October 13, 2021

Elisabet de los Pinos, Ph.D. Chief Executive Officer Aura Biosciences, Inc. 85 Bolton Street Cambridge, MA 02140

> Re: Aura Biosciences, Registration Filed October 8,

> > File No. 333-260156

Dear Dr. de los Pinos:

Statement on Form S-1

We have reviewed your 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 amending your registration statement and providing the requested information. 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

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response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Registration Statement on Form S-1

Prospectus Summary Our Team and Investors, page 3

We note your revisions in response to prior comment 1 but your response and revised disclosure do not appear to address the concerns raised in our prior comment. As such, we continue to believe the identification of the pre-IPO investors is inappropriate in the prospectus summary. Please provide us with a more detailed response addressing the concerns raised in our prior comment or revise your disclosure as appropriate. 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. Elisabet de los Pinos, Ph.D. Aura Biosciences, Inc. October 13, 2021 Page 2 Refer to Rules 460 and 461 regarding requests for acceleration. Please allow adequate time for us to review any amendment prior to the requested effective date of

the registration statement.

You may contact Tracey Houser at 202-551-3736 or Jeanne Baker at 202-551-3691 if you have questions regarding comments on the financial statements and related matters. Please contact Dillon Hagius at 202-551-7967 or Tim Buchmiller at 202-551-3635 with any other questions.

Inc.

2021

FirstName LastNameElisabet de los Pinos, Ph.D.

Sincerely,

Division of

Corporation Finance Comapany NameAura Biosciences, Inc.

Sciences October 13, 2021 Page 2 cc: Danielle Lauzon, Esq. FirstName LastName Office of Life