

March 19, 2021

Adam Stone  
Chief Executive Officer  
ARYA Sciences Acquisition Corp III  
51 Astor Place, 10th Floor  
New York, NY 10003

Re: ARYA Sciences

Acquisition Corp III  
Statement on Form S-4  
16, 2021

Draft Registration  
Submitted February  
CIK No. 0001808805

Dear Mr. Stone:

We have reviewed your draft registration statement 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 this letter by providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

Draft Registration Statement on Form S-4

Questions and Answers for Shareholders of ARYA  
Did the ARYA Board obtain a third-party valuation or fairness opinion in determining whether or not to proceed with the Business Combination, page viii

1. Please revise the prospectus, where appropriate, to provide the comparable company analysis as well as a detailed discussion of the other "necessary analyses" performed by the Board. In this regard, it should be clear how the Board arrived at the \$900 million equity valuation for Nautilus and concluded that the acquisition satisfied the 80% test.

Adam Stone  
FirstName LastNameAdam  
ARYA Sciences AcquisitionStone  
Corp III  
Comapany  
March NameARYA Sciences Acquisition Corp III  
19, 2021  
March2 19, 2021 Page 2  
Page  
FirstName LastName  
Summary, page 1

2. On page 4, revise the discussion of the conditions of the closing to clarify which conditions are waivable and by which party or parties. Highlight the risk that Nasdaq approval of the New Nautilus listing is a waivable condition, as outlined in the risk factor on page 72.  
Risk Factors, page 28

3. In the introduction to this section you explain that the risk factors are not "exhaustive" and you encourage investors to perform their own investigation with respect to [your] business, financial condition and prospects. Please revise to eliminate this disclaimer or explain why it is appropriate to direct investors to information that is not contained in the registration statement.

Risks Related to Ownership of New Nautilus Common Stock, page 59

4. On page 62, revise to describe the risk that the exclusive forum provisions may increase investors costs to bring a claim.

Background to the Business Combination, page 102

5. Substantially revise the background section to provide additional detail regarding the discussions with other potential combination targets and between ARYA and Nautilus. In particular we note no disclosure of when discussions with the remaining two of the three final candidates ended, and no disclosure regarding what occurred between October 21, 2020 and December 1, 2020.

6. Revise to disclose the potential structure of the transaction as discussed at the December 1, 2020 meeting.

7. Refer to the top of page 104. Disclose ARYA's valuation of Nautilus shared at that time and the comparable company analysis ARYA had performed, and the valuation ARYA identified at which it was interested in pursuing a transaction.

Certain Company Projected Financial Information, page 110

8. Please revise to include the cost projections referenced on page 111 as well as any other material projections provided to the board.

U.S. Federal Income Tax Considerations, page 149

9. You state that the disclosure is for informational purposes only. Investors are entitled to rely on your disclosure. Revise to eliminate this inappropriate disclaimer.

Adam Stone

FirstName LastNameAdam

ARYA Sciences AcquisitionStone

Corp III

Comapany

March NameARYA Sciences Acquisition Corp III

19, 2021

March3 19, 2021 Page 3

Page

FirstName LastName

10. Please revise the heading to indicate that this section covers

Material U.S. Federal Income

Tax Consequences and provide a tax opinion in accordance with Regulation S-K, Item

601(b)(8). Also, refer to Sections III.C.3 and 4 of Staff Legal Bulletin No. 19 concerning

assumptions and opinions subject to uncertainty. In this regard, we note the disclosure

that U.S. holders generally should not recognize gain or loss on the domestication

[a]ssuming the Domestication qualifies as an F Reorganization. We also note the

disclosure that the Domestication could be a taxable event to U.S. Holders under the

PFIC provisions of the Code. Please note that these are only examples.

Business Summary, page 187

11. Please revise the opening paragraph to explain that you are a development stage company

and the third paragraph to clarify the development status of your Nautilus Platform

including whether you have a working prototype. Please make similar changes to the

Summary on page 1.

12. We note numerous statements indicating that you have "designed" your Nautilus Platform

to achieve certain performance specifications but it remains unclear whether the specifications you cite are aspirational goals or whether you presently have technology that can meet these specifications. For instance, we refer to your statement on page 198 that you have designed your Nautilus Platform to measure billions of individual protein molecules at a time, in a massively parallel and efficient workflow.

13. With reference to your disclosure on page 45, discuss how the Nautilus Platform involves the use of laser technology. The Nautilus Approach, page 196

14. Please revise this section to include a development plan that identifies and discusses the key work that you will need to perform on the Nautilus Platform in order to achieve your stated goal of broad commercialization by the end of 2023 or beginning of 2024. Government Regulation, page 216

15. We note that your risk factor discussion on page 45 discusses your use of hazardous chemicals and biological materials in your business. Please revise to discuss regulations governing your use of these materials or advise. Exhibits

16. Please provide a form of proxy marked as preliminary with your next submission. Adam Stone  
FirstName LastNameAdam  
ARYA Sciences AcquisitionStone  
Corp III

Comapany  
March NameARYA Sciences Acquisition Corp III  
19, 2021  
March4 19, 2021 Page 4  
Page  
FirstName LastName

You may contact Christine Torney at (202) 551-3652 or Vanessa Robertson at (202) 551-3649 if you have questions regarding comments on the financial statements and related matters. Please contact Abby Adams at (202) 551-6902 or Joe McCann at (202) 551-6262 with any other questions.

Sincerely,

Division of

Office of Life

Corporation Finance

Sciences

cc: Peter Seligson, Esq.