# UNITED STATES SECURITIES AND EXCHANGE COMMISSION

**Washington, D.C. 20549**

# Form 10-Q

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

For the quarterly period ended September 30, 2019

or

**[ ] 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)

| 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** |

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act") during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or such shorter period that the registrant was required to submit such files).

Yes ☑ No ☐

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

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

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

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

Yes ☐ No ☑

At November 4, 2019, the registrant had 21,605,322 shares of common stock, par value $0.001 per share ("Common Shares") outstanding.

# AquaBounty Technologies, Inc.

**FORM 10-Q**

**For the Quarterly Period Ended September 30, 2019**

**TABLE OF CONTENTS**

## PART I. FINANCIAL INFORMATION

### Item 1. Financial Statements

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

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

See accompanying notes to these unaudited interim consolidated financial statements.

# AquaBounty Technologies, Inc.

## Consolidated Statements of Operations and Comprehensive Loss

## (Unaudited)

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

See accompanying notes to these unaudited interim consolidated financial statements.

## AquaBounty Technologies, Inc.

## Consolidated Statements of Changes in Stockholders' Equity

## (Unaudited)

| | Common stock issued and outstanding | Par value | Additional paid-in capital | Accumulated other comprehensive loss | Accumulated deficit | Total |
|---|---|---|---|---|---|---|
| Balance at December 31, 2017 | 8,895,094 | $ 8,895 | $ 126,718,186 | $ (213,884) | $ (108,532,508) | $ 17,980,689 |
| Net loss | | | | | (2,449,787) | (2,449,787) |
| Other comprehensive income (loss) | | | | (112,118) | | (112,118) |
| Issuance of common stock, net | 3,692,307 | 3,692 | 10,612,356 | | | 10,616,048 |
| Exercise of warrants | 76,981 | 77 | 250,111 | | | 250,188 |
| Share based compensation | 11,151 | 11 | 48,534 | | | 48,545 |
| Balance at March 31, 2018 | 12,675,533 | $ 12,675 | $ 137,629,187 | $ (326,002) | $ (110,982,295) | $ 26,333,565 |
| Net loss | | | | | (2,781,149) | (2,781,149) |
| Other comprehensive income (loss) | | | | (85,811) | | (85,811) |
| Exercise of warrants | 172,843 | 173 | 561,567 | | | 561,740 |
| Share based compensation | | | 71,544 | | | 71,544 |
| Balance at June 30, 2018 | 12,848,376 | $ 12,848 | $ 138,262,298 | $ (411,813) | $ (113,763,444) | $ 24,099,889 |
| Net loss | | | | | (2,727,028) | (2,727,028) |
| Other comprehensive income (loss) | | | | 84,711 | | 84,711 |
| Share based compensation | | | 71,593 | | | 71,593 |
| Balance at September 30, 2018 | 12,848,376 | $ 12,848 | $ 138,333,891 | $ (327,102) | $ (116,490,472) | $ 21,529,165 |

| | Common stock issued and outstanding | Par value | Additional paid-in capital | Accumulated other comprehensive loss | Accumulated deficit | Total |
|---|---|---|---|---|---|---|
| Balance at December 31, 2018 | 15,098,837 | $ 15,099 | $ 142,707,957 | $ (574,186) | $ (118,914,567) | $ 23,234,303 |
| **Net loss** | | | | | **(2,763,932)** | **(2,763,932)** |
| **Other comprehensive income (loss)** | | | | **87,552** | | **87,552** |
| **Issuance of common stock, net** | **3,345,282** | **3345** | **6,606,310** | | | **6,609,655** |
| **Exercise of warrants** | **76,797** | **77** | **250,347** | | | **250,424** |
| **Share based compensation** | **176,561** | **176** | **138,322** | | | **138,498** |
| **Balance at March 31, 2019** | **18,697,477** | **$ 18,697** | **$ 149,702,936** | **$ (486,634)** | **$ (121,678,499)** | **$ 27,556,500** |
| **Net loss** | | | | | **(4,026,731)** | **(4,026,731)** |
| **Other comprehensive income (loss)** | | | | **84,788** | | **84,788** |
| **Issuance of common stock, net** | **2,901,078** | **2,901** | **5,782,792** | | | **5,785,693** |
| **Share based compensation** | | | **318,218** | | | **318,218** |
| **Balance at June 30, 2019** | **21,598,555** | **$ 21,598** | **$ 155,803,946** | **$ (401,846)** | **$ (125,705,230)** | **$ 29,718,468** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Net loss** | | | | | **(3,018,222)** | **(3,018,222)** |
| **Other comprehensive income (loss)** | | | | **(38,892)** | | **(38,892)** |
| **Exercise of warrants** | **6,767** | **7** | **21,986** | | | **21,993** |
| **Share based compensation** | | | **196,736** | | | **196,736** |
| **Balance at September 30, 2019** | **21,605,322** | **$ 21,605** | **$ 156,022,668** | **$ (440,738)** | **$ (128,723,452)** | **$ 26,880,083** |

See accompanying notes to these unaudited interim consolidated financial statements.

**AquaBounty Technologies, Inc.**

**Consolidated Statements of Cash Flows**

**(Unaudited)**

| | Nine Months Ended September 30, | |
|---|---|---|
| | **2019** | 2018 |
| **Operating activities** | | |
| Net loss | **$ (9,808,885)** | $ (7,957,964) |
| Adjustment to reconcile net loss to net cash used in operating activities: | | |
| Depreciation and amortization | **928,476** | 557,718 |
| Share-based compensation | **653,452** | 191,682 |
| Gain on disposal of equipment | **(8,548)** | (11,745) |
| Changes in operating assets and liabilities: | | |
| Other receivables | **45,880** | 97,353 |
| Inventory | **(400,716)** | 97,897 |
| Prepaid expenses and other assets | **(43,404)** | 210,796 |
| Accounts payable and accrued liabilities | **345,569** | (654,997) |
| Net cash used in operating activities | **(8,288,176)** | (7,469,260) |
| **Investing activities** | | |
| Purchase of property, plant and equipment | **(1,824,831)** | (3,375,306) |
| Proceeds from sale of equipment | **8,548** | 21,758 |
| Other investing activities | **12** | — |
| Net cash used in investing activities | **(1,816,271)** | (3,353,548) |
| **Financing activities** | | |
| Proceeds from issuance of debt | **900,767** | — |
| Repayment of term debt | **(57,001)** | (43,437) |
| Proceeds from the issuance of common stock and warrants, net | **12,395,348** | 10,616,048 |
| Proceeds from the exercise of stock options and warrants, net | **272,416** | 811,928 |
| Net cash provided by financing activities | **13,511,530** | 11,384,539 |
| Effect of exchange rate changes on cash and cash equivalents | **15,642** | (23,921) |
| Net change in cash and cash equivalents | **3,422,725** | 537,810 |
| Cash and cash equivalents at beginning of period | **2,990,196** | 492,861 |
| **Cash and cash equivalents at the end of period** | **$ 6,412,921** | $ 1,030,671 |
| **Supplemental disclosure of cash flow information and non-cash transactions:** | | |
| Interest paid in cash | **$ 45,483** | $ 15,854 |
| Property and equipment included in accounts payable and accrued liabilities | **$ 119,541** | $ 512,497 |
| Acquisition of equipment under debt arrangement | **$ —** | $ 74,555 |

See accompanying notes to these unaudited interim consolidated financial statements.

# AquaBounty Technologies, Inc.

## Notes to the consolidated financial statements

### For the nine months ended September 30, 2019 and 2018 (unaudited)

**1. Nature of business and organization**

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

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

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

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

AquaBounty Panama, S. de R.L. (the “Panama Subsidiary”) was incorporated in May 2008 in Panama for the purpose of conducting commercial trials of the Parent’s products. With the regulatory approval of the Company’s farms in Indiana and Rollo Bay, the site in Panama was no longer needed for commercial trials. Operations at the site ceased in May 2019.

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

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

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

**2. Basis of presentation**

The unaudited interim consolidated financial statements include the accounts of AquaBounty Technologies, Inc. and its wholly owned direct subsidiaries, AQUA Bounty Canada Inc.; AquaBounty Panama, S. de R.L.; AquaBounty Farms, Inc.; AquaBounty Farms Indiana LLC; and AquaBounty Brasil Participações Ltda. All inter-company transactions and balances have been eliminated upon consolidation.

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

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

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

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

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

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

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

**Net loss per share**

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

**Accounting Pronouncements**

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

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

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

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

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

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

## 3. Risks and uncertainties

The Company is subject to risks and uncertainties common in the biotechnology and aquaculture industries. Such risks and uncertainties include, but are not limited to: (i) results from current and planned product development studies and trials; (ii) decisions made by the FDA or similar regulatory bodies in other countries with respect to approval and commercial sale of any of the Company's proposed products; (iii) the commercial acceptance of any products approved for sale and the Company's ability to manufacture, distribute, and sell for a profit any products approved for sale; (iv) the Company's ability to obtain the necessary patents and proprietary rights to effectively protect its technologies; and (v) the outcome of any collaborations or alliances entered into by the Company. In addition, as disclosed in "Item 1A. Risk Factors," below, and in "Item 1A. Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2018, which was filed on March 7, 2019, there are a number of other risks and uncertainties that may have a material effect on the operating results of our business and our financial condition.

**Concentration of credit risk**

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

**4. Inventory**

Major classifications of inventory are summarized as follows:

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

**5. Property, plant and equipment**

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

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

During the quarter ended September 30, 2019, a significant portion of the Rollo Bay facility was placed in service. As a result, the Company transferred $5.2 million of construction in process to building and improvements and equipment and commenced deprecation of these assets. Remaining in construction in process is $1.7 million for construction costs to complete the farm site and another $374 thousand has been committed.

**6. Accounts payable and accrued liabilities**

Accounts payable and accrued liabilities include the following:

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

**7. Debt**

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

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

Estimated principal payments remaining on loan debt are as follows:

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

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

In 2018, the Canadian Subsidiary obtained a new loan from Finance PEI (“FPEI”), which incorporated the existing loan and provides C$2.0 million ($1.5 million) of additional funds. As of December 31, 2018, C$1.0 million ($734 thousand) had been drawn down. On May 17, 2019, an additional C$700 thousand ($535 thousand) had been drawn down. The final C$300 thousand ($230 thousand) is anticipated to be drawn down during the fourth quarter of 2019. Payments commenced in June 2019. The loan has an interest rate of 4% and is collateralized by a mortgage executed by the Canadian Subsidiary, which conveys a first security interest in all of its current and acquired assets. The loan is guaranteed by the Parent.

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

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

**8. Leases**

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

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

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

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

| Year | Office | Auto | Well | Amount |
|---|---|---|---|---|
| 2019 | $ 16,011 | $ 1,211 | $ 3,770 | $ 20,992 |
| 2020 | 64,637 | 4,842 | 15,532 | 85,011 |
| 2021 | 66,416 | 1,157 | 15,998 | 83,571 |
| 2022 | 67,602 | — | 16,478 | 84,080 |
| 2023 | 16,902 | — | 16,972 | 33,874 |
| Thereafter | — | — | 637,360 | 637,360 |
| Total Lease Payments | $ 231,568 | $ 7,210 | $ 706,110 | $ 944,888 |

## 9. Stockholders' equity

### Recent issuances

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

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

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

### Warrants

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

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

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

**Share-based compensation**

*Restricted stock*

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

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

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

*Stock options*

The Company's option activity is summarized as follows:

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

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

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

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

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

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

The following table summarizes information about options outstanding and exercisable at September 30, 2019:

| Weighted average exercise price of outstanding options | Number of options outstanding | Weighted average remaining estimated life (in years) | Number of options exercisable | Weighted average exercise price of outstanding and exercisable options |
|---|---|---|---|---|
| $2.50 - $5.70 | 403,663 | 9.1 | 270,120 | |
| $6.90 - $9.60 | 52,841 | 3.0 | 52,841 | |
| $10.50 - $10.80 | 4,000 | 4.4 | 4,000 | |
| $14.20 - $23.40 | 78,421 | 6.5 | 74,886 | |
| | 538,925 | | 401,847 | $5.99 |

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

During the period ended June 30, 2019, the Company recognized share based compensation of $134,258 related to the accelerated vesting and exercisable term change for options to purchase an aggregate of 153,940 shares for the Company's former CEO, who retired June 30, 2019. Each option granted was revalued as of June 30, 2019, using the following Black-Scholes values to determine the incremental charges for the option modification: expected volatility of 97%, risk free interest rate of 1.71% to 1.92%, expected dividend yield of 0.0%, and expected life of 1.5 to 5 years.

The following table summarizes the expense related to the options revalued at June 30, 2019:

| | | Expense | | | |
|---|---|---|---|---|---|
| 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 |

**10. Commitments and contingencies**

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

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

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

**11. Related Party Collaboration Agreement**

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

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

## Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following "Management's Discussion and Analysis of Financial Condition and Results of Operations" should be read in conjunction with the unaudited financial information and the notes thereto included in this Quarterly Report on Form 10-Q and our Annual Report on Form 10-K for the year ended December 31, 2018, which was filed on March 7, 2019.

This discussion and analysis also contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 and should be read in conjunction with the disclosures and information contained in "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2018, and in this Quarterly Report on Form 10-Q. Our actual results may differ materially from those discussed below. The following discussion and analysis is intended to enhance the reader's understanding of our business environment. The forward-looking statements included in this Quarterly Report on Form 10-Q are made only as of the date hereof. We are not under any obligation to, and do not intend to, publicly update or review any of these forward-looking statements, whether as a result of new information, future events, or otherwise, even if experience or future events make it clear that any expected results expressed or implied by those forward-looking statements will not be realized.

### Overview

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

#### Revenue

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

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

#### Cost of Products

Cost of products includes the labor and related costs to grow out our fish, including feed, oxygen, and other direct costs; an application of overhead; and the cost to process and ship our products to customers. As of September 30, 2019, we had twenty-seven employees engaged in production activities.

#### Sales and Marketing Expenses

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

#### Research and Development Expenses

As of September 30, 2019, we employed twenty-one scientists and technicians at our facilities on Prince Edward Island to oversee our broodstock of AquAdvantage Salmon, as well as the lines of fish we maintain for research and development purposes. We recognize research and development expenses as they are incurred. Our research and development expenses consist primarily of:

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

#### General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related costs for employees in executive, corporate, and finance functions. Other significant general and administrative expenses include corporate governance and public market maintenance, regulatory compliance, rent and utilities, insurance, and legal services, along with pre-production and capacity utilization costs for our Rollo Bay and Indiana farms, respectively. We had eleven employees in our general and administrative group at September 30, 2019.

#### Other Income (Expense)

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

**Results of Operations**

**Comparison of the three months ended September 30, 2019, to the three months ended September 30, 2018.**

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

| | Three Months End September 30, | | Dollar Change | % Change |
|---|---|---|---|---|
| | 2019 | 2018 | | |
| | (unaudited) | | | |
| Product revenue | $ — | $ 11 | $ (11) | (100)% |
| Operating expenses: | | | | |
| Product costs | — | 9 | (9) | (100)% |
| Sales and marketing | 206 | 65 | 141 | 217 % |
| Research and development | 446 | 805 | (359) | (45)% |
| General and administrative | 2,347 | 1,852 | 495 | 27 % |
| Operating loss | 2,999 | 2,720 | 279 | 10 % |
| Total other (income) expense | 19 | 7 | 12 | 171 % |
| Net loss | $ 3,018 | $ 2,727 | $ 291 | 11 % |

*Product Revenue and Product Cost*

There was no product revenue for the three months ended September 30, 2019. We expect that our sales will be modest and infrequent until our grow-out farms in Indiana and Rollo Bay commence harvesting in mid-2020.

*Sales and Marketing Expenses*

Sales and marketing expenses for the three months ended September 30, 2019, were up from the corresponding period in 2018 due to increased personnel and consulting expenses, travel costs, and compensation charges related to the commencement of marketing activities for our salmon. We expect that our sales and marketing expenses will increase as we increase our production at our farm sites.

*Research and Development Expenses*

Research and development expenses for the three months ended September 30, 2019, were down from the corresponding period in 2018 due to lower personnel costs, outside contract service fees, travel expenses, and field trial costs, primarily related to the closing of our demonstration farm in Panama. We expect that our research and development expenses will increase as we expand our broodstock capacity, commence new field trials and continue to pursue regulatory approval for additional products and additional markets.

*General and Administrative Expenses*

General and administrative expenses for the three months ended September 30, 2019, were up significantly from the corresponding period in 2018 due to increases in stock compensation charges and travel costs associated with headcount additions to our management team, regulatory legal fees associated with the FDA legal challenge, and excess capacity charges at the Indiana and Rollo Bay farms as they continue their start-up.

*Total Other (Income) Expense*

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

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

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

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

*Product Revenue and Product Cost*

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

*Sales and Marketing Expenses*

Sales and marketing expenses for the nine months ended September 30, 2019, were up from the corresponding period in 2018 due to increased personnel and consulting expenses, travel costs, and compensation charges related to the commencement of marketing activities for our salmon. We expect that our sales and marketing expenses will increase as we increase our production at our farm sites.

*Research and Development Expenses*

Research and development expenses for the nine months ended September 30, 2019, were down from the corresponding period in 2018 due to lower personnel costs, outside contract service fees, travel expenses, and field trial costs, primarily related to the closing of our demonstration farm in Panama. We expect that our research and development expenses will increase as we expand our broodstock capacity, commence new field trials and continue to pursue regulatory approval for additional products and additional markets.

*General and Administrative Expenses*

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

*Total Other (Income) Expense*

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

**Cash Flows**

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

| | Nine Months Ended September 30, | |
|---|---|---|
| | 2019 | 2018 |
| | (unaudited) | |
| Net cash provided by (used in): | | |
| Operating activities | $ (8,288) | $ (7,469) |
| Investing activities | (1,816) | (3,354) |
| Financing activities | 13,511 | 11,385 |
| Effect of exchange rate changes on cash | 16 | (24) |
| Net increase (decrease) in cash | $ 3,423 | $ 538 |

*Cash Flows from Operating Activities*

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

Spending on operations increased during the current period due to headcount additions; legal, tax, and travel cost increases; and production activities at our Rollo Bay and Indiana farm sites. The increase in cash used by working capital in the current period was due primarily to an increase in inventory and prepaid items, offset by an increase in accounts payable and accrued liabilities and a decrease in receivables.

*Cash Flows from Investing Activities*

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

*Cash Flows from Financing Activities*

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

**Future Capital Requirements**

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

As discussed in Note 1 to the financial statements, the Company has experienced net losses and negative cash flows from operations since its inception and has cumulative losses attributable to common stockholders of $129 million and a cash balance of $6.4 million as of September 30, 2019. Management has evaluated the Company’s cash resources in view of its planned spending for ongoing operations, capital expenditures, and working capital for the next twelve months from the filing date and has determined that its current funds will be exhausted by June 30, 2020. As a result, there is substantial doubt about the Company’s ability to continue as a going concern within one year after the date that these financial statements are issued.

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

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

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

**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.

## Item 3. Quantitative and Qualitative Disclosures About Market Risk

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

**Interest Rate Risk**

Our primary exposure to market risk is interest rate risk associated with debt financing that we utilize from time to time to fund operations or specific projects. The interest on this debt is usually determined based on a fixed rate and is contractually set in advance. At September 30, 2019, and December 31, 2018, we had $1.8 million and $1.2 million, respectively, in interest-bearing debt instruments on our consolidated balance sheet. All of our interest-bearing debt is at fixed rates.

**Foreign Currency Exchange Risk**

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

## Item 4. Controls and Procedures

**Disclosure Controls and Procedures**

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the Company's disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this Form 10-Q. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of the quarter ended September 30, 2019, the Company's disclosure controls and procedures are effective in recording, processing, summarizing, and reporting, on a timely basis, information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act and are effective in ensuring that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including the Company's Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

**Changes in Internal Control Over Financial Reporting**

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(g) and 15d-15(f)) that occurred during the fiscal quarter covered by this report that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

# PART II. OTHER INFORMATION

## Item 1. Legal Proceedings

**Lawsuit Against the FDA Approval of NADA**

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. The coalition, including the Center for Food Safety and Friends of the Earth, claims that the FDA had no statutory authority to regulate bioengineered animals, and, if it did, that the agency failed to analyze and implement measures to mitigate ecological, environmental, and socioeconomic risks that could impact wild salmon and the environment, including the risk that AquAdvantage Salmon could escape and threaten endangered wild salmon stocks. The discovery phase of litigation is now complete, and the case is moving forward on substantive briefing.

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

## Item 1A. Risk Factors

As disclosed in “Item 1A. Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2018, which was filed on March 7, 2019, there are a number of risks and uncertainties that may have a material effect on the operating results of our business and our financial condition. The following risk factors are either new or have changed materially from those set forth in our Annual Report on Form 10-K for the year ended December 31, 2018. You should carefully review the risks involved and those described in our Annual Report on Form 10-K and in other reports we file with the Securities and Exchange Commission in evaluating our business.

***Risks Relating to our Business***

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

Currently, we do not have sufficient capital to continue our operations after the first six months of 2020. If we are unable to generate additional funds through financings, sales of our products, government grants, loans, or from other sources or transactions, we would exhaust our resources and be unable to maintain our currently planned operations and continue as a going concern. We therefore plan to seek additional financing in the form of debt or equity to fund our cash requirements for the next twelve months. We may also cut operating costs or delay capital spend in order to preserve available cash. There can be no assurance that we will be successful in securing additional financing, and, if we do not, we would not be able to continue as a going concern, and our stockholders would likely lose most or all of their investment in us. You should not rely on our consolidated balance sheet as an indication of the amount of proceeds that would be available to satisfy claims of creditors, and potentially be available for distribution to shareholders, in the event of liquidation. Our consolidated financial statements included in this Quarterly Report on Form 10-Q have been prepared assuming that we will continue as a going concern and do not include any adjustment to reflect the possible future effects on the recoverability and classification of assets, or the amounts and classification of liabilities that may result if we do not continue as a going concern.

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

Although we were established in 1991, we did not start to develop our current product portfolio until 1996. In the period since incorporation to September 30, 2019, we have incurred net losses of approximately $129 million. These losses reflect our personnel, research and development, and marketing costs. We have constructed a 250-metric-ton annual capacity production facility in Rollo Bay, and in 2017 we acquired a facility in Albany, Indiana, which has undergone renovations to increase its annual capacity to 1,200 metric tons. We expect more significant revenues in 2020 once our new facilities are in full production. However, our ability to realize revenues and the timing thereof are not certain, and achieving revenues does not assure that we will become profitable.

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

We do not expect significant sales until 2020, at the earliest, and to date we have not generated any profit and expect to incur losses for the foreseeable future and may never become profitable. Therefore, based on our current business plan, we anticipate a need to raise further funds. Any issuance of shares of our common stock could have an effect of depressing the market price of shares of our common stock through dilution of earnings per share or otherwise.

The amount and timing of the expenditures needed to achieve our development and commercialization programs will depend on numerous factors, some of which are outside our control. Changes in our plans could result in the need for additional funds. The primary factor impacting the amount and timing of any additional expenditure is the timing of further stocking of AquAdvantage Salmon in our two production facilities in Rollo Bay and Indiana. Until these two sites reach full capacity, we will have only modest revenues to cover net losses, which were $10.4 million and $9.3 million in 2018 and 2017, respectively.

While we await the completion of the first harvests from our two production facilities, we plan to evaluate additional commercialization alternatives for our product through the channels we determine to be most advantageous to the Company. Such efforts may involve engaging in partnerships or joint ventures or licensing the technology to salmon growers. If we elect to grow out the fish ourselves, we would need to invest in the construction or purchase of additional land-based recirculating aquaculture system facilities. These facilities have estimated construction costs of between $10-$17 million for each 1,000 metric tons of output.

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

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

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

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

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

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

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

Regulations pertaining to bioengineered animals are still developing and could change from their present state. In addition, new legislation could require new regulatory frameworks, changes in existing regulation, or re-evaluation of prior regulatory decisions. For example, despite the FDA’s final determination that AquAdvantage Salmon may be sold without being labeled as a bioengineered product, a provision added to the 2016 Omnibus Appropriations Act required the FDA to issue final guidance for such labeling. The FDA was therefore obligated to maintain an Import Alert starting in January 2016 that prohibited import of AquAdvantage Salmon until such guidance was finalized or the provision was no longer effective. On March 8, 2019, several months after the USDA promulgated its final rule establishing a national standard for the labeling of bioengineered foods, including AquAdvantage Salmon, the FDA lifted the Import Alert. However, in September 2019, an appropriations bill was introduced in the Senate that would, if adopted into law, prohibit the introduction into interstate commerce of any food containing genetically engineered salmon until a consumer study of the efficacy of that national labeling standard for informing consumers of the genetically engineered content of salmon products was transmitted to Congress.

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.

**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. If we are not able to attract and retain the necessary personnel to accomplish our business objectives, we may experience staffing constraints that could adversely affect our ability to meet the demands of our customers in a timely fashion, adequately staff existing or new production facilities, or support our internal research and development programs. In particular, our production facilities require individuals experienced in RAS-based aquaculture, and our product development programs are dependent on our ability to attract and retain highly skilled scientists. Competition for experienced production staff, scientists, and other technical personnel from numerous companies and academic and other research institutions may limit our ability to attract and retain such personnel on acceptable terms.

***Risks Relating to our Common Stock***

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

Based solely on a Schedule 13D/A filed on October 31, 2019, by Randal J. Kirk ("Mr. Kirk"), Third Security, LLC ("Third Security"), TS AquaCulture LLC ("TS AquaCulture"), and Intrexon, as of issuance, TS AquaCulture owns 8,239,199 shares of our common stock, or approximately 38.1% of our outstanding shares. In addition, entities controlled by Mr. Kirk, including Third Security and its affiliates other than TS AquaCulture, currently hold 837,554 shares of our common stock, or approximately 3.9% of our outstanding shares. TS AquaCulture is managed by Third Security and is successor-in-interest to Intrexon under the Relationship Agreement entered into by AquaBounty and Intrexon dated as of December 5, 2012 (the "Relationship Agreement"). Based on these holdings, Mr. Kirk, Intrexon's Chairman and Chief Executive Officer and Third Security's Chief Executive Officer and Senior Managing Director, has reported control over approximately 42.0% of our outstanding shares. Given this, and our grant to TS AquaCulture, as successor-in-interest to Intrexon under the Relationship Agreement, of certain rights to nominate members of our Board of Directors that are intended to ensure that TS AquaCulture-nominated Board members represent a percentage of our Board that is proportionate to TS AquaCulture's percentage ownership of our common stock, TS AquaCulture will be able to significantly influence who serves on our Board of Directors and the outcome of matters required to be submitted to our shareholders for approval, including decisions relating to the outcome of any proposed merger or consolidation of our company. TS AquaCulture's interests may not be consistent with those of our other shareholders. Furthermore, TS AquaCulture's significant interest in us may discourage third parties from seeking to acquire control of us, which may adversely affect the market price of our common stock.

## Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None.

## Item 3. Defaults Upon Senior Securities

None.

## Item 4. Mine Safety Disclosures

Not applicable.

## Item 5. Other Information

None.

## Item 6. Exhibits

### EXHIBIT INDEX

| Exhibit Number | Exhibit Description |
|---|---|
| 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. |

## Signatures

Pursuant to the requirements 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. |
| November 5, 2019 | /s/ Sylvia Wulf |
| | Sylvia Wulf |
| | President, Chief Executive Officer, and Director (Principal Executive Officer) |
| November 5, 2019 | /s/ David A. Frank |
| | David A. Frank |
| | Chief Financial Officer and Treasurer (Principal Financial Officer and Principal Accounting Officer) |

**EXHIBIT 31.1**

# Certification

I, Sylvia Wulf, certify that:

1. I have reviewed this quarterly report on Form 10-Q 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 control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and

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

| | | |
|---|---|---|
| Date: | November 5, 2019 | /s/ Sylvia Wulf |
| | | Sylvia Wulf |
| | | *Chief Executive Officer* |
| | | (Principal Executive Officer) |

**EXHIBIT 31.2**

# Certification

I, David A. Frank, certify that:

1. I have reviewed this quarterly report on Form 10-Q 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 control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and

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

| | | |
|---|---|---|
| Date: | November 5, 2019 | /s/ David A. Frank |
| | | David A. Frank |
| | | *Chief Financial Officer* |
| | | (Principal 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) the Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2019, which this statement accompanies, fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and

(ii) the information contained in the Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2019, fairly presents, in all material respects, the financial condition and results of operations of AquaBounty Technologies, Inc.

Dated as of this 5th day of November, 2019.

| | |
|---|---|
| /s/ Sylvia Wulf | /s/ David A. Frank |
| Sylvia Wulf | David A. Frank |
| *Chief Executive Officer* | *Chief Financial Officer* |
| (Principal Executive Officer) | (Principal Financial Officer) |