to increases in production activities at our Rollo Bay and Indiana farm sites, offset by lower field trial costs related to our demonstration farm in Panama and travel expenses. Cash provided by working capital was due primarily to an increase in accounts payable and accrued liabilities, partially offset by increases in inventory and prepaid expenses.

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

Cash Flows from Investing Activities

During 2020, we used $4.0 million for renovations to our Indiana farm site and for construction charges at our Rollo Bay site, offset by $100 thousand in proceeds from the sale of equipment and $1 million in net proceeds from a settlement agreement.

During 2019, we used $2.5 million for property and equipment purchases for renovations to our Indiana farm site and for construction charges at our Rollo Bay site, offset by $16 thousand in proceeds from the sale of equipment.

Cash Flows from Financing Activities

During 2020, we received approximately $104.6 million in net proceeds from the issuance of Common Shares in three public offerings, $2.3 million from the exercise of warrants, and $4.1 million from the issuance of debt, net of repayments and debt issuance costs.

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

Future Capital Requirements

The Company completed multiple equity raises in 2020 and has $95.8 million in cash and cash equivalents as of December 31, 2020. Subsequent to year end, in February 2021, the Company raised an additional $119.2 million. While we have experienced net losses

and negative cash flows from operations since inception, management believes that it has sufficient cash to meet the Company's requirements for at least the next twelve months from the filing date.

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

If we are unable to generate additional funds in the future through financings, sales of our products, government grants, loans, or from other sources or transactions, we will exhaust our resources and will be unable to maintain our currently planned operations. If we cannot continue as a going concern, our stockholders would likely lose most or all of their investment in us.

Off-Balance Sheet Arrangements

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

Contractual Obligations

The following table summarizes our significant contractual obligations and commercial commitments at December 31, 2020, and the effects such obligations are expected to have on our liquidity and cash flows in future periods (in thousands):

	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
PEI Finance term loan	$ 2,014	$ 77	$ 1,937	$ —	$ —
ACOA term loans	563	73	146	146	198
Kubota Canada Ltd	44	11	21	12	—
ACOA AIF grant (1)	2,254	—	—	—	2,254
FFBT term loan	4,000	117	992	1105	1,786
Maynard office lease	151	66	85	—	—
Indiana auto lease	1	1	—	—	—
Indiana well lease	686	16	33	35	602
Total	$ 9,713	$ 361	$ 3,214	$ 1,298	$ 4,840

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

Recent Accounting Pronouncements

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

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

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

Interest Rate Risk

Our primary exposure to market risk is interest rate risk associated with debt financing that we utilize from time to time to fund operations or specific projects. The interest on this debt is usually determined based on a fixed rate and is contractually set in advance. At December 31, 2020, and December 31, 2019, we had $6.0 million and $1.8 million, respectively, in interest-bearing debt instruments on our consolidated balance sheet. All of our interest-bearing debt is at fixed rates, except for our loan with First Farmers' Bank and Trust which has a rate reset in July 2025.

Foreign Currency Exchange Risk

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

Item 8. Financial Statements and Supplementary Data

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

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

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Securities and Exchange Act of 1934 is (1) recorded, processed, summarized, and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and (2) accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure. As of December 31, 2020 (the "Evaluation Date"), our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities and Exchange Act of 1934). Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our Chief Executive Officer and Chief Financial Officer have concluded based upon the evaluation described above that, as of the Evaluation Date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Report on Internal Control over Financial Reporting

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

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and disposition of our assets;

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

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

Our management, including our Chief Executive Officer and Chief Financial Officer, has conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2020. In conducting this evaluation, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control-Integrated Framework (2013).

Based upon this evaluation and those criteria, management believes that, as of December 31, 2020, our internal controls over financial reporting were effective.

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

Changes in Internal Control

There have been no changes in our internal control over financial reporting for the year ended December 31, 2020, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

Part III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this Item is set forth in our 2021 Proxy Statement to be filed with the SEC within 120 days of December 31, 2020, and is incorporated by reference into this Annual Report on Form 10-K by reference.

Item 11. Executive Compensation

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

The information required by this Item is set forth in our 2021 Proxy Statement to be filed with the SEC within 120 days of December 31, 2020, and is incorporated by reference into this Annual Report on Form 10-K by reference.

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

The information required by this Item is set forth in our 2021 Proxy Statement to be filed with the SEC within 120 days of December 31, 2020, and is incorporated by reference into this Annual Report on Form 10-K by reference.

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

The information required by this Item is set forth in our 2021 Proxy Statement to be filed with the SEC within 120 days of December 31, 2020, and is incorporated by reference into this Annual Report on Form 10-K by reference.

Item 14. Principal Accounting Fees and Services

The information required by this Item is set forth in our 2021 Proxy Statement to be filed with the SEC within 120 days of December 31, 2020, and is incorporated by reference into this Annual Report on Form 10-K by reference.

Part IV

Item 15. Exhibits and Financial Statement Schedules

List of Documents Filed as Part of this Report

1. Consolidated Financial Statements

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

(i) Report of Independent Registered Public Accounting Firm

(ii) Consolidated Balance Sheets

(iii) Consolidated Statements of Operations and Comprehensive Loss

(iv) Consolidated Statements of Changes in Stockholders' Equity

(v) Consolidated Statements of Cash Flows

(vi) Notes to Consolidated Financial Statements

2. Schedules

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

3. Exhibits

Exhibit Number	Exhibit Description
3.1*	Third Amended and Restated Certificate of Incorporation of AquaBounty Technologies, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
3.2*	Certificate of Amendment of Third Amended and Restated Bylaws of AquaBounty Technologies, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed on January 6, 2017).
3.3*	Certificate of Amendment of Third Amended and Restated Certificate of Incorporation of AquaBounty Technologies, Inc. (incorporated by reference to Exhibit 3.3 to the Registrant's Registration Statement on Form S-1, filed on January 15, 2020).
3.4*	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 November 19, 2020).
3.5*	Amended and Restated Bylaws of AquaBounty Technologies, Inc. (incorporated by reference to Exhibit 3.2 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
4.1*	Specimen Certificate of Common Stock (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
4.2*	Specimen Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1, filed on January 9, 2018).
4.3	Description of Registrant's securities. (incorporated by reference to Exhibit 4.3 to the Registration's Annual Report on Form 10-K, filed on March 10, 2020).
10.1*	Stock Purchase Agreement, by and between AquaBounty Technologies, Inc. and Intrexon Corporation, dated November 7, 2016 (incorporated by reference to Exhibit 10.1 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.2*†	AquaBounty Technologies, Inc. 2006 Equity Incentive Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.3*†	Amendment No. 1 to AquaBounty Technologies, Inc. 2006 Equity Incentive Plan (incorporated by reference to Exhibit 10.3 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.4*†	Form of Stock Option Agreement pursuant to AquaBounty Technologies, Inc. 2006 Equity Incentive Plan (incorporated by reference to Exhibit 10.4 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.5*†	Form of Restricted Stock Agreement pursuant to AquaBounty Technologies, Inc. 2006 Equity Incentive Plan (incorporated by reference to Exhibit 10.5 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.6*†	AquaBounty Technologies, Inc. 2016 Equity Incentive Plan (incorporated by reference to Exhibit 10.6 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.7*†	Amendment No. 1 to AquaBounty Technologies, Inc. 2016 Equity Incentive Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K, filed on May 2. 2019).
10.8*	Amendment No. 2 to AquaBounty Technologies, Inc. 2016 Equity Incentive Plan (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K, filed on April 29, 2020).
10.9*†	Form of Stock Option Agreement pursuant to AquaBounty Technologies, Inc. 2016 Equity Incentive Plan (incorporated by reference to Exhibit 10.22 to the Registrant's Registration Statement on Form 10, filed on December 12, 2016).
10.10*†	Form of Restricted Stock Agreement pursuant to AquaBounty Technologies, Inc. 2016 Equity Incentive Plan (incorporated by reference to Exhibit 10.21 to the Registrant's Registration Statement on Form 10, filed on December 12, 2016).
10.11*	Relationship Agreement, by and between AquaBounty Technologies, Inc. and Intrexon Corporation, dated December 5, 2012 (incorporated by reference to Exhibit 10.7 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.12*	Subscription Agreement, by and between AquaBounty Technologies, Inc. and the investors listed therein, dated February 14, 2013 (incorporated by reference to Exhibit 10.9 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.13*	Subscription Agreement, by and between AquaBounty Technologies, Inc. and Intrexon Corporation, dated March 5, 2014 (incorporated by reference to Exhibit 10.10 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.14*	Subscription Agreement, by and between AquaBounty Technologies, Inc. and Intrexon Corporation, dated June 24, 2015 (incorporated by reference to Exhibit 10.11 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).

10.15*	Promissory Note Purchase Agreement, by and between AquaBounty Technologies, Inc. and Intrexon Corporation, dated February 22, 2016 (incorporated by reference to Exhibit 10.12 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.16*	Form of Warrant Exercise Agreement, by and between AquaBounty Technologies, Inc. and certain holders of its Common Stock Purchase Warrants, dated October 24, 2018 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed on October 25, 2018).
10.17*	Agreement, by and among Atlantic Canada Opportunities Agency and AQUA Bounty Canada Inc. and AquaBounty Technologies Inc., dated December 16, 2009 (incorporated by reference to Exhibit 10.14 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.18*	Offer Letter dated as of July 10, 2018, from Prince Edward Island Century 2000 Fund Inc. to AQUA Bounty Canada Inc. and accepted by AQUA Bounty Canada Inc. and AquaBounty Technologies, Inc. on August 20, 2018 (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q, filed on November 2, 2018).
10.19*	Negotiable Promissory Note dated as of October 16, 2018, issued by AQUA Bounty Canada Inc. in favor of Prince Edward Island Century 2000 Fund Inc. (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q, filed on November 2, 2018).
10.20*	Collateral Mortgage dated as of July 26, 2016, by and between AQUA Bounty Canada Inc. and Prince Edward Island Century 2000 Fund Inc. (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q, filed on November 2, 2018).
10.21*	Collateral Mortgage dated as of October 9, 2018, by and between AQUA Bounty Canada Inc. and Prince Edward Island Century 2000 Fund Inc. (incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q, filed on November 2, 2018).
10.22*	General Security Agreement dated as of July 26, 2016, by and between AQUA Bounty Canada Inc. and Prince Edward Island Century 2000 Fund Inc. (incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q, filed on November 2, 2018).
10.23*	Guarantee dated as of October 9, 2018, made by AquaBounty Technologies, Inc. in favor of Prince Edward Island Century 2000 Fund Inc. (incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q, filed on November 2, 2018).
10.24*†	Employment Agreement, by and between Sylvia Wulf and AquaBounty Technologies, Inc., dated November 27. 2018 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed on November 28, 2018).
10.25*†	Employment Agreement, by and between David Frank and AquaBounty Technologies, Inc., dated October 1, 2007 (incorporated by reference to Exhibit 10.16 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.26*†	Employment Agreement, by and between Alejandro Rojas and AquaBounty Technologies, Inc., dated December 30, 2013 (incorporated by reference to Exhibit 10.17 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.27*	Intellectual Property License and Full and Final Release among Genesis Group, Inc., HSC Research and Development Partnership and AquaBounty Technologies, Inc., dated February 28, 2014 (incorporated by reference to Exhibit 10.19 to the Registrant's Registration Statement on Form 10, filed on November 7, 2016).
10.28*	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).
10.29*#	Loan and Security Agreement by and between AquaBounty Farms Indiana LLC and First Farmers Bank and Trust, dated as of July 31, 2020 (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q, filed on August 6, 2020).
10.30*	Term Note granted by AquaBounty Farms Indiana LLC in favor of First Farmers Bank and Trust, dated as of July 31, 2020 (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q, filed on August 6, 2020).
10.31*	Mortgage, Assignment of Rents and Leases, Security Agreement, Fixture Filing and Financing Statement granted by AquaBounty Technologies, Inc. in favor of First Farmers Bank and Trust, dated as of July 31, 2020 (incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q, filed on August 6, 2020).
10.31*	Guarantor Security Agreement by and between AquaBounty Technologies, Inc. and First Farmers Bank and Trust, dated as of July 31, 2020 (incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q, filed on August 6, 2020).
10.32*	Unconditional and Continuing Secured Guaranty Agreement by and between AquaBounty Technologies, Inc. and First Farmers Bank and Trust, dated as of July 31, 2020 (incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q, filed on August 6, 2020).

10.33*	Collateral Access Agreement by and between AquaBounty Technologies, Inc. and First Farmers Bank and Trust, dated as of July 31, 2020 (incorporated by reference to Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-Q, filed on August 6, 2020).
10.34*	Unconditional and Continuing Guaranty Agreement by and between AquaBounty Farms, Inc. and First Farmers Bank and Trust, dated as of July 31, 2020 (incorporated by reference to Exhibit 10.8 to the Registrant's Quarterly Report on Form 10-Q, filed on August 6, 2020).
10.35*	Environmental Indemnity Agreement by and among AquaBounty Technologies, Inc., AquaBounty Farms Indiana LLC, and First Farmers Bank and Trust, dated as of July 31, 2020 (incorporated by reference to Exhibit 10.9 to the Registrant's Quarterly Report on Form 10-Q, filed on August 6, 2020).
21.1	List of Subsidiaries of AquaBounty Technologies, Inc.
31.1	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of the Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

*Incorporated herein by reference as indicated.

Schedules, exhibits, and similar supporting attachments or agreements to the Loan and Security Agreement are omitted pursuant to Item 601(b)(2) of Regulation S-K. The Registrant agrees to furnish a supplemental copy of any omitted schedule or similar attachment to the Securities and Exchange Commission upon request.

†Management contract or compensatory plan or arrangement.

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

Item 16. Form 10-K Summary

Not applicable.

Signatures

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

AQUABOUNTY TECHNOLOGIES, INC.

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

Power of Attorney

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

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

Signature	Title	Date
/s/ Sylvia A. Wulf Sylvia A. Wulf	President, Chief Executive Officer and Director (Principal Executive Officer)	March 9, 2021
/s/ David A. Frank David A. Frank	Chief Financial Officer and Treasurer (Principal Financial Officer and Principal Accounting Officer)	March 9, 2021
/s/ Richard J. Clothier Richard J. Clothier	Chairman of the Board, Director	March 9, 2021
/s/ Richard L. Huber Richard L. Huber	Director	March 9, 2021
/s/ Christine St.Clare Christine St.Clare	Director	March 9, 2021
/s/ Rick Sterling Rick Sterling	Director	March 9, 2021
/s/ James C. Turk James C. Turk	Director	March 9, 2021
/s/ Alana D. Kirk Alana D. Kirk	Director	March 9, 2021
/s/ Theodore J. Fisher Theodore J. Fisher	Director	March 9, 2021

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, 2020 and 2019, the related consolidated statements of operations and comprehensive loss, changes in stockholders' equity, and cash flows, for each of the years in the three-year period ended December 31, 2020, 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, 2020 and 2019, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2020, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

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

/s/ Wolf & Company, P.C.

Boston, Massachusetts

March 9, 2021

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

AquaBounty Technologies, Inc.

Consolidated Balance Sheets

	As of December 31, 2020	2019
Assets		
Current assets:		
Cash and cash equivalents	$ **95,751,160**	$ 2,798,744
Other receivables	**46,678**	55,198
Inventory	**1,525,377**	1,232,049
Prepaid expenses and other current assets	**358,692**	391,162
Total current assets	**97,681,907**	4,477,153
Property, plant and equipment, net	**26,930,338**	25,065,836
Right of use assets, net	**341,997**	399,477
Definite lived intangible assets, net	**143,885**	157,588
Indefinite lived intangible assets	**101,661**	101,661
Restricted cash	**500,000**	—
Other assets	**76,715**	32,024
Total assets	$ **125,776,503**	$ 30,233,739
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable and accrued liabilities	$ **1,760,103**	$ 1,462,809
Other current liabilities	**62,483**	62,286
Current debt	**259,939**	163,155
Total current liabilities	**2,082,525**	1,688,250
Long-term lease obligations	**290,327**	352,808
Long-term debt	**8,528,490**	4,432,052
Total liabilities	**10,901,342**	6,473,110
Stockholders' equity:		
Common stock, $0.001 par value, 80,000,000 shares authorized; 55,497,133 (2019: 21,635,365) shares outstanding	**55,497**	21,635
Additional paid-in capital	**263,629,116**	156,241,363
Accumulated other comprehensive loss	**(267,258)**	(360,160)
Accumulated deficit	**(148,542,194)**	(132,142,209)
Total stockholders' equity	**114,875,161**	23,760,629
Total liabilities and stockholders' equity	$ **125,776,503**	$ 30,233,739

See accompanying notes to the consolidated financial statements.

AquaBounty Technologies, Inc.

Consolidated Statements of Operations and Comprehensive Loss

	Years ended December 31,		
	2020	**2019**	**2018**
Revenues			
Product revenues	$ **127,663**	$ 186,738	$ 84,518
Costs and expenses			
Production costs	**6,680,012**	3,573,858	2,626,353
Sales and marketing	**533,428**	709,023	297,687
Research and development	**2,364,610**	2,359,441	3,458,564
General and administrative	**6,797,443**	6,723,060	4,067,710
Total costs and expenses	**16,375,493**	13,365,382	10,450,314
Operating loss	**(16,247,830)**	(13,178,644)	(10,365,796)
Other income (expense)			
Interest expense	**(152,367)**	(62,988)	(22,257)
Other income (expense), net	**212**	13,990	5,994
Total other income (expense)	**(152,155)**	(48,998)	(16,263)
Net loss	$ **(16,399,985)**	$ (13,227,642)	$ (10,382,059)
Other comprehensive income (loss):			
Foreign currency translation gain (loss)	**92,902**	214,026	(360,302)
Total other comprehensive income (loss)	**92,902**	214,026	(360,302)
Comprehensive loss	$ **(16,307,083)**	$ (13,013,616)	$ (10,742,361)
Earnings per share			
Net loss	$ **(16,399,985)**	$ (13,227,642)	$ (10,382,059)
Deemed dividend	$ **—**	$ —	$ (1,822,873)
Net loss attributable to common shareholders	**$ (16,399,985)**	**$ (13,227,642)**	**$ (12,204,932)**
Basic and diluted net loss per share attributable to common shareholders	$ **(0.45)**	$ (0.66)	$ (0.94)
Weighted average number of common shares - basic and diluted	**36,347,398**	20,078,017	13,028,760

See accompanying notes to the consolidated financial statements.

AquaBounty Technologies, Inc.

Consolidated Statements of Changes in Stockholders' Equity

	Common stock issued and outstanding	Par value	Additional paid-in capital	Accumulated other comprehensive loss	Accumulated deficit	Total
Balance at December 31, 2017	8,895,094	$ 8,895	$ 126,718,186	$ (213,884)	$ (108,532,508)	$ 17,980,689
Net loss					(10,382,059)	(10,382,059)
Other comprehensive income (loss)				(360,302)		(360,302)
Issuance of common stock, net of expenses	3,692,307	3,692	10,612,354			10,616,046
Exercise of warrants for common stock	2,500,285	2,501	5,114,032			5,116,533
Share based compensation	11,151	11	263,385			263,396
Balance at December 31, 2018	15,098,837	$ 15,099	$ 142,707,957	$ (574,186)	$ (118,914,567)	$ 23,234,303
Net loss					(13,227,642)	(13,227,642)
Other comprehensive income (loss)				214,026		214,026
Issuance of common stock, net of expenses	6,246,360	6,246	12,389,102			12,395,348
Exercise of warrants for common stock	83,564	84	272,333			272,417
Share based compensation	206,604	206	871,971			872,177
Balance at December 31, 2019	21,635,365	$ 21,635	$ 156,241,363	$ (360,160)	$ (132,142,209)	$ 23,760,629
Net loss					**(16,399,985)**	**(16,399,985)**
Other comprehensive income (loss)				**92,902**		**92,902**
Issuance of common stock for services	**20,000**	**20**	**40,580**			**40,600**
Issuance of common stock, net of expenses	**33,028,000**	**33,028**	**104,592,587**			**104,625,615**
Exercise of warrants for common stock	**713,449**	**713**	**2,317,996**			**2,318,709**
Share based compensation	**100,319**	**101**	**436,590**			**436,691**
Balance at December 31, 2020	**55,497,133**	**$ 55,497**	**$ 263,629,116**	**$ (267,258)**	**$ (148,542,194)**	**$ 114,875,161**

See accompanying notes to the consolidated financial statements.

AquaBounty Technologies, Inc.

Consolidated Statements of Cash Flows

	Years ended December 31,		
	2020	**2019**	**2018**
Operating activities			
Net loss	$ **(16,399,985)**	$ (13,227,642)	$ (10,382,059)
Adjustment to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	**1,494,596**	1,285,902	843,387
Share-based compensation	**436,691**	872,177	263,396
Gain on sale of equipment	**(1,816)**	(12,133)	(13,233)
Loss on asset held for sale	**—**	149,800	—
Impairment loss	**—**	103,116	—
Other non-cash charges	**46,155**	—	(1,364)
Changes in operating assets and liabilities:	**—**		
Other receivables	**9,229**	65,002	56,212
Inventory	**(282,260)**	(1,154,222)	93,956
Prepaid expenses and other assets	**(83,850)**	59,942	289,868
Accounts payable and accrued liabilities	**492,419**	609,311	(966,928)
Net cash used in operating activities	**(14,288,821)**	(11,248,747)	(9,816,765)
Investing activities			
Purchase of property, plant and equipment	**(3,975,135)**	(2,316,809)	(4,009,736)
Deposits on equipment purchases	**(349,847)**	(160,675)	(95,001)
Proceeds from sale of equipment	**99,816**	15,848	23,233
Proceeds from legal settlement, net	**1,014,008**	—	—
Other investing activities	**(27,253)**	—	—
Net cash used in investing activities	**(3,238,411)**	(2,461,636)	(4,081,504)
Financing activities			
Proceeds from issuance of debt	**4,221,130**	900,767	771,858
Payment of debt issuance costs	**(91,620)**	—	—
Repayment of term debt	**(70,826)**	(85,802)	(55,615)
Proceeds from the issuance of common stock, net	**104,625,615**	12,395,348	10,616,046
Proceeds from exercise of stock options and warrants, net	**2,318,709**	272,417	5,116,533
Net cash provided by financing activities	**111,003,008**	13,482,730	16,448,822
Effect of exchange rate changes on cash, cash equivalents and restricted cash	**(23,360)**	23,840	(54,279)
Net change in cash, cash equivalents and restricted cash	**93,452,416**	(203,813)	2,496,274
Cash, cash equivalents and restricted cash at beginning of period	**2,798,744**	3,002,557	506,283
Cash, cash equivalents and restricted cash at end of period	$ **96,251,160**	$ 2,798,744	$ 3,002,557
Supplemental disclosure of cash flow information and non-cash transactions:			
Interest paid in cash	$ **114,893**	$ 62,988	$ 22,257
Property and equipment included in accounts payable and accrued liabilities	$ **23,600**	$ 210,270	$ 193,378
Acquisition of equipment under debt arrangement	$ **—**	$ —	$ 74,068

See accompanying notes to the consolidated financial statements.

AquaBounty Technologies, Inc.
Notes to the Consolidated Financial Statements
for the years ended December 31, 2020, 2019, and 2018

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 regulatory approval from the U.S. Food and Drug Administration for the production and sale of its AquAdvantage salmon product in the United States and in 2016, the Parent obtained regulatory approval from Health Canada for the production and sale of its AquAdvantage salmon product in Canada.

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. Operations at the site concluded in May 2019.

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

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

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

Basis of presentation

The consolidated financial statements include the accounts of AquaBounty Technologies, Inc. and its wholly owned direct subsidiaries, AQUA Bounty Canada Inc.; AquaBounty Panama, S. de R.L.; AquaBounty Farms, Inc.; AquaBounty Farms Indiana LLC; and AquaBounty Brasil Participacoes Ltda. The entities are collectively referred to herein as the "Company." All inter-company transactions and balances have been eliminated upon consolidation.

Liquidity

The Company completed multiple equity raises in 2020 and has $95.8 million in cash and cash equivalents as of December 31, 2020. Subsequent to year end, in February 2021, the Company raised an additional $119.2 million. While the Company has experienced net losses and negative cash flows from operations since inception, management believes that it has sufficient cash to meet the Company's requirements for at least the next twelve months from the filing date. However, until such time as the Company reaches profitability, it may require additional financing to fund its operations and execute its business plan.

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, 2020, 2019, and 2018

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

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, certificates of deposit and money market accounts. Included in cash equivalents at December 31, 2020 is $80 million in a Dreyfus Government Cash Management money market account.

Inventories

Inventories are mainly comprised of feed, eggs, fish in process and packaging materials. Fish in process inventory is a biological asset that is measured based on the estimated biomass of fish on hand. The Company has established a standard procedure to estimate the biomass of fish on hand using counting and sampling techniques.

The Company measures inventory at the lower of cost or net realizable value (NRV). Our NRV calculation contains various estimates and assumptions in regard to the calculation of the biomass, including expected yield, the market value of the biomass and estimated costs of completion and transportation. As of December 31, 2020, the NRV of our conventional salmon biomass was valued at $0 as a result of our intent to harvest and donate this fish. The NRV of our AquAdvantage salmon biomass was valued at $1.2 million.

The Company also considers capacity utilization in calculating its inventory value with any excess capacity charged to production costs as idle capacity. Inventory reserves are recorded as needed to represent the difference between the carrying value and the NRV calculation, taking into consideration the expected timing and disposition of the inventory.

Asset held for sale

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

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

Intangible assets

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

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

AquaBounty Technologies, Inc.
Notes to the Consolidated Financial Statements
for the years ended December 31, 2020, 2019, and 2018

Property, plant and equipment

Property, plant and equipment are carried at cost. The Company depreciates all asset classes over their estimated useful lives, as follows:

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

The Company commences depreciation on an asset in the month it is placed into service, which is dependent upon when the asset is available for its intended use.

Impairment of long-lived assets

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

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

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

Leases

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

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

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. 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.

AquaBounty Technologies, Inc.
Notes to the Consolidated Financial Statements
for the years ended December 31, 2020, 2019, and 2018

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 2017.

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

Net loss per share

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

Share-based compensation

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

3. Risks and uncertainties

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

COVID-19

In March 2020, the World Health Organization declared the outbreak of a novel coronavirus, SARS-CoV-2, as a pandemic, which continues to spread throughout the United States and worldwide. Because infections of this virus and the incidences of the disease it causes, certain national, provincial, state, and local governmental authorities in the United States and Canada have issued

proclamations and directives aimed at minimizing the spread of the virus. Additional, more restrictive proclamations and directives may be issued in the future.

The ultimate impact of the COVID-19 pandemic on the Company's operations is unknown and will depend on future developments, which are highly uncertain and cannot be predicted with confidence, including the duration of the COVID-19 pandemic, new information which may emerge concerning the severity of the COVID-19 pandemic, and any additional preventative and protective actions that governments, or the Company, may direct, which may result in an extended period of continued business disruption and reduced operations.

To date, the Company's farm operations have not been materially affected by the pandemic, although management has made modifications to biosecurity procedures and the farm sites to adapt to local requirements and to provide a safe work environment. The Company's current preventative and protective measures include, but are not limited to, segregating farm workers to specific locations, rotating shifts, and monitoring worker temperatures upon arrival at our facilities. To the extent possible, work-from-home is utilized for employees that do not have fish care responsibilities.

The Company has experienced delays in capital projects due to the pandemic, including a six-month delay in the completion of the processing facility at the Indiana farm, which did not become operational until November 2020. Management utilized third party alternatives for fish processing during the delay.

The Company has been primarily impacted by a reduction in the market price and demand for Atlantic salmon due to the pandemic's impact on the food service sector. This had and continues to have a negative impact on revenue and inventory value, as the company is not yet an established vendor and customers do not need a new supplier during a period of depressed demand. Consequently, in December 2020, management made the decision to donate substantially all of the conventional salmon to local food charities, which are experiencing unprecedented need during the pandemic. This decision was made to ease the capacity constraints at the Indiana farm to provide space for the growing biomass of AquAdvantage salmon. The donation program commenced in February 2021.

The financial impact of the pandemic is likely to continue through at least the first half of 2021, as the industry waits for the roll-out of COVID-19 vaccines and the subsequent reopening of the food service sector. Any financial impact beyond the near-term cannot be reasonably estimated at this time but may have a material adverse impact on the Company's business, financial condition, and results of operations in 2021.

Concentration of credit risk

Financial instruments that potentially subject the Company to credit risk consist principally of cash and cash equivalents and certificates of deposit. This risk is mitigated by the Company's policy of investing in financial instruments with short-term maturities issued by highly rated financial institutions. The Company's cash balances may at times exceed insurance limitations. The Company holds cash balances in bank accounts located in Canada to fund its local operations. These amounts are subject to foreign currency exchange risk, which is minimized by the Company's policy to limit the balances held in these accounts. Balances in Canadian bank accounts totaled $242 thousand at December 31, 2020.

Financial instruments

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

Included in other assets is a long-term investment that consists of 216,281 shares of common stock of A/F Protein, Inc. (AFP), equating to less than 1% ownership. During 2019, the cost basis for these shares was reduced from $22 thousand to $9 thousand, which the Company believes to be the best estimate of market value. AFP and the Company have certain shareholders in common.

AquaBounty Technologies, Inc.
Notes to the Consolidated Financial Statements
for the years ended December 31, 2020, 2019, and 2018

4. Inventory

Major classifications of inventory are summarized as follows for December 31, 2020 and 2019:

		2020		2019
Feed	**$**	**244,311**	$	251,778
Eggs		**54,929**		55,887
Packaging		**6,452**		—
Fish in process, net		**1,219,685**		924,384
Inventory, net		**1,525,377**		**1,232,049**

In December 2020, the Company wrote-down the value of its fish-in-process inventory by $1.53 million, representing the total carrying amount of the conventional salmon biomass. The Company plans to donate substantially all of its conventional salmon to local food charities during the first quarter of 2021.

5. Property, plant and equipment

Major classifications of property, plant and equipment are summarized as follows for December 31, 2020 and 2019:

		2020		2019
Land	**$**	**724,785**	$	718,586
Building and improvements		**14,048,917**		13,297,489
Construction in Process		**3,212,287**		2,105,873
Equipment		**13,819,210**		12,275,619
Office furniture and equipment		**202,596**		201,813
Vehicles		**28,700**		28,097
Total property and equipment	**$**	**32,036,495**	$	28,627,477
Less accumulated depreciation and amortization		**(5,106,157)**		(3,561,641)
Property, plant and equipment, net	**$**	**26,930,338**	$	25,065,836

Depreciation and amortization expense for 2020 on property, plant and equipment was $1.5 million (2019: $1.3 million; 2018: $830 thousand).

In March 2020, the Company settled an outstanding legal claim against a third party resulting in net proceeds of $1.0 million. The proceeds received reduced the carrying value of the acquired equipment. Depreciation on these items has been recalculated prospectively over their remaining useful lives.

As of December 31, 2020, included in construction in process is $1.9 million for construction related to the Rollo Bay farm site and $407 thousand for construction related to the Indiana farm site. An additional $258 thousand and $1.1 million have been committed for the Rollo Bay and Indiana farm sites, respectively.

6. Accounts payable and accrued liabilities

Accounts payable and accrued liabilities include the following at December 31, 2020 and 2019:

		2020		2019
Accounts payable	**$**	**799,888**	$	809,444
Accrued payroll including vacation		**583,301**		236,489
Accrued professional fees and contract services		**278,165**		346,349
Accrued taxes		**86,052**		68,831
Accrued other		**12,697**		1,696
Accounts payable and accrued liabilities	**$**	**1,760,103**	$	1,462,809

AquaBounty Technologies, Inc.
Notes to the Consolidated Financial Statements
for the years ended December 31, 2020, 2019, and 2018

7. Debt

The current terms and conditions of long-term debt outstanding at December 31, 2020 and 2019, are as follows:

	Interest rate	Monthly repayment	Maturity date	2020	2019
ACOA AIF grant	0%	Royalties	—	**$ 2,253,595**	$ 2,206,208
ACOA term loan#1	0%	C$3,120	Feb 2027	**181,203**	184,583
ACOA term loan#2	0%	C$4,630	Sept 2029	**381,451**	384,100
Kubota Canada Ltd	0%	C$1,142	Jan 2025	**43,925**	53,533
PEI Finance term loan	4%	C$16,313	Nov 2023	**2,014,321**	1,766,783
First Farmers Bank & Trust	5.375%	$ 56,832	Oct 2028	**4,000,000**	—
Total debt				**$ 8,874,495**	$ 4,595,207
less: debt issuance costs				**(86,066)**	—
less: current portion				**(259,939)**	(163,155)
Long-term debt				**$ 8,528,490**	$ 4,432,052

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

Year	AIF	ACOA	FPEI	Kubota	FFBT	Total
2021		72,977	76,915	10,757	116,675	277,324
2022		72,977	80,049	10,757	482,306	646,089
2023		72,977	1,857,357	10,757	509,256	2,450,347
2024		72,977	—	10,757	537,276	621,010
2025		72,977	—	897	567,735	641,609
Thereafter	2,253,595	197,769	—	—	1,786,752	4,238,116
Total	2,253,595	562,654	2,014,321	43,925	4,000,000	8,874,495

Atlantic Canada Opportunities Agency (“ACOA”)

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

ACOA Atlantic Innovation Fund (“AIF”) Grant

In January 2009, the Canadian Subsidiary was awarded an AIF grant from ACOA to provide a contribution towards the funding of a research and development project. Contributions under the grant were made through 2014 and no further funds are available. Amounts claimed by the Canadian Subsidiary must be repaid in the form of a 10% royalty on any products that are commercialized out of this research project until the loan is fully repaid. Revenue from the sale of 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.

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

In response to the COVID-19 pandemic, the Company was informed by Atlantic Canada Opportunities Agency (ACOA) on March 19, 2020, that all payments to the Canadian government would be deferred for three months, commencing April 1, 2020. On June 15,

2020, the Company was informed that payments would be deferred an additional three months, recommencing October 1, 2020. On October 14, 2020, the Company was informed that payments would continue to be deferred until further notice. Payments to ACOA resumed on January 1, 2021.

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.

In 2018, the Canadian Subsidiary obtained a new loan from FPEI, which incorporates the existing loan and provides C$2.0 million ($1.5 million) of additional funds. As of December 31, 2019, C$1.7 million ($1.3 million) had been drawn down. The final C$300 thousand ($230 thousand) was drawn down on April 23, 2020. Repayment commenced in 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.

On March 24, 2020, the Company was informed by FPEI that all payments would be deferred for three months due to the COVID-19 pandemic. Payments on the loan resumed on August 1, 2020.

First Farmers Bank & Trust ("FFBT")

On July 31, 2020, the Company's Indiana Subsidiary obtained a $4.0 million loan from First Farmers Bank and Trust. Net proceeds were $3.9 million after deducting $90 thousand in loan costs. The loan bears interest at a rate of 5.375% for the first five years. On July 31, 2025, the interest rate resets to the then U.S. Treasury 5-year maturities rate plus 5% and remains fixed at that rate through maturity on October 1, 2028. The note requires interest only payments for the first 13 months, followed by monthly principal and interest payments of approximately $57 thousand through maturity. Proceeds from the loan may be used for the purpose of performing equipment upgrades, purchasing equipment and other improvements to the Indiana farm. The Company must comply with certain financial and non-financial covenants and at December 31, 2020, the Company was in compliance. The loan is also subject to certain prepayment penalties and is secured by the assets of the Indiana subsidiary and a guarantee by the Parent. The loan agreement requires the Company to maintain a $500 thousand minimum cash balance with the bank throughout the loan term. This amount is reflected as restricted cash on the balance sheet.

Department of Fisheries and Oceans ("DFO")

DFO is a department of the government of Canada responsible for safeguarding its waters and managing its fisheries, oceans and freshwater resources. DFO supports economic growth in the marine and fisheries sectors, and innovation in areas such as aquaculture and biotechnology.

In September 2020, the Canadian Subsidiary entered into a Contribution Agreement with DFO's Atlantic Fisheries Fund, whereby it is eligible to receive up to C$1.9 million ($1.4 million) to finance new equipment for its Rollo Bay farm. As of December 31, 2020, the Canadian Subsidiary had not drawn down any of the funds available under the agreement. Any borrowings under the agreement are interest free and monthly repayments of any borrowed amounts commence in March 2023, with maturity in September 2029.

The Company recognized interest expense in 2020 of $152 thousand (2019: $62 thousand; 2018: $22 thousand) on its interest-bearing debt.

AquaBounty Technologies, Inc.
Notes to the Consolidated Financial Statements
for the years ended December 31, 2020, 2019, and 2018

8. Stockholders' equity

The Company's shareholders have authorized 85 million shares of stock, of which 5 million are authorized as preferred stock and 80 million as common stock. At December 31, 2020, the Company had zero shares (2019: zero) of preferred stock and 55,497,133 shares (2019: 21,635,365) of common stock, issued and outstanding.

Common stock

The holders of the common stock are entitled to one vote for each share held at all meetings of stockholders. Dividends and distribution of assets of the Company in the event of liquidation are subject to the preferential rights of any outstanding preferred shares.

Recent issuances

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

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

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

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

On March 21, 2019, the Company completed a public offering of 3,345,282 Common Shares for net proceeds of approximately $6.6 million.

On April 5, 2019, the Company completed a public offering of 2,554,590 Common Shares for net proceeds of approximately $5.1 million. On April 17, 2019, the Company issued 346,488 Common Shares in conjunction with the over-allotment exercise of its underwriters for net proceeds of approximately $0.7 million.

On May 6, 2020, the Company issued 20,000 restricted common shares to a consultant. The Company recorded a charge of $41 thousand in conjunction with the share issuance.

On August 7, 2020, the Company completed a public offering of 11,000,000 Common Shares for net proceeds of approximately $25.8 million. On August 17, 2020, the Company issued 1,650,000 Common Shares in conjunction with the over-allotment exercise of its underwriters for net proceeds of approximately $3.9 million.

On December 14, 2020, the Company completed a public offering of 10,028,000 Common Shares for net proceeds of approximately $60.4 million.

During 2020, the Company issued 713,449 Common Shares in connection with the exercise of warrants, with total proceeds of $2.3 million.

On February 8, 2021, the Company completed a public offering of 14,950,000 Common Shares for net proceeds of approximately $119.2 million.

AquaBounty Technologies, Inc.
Notes to the Consolidated Financial Statements
for the years ended December 31, 2020, 2019, and 2018

Warrants

The following table summarizes information about outstanding warrants at December 31, 2020:

	Number of warrants	Weighted average exercise price
Outstanding at December 31, 2019	1,662,304	$ 3.25
Exercised	(713,449)	3.25
Outstanding at December 31, 2020	948,855	$ 3.25
Exercisable at December 31, 2020	948,855	$ 3.25

Share-based compensation

In 2006, the Company established the 2006 Equity Incentive Plan (the "2006 Plan"). The 2006 Plan provided for the issuance of incentive stock options to employees of the Company and non-qualified stock options and awards of restricted stock to Directors, officers, employees, and consultants of the Company. In accordance with its original terms, the 2006 Plan terminated on March 18, 2016. All outstanding awards under the 2006 Plan will continue until their individual termination dates.

In March 2016, the Company's Board of Directors adopted the AquaBounty Technologies, Inc. 2016 Equity Incentive Plan (the "2016 Plan") to replace the 2006 Plan. The 2016 Plan provides for the issuance of incentive stock options, non-qualified stock options, and awards of restricted and direct stock purchases to Directors, officers, employees, and consultants of the Company. The 2016 Plan was approved by the Company's shareholders at its Annual Meeting on April 26, 2016 and the aggregate number of shares of common stock that were to be issued pursuant to awards granted under the 2016 Plan could not exceed 450,000. At the April 30, 2019, Annual Meeting, an additional 450,000 shares of common stock that may be issued pursuant to awards granted under the 2016 Plan were authorized, for a total of 900,000. At the April 28, 2020, Annual Meeting, an additional 1,000,000 shares of common stock that may be issued pursuant to awards granted under the 2016 Plan were authorized, for a total of 1,900,000.

Restricted stock

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

	Shares	Weighted average grant date fair value
Unvested at December 31, 2019	39,900	$ 2.31
Granted	100,319	1.88
Vested	(67,566)	2.12
Unvested at December 31, 2020	72,653	$ 1.90

During 2020, the Company expensed $186 thousand (2019: $385 thousand; 2018: $27 thousand) related to restricted stock awards. At December 31, 2020, the balance of unearned share-based compensation to be expensed in future periods related to the restricted stock awards is $95 thousand. 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
for the years ended December 31, 2020, 2019, and 2018

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, 2019	573,925	$ 4.94
Issued	104,458	1.99
Expired	(20,969)	11.04
Outstanding at December 31, 2020	657,414	$ 4.28
Exercisable at December 31, 2020	598,139	$ 4.51

Unless otherwise indicated, options issued to employees, members of the Board of Directors, and non-employees are vested over one year 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 2020 was $1.49 (2019: $1.62; 2018: 2.50.). There were no options exercised in 2020, 2019 or 2018. The total intrinsic value of options exercised in 2020, 2019 and 2018 was $0. At December 31, 2020, the total intrinsic value of all options outstanding was $3.6 million (2019: $1 thousand; 2018: $0), the total intrinsic value of exercisable options was $3.2 million (2019: $1 thousand; 2018 $0), and the total number of shares available for grant under the 2016 Plan was 996,767 (2019: 198,034; 2018: 268,138).

The following table summarizes information about options outstanding and exercisable at December 31, 2020:

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
$1.88 - $2.50	531,519	8.3	472,244	
$3.30 - $6.90	33,805	1.3	33,805	
$7.50 - $10.80	20,503	3.5	20,503	
$14.20 - $23.40	71,587	5.3	71,587	
	657,414		598,139	$4.51

The fair values of stock option grants to employees and members of the Board of Directors during 2020, 2019, and 2018 were measured on the date of grant using Black-Scholes, with the following weighted average assumptions:

	2020	2019	2018
Expected volatility	101% - 104%	89% - 100%	81%
Risk free interest rate	0.31% - 1.67%	1.55% - 2.85%	2.60%
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 $251 thousand in 2020 (2019: $487 thousand; 2018: $236 thousand). At December 31, 2020, the balance of unearned share-based compensation to be expensed in future periods related to

unvested share-based awards is $84 thousand. The period over which the unearned share-based compensation is expected to be earned is 2.5 years.

In June 2019, the Company recognized share based compensation of $134 thousand related to the accelerated vesting and exercisable term change for options to purchase an aggregate of 153,940 shares for the Company's former CEO, who retired June 30, 2019. Each option granted was revalued as of June 30, 2019, using the following Black-Scholes values to determine the incremental charges for the option modification: expected volatility of 97%, risk free interest rate of 1.71% to 1.92%, expected dividend yield of 0.0%, and expected life of 1.5 to 5 years.

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

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

Share-based compensation

The following table summarizes share-based compensation costs recognized in the Company's Consolidated Statements of Operations and Comprehensive Loss for the years ended December 31, 2020, 2019, and 2018:

	2020	2019	2018
Research and development	**$ 497**	$ 3,127	$ 3,238
Sales and marketing	**—**	12,578	—
General and administrative	**436,194**	856,472	260,158
Total share-based compensation	**$ 436,691**	$ 872,177	$ 263,396

9. Income taxes

The components of loss before income taxes for the years ended December 31, 2020, 2019, and 2018, are presented below:

	2020	2019	2018
Domestic	**$ (15,768,224)**	$ (12,950,725)	$ (9,702,869)
Foreign	**(631,761)**	(276,917)	(679,190)
Loss before income taxes	**$ (16,399,985)**	$ (13,227,642)	$ (10,382,059)

Income taxes computed using the federal statutory income tax rate differs from the Company's effective tax rate for the years ended December 31, 2020, 2019, and 2018, primarily due to the following:

	2020	2019	2018
Income tax benefit	**$ (3,443,997)**	$ (2,777,805)	$ (2,180,233)
State and provincial income tax, net of federal benefit	**(732,994)**	397,081	(534,789)
Permanent differences	**131,141**	219,549	53,795
US-Foreign rate differential	**(142,663)**	38,776	(13,955)
Other, net	**(145,973)**	866,250	1,182,900
	$ (4,334,486)	$ (1,256,149)	$ (1,492,282)
Change in valuation allowance	**4,334,486**	1,256,149	1,492,282
Total income tax	**$ —**	$ —	$ —

AquaBounty Technologies, Inc.
Notes to the Consolidated Financial Statements
for the years ended December 31, 2020, 2019, and 2018

As of December 31, 2020, the Company has domestic net operating loss carryforwards of approximately $56 million, after consideration of limitations pursuant to section 382, to offset future federal taxable income, which begin to expire in 2031. At December 31, 2020, the Company has domestic net operating loss carryforwards of approximately $27 million, which can be carried forward indefinitely. The future utilization of certain historic net operating loss and tax credit carryforwards, however, is subject to annual use limitations based on the change in stock ownership rules of Internal Revenue Code Sections 382 and 383. The Company experienced a change in ownership under these rules during 2012 and revised its calculation of net operating loss carryforwards based on annual limitation rules. The Company also has foreign research loss carryforwards totaling approximately $10.0 million and foreign research and development expense tax credits of approximately $2.7 million at December 31, 2020, which expire at various times commencing in 2021. Since the Company has incurred only losses from inception and there is uncertainty related to the ultimate use of the loss carryforwards and tax credits, a valuation allowance has been recognized to offset the Company's deferred tax assets, and no benefit for income taxes has been recorded.

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

		2020		2019
Deferred tax assets:				
Net operating loss carryforwards	**$**	**16,964,199**	$	12,251,892
Foreign research and development tax credit carryforwards		**2,679,180**		2,564,679
Property and equipment		**56,697**		429,764
Intangibles		**3,122,394**		3,241,649
Total deferred tax assets	**$**	**22,822,470**	$	18,487,984
Valuation allowance	**$**	**(22,822,470)**	$	(18,487,984)
Net deferred tax assets	**$**	**—**	$	—

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.

The Company is subject to legal proceedings and claims arising in the normal course of business. Management believes that final disposition of any such matters existing at December 31, 2020, will not have a material adverse effect on the Company's financial position or results of operations.

Lease commitments

Lease expense for the year ended December 31, 2020, amounted to $86 thousand. The weighted average remaining lease term of the Company's operating leases was 23.3 years as of December 31, 2020. Lease payments included in operating cash flows totaled $85 thousand for the year ended December 31, 2020.

The table below summarizes the Company's lease obligations and remaining payments at December 31, 2020:

				December 31, 2020		**December 31, 2019**	
	Lease Type	**End Date**	**Remaining Years**	**Remaining Payments**	**Lease Liability**	**Remaining Payments**	**Lease Liability**
Maynard Office Lease	Operating	Mar 2023	2.3	**$ 150,918**	**$ 134,099**	$ 215,556	$ 186,323
Indiana Auto Lease	Operating	Feb 2021	0.2	**1,157**	**821**	5,999	5,533
Indiana Well Lease	Operating	Dec 2048	28.0	**686,809**	**217,890**	702,341	223,238
Total leases				**$ 838,884**	**$ 352,810**	$ 923,896	$ 415,094
Less: current portion				**(83,571)**	**(62,483)**	(85,011)	(62,286)
Long-term leases				**$ 755,313**	**$ 290,327**	$ 838,885	$ 352,808

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

AquaBounty Technologies, Inc.
Notes to the Consolidated Financial Statements
for the years ended December 31, 2020, 2019, and 2018

Remaining payments under leases are as follows at December 31, 2020:

Year	Office	Auto	Well	Amount
2021	$ 66,416	$ 1,157	$ 15,998	$ 83,571
2022	67,602	—	16,478	84,080
2023	16,901	—	16,972	33,873
2024	—	—	17,481	17,481
2025	—	—	18,006	18,006
Thereafter	—	—	601,873	601,873
Total Lease Payments	$ 150,919	$ 1,157	$ 686,808	$ 838,884

11. Retirement plan

The Company has a savings and retirement plan for its US employees that qualifies under Section 401(k) of the Internal Revenue Code. The plan covers substantially all employees and provides for voluntary contributions by participating employees up to the maximum contribution allowed under the Internal Revenue Code. Contributions by the Company can be made, as determined by the Board of Directors, provided the amount does not exceed the maximum permitted by the Internal Revenue Code. Company contributions made and expensed in operations in connection with the plan during the year ended December 31, 2020, amounted to $72 thousand (2019: $64 thousand; 2018: $44 thousand).

The Company also has a Registered Retirement Savings Plan for its Canadian employees. Company contributions made and expensed in operations in connection with the plan during the year ended December 31, 2020, amounted to $32 thousand (2019: $28 thousand; 2018: $26 thousand).

12. Related Party Collaboration Agreement

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

The Company agreed to pay Precigen quarterly 16.66% of the gross profits calculated under the terms of the agreement for each developed product. The Company likewise agreed to pay Precigen 50% of quarterly revenue obtained from a sublicensor in the event of a sublicensing arrangement. In addition, the Company would reimburse Precigen for the costs of certain services provided by Precigen. The agreement was terminated in 2020 and no royalties were paid to Precigen during the year.

Total Precigen service costs incurred under the terms of this agreement totaled $0 in 2020 (2019: $218 thousand; 2018: $562 thousand), of which $0 is included in accounts payable and accrued liabilities at December 31, 2020 (2019: $1 thousand), and is included as a component of research and development expense in the Consolidated Statements of Operations and Comprehensive Loss.

13. Recently Issued Accounting Standards

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

AquaBounty Technologies, Inc.
Notes to the Consolidated Financial Statements
for the years ended December 31, 2020, 2019, and 2018

14. Quarterly Financial Information (unaudited)

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

	Three Months Ended 2020			
	March 31	June 30	September 30	December 31
Revenue	$ 6,753	$ 2,950	$ 67,763	$ 50,197
Operating loss	(3,091,421)	(3,504,999)	(3,613,158)	(6,038,252)
Net loss	(3,109,618)	(3,523,684)	(3,649,788)	(6,116,895)
Basic and diluted net loss per share attributable to common shareholders	$ (0.11)	$ (0.11)	$ (0.09)	$ (0.13)

	Three Months Ended 2019			
	March 31	June 30	September 30	December 31
Revenue	$ 97,885	$ 42,486	$ —	$ 46,367
Operating loss	(2,755,694)	(4,019,719)	(2,999,592)	(3,403,639)
Net loss	(2,763,932)	(4,026,731)	(3,018,222)	(3,418,757)
Basic and diluted net loss per share attributable to common shareholders	$ (0.17)	$ (0.19)	$ (0.14)	$ (0.16)

15. Subsequent events

On February 8, 2021, the Company completed a public offering of 14,950,000 Common Shares for net proceeds of approximately $119.2 million.

On February 25, 2021, the Canadian Subsidiary received a claim reimbursement under its Contribution Agreement with DFO in the amount of C$238,400 or approximately $184,760 (see Note 7).

EXHIBIT 21.1

List of Subsidiaries of AquaBounty Technologies, Inc.

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

Name	Jurisdiction of Organization
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

EXHIBIT 31.1

Certification

I, Sylvia Wulf, certify that:

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

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

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

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

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

(b) designed such internal controls over financial reporting, or caused such internal controls over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

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

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

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

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

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

Date: March 9, 2021

/s/ Sylvia Wulf
Chief Executive Officer

EXHIBIT 31.2

Certification

I, David A. Frank, certify that:

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

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

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

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

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

(b) designed such internal controls over financial reporting, or caused such internal controls over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

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

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

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

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

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

Date: March 9, 2021

/s/ David A. Frank
Chief Financial Officer

EXHIBIT 32.1

The following certification is being made to the Securities and Exchange Commission solely for purposes of Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. 1350). This certification is not to be deemed a part of the Report, nor is it deemed to be "filed" for any purpose whatsoever.

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

(i) this Annual Report on Form 10-K for the year ended December 31, 2020, which this statement accompanies, fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and

(ii) the information contained in this Annual Report on Form 10-K for the year ended December 31, 2020, fairly presents, in all material respects, the financial condition and results of operations of AquaBounty Technologies, Inc.

Dated as of this 9th day of March 2021.

/s/ Sylvia Wulf	/s/ David A. Frank
Sylvia Wulf	David A. Frank
Chief Executive Officer	Chief Financial Officer