

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

Form 10-Q

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

For the quarterly period ended September 30, 2022

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

(State or other jurisdiction of
incorporation or organization)

04-3156167

(I.R.S. Employer
Identification No.)

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

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

Title of each class
Common Stock, par value \$0.001 per share

Trading Symbol(s)
AQB

Name of exchange on which registered
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 7, 2022, the registrant had 71,110,713 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, 2022

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Cautionary Note Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q, particularly the sections titled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” contains forward looking statements. All statements other than present and historical facts and conditions contained in this Quarterly Report on Form 10-Q, 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 Quarterly Report on Form 10-Q, 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 Quarterly Report on Form 10-Q include, but are not limited to, statements about:

- 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 (including our Pioneer, Ohio farm);
- developments concerning our research projects;
- our expectations regarding our ability to successfully enter new markets or develop additional products;
- our ability to expand our competitive offering;
- expectations regarding anticipated operating results;
- our cash position, our ability to raise additional capital to finance our activities and the terms of such financing, including interest rates on debt;
- the impact of the evolving COVID-19 pandemic (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 genetically engineered 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”), which will end on December 31, 2022;
- our estimates regarding expenses, inflation, 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 Quarterly Report on Form 10-Q 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 Quarterly Report on Form 10-Q. 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.

PART I. FINANCIAL INFORMATION**Item 1. Financial Statements**

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

| | September 30, 2022 | December 31, 2021 |
|---|-----------------------|-----------------------|
| Assets | | |
| Current assets: | | |
| Cash and cash equivalents | \$ 127,008,620 | \$ 88,454,988 |
| Marketable securities | — | 101,773,781 |
| Inventory | 2,104,251 | 1,259,910 |
| Prepaid expenses and other current assets | 4,041,029 | 1,536,484 |
| Total current assets | 133,153,900 | 193,025,163 |
| Property, plant and equipment, net | 88,002,701 | 33,815,119 |
| Right of use assets, net | 238,699 | 284,320 |
| Intangible assets, net | 221,565 | 231,842 |
| Restricted cash | 1,000,000 | 1,000,000 |
| Other assets | 68,343 | 79,548 |
| Total assets | \$ 222,685,208 | \$ 228,435,992 |
| Liabilities and stockholders' equity | | |
| Current liabilities: | | |
| Accounts payable and accrued liabilities | \$ 15,544,254 | \$ 4,317,615 |
| Accrued employee compensation | 764,748 | 874,589 |
| Current debt | 709,597 | 627,365 |
| Other current liabilities | 36,706 | 66,269 |
| Total current liabilities | 17,055,305 | 5,885,838 |
| Long-term lease obligations | 204,396 | 224,058 |
| Long-term debt, net | 7,617,173 | 8,523,333 |
| Total liabilities | 24,876,874 | 14,633,229 |
| Commitments and contingencies | | |
| Stockholders' equity: | | |
| Common stock, \$0.001 par value, 150,000,000 and 80,000,000 shares authorized at September 30, 2022 and December 31, 2021, respectively; 71,110,713 and 71,025,738 shares outstanding at September 30, 2022 and December 31, 2021, respectively | 71,111 | 71,026 |
| Additional paid-in capital | 385,279,809 | 384,852,107 |
| Accumulated other comprehensive loss | (589,909) | (255,588) |
| Accumulated deficit | (186,952,677) | (170,864,782) |
| Total stockholders' equity | 197,808,334 | 213,802,763 |
| Total liabilities and stockholders' equity | \$ 222,685,208 | \$ 228,435,992 |

See accompanying notes to these condensed interim consolidated financial statements.

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

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|-------------------------------------|----------------|------------------------------------|-----------------|
| | 2022 | 2021 | 2022 | 2021 |
| Revenues | | | | |
| Product revenues | \$ 653,432 | \$ 455,397 | \$ 2,686,019 | \$ 757,162 |
| Costs and expenses | | | | |
| Product costs | 3,518,296 | 4,311,003 | 10,044,092 | 7,713,254 |
| Sales and marketing | 186,393 | 201,838 | 783,882 | 1,069,354 |
| Research and development | 220,598 | 580,346 | 596,079 | 1,512,339 |
| General and administrative | 2,264,755 | 2,177,153 | 7,472,921 | 6,541,621 |
| Total costs and expenses | 6,190,042 | 7,270,340 | 18,896,974 | 16,836,568 |
| Operating loss | (5,536,610) | (6,814,943) | (16,210,955) | (16,079,406) |
| Other income (expense) | | | | |
| Interest expense | (72,313) | (79,489) | (222,295) | (238,503) |
| Other income, net | 168,796 | 29,593 | 345,355 | 63,442 |
| Total other income (expense) | 96,483 | (49,896) | 123,060 | (175,061) |
| Net loss | \$ (5,440,127) | \$ (6,864,839) | \$ (16,087,895) | \$ (16,254,467) |
| Other comprehensive (loss) income: | | | | |
| Foreign currency translation (loss) gain | (303,725) | (136,670) | (374,422) | 9,293 |
| Unrealized gain on marketable securities | 32,370 | 6,132 | 40,101 | 15,102 |
| Total other comprehensive (loss) income | (271,355) | (130,538) | (334,321) | 24,395 |
| Comprehensive loss | \$ (5,711,482) | \$ (6,995,377) | \$ (16,422,216) | \$ (16,230,072) |
| Basic and diluted net loss per share | \$ (0.08) | \$ (0.10) | \$ (0.23) | \$ (0.24) |
| Weighted average number of Common Shares - basic and diluted | 71,070,196 | 71,025,738 | 71,047,999 | 68,889,650 |

See accompanying notes to these condensed interim consolidated financial statements.

AquaBounty Technologies, Inc.
Condensed 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, 2020 | 55,497,133 | \$ 55,497 | \$ 263,629,116 | \$ (267,258) | \$ (148,542,194) | \$ 114,875,161 |
| Net loss | | | | | (4,158,891) | (4,158,891) |
| Other comprehensive income (loss) | | | | 80,039 | | 80,039 |
| Cashless exercise of options for common stock | 4,354 | 4 | (4) | | | — |
| Issuance of common stock, net of expenses | 14,950,000 | 14,950 | 119,105,487 | | | 119,120,437 |
| Exercise of warrants for common stock | 491,133 | 491 | 1,595,691 | | | 1,596,182 |
| Share based compensation | 40,525 | 41 | 129,674 | | | 129,715 |
| Balance at March 31, 2021 | 70,983,145 | \$ 70,983 | \$ 384,459,964 | \$ (187,219) | \$ (152,701,085) | \$ 231,642,643 |
| Net loss | | | | | (5,230,737) | (5,230,737) |
| Other comprehensive income (loss) | | | | 74,894 | | 74,894 |
| Exercise of warrants for common stock | 39,281 | 39 | 127,625 | | | 127,664 |
| Share based compensation | 3,312 | 4 | 87,350 | | | 87,354 |
| Balance at June 30, 2021 | 71,025,738 | \$ 71,026 | \$ 384,674,939 | \$ (112,325) | \$ (157,931,822) | \$ 226,701,818 |
| Net loss | | | | | (6,864,839) | (6,864,839) |
| Other comprehensive income (loss) | | | | (130,538) | | (130,538) |
| Share based compensation | | | 88,584 | | | 88,584 |
| Balance at September 30, 2021 | 71,025,738 | \$ 71,026 | \$ 384,763,523 | \$ (242,863) | \$ (164,796,661) | \$ 219,795,025 |

| | Common stock issued and outstanding | Par value | Additional paid- in capital | Accumulated other comprehensive loss | Accumulated deficit | Total |
|--|---|------------------|--------------------------------|---|-------------------------|-----------------------|
| Balance at December 31, 2021 | 71,025,738 | \$ 71,026 | \$ 384,852,107 | \$ (255,588) | \$ (170,864,782) | \$ 213,802,763 |
| Net loss | | | | | (5,111,726) | (5,111,726) |
| Other comprehensive income (loss) | | | | (31,160) | | (31,160) |
| Share based compensation | 83,963 | 84 | 211,244 | | | 211,328 |
| Balance at March 31, 2022 | 71,109,701 | \$ 71,110 | \$ 385,063,351 | \$ (286,748) | \$ (175,976,508) | \$ 208,871,205 |
| Net loss | | | | | (5,536,042) | (5,536,042) |
| Other comprehensive income (loss) | | | | (31,806) | | (31,806) |
| Exercise of options for common stock | 1,012 | 1 | 1,537 | | | 1,538 |
| Share based compensation | | | 107,280 | | | 107,280 |
| Balance at June 30, 2022 | 71,110,713 | \$ 71,111 | \$ 385,172,168 | \$ (318,554) | \$ (181,512,550) | \$ 203,412,175 |
| Net loss | | | | | (5,440,127) | (5,440,127) |
| Other comprehensive income (loss) | | | | (271,355) | | (271,355) |
| Share based compensation | | | 107,641 | | | 107,641 |
| Balance at September 30, 2022 | 71,110,713 | \$ 71,111 | \$ 385,279,809 | \$ (589,909) | \$ (186,952,677) | \$ 197,808,334 |

See accompanying notes to these condensed interim consolidated financial statements.

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

| | Nine Months Ended September 30, | |
|---|--|-----------------------|
| | 2022 | 2021 |
| Operating activities | | |
| Net loss | \$ (16,087,895) | \$ (16,254,467) |
| Adjustment to reconcile net loss to net cash used in operating activities: | | |
| Depreciation and amortization | 1,501,381 | 1,308,062 |
| Share-based compensation | 426,249 | 305,653 |
| Other non-cash charge | 18,997 | 12,993 |
| Changes in operating assets and liabilities: | | |
| Inventory | (857,331) | 303,767 |
| Prepaid expenses and other assets | (2,475,197) | (794,573) |
| Accounts payable and accrued liabilities | (369,254) | 13,040 |
| Accrued employee compensation | (109,841) | (5,767) |
| Net cash used in operating activities | (17,952,891) | (15,111,292) |
| Investing activities | | |
| Purchases of and deposits on property, plant and equipment | (44,882,996) | (4,160,370) |
| Maturities of marketable securities | 149,435,173 | 23,810,038 |
| Purchases of marketable securities | (47,621,291) | (103,457,168) |
| Other investing activities | 12,500 | (11,010) |
| Net cash provided by (used in) investing activities | 56,943,386 | (83,818,510) |
| Financing activities | | |
| Proceeds from issuance of debt | 42,338 | 606,453 |
| Repayment of term debt | (478,870) | (119,527) |
| Proceeds from the issuance of common stock, net | — | 119,120,437 |
| Proceeds from the exercise of stock options and warrants | 1,538 | 1,723,846 |
| Net cash (used in) provided by financing activities | (434,994) | 121,331,209 |
| Effect of exchange rate changes on cash, cash equivalents and restricted cash | (1,869) | 27,086 |
| Net change in cash, cash equivalents and restricted cash | 38,553,632 | 22,428,493 |
| Cash, cash equivalents and restricted cash at beginning of period | 89,454,988 | 96,251,160 |
| Cash, cash equivalents and restricted cash at end of period | \$ 128,008,620 | \$ 118,679,653 |
| Reconciliation of cash, cash equivalents and restricted cash reported in the consolidated balance sheet: | | |
| Cash and cash equivalents | \$ 127,008,620 | \$ 118,179,653 |
| Restricted cash | 1,000,000 | 500,000 |
| Total cash, cash equivalents and restricted cash | \$ 128,008,620 | \$ 118,679,653 |
| Supplemental disclosure of cash flow information and non-cash transactions: | | |
| Interest paid in cash | \$ 209,666 | \$ 224,595 |
| Property and equipment included in accounts payable and accrued liabilities | \$ 14,496,747 | \$ 206,423 |

See accompanying notes to these condensed interim consolidated financial statements.

AquaBounty Technologies, Inc.

Notes to the condensed consolidated financial statements

(unaudited)

1. Nature of business and organization

AquaBounty Technologies, Inc. (the “Parent” and, together with its wholly owned 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 (“FDA”) for the production and sale of its genetically engineered (“GE”) Atlantic salmon in the United States and in 2016, the Parent obtained regulatory approval from Health Canada for the production and sale of its GE Atlantic salmon in Canada. In 2021, the Parent obtained regulatory approval from the National Biosafety Technical Commission for the sale of its GE Atlantic salmon in Brazil. In 2021, the Company began harvesting and selling its GE Atlantic salmon in the United States and Canada.

2. Basis of presentation

The unaudited interim condensed consolidated financial statements include the accounts of AquaBounty Technologies, Inc. and its wholly owned direct subsidiaries. All intercompany transactions and balances have been eliminated upon consolidation.

The unaudited interim condensed 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 notes for the year ended December 31, 2021. The unaudited interim condensed 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, 2022 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 condensed consolidated financial statements do not include all of the information and notes required by GAAP for complete financial statements, as allowed by the relevant U.S. Securities and Exchange Commission (“SEC”) rules and regulations; however, the Company believes that its disclosures are adequate to ensure that the information presented is not misleading.

Liquidity

The Company had \$128 million in cash and cash equivalents and restricted cash as of September 30, 2022. The Company’s plans include the construction of a 10,000 metric ton salmon farm in Ohio at a cost that is currently expected to exceed \$320 million. The Company plans to use cash-on-hand and debt financing to fund the construction. To date, the Company has invested over \$60 million in the project. Though the Company has experienced net losses and negative cash flows from operations since inception, management believes that it has sufficient uncommitted cash, and the ability to manage construction effort timing, to meet the Company’s requirements beyond the next twelve months from the filing date of these condensed consolidated financial statements. However, until such time as the Company reaches profitability, it will require additional financing to fund its operations and execute its business plan.

Inventories

Inventories are mainly comprised of feed, eggs, fish in process and finished goods. Fish in process inventory 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). The 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. The Company considers fish that has been harvested and transported from its farm to be finished goods inventory.

Revenue recognition

The Company generates revenue from the sale of its products. Revenue is recognized when the customer takes physical control of the goods, in an amount that reflects the transaction price consideration that the Company expects to receive in exchange for the goods. Revenue excludes any sales tax collected and includes any estimate of future credits.

During the period ended September 30, 2022, the Company recognized the following product revenue:

| | Three Months Ended September 30, 2022 | | |
|-----------------------------|---------------------------------------|-------------------|-------------------|
| | U.S. | Canada | Total |
| GE Atlantic salmon | \$ 539,311 | \$ 54,764 | \$ 594,075 |
| Non-GE Atlantic salmon eggs | - | - | - |
| Non-GE Atlantic salmon fry | - | 48,570 | 48,570 |
| Other revenue | - | 10,787 | 10,787 |
| Total Revenue | \$ 539,311 | \$ 114,121 | \$ 653,432 |

| | Nine Months Ended September 30, 2022 | | |
|-----------------------------|--------------------------------------|-------------------|---------------------|
| | U.S. | Canada | Total |
| GE Atlantic salmon | \$ 2,140,703 | \$ 394,478 | \$ 2,535,181 |
| Non-GE Atlantic salmon eggs | - | 46,692 | 46,692 |
| Non-GE Atlantic salmon fry | - | 81,665 | 81,665 |
| Other revenue | - | 22,481 | 22,481 |
| Total Revenue | \$ 2,140,703 | \$ 545,316 | \$ 2,686,019 |

During the period ended September 30, 2022, the Company had the following customer concentration of revenue:

| | Three Months Ended September 30, 2022 |
|-------------------------------|--|
| Customer A | 36% |
| Customer B | 18% |
| Customer C | 18% |
| All other | 28% |
| Total of all customers | 100% |

| | Nine Months Ended September 30, 2022 |
|-------------------------------|---|
| Customer A | 37% |
| Customer B | 18% |
| Customer C | 14% |
| All other | 31% |
| Total of all customers | 100% |

Net loss per share

Basic 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. Fully diluted net loss per share includes the number of Common Shares issuable upon the exercise of warrants and options with an exercise price less than the fair value of the Common Shares, unless the impact of the warrant or option is anti-dilutive to the calculation. 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.

The following outstanding potentially dilutive securities have been excluded from the calculation of diluted net loss per share, as their effect is anti-dilutive:

| | Three Months Ended | |
|----------------------------|--------------------|--------------------|
| | September 30, 2022 | September 30, 2021 |
| Average Outstanding | | |
| Stock options | 850,864 | 672,796 |
| Warrants | 418,441 | 418,441 |
| Unvested restricted shares | 191,257 | 68,898 |

| | Nine Months Ended | |
|----------------------------|--------------------|--------------------|
| | September 30, 2022 | September 30, 2021 |
| Average Outstanding | | |
| Stock options | 809,583 | 671,783 |
| Warrants | 418,441 | 560,865 |
| Unvested restricted shares | 158,065 | 69,951 |

Accounting Pronouncements

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 produce, 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

Although the COVID-19 pandemic has diminished in the United States and other parts of the world as vaccines have become more readily available, several variants of the virus continue to spread. Local governmental authorities in the United States and Canada have issued, and continue to update, directives aimed at minimizing the spread of the virus and the Company continues to monitor its status. Due to the pandemic, the Company has experienced delays and cost increases in capital projects, additional challenges in its efforts to meet the capacity expectations at its existing facilities and continues to experience extended lead times on equipment purchases. The Company may continue to experience delays and cost increases on farm construction, purchases of capital equipment and supplies and other materials required in its operations due to vendor shortages and other labor shortages. The Company expects to continue to be impacted by transportation or supply chain disruptions to its partners or customers and it is carefully managing and monitoring the impact of labor shortages on its ability to meet the annual capacity expectations at its existing facilities.

Concentration of credit risk

Financial instruments that potentially subject the Company to credit risk consist principally of cash and cash equivalents. This risk is mitigated by the Company's policy of maintaining all balances with highly rated financial institutions, investing cash equivalents with maturities of less than 90 days. 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 \$122 thousand and \$224 thousand as of September 30, 2022 and December 31, 2021, respectively. The Company also holds cash equivalent investments in a highly liquid investment account at a major financial institution. As of September 30, 2022 and December 31, 2021 the cash equivalent investment balance was \$15.5 million and \$73.3 million, respectively.

4. Marketable Securities

Marketable securities are classified as available-for-sale. During the current quarter ended September 30, 2022, all remaining investments in marketable securities matured. The following tables summarize the amortized cost, gross unrealized gains and losses, and the fair value (level 2) as of September 30, 2022 and December 31, 2021:

| | Amortized Cost | | Unrealized Gains | | Unrealized Losses | | Market Value |
|---------------------------|-------------------|----|---------------------|----|----------------------|----|-----------------|
| December 31, 2021 | | | | | | | |
| Government bonds | \$ 28,453,161 | \$ | 82 | \$ | (18,255) | \$ | 28,434,988 |
| Corporate bonds | 29,874,696 | | - | | (21,928) | | 29,852,768 |
| Commercial paper | 43,486,025 | | - | | - | | 43,486,025 |
| Marketable securities | \$ 101,813,882 | \$ | 82 | \$ | (40,183) | \$ | 101,773,781 |
| September 30, 2022 | | | | | | | |
| Government bonds | \$ - | \$ | - | \$ | - | \$ | - |
| Corporate bonds | - | | - | | - | | - |
| Commercial paper | - | | - | | - | | - |
| Marketable securities | \$ - | \$ | - | \$ | - | \$ | - |

5. Inventory

Major classifications of inventory are summarized as follows:

| | September 30, 2022 | December 31, 2021 |
|-----------------------|---------------------|-------------------|
| Feed, net | \$ 313,095 | 162,047 |
| Eggs and fry | 111,120 | — |
| Fish in process | 1,565,145 | 926,360 |
| Finished goods | 114,891 | 171,503 |
| Inventory, net | \$ 2,104,251 | 1,259,910 |

6. Property, plant and equipment

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

| | September 30, 2022 | December 31, 2021 |
|--|----------------------|----------------------|
| Land | \$ 2,952,075 | \$ 725,799 |
| Building and improvements | 15,372,971 | 15,580,385 |
| Construction in process | 60,502,996 | 8,119,575 |
| Equipment | 16,912,691 | 15,981,408 |
| Office furniture and equipment | 257,665 | 240,939 |
| Vehicles | 91,343 | 36,280 |
| Total property and equipment | \$ 96,089,741 | \$ 40,684,386 |
| Less accumulated depreciation and amortization | (8,087,040) | (6,869,267) |
| Property, plant and equipment, net | \$ 88,002,701 | \$ 33,815,119 |

Depreciation expense was 1.5 million and \$1.3 million, for the nine months ended September 30, 2022 and 2021, respectively.

Included in construction in process is \$2.5 million for construction related to the Rollo Bay farm site and improvements to the Fortune Bay hatchery, \$429 thousand for construction related to the Indiana farm site, and \$57.6 million related to design work and construction activities for the Ohio farm. An additional \$1.8 million has been contractually committed for the Indiana and Rollo Bay farm sites and \$21.3 million has been committed for the construction of the Ohio farm.

7. Debt

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

| | Interest rate | Monthly repayment | Maturity date | September 30, 2022 | December 31, 2021 |
|--------------------------------------|---------------|-------------------|---------------|---------------------|---------------------|
| ACOA AIF Grant | 0% | Royalties | - | \$ 2,089,895 | \$ 2,261,349 |
| ACOA term loan #1 | 0% | C\$3,120 | Feb 2027 | 120,362 | 152,346 |
| ACOA term loan #2 | 0% | C\$4,630 | Sep 2029 | 282,988 | 339,015 |
| ACOA term loan #3 | 0% | C\$6,945 | Dec 2025 | 181,925 | 196,850 |
| Kubota Canada Ltd | 0% | C\$1,142 | Jan 2025 | 23,277 | 33,283 |
| DFO term loan | 0% | C\$2,091 | Aug 2032 | 413,841 | 405,700 |
| PEI Finance term loan | 4% | C\$16,313 | Nov 2023 | 1,746,344 | 1,947,510 |
| First Farmers Bank & Trust term loan | 5.375% | \$56,832 | Oct 2028 | 3,524,189 | 3,883,325 |
| Total debt | | | | \$ 8,382,821 | \$ 9,219,378 |
| less: debt issuance costs | | | | (56,051) | (68,680) |
| less: current portion | | | | (709,597) | (627,365) |
| Long-term debt, net | | | | \$ 7,617,173 | \$ 8,523,333 |

Estimated principal payments remaining on debt outstanding are as follows:

| | Total |
|----------------|---------------------|
| 2022 remaining | \$ 160,840 |
| 2023 | 2,411,944 |
| 2024 | 719,137 |
| 2025 | 740,437 |
| 2026 | 710,697 |
| Thereafter | 3,639,766 |
| Total | \$ 8,382,821 |

In September 2020, the Canadian Subsidiary entered into a Contribution Agreement with the Department of Fisheries and Ocean'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 (the "DFO Term Loan"). On April 6, 2022, the Canadian Subsidiary borrowed an additional C\$53,456 (\$42,338) under the DFO Term Loan. Borrowings are interest free and monthly repayments commence in March 2023, with maturity in August 2032. All funding requests were to be submitted by August 22, 2022, but the Canadian Subsidiary has requested an extension.

In August 2020, the Indiana Subsidiary entered into a term loan agreement with First Farmers Bank and Trust ("FFBT") in the amount of \$4 million, which is secured by the assets of the Indiana subsidiary and a corporate guarantee. The agreement contains certain financial and non-financial covenants, which if not met, could result in an event of default pursuant to the terms of the loan. At September 30, 2022, the Indiana subsidiary was in compliance with its loan covenants.

The Company recognized interest expense of \$222 thousand and \$238 thousand for the nine months ended September 30, 2022 and 2021, respectively, on its interest-bearing debt.

8. Leases

Lease expense for the nine months ended September 30, 2022 and 2021, amounted to \$64 thousand and \$63 thousand, respectively. The weighted average remaining lease term of the Company's operating leases was 24 years as of September 30, 2022. Lease payments included in operating cash flows totaled \$67 thousand and \$63 thousand for the nine months ended September 30, 2022 and 2021, respectively.

The table below summarizes the Company's lease obligations and remaining payments at September 30, 2022 and December 31, 2021:

| | September 30, | | December 31, 2021 |
|-----------------------|------------------------|----|--------------------------|
| | Lease Liability | | Lease Liability |
| Total leases | \$ 241,102 | \$ | 290,327 |
| Less: current portion | (36,706) | | (66,269) |
| Long-term leases | \$ 204,396 | \$ | 224,058 |

Remaining payments under leases are as follows:

| Year | Amount |
|-----------------------------|-------------------|
| 2022 remaining | \$ 17,045 |
| 2023 | 20,830 |
| 2024 | 4,495 |
| 2025 | 4,340 |
| 2026 | 4,215 |
| Thereafter | 190,177 |
| Total lease payments | \$ 241,102 |

9. Stockholders' equity

Recent issuances

On February 8, 2021, the Company completed a public offering of 14,950,000 Common Shares for net proceeds of approximately \$119.1 million.

Warrants

At September 30, 2022 and December 31, 2021, there were 418,441 warrants outstanding at an exercise price of \$3.25, all of which were issued in conjunction with a public equity offering in January 2018. All remaining warrants have an expiration date of January 17, 2023.

Share-based compensation

At September 30, 2022, the Company has reserved 835,542 Common Shares issuable upon the exercise of outstanding stock options awarded under its 2006 and 2016 Equity Incentive Plans. An additional 490,576 Common Shares are reserved for future award and issuance under the 2016 Equity Incentive Plan.

Restricted stock

A summary of the Company's restricted Common Shares for the nine months ended September 30, 2022, is as follows:

| | Shares | | Weighted average grant date fair value |
|--------------------------------|-----------|----|--|
| Unvested at December 31, 2021 | 65,100 | \$ | 4.10 |
| Granted | 260,088 | | 1.53 |
| Vested | (127,495) | | 2.26 |
| Forfeited | (1,755) | | 1.52 |
| Unvested at September 30, 2022 | 195,938 | \$ | 1.90 |

During the nine months ended September 30, 2022 and 2021, the Company expensed \$294 thousand and \$194 thousand, respectively, related to the restricted stock awards. At September 30, 2022, the balance of unearned share-based compensation to be expensed in future periods related to the restricted stock awards is \$250 thousand. 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, 2021 | 663,425 | \$ | 4.31 |
| Issued | 209,755 | | 1.55 |
| Exercised | (1,012) | | 1.52 |
| Forfeited | (8,020) | | 1.52 |
| Expired | (28,606) | | 5.85 |
| Outstanding at September 30, 2022 | 835,542 | \$ | 3.59 |
| Exercisable at September 30, 2022 | 650,364 | \$ | 4.06 |

Unless otherwise indicated, options issued to employees, members of the Board of Directors, and non-employees are vested daily over one to six 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 2022 were measured on the date of grant using Black-Scholes, with the following weighted average assumptions:

| | |
|--------------------------|----------------------------|
| Expected volatility | 2022 103% |
| Risk free interest rate | 2.10% |
| Expected dividend yield | 0% |
| Expected life (in years) | 5 |

The weighted average fair value of stock options granted during the nine months ended September 30, 2022 was \$1.12.

The total intrinsic value of all options outstanding was \$0 and \$18 thousand at September 30, 2022, and December 31, 2021, respectively. The total intrinsic value of exercisable options was \$0 and \$11 thousand at September 30, 2022 and December 31, 2021, respectively.

The following table summarizes information about options outstanding and exercisable at September 30, 2022:

| Weighted average exercise price of outstanding options | Number of options outstanding | Weighted average remaining estimated life (in years) | Number of options exercisable |
|--|-------------------------------|--|-------------------------------|
| \$1.52 - \$2.50 | 711,250 | 7.3 | 541,366 |
| \$5.44 - \$6.72 | 45,402 | 7.8 | 30,108 |
| \$7.50 - \$10.80 | 12,303 | 1.2 | 12,303 |
| \$14.20 - \$23.40 | 66,587 | 3.5 | 66,587 |
| | 835,542 | | 650,364 |

Total share-based compensation on stock options amounted to \$133 thousand and \$111 thousand for the nine months ended September 30, 2022 and 2021, respectively. At September 30, 2022, the balance of unearned share-based compensation to be expensed in future periods related to unvested share-based awards was \$276 thousand. The period over which the unearned share-based compensation is expected to be earned is approximately 2.5 years.

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. The Company records estimated losses from these legal proceedings and claims when it determines that it is probable a liability has been incurred and the amount of loss can be reasonably estimated. Litigation is subject to many factors that are difficult to predict so that there can be no assurance, in the event of a material unfavorable result in one or more claims, the Company will not incur material costs. There have been no other material changes to the commitments and contingencies disclosed in the Company's Annual Report on Form 10-K as of and for the year ended December 31, 2021.

11. Income Taxes

The Company estimates an annual effective tax rate of 0% for the year ending December 31, 2022 as the Company incurred losses for the nine months ended September 30, 2022 and is forecasting additional losses through the remainder of the year ending December 31, 2022, resulting in an estimated net loss for both financial statement and tax purposes for the year ending December 31, 2022. Therefore, no federal or state income taxes are expected and none have been recorded at this time. Income taxes have been accounted for using the liability method.

Due to the Company's history of losses since inception, there is not enough evidence at this time to support that the Company will generate future income of a sufficient amount and nature to utilize the benefits of its net deferred tax assets. Accordingly, the deferred tax assets have been reduced by a full valuation allowance, since the Company does not currently believe that realization of its deferred tax assets is more likely than not.

As of September 30, 2022, the Company had no unrecognized income tax benefits that would reduce the Company's effective tax rate if recognized.

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, 2021, which was filed on March 10, 2022.

Overview

We believe we are a leader in land-based aquaculture, leveraging decades of technology expertise to deliver innovative solutions that address food insecurity and climate change issues, while improving efficiency, sustainability and profitability. We provide fresh Atlantic salmon to nearby markets by raising our fish in carefully monitored land-based fish farms through a safe, secure and sustainable process. Our land-based Recirculating Aquaculture System farms, located in Indiana in the United States and Prince Edward Island in Canada, are close to key consumption markets and are designed to prevent disease and to include multiple levels of fish containment to protect wild fish populations. We are raising nutritious salmon that is free of antibiotics and other contaminants and provides a solution with a reduced carbon footprint without the risk of pollution to marine ecosystems as compared to traditional sea-cage farming. Our lead product is our GE Atlantic salmon, which received FDA approval in 2015 as the first genetically engineered animal available for sale for human consumption. We commenced commercial activities in 2021 with operations in the United States and Canada. We are actively engaged in genetic, genomic, fish health and fish nutrition research, which drive continuous improvement in our operations and may lead to new, disruptive technologies and products that could further expand our competitive offerings.

COVID-19

Although the COVID-19 pandemic has diminished in the United States and other parts of the world as vaccines have become more readily available, several variants of the virus continue to spread. Local governmental authorities in the United States and Canada have issued, and continue to update, directives aimed at minimizing the spread of the virus and we continue to monitor their status. Due to the pandemic, we have experienced delays and cost increases in capital projects, additional challenges in our efforts to meet the capacity expectations at our existing facilities and continue to experience extended lead times on equipment purchases. We may continue to experience delays and cost increases on farm construction, purchases of capital equipment and supplies and other materials required in our operations due to vendor shortages and other labor shortages. We expect to continue to be impacted by transportation or supply chain disruptions to our partners or customers and we are carefully managing and monitoring the impact of labor shortages on our ability to meet the annual capacity expectations at our existing facilities.

Inflation

Global inflation is well above normal and historical levels, impacting all areas of our business. We are experiencing higher costs for farming supplies, transportation costs, wage rates, and other direct operating expenses. Additionally, inflation has impacted the cost estimates for constructing our Ohio farm, rising from \$320 million to a range of \$375 million to \$395 million. We expect inflation to continue to negatively impact our results of operations for the remainder of 2022.

Revenue

We currently generate product revenue through the sales of our GE Atlantic salmon, conventional Atlantic salmon eggs and fry, and salmon byproducts. We expect revenues to grow modestly in 2022, as we increase our weekly harvesting capability at our Indiana farm. We measure our harvest volume of GE Atlantic salmon in terms of metric tons (“mt”) of live weight taken out of the water. 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. Our revenue will also be impacted by the seasonal fluctuations in salmon demand and pricing.

Production Costs

Production costs include the labor and related costs to grow out our fish, including feed, oxygen, and other direct costs; overhead; and the cost to process and ship our products to customers. A portion of production costs is absorbed into inventory as fish in process to the extent that these costs do not exceed the net realizable value (“NRV”) of the fish biomass. The costs that are not absorbed into inventory, as well as any net realizable inventory value adjustments, are classified as production costs. Our production costs also include the labor and related costs to maintain our salmon broodstock. As of September 30, 2022 and 2021, we had eighty and sixty-one employees, respectively engaged in production activities.

Sales and Marketing Expenses

Our sales and marketing expenses currently include salaries and related costs for our sales personnel and consulting fees for market-related activities. As of September 30, 2022 and 2021, we had two and one employees, respectively, 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 September 30, 2022 and 2021, we employed thirteen and twenty scientists and technicians, respectively, at our facilities on Prince Edward Island to oversee our broodstock of GE Atlantic 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 and development functions;
fees paid to contract research organizations and consultants who perform research for us; and
costs related to laboratory supplies used in our research and development efforts.

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 affairs, rent and utilities, insurance, and legal services. We had fifteen employees in our general and administrative group as of both September 30, 2022 and 2021.

Other Income (Expense)

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

Results of Operations

Comparison of the three months ended September 30, 2022, to the three months ended September 30, 2021

The following table summarizes our results of operations for the three months ended September 30, 2022 and 2021, together with the changes in those items in dollars and as a percentage (all dollar amounts in thousands):

| | Three Months Ended | | Dollar | % |
|------------------------------|---------------------------|-------------|---------------|---------------|
| | September 30, | | | |
| | 2022 | 2021 | Change | Change |
| | (unaudited) | | | |
| Product revenue | \$ 653 | \$ 455 | 198 | 44% |
| Operating expenses: | | | | |
| Product costs | 3,518 | 4,311 | (793) | (18)% |
| Sales and marketing | 186 | 202 | (16) | (8)% |
| Research and development | 221 | 580 | (359) | (62)% |
| General and administrative | 2,265 | 2,177 | 88 | 4% |
| Operating loss | 5,537 | 6,815 | (1,278) | (19)% |
| Total other (income) expense | (97) | 50 | (147) | (294)% |
| Net loss | \$ 5,440 | \$ 6,865 | (1,425) | (21)% |

Product Revenue

| | Three Months Ended September 30, | | Change | % Change |
|---|---|---------------|---------------|---------------------|
| | 2022 | 2021 | | |
| | (unaudited) | | | |
| Harvest of GE Atlantic salmon (mt of live weight) | 122,218 | 98,173 | 24,045 | 24% |
| Product revenue | | | | |
| GE Atlantic salmon revenue | \$ 594 | \$ 402 | \$ 192 | 48% |
| Non-GE Atlantic salmon revenue | 48 | 53 | (5) | (9)% |
| Other revenue | 11 | - | 11 | —% |
| Total product revenue | \$ 653 | \$ 455 | \$ 198 | 44% |

The increase in revenue is due to the increase in harvest volume and sales of our GE Atlantic salmon, along with improvements in yield and increases in market prices. We expect revenues for the remainder of 2022 to grow slowly and to be impacted by seasonal demand and fluctuating market prices.

Production Costs

Production costs for the three months ended September 30, 2022, were down from the corresponding period in 2021, due to an improvement in the NRV of the salmon sold, which allowed for more cost to be absorbed into inventory. Total production costs without the NRV adjustment were slightly higher in the current period due to production cost increases related to the volume of harvesting at the Indiana and Rollo Bay farms. Increases included headcount additions, feed costs and other direct supplies, as well as the costs for processing and transportation to bring our product to market. Costs were impacted by inflation on material and supply purchases, as well as wage increases.

Since our production costs were higher than the net realizable value of the salmon produced, the current period includes an inventory value charge of \$2.2 million based on the market price for salmon, our production yields and external processing and transportation costs. For the corresponding period in 2021, the inventory value charge was \$3.6 million.

Sales and Marketing Expenses

Sales and marketing expenses for the three months ended September 30, 2022, were down from the corresponding period in 2021 due to decreases in outside consultants, offset by an increase in head count, travel and stock compensation.

Research and Development Expenses

Research and development expenses for the three months ended September 30, 2022, were down from the corresponding period in 2021 due to a decrease in personnel costs, outside contract service fees, and laboratory costs, partly offset by an increase in depreciation and travel.

General and Administrative Expenses

General and administrative expenses for the three months ended September 30, 2022, were up from the corresponding period in 2021 due to an increase in personnel, auditing costs, legal, insurance costs, stock compensation, recruitment fees and travel, partly offset by a decrease in regulatory fees and outside consulting.

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, 2022 and 2021.

Comparison of the nine months ended September 30, 2022, to the nine months ended September 30, 2021

The following table summarizes our results of operations for the nine months ended September 30, 2022 and 2021, 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 |
|------------------------------|------------------------------------|-----------|------------------|-------------|
| | 2022 | 2021 | | |
| | (unaudited) | | | |
| Product revenue | \$ 2,686 | \$ 757 | 1,929 | 255% |
| Operating expenses: | | | | |
| Product costs | 10,044 | 7,713 | 2,331 | 30% |
| Sales and marketing | 784 | 1,069 | (285) | (27)% |
| Research and development | 596 | 1,512 | (916) | (61)% |
| General and administrative | 7,473 | 6,542 | 931 | 14% |
| Operating loss | 16,211 | 16,079 | 132 | 1% |
| Total other (income) expense | (123) | 175 | (298) | (170)% |
| Net loss | \$ 16,088 | \$ 16,254 | (166) | (1)% |

Product Revenue

| | Nine Months Ended September 30, | | Change | % Change |
|---|------------------------------------|---------|----------|-------------|
| | 2022 | 2021 | | |
| | (unaudited) | | | |
| Harvest of GE Atlantic salmon (mt of live weight) | 434,377 | 180,312 | 254,065 | 141% |
| Product revenue | | | | |
| GE Atlantic salmon revenue | \$ 2,535 | \$ 442 | \$ 2,093 | 474% |
| Non-GE Atlantic salmon revenue | 128 | 314 | (186) | (59)% |
| Other revenue | 23 | 1 | 22 | 2,200% |
| Total product revenue | \$ 2,686 | \$ 757 | \$ 1,929 | 255% |

The increase in revenue is due to the increase in harvest volume and sales of our GE Atlantic salmon, along with improvements in yield and increases in market prices. We expect revenues for the remainder of 2022 to grow slowly and to be impacted by seasonal demand and fluctuating market prices.

Production Costs

Production costs for the nine months ended September 30, 2022, were up from the corresponding period in 2021 even though there was an improvement in the NRV of the salmon sold, which allowed for more cost to be absorbed into inventory. Total production costs without the NRV adjustment were higher in the current period, due to production cost increases related to the volume of harvesting at the Indiana and Rollo Bay farms. Increases included headcount additions, feed costs and other direct supplies, as well as the costs for processing and transportation to bring our product to market. Costs were impacted by inflation on material and supply purchases, as well as wage increases.

Since our production costs were higher than the net realizable value of the salmon produced, the current period includes an inventory value charge of \$6.3 million based on the market price for salmon, our production yields and external processing and transportation costs. For the corresponding period in 2021, the inventory value charge was \$6.8 million.

Sales and Marketing Expenses

Sales and marketing expenses for the nine months ended September 30, 2022, were down from the corresponding period in 2021 due to decreases in donations and promotional expenses, offset by an increase in head count, fees payable to outside consultants, stock compensation, and travel related to marketing activities for our salmon.

Research and Development Expenses

Research and development expenses for the nine months ended September 30, 2022, were down from the corresponding period in 2021 due to a decrease in personnel costs, outside contract service fees and field trials, partially offset by depreciation.

General and Administrative Expenses

General and administrative expenses for the nine months ended September 30, 2022, were up from the corresponding period in 2021 due to an increase in personnel, insurance and taxes, recruitment fees, auditing fees, public listing costs, stock compensation, travel and legal, outside consultants, offset by a decrease in outside consultants and regulatory.

Total Other (Income) Expense

Total other (income) expense is comprised of interest on debt, bank charges, and interest income for the nine months ended September 30, 2022, and 2021.

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 | | Dollar | % |
|---|--------------------------|------------------|---------------|---------------|
| | September 30, | | | |
| | 2022 | 2021 | Change | Change |
| | unaudited | | | |
| Net cash (used in) provided by: | | | | |
| Operating activities | \$ (17,953) | \$ (15,111) | (2,842) | 19% |
| Investing activities | 56,944 | (83,819) | 140,763 | (168)% |
| Financing activities | (435) | 121,331 | (121,766) | (100)% |
| Effect of exchange rate changes on cash | (2) | 27 | (29) | (107)% |
| Net increase in cash | \$ 38,554 | \$ 22,428 | 16,126 | 72% |

Cash Flows from Operating Activities

Net cash used in operating activities during the nine months ended September 30, 2022 was primarily comprised of our \$16.1 million net loss, offset by non-cash depreciation and stock compensation charges of \$1.9 million and increased by working capital uses of \$3.8 million. Net cash used in operating activities during the nine months ended September 30, 2021 was primarily comprised of our \$16.3 million net loss, offset by non-cash depreciation and stock compensation charges of \$1.6 million and increased by working capital uses of \$484 thousand.

Spending on operations increased in the current period due to increases in production activities at our Rollo Bay and Indiana farm sites and additions to corporate overhead. Cash used by working capital increased in the current period due to a decrease in accounts payable and accrued liabilities and increases in inventory and prepaid expenses.

Cash Flows from Investing Activities

During the nine months ended September 30, 2022, we used \$44.9 million for construction activities at our farm sites and the purchase of equipment, offset by cash provided by the net sale of marketable securities of \$101.8 million. During the same period in 2021, we used \$4.2 million for construction costs and equipment purchases and \$79.6 million on net marketable securities purchases.

We expect expenditures on capital projects to increase in future periods as we continue construction of our Ohio farm. We currently estimate the construction costs will exceed \$320 million with over \$60 million spent to date, but we are exploring alternatives to reduce this cost. Estimating the cost and timing for the completion of this new and complex capital project is inherently difficult and subject to change based on a number of factors, that we have experienced to date and may experience in the future, including design changes, increasing inflationary pressure on costs of materials and labor, the impact of the COVID-19 pandemic, construction delays, dependence on contractors, the impact of increasing interest rates on financing costs, customer requirements and unexpected complications. For more information, see “*Our business plans include the need for substantial additional capital and without it we may not be able to implement our strategy as planned or at all*” in the section titled “*Risk Factors*” in this Quarterly Report on Form 10-Q.

Cash Flows from Financing Activities

During the nine months ended September 30, 2022, we received \$42 thousand from new debt and made \$479 thousand in debt repayment. During the same period in 2021, we received approximately \$119.1 million in net proceeds from the issuance of shares of common stock in a public equity offering, \$1.7 million from the exercise of warrants, and \$606 thousand from new debt. This was offset by \$120 thousand in debt repayment.

Future Capital Requirements

We had \$128 million of cash and cash equivalents and restricted cash as of September 30, 2022. Our plans include the construction of a 10,000 metric ton salmon farm in Ohio at a cost that is currently estimated to exceed \$320 million with over \$60 million spent to date, and we are exploring alternatives to reduce this cost. We plan to use cash-on-hand and debt financing to fund the construction. To date, we have invested over \$60 million in the project. Though we have experienced net losses and negative cash flows from operations since inception, we believe that we have sufficient uncommitted cash to meet our requirements beyond the next twelve months from the filing date of these condensed consolidated financial statements.

In 2020, we entered into a term loan agreement with First Farmers Bank and Trust in the amount of \$4 million, which is secured by the assets of our Indiana subsidiary and a corporate guarantee. The agreement contains certain financial and non-financial covenants, which if not met, could result in an event of default pursuant to the terms of the loan. At September 30, 2022, the Indiana subsidiary was in compliance with its loan covenants. The ability of the Indiana subsidiary to meet its debt covenants over the next twelve months is dependent upon its operating performance.

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.

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.

There have been no material changes to these estimates, or the policies related to them, during the nine months ended September 30, 2022. For a full discussion of these estimates and policies, see "Critical Accounting Policies and Estimates" within "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the year ended December 31, 2021.

Emerging Growth Company and Smaller Reporting Company Status

We qualify as an emerging growth company ("EGC"), as defined in the JOBS Act. As an EGC, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies, including reduced disclosure about our executive compensation arrangements, exemption from the requirements to hold non-binding advisory votes on executive compensation and golden parachute payments and exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting.

We may take advantage of these exemptions until December 31, 2022 or such earlier time that we are no longer an emerging growth company. We would cease to be an EGC earlier if we have more than \$1.07 billion in annual revenue, we have more than \$700.0 million in market value of our stock held by non-affiliates or we issue more than \$1.0 billion of non-convertible debt securities over a six-year period. For so long as we remain an EGC, we are permitted, and intend, to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not EGCs. We may choose to take advantage of some, but not all, of the available exemptions.

In addition, the JOBS Act provides that an EGC can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an EGC to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected not to “opt out” of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we will adopt the new or revised standard at the time private companies adopt the new or revised standard and will do so until such time that we either (i) irrevocably elect to “opt out” of such extended transition period or (ii) no longer qualify as an EGC. Therefore, the reported results of operations contained in our consolidated financial statements may not be directly comparable to those of other public companies.

We are also a “smaller reporting company,” meaning that the market value of our stock held by non-affiliates is less than \$700 million and our annual revenue was less than \$100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company if either (i) the market value of our stock held by non-affiliates is less than \$250 million or (ii) our annual revenue is less than \$100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than \$700 million.

If we are a smaller reporting company at the time we cease to be an EGC, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to EGCs, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

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, 2022, and December 31, 2021, we had \$5.3 million and \$5.8 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 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 accumulated other comprehensive loss within shareholders' equity.

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, 2022, 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

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, 2021, which was filed on March 10, 2022, and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2022 and for the quarter ended June 30, 2022, there are a number of risk factors that could affect our business, financial condition, and results of operations. 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, 2021 or our Quarterly Report on Form 10-Q for the quarter ended June 30, 2022. You should carefully review the risks described in our Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q, including our consolidated financial statements and related notes, and in other reports we file with the Securities and Exchange Commission, in evaluating our business. 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 Quarterly Report on Form 10-Q 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, elsewhere in this Quarterly Report on Form 10-Q, in our Annual Report on Form 10-K. See “Cautionary Note Regarding Forward-Looking Statements” for information relating to these forward-looking statements.

Our business plans include the need for substantial additional capital and without it we may not be able to implement our strategy as planned or at all.

Our strategy depends on our ability to develop and construct additional farms, including our planned Ohio farm. We have begun construction of this farm and its construction, and others in the future, is contingent on a number of significant uncertainties, including those described below. As a result, we may be unable to construct such facilities as planned or at all. We may not be able to obtain the financing necessary to complete construction of our proposed facilities. We estimate that the construction cost for the Ohio farm will exceed \$320 million, although this figure is likely to continue to change as we finalize the design, finalize bids from contractors and continue with construction. For example, at least partially due to recent inflationary pressures, subcontractors for certain goods and services at our Ohio farm have submitted bids above the levels that we expected. As a result of these increases, and increased interest rates, we have raised our estimate for the total cost of construction for the project and we are seeking an increase in the amount of debt financing. However, there can be no guarantee that our attempts will be successful, and macro-economic conditions could worsen, which could result in further cost increases and further financing and construction-related delays.

We do not have the financial resources required to fully finance the construction of the Ohio farm. We will seek to raise part of these necessary funds through debt financing. Recent increases to interest rates have increased the borrowing costs for this financing, and any further increases before the financing is complete could further increase such costs. Volatility and/or declines in equity markets in general, and for our securities, may cause equity financing to be unavailable on acceptable terms or at all. We may also need further funding if there are delays in construction or increased construction costs at our proposed construction site in Ohio. We may finance unanticipated construction costs by issuing equity securities or debt. The delay or failure of regulatory bodies to approve our construction plans, disruption and volatility in the financial markets, tighter credit markets and a downturn in the seafood market may negatively impact our ability to obtain financing. We may not have access to the required funding, or funding may not be available to us on acceptable terms.

We may not be able to obtain the approvals and permits that will be necessary in order to construct our facilities as planned. We will need to obtain a number of required permits in connection with the hydrology, construction and operation of our farms, which is often a time-consuming process. We will also need to obtain FDA approval to grow our GE Atlantic salmon in the facility. If we experience delays in obtaining the required approvals and permits for our farms, our expected construction start date, commercial stocking and first sale of our GE Atlantic salmon may be delayed. If we are unable to obtain the required approvals and permits for our farms, we will not be able to construct the farms. In addition, federal, state and local governmental requirements could substantially increase our costs, which could materially harm our results of operations and financial condition.

We have encountered cost increases in the expected construction cost of the Ohio farm and may encounter further unanticipated difficulties and cost overruns in constructing this farm and other future farms. Preparing cost and timing estimates for complex RAS farms is inherently difficult and subject to change based on a number of factors that we have experienced to date and may experience in the future, including design changes, increasing inflationary pressure on costs of materials and labor, the impact of the COVID-19 pandemic, construction delays, dependence on contractors, the impact of increasing interest rates on financing costs, customer requirements and unexpected complications. As a result, we may encounter unanticipated difficulties and the construction and development of our proposed farms may be more costly or time-consuming than we anticipate.

Delays and defects may cause our costs to increase to a level that would make one or more of our farms too expensive to construct or unprofitable. We may suffer significant delays or cost overruns at our farms that could prevent us from commencing operations as expected as a result of various factors. These factors include shortages of workers or materials, construction and equipment cost escalation, transportation constraints, adverse weather, unforeseen difficulties or labor issues, or changes in political administrations at the federal, state or local levels that result in policy change towards genetically engineered foods in general or our products and farms in particular. Defects in materials or workmanship could also delay the commencement of operations of our planned farms, increase production costs or negatively affect the quality of our products. Due to these or other unforeseen factors, we may not be able to proceed with the construction or operation of our farms in a timely manner or at all.

NASDAQ may delist our securities from quotation on its exchange which could limit investors' ability to make transactions in our securities and subject us to additional trading restrictions.

Our Common Stock is traded on the Nasdaq Stock Market LLC ("Nasdaq"), a national securities exchange. On October 31, 2022, we received a letter (the "Notice") from Nasdaq notifying us that, because the closing bid price for our common stock, par value \$0.001 per share (the "Common Stock"), has been below \$1.00 per share for the past 30 consecutive business days, it no longer complies with the minimum bid price requirement for continued listing on the Nasdaq Capital Market. The Notice has no immediate effect on our listing on the Nasdaq Capital Market or on the trading of the Common Stock. The Notice provide us with a compliance period of 180 calendar days, or until May 1, 2023, to regain compliance. If at any time during this 180-day compliance period the closing bid price of the Common Stock is at least \$1.00 per share for a minimum of 10 consecutive business days, then Nasdaq will provide us with written confirmation of compliance and the matter will be closed. We intend to monitor the closing bid price of the Common Stock and may, if appropriate, evaluate various courses of action to regain compliance. There can be no assurance that we will regain compliance or otherwise maintain compliance with the other listing requirements.

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 |
|-----------------------|--|
| 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 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). |
| 3.3* | 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). |
| 3.4* | 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 May 27, 2022). |
| 3.5* | Certificate of Validation dated October 18, 2022 relating to Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation of AquaBounty Technologies, Inc. dated May 27, 2022. |
| 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. |
| 101.INS | XBRL instance document. |
| 101.SCH | XBRL taxonomy extension schema document. |
| 101.CAL | XBRL taxonomy extension calculation linkbase document. |
| 101.LAB | XBRL taxonomy label linkbase document. |
| 101.PRE | XBRL taxonomy extension presentation linkbase document. |
| 101.DEF | XBRL taxonomy extension definition linkbase document. |
| 104 | Cover Page Interactive Data File-the cover page interactive data file does not appear in the Interactive Data File because the XBRL tags are embedded within the Inline XBRL document. |

- + The certification furnished in Exhibit 32.1 hereto is deemed to accompany this Form 10-Q and will not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended. Such certification will not be deemed to be incorporated by reference into any filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent that the Registrant specifically incorporates it by reference.

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.

November 8, 2022

AQUABOUNTY TECHNOLOGIES, INC.

/s/ Sylvia Wulf

Sylvia Wulf
President, Chief Executive Officer, and Director
(Principal Executive Officer)

November 8, 2022

/s/ David A. Frank

David A. Frank
Chief Financial Officer and Treasurer
(Principal Financial Officer and Principal
Accounting Officer)

**CERTIFICATE OF VALIDATION
OF
AQUABOUTY TECHNOLOGIES, INC.**

Pursuant to Section 204 of the
General Corporation Law of the State of Delaware

AquaBounty Technologies, Inc., a corporation organized and existing under the laws of the State of Delaware (the “Company”), certifies as follows:

1. The defective corporate acts that are the subject of this Certificate of Validation are the approval of an amendment of the Third Amended and Restated Certificate of Incorporation (the “Certificate of Incorporation”) to increase the number of authorized shares of common stock, par value \$0.001 per share, from 80,000,000 to 150,000,000 (the “Share Increase”) by the stockholders of the Company, the filing of a certificate of amendment (the “Certificate of Amendment”) to the Certificate of Incorporation with the Secretary of State of the State of Delaware (the “Secretary of State”) and the effectiveness of the Certificate of Amendment following such filing.

2. The nature of the failure of authorization in respect of the approval of the amendment effecting the Share Increase by the stockholders of the Company as well as the filing and effectiveness of the Certificate of Amendment was the potential failure of the approval of the amendment effecting the Share Increase by the stockholders of the Company and the filing and effectiveness of the Certificate of Amendment to have been duly authorized and effected in a manner consistent with the disclosures set forth in the proxy statement for the Company’s 2022 annual meeting of stockholders and Section 242 of the General Corporation Law of the State of Delaware (the “DGCL”).

3. The defective corporate acts that are the subject of this Certificate of Validation were duly ratified in accordance with Section 204 of the DGCL pursuant to resolutions of the Board of Directors of the Company approving the ratification of such defective corporate acts on August 3, 2022 and the approval of the ratification of such defective corporate acts by the stockholders of the Company on October 12, 2022.

4. The Certificate of Amendment was previously filed with the Secretary of State under Sections 103 and 242 of the DGCL on May 27, 2022 and no changes are required to give effect to the defective corporate acts that are the subject of this Certificate of Validation. A copy of the Certificate of Amendment as previously filed is attached hereto as Exhibit A.

(Signature Page Follows)

EXHIBIT A

Certificate of Amendment

(Attached)

**CERTIFICATE OF AMENDMENT
TO THE
THIRD AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
AQUABOUNTY TECHNOLOGIES, INC.**

AquaBounty Technologies, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "Corporation") does hereby certify:

FIRST: That, at a meeting of the Board of Directors of the Corporation on March 1, 2022, and as reaffirmed via unanimous written consent on May 15, 2022, a resolution was duly adopted setting forth a proposed amendment to the Third Amended and Restated Certificate of Incorporation of the Corporation, as amended, in the form set forth below (the "Amendment"), declaring the Amendment to be advisable and calling for consideration of said proposed Amendment by the stockholders of the Corporation.

"RESOLVED, that, having determined that an increase in the Corporation's authorized Common Stock to 150,000,000 shares is in the best interest of the Corporation and its stockholders, subject to the consideration and approval of the Corporation's stockholders, Article 4 of the Third Amended and Restated Certificate of Incorporation of the Corporation, as amended, be, and it hereby is, amended to replace subsection (a) thereof in its entirety with the following:

4. (a) The Corporation is authorized to issue two classes of stock to be designated Common Stock and Preferred Stock. The Corporation is authorized to issue 150,000,000 shares of Common Stock, with a par value of \$0.001 per share, and 5,000,000 shares of Preferred Stock, with a par value of \$0.01 per share."

SECOND: That thereafter, pursuant to resolution of its Board of Directors, a meeting of the stockholders of the Corporation was duly called and held upon notice in accordance with Section 222 of the General Corporation Law of the State of Delaware on May 27, 2022, at which meeting the necessary number of shares as required by statute were voted in favor of the Amendment.

THIRD: That the Amendment was duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation of the Corporation to be signed this 27th day of May, 2022.

AquaBounty Technologies, Inc.

BY: /s/ Sylvia Wulf

Authorized Officer

Title: President and Chief Executive Officer

Name: Sylvia Wulf

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 8, 2022

/s/ Sylvia Wulf
Sylvia Wulf
Chief Executive Officer
(Principal Executive Officer)

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 8, 2022

/s/ David A. Frank
David A. Frank
Chief Financial Officer
(Principal Financial Officer)

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

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

(i) the Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2022, 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, 2022, fairly presents, in all material respects, the financial condition and results of operations of AquaBounty Technologies, Inc.

Dated as of this 8th day of November, 2022.

/s/ Sylvia Wulf

Sylvia Wulf
Chief Executive Officer
(Principal Executive Officer)

/s/ David A. Frank

David A. Frank
Chief Financial Officer
(Principal Financial Officer)
