ARYA Sciences Acquisition Corp III 51 Astor Place, 10th Floor New York, NY 10003

March 26, 2021

VIA EDGAR

Securities and Exchange Commission Division of Corporation Finance Office of Life Sciences 100 F Street, NE Washington, D.C. 20549

Attention: Abby Adams and Joe McCann

Re: ARYA Sciences Acquisition Corp III

Draft Registration Statement on Form S-4

Submitted February 16, 2021

CIK No. 0001808805

Dear Ms. Adam and Mr. McCann:

This letter sets forth responses of ARYA Sciences Acquisition Corp III ("ARYA") to the comments of the staff of the Division of Corporation Finance (the "Staff") of the U.S. Securities and Exchange Commission set forth in your letter, dated March 19, 2021, with respect to the above referenced Draft Registration Statement on Form S-4 (the "Registration Statement").

The text of the Staff's comments has been included in this letter for your convenience, and we have numbered the paragraphs below to correspond to the numbers in the Staff's letter. For your convenience, we have also set forth the Company's response to each of the numbered comments immediately below each numbered comment.

In addition, the Company has revised the Registration Statement in response to the Staff's comments and the Company is concurrently filing publicly the revised Registration Statement with this letter. Page numbers in the text of the Company's responses correspond to page numbers in the Registration Statement, as so amended.

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. **Staff's Comment:** 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.

Response: The Company acknowledges the Staff's comment and has revised the section entitled "Business Combination Proposal—The ARYA Board's Reasons for the Business Combination" to include the comparable company analysis that the ARYA Board reviewed in connection with its valuation of Nautilus and its determination that the transaction satisfied the 80% test.

Summary, page 1

2. **Staff's Comment:** 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.

Response: The Company acknowledges the Staff's comment and has revised the discussion of conditions of closing accordingly.

Risk Factors, page 28

3. **Staff's Comment:** 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.

Response: The Company acknowledges the Staff's comment and has deleted the disclaimer.

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

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

Response: The Company acknowledges the Staff's comment and has revised the risk factor to include this risk on page 63.

Background to the Business Combination, page 102

5. **Staff's Comment:** 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.

Response: The Company acknowledges the Staff's comments and has revised the disclosure accordingly.

6. Staff's Comment: Revise to disclose the potential structure of the transaction as discussed at the December 1, 2020 meeting.

Response: The Company acknowledges the Staff's comments and has revised the disclosure accordingly.

7. **Staff's Comment:** 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.

Response: The Company acknowledges the Staff's comments and has revised the disclosure accordingly.

Certain Company Projected Financial Information, page 110

8. **Staff's Comment:** Please revise to include the cost projections referenced on page 111 as well as any other material projections provided to the board.

Response: The Company acknowledges the Staff's comments and has revised the disclosure on page 113 to include projections related to expenses and on page 114 to describe a potential upside scenario reviewed by the ARYA Board.

U.S. Federal Income Tax Considerations, page 149

9. *Staff's Comment:* You state that the disclosure is "for informational purposes only." Investors are entitled to rely on your disclosure. Revise to eliminate this inappropriate disclaimer.

Response: The Company acknowledges the Staff's comment and has deleted the disclaimer.

10. *Staff's Comment:* 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.

Response: The Company acknowledges the Staff's comment and has revised the disclosure accordingly. The Company will file a tax opinion with an amendment to the Registration Statement.

Business Summary, page 187

11. *Staff's Comment:* 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.

Response: The Company acknowledges the Staff's comment and has revised the opening paragraph in this section and in the Summary on page 1 to state that Nautilus is a development stage company and state that it has built a prototype of a single molecule instrument, or Nautilus' Proteomic Analysis System.

12. *Staff's Comment:* 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.

Response: The Company acknowledges the Staff's comment and has revised the description throughout to clarify the status of Nautilus' development efforts.

13. *Staff's Comment:* With reference to your disclosure on page 45, discuss how the Nautilus Platform involves the use of laser technology.

Response: The Company acknowledges the Staff's comment and has added this description on page 207.

The Nautilus Approach, page 196

14. *Staff's Comment:* 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.

Response: The Company acknowledges the Staff's comment and has added a description of the development plan on pages 214-215.

Government Regulation, page 216

15. *Staff's Comment:* 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.

Response: The Company acknowledges the Staff's comment and has added this discussion on page 227.

Exhibits

16. Staff's Comment: Please provide a form of proxy marked as "preliminary" with your next submission.

Response: The Company acknowledges the Staff's comments and has included a form of proxy marked as "preliminary" in the revised Registration Statement that is being filed concurrently with this letter.

We hope that the foregoing has been responsive to the Staff's comments. If you have any questions related to this letter, please contact Christian O. Nagler at (212) 446-4660 and Peter S. Seligson at (212) 446-4756 of Kirkland & Ellis LLP.

Sincerely,

By: /s/ Adam Stone

Name: Adam Stone

Title: Chief Executive Officer

Via E-mail:

cc: Christian O. Nagler
Peter S. Seligson
Kirkland & Ellis LLP

Robert F. Kornegay Michael Nordtvedt Brian Keyes Zachary B. Myers Wilson Sonsini Goodrich & Rosati, P.C.