



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 3561

December 2, 2016

Ronald L. Stotish
Chief Executive Officer
AquaBounty Technologies, Inc.
2 Mill and Main Place, Suite 395
Maynard, MA 01754

**Re: AquaBounty Technologies, Inc.
Form 10-12B
Filed November 7, 2016
File No. 001-36426**

Dear Mr. Stotish:

We have reviewed your filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response and any amendment you may file in response to these comments, we may have additional comments.

General

1. Please provide legal analysis, with reference to our guidance in Staff Legal Bulletin No. 4 (September 16, 1997), available on our website at www.sec.gov, of the reasons that you believe the business purposes of the transaction outlined on pages 26-27 of the Information Statement mitigate the registration requirements otherwise applicable to the proposed Distribution. In your response, please reference Intrexon's continuing majority equity holding in the company, and discuss the reasons that Intrexon will not benefit indirectly from the proposed spin-off of AquaBounty's shares. Finally, please address the fact that AquaBounty has yet to record a profit, as well as the material contractual obligations that AquaBounty will continue to owe to Intrexon following the spin-off.

Exhibit 99.1

General

2. Please provide us mock-ups of any pages that include any pictures or graphics to be presented, including any accompanying captions. Please keep in mind, in scheduling the printing and distribution of the information statement, that we may have comments after our review of the materials.

Letter to Intrexon Shareholders

3. Please tell us the basis for your conclusion that the approval of Intrexon's shareholders is not required as a matter of Virginia law.

Questions and Answers about the Distribution, page 2

What other transactions are expected to occur in connection with the Distribution? page 2

4. Since the conversion of the dollar denominated loan of \$10 million to common shares will be calculated in pence, please briefly explain what currency exchange benchmark you will apply.

What are the reasons for and benefits of the Distribution? page 3

5. Please clarify the ways in which Intrexon's shareholders will participate directly in the potential value creation in AquaBounty. Include examples of the ways in which their participation will differ following the spin-off.

Who will manage AquaBounty after the Distribution? page 3

6. Please clarify briefly how AquaBounty will continue to benefit from the knowledge, skills and experience of Intrexon's full board of directors following the spin-off. Explain whether you expect the full board to continue to manage AquaBounty.

What are the US federal income tax consequences to me of the distribution of shares of AquaBounty common stock pursuant to the Distribution? page 5

7. In this question or in the question discussing fractional shares above, please include the information that the cash distribution in respect of fractional shares will be taxable.

Summary, page 7

Overview, page 7

8. Please revise the Overview to include the information that the company has experienced losses since inception, and quantify your net losses over the past two years.

Relationship of AquaBounty and Intrexon after the Distribution, page 8

9. Please revise your disclosure in this section to include the following: a brief description of the Exclusive Channel Collaboration Agreements (“ECCs”); the information that Intrexon will continue to receive 16.66% of AquaBounty’s profits for each developed product, and that AquaBounty is obligated to pay 50% of any quarterly revenue obtained from sublicensees (if any), pursuant to the ECCs; and that AquaBounty will be a “controlled company” by virtue of Intrexon’s continued majority holding following the Distribution.
10. Briefly describe the material terms of the \$10 million Convertible Loan and the debt financing agreement with Intrexon in the Summary section.

Risk Factors, page 11

11. Please provide a risk factor outlining the information disclosed under “Restrictions on Atlantic Salmon Farming” on page 57. Disclose in a new risk factor that some states have adopted regulatory bans on Atlantic salmon farming and explain the risks that this presents for the company, or tell us why you do not believe that this is a risk for AquaBounty.

The Distribution, page 26

Reasons for the Distribution, page 26

12. Please clarify what you mean when you disclose that “Intrexon believes that it can reduce its direct ownership position in AquaBounty without changing its strategic relationship with AquaBounty.” Explain the various aspects of the strategic relationship and why they will remain the same.
13. Please revise to discuss the negative factors, if any, that the board considered in deciding to enter into the Distribution. If the board did not consider any negative aspects to the Distribution, please state that in the disclosure. Also, please disclose whether the board considered any alternatives to the Distribution.
14. We note that Intrexon will retain control of its UltraVector[®] and other technology platforms to develop additional genetically modified fish traits. Please revise to explain

in greater detail the reasons for separating the platform from AquaBounty's production capability.

Information on AquaBounty, page 53

Atlantic Salmon Disease Impact, page 56

15. Please substantiate your statement that closed, land-based production systems such as those used by AquaBounty are less prone to disease vectors than open sea-cage systems. If you are not aware of scientific studies conducted by unrelated and qualified researchers, please state that in your disclosure. Please furnish copies to us of any studies that you cite.

Our Product, page 57

16. Please substantiate that AquAdvantage salmon do not reach a larger final size than their traditional counterparts. Please also balance your disclosure by including information about the risks of adverse consumer reaction and regulatory scrutiny if AquAdvantage salmon were found to grow to a larger final size than their traditional counterparts.

Security Ownership of Certain Beneficial Owners and Management, page 75

17. For each beneficial owner that is not a natural person, please name the natural persons who have or share voting or investment power of the shares held by such owner.

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

You may contact Patrick Kuhn at 202-551-3308 or Doug Jones at 202-551-3309 if you have questions regarding comments on the financial statements and related matters. Please contact Julie Griffith at 202-551-3267 or me at 202-551-3217 with any other questions.

Sincerely,

/s/ J. Nolan McWilliams

J. Nolan McWilliams
Attorney-Advisor
Office of Transportation and Leisure