

September 10, 2021

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

Inc.
Statement on Form S-1
10, 2021

Re: Aura Biosciences,
Draft Registration
Submitted August
CIK No. 0001501796

Dear Dr. de los Pinos:

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-1

Prospectus Summary
Our Pipeline, page 2

1. Please revise your pipeline table to reflect that you are currently in phase 2 of clinical trials for AU-011 for the treatment of primary choroidal melanoma. In this regard, we note your disclosure on pages 117 and 118 that you "are currently conducting a Phase 2 dose escalation trial of AU-011 with SC administration in 18 patients with choroidal melanoma" and that your "first pivotal trial will be the Phase 2b portion of the ongoing SC administration trial." We note that a textual discussion of the program is likely a more appropriate place to make distinctions regarding different segments within a particular phase.

Elisabet de los Pinos, Ph.D.
FirstName LastNameElisabet de los Pinos, Ph.D.
Aura Biosciences, Inc.
Comapany 10,
September NameAura
2021 Biosciences, Inc.

September
Page 2 10, 2021 Page 2
FirstName LastName
Our Team and Investors, page 3

2. We note that you identify three entities - Rock Springs Capital, Adage Capital Management LP, and Lundbeckfonden Ventures - as investors in your company; however, some do not appear to be among your principal stockholders as

disclosed on page 182.

Please remove this disclosure or explain to us why highlighting this information in the

Summary is appropriate. Explain in your response how you will update investors about

any changes these entities make with respect to their holdings.

Summary Financial Data, page 10

3. Please expand your disclosures for the second bullet of footnote (2) to provide the

computation of pro forma net loss per share and pro forma weighted average shares of

common stock for the year ended December 31, 2020 in addition to the quarter ended

March 31, 2021.

4. Please disclose the per share price of the 50,000 shares of common stock sold including

the date of the transaction. Disclose whether this transaction was with a related party.

Address this comment where this transaction has been disclosed.

Use of Proceeds, page 73

5. We note your disclosure that you intend to use the proceeds from the offering to advance

your initial product candidate (AU-011) through clinical development and to develop your

platform. Please quantify the amount of proceeds you intend to use for each designated

use and more specifically explain what each entails. To the extent that you plan to use a

material portion of the proceeds to fund the development of AU-011, please specify how

far in the clinical development for each indication you plan to reach with the proceeds

from this offering.

Business, page 97

6. Please revise, where appropriate in the Business section, to discuss the laser component.

For instance, discuss the laser's state of development, its key and/or novel features, your

supply arrangements and whether you hold licenses and/or patents that cover the laser

technology.

7. With a view to disclosure, please tell us whether your combination products, which may

include use of a microinjector and a laser, will require you to provide doctors with

specialized training. If so, please discuss how this impacts future sales and marketing

efforts, and associated costs to generate commercial sales.

Pivotal trial plan in choroidal melanoma, page 118

8. We note your disclosure that you plan on conducting two pivotal trials with AU-011.

While you disclose that the "first pivotal trial will be the Phase 2b portion of the ongoing

SC administration trial," the second pivotal trial is not clear.

Please confirm that the

Elisabet de los Pinos, Ph.D.

Aura Biosciences, Inc.

September 10, 2021

Page 3

"registry trial" mentioned on page 119 is this second pivotal trial.

If so, please clarify that

this registry trial is the Phase 3 trial.

Our License Agreements, page 132

9. Please disclose the expiry of the last-to-expire patent licensed under the NIH Patent

License Agreement, the LI-COR Exclusive License Agreement, and the Clearside License

Agreement.

Executive Compensation, page 166

10. With reference to the disclosure on page 169, please file each employment agreement with

a named executive officers or tell us why you are filing a form of agreement.

Principal Stockholders, page 182

11. With reference to Item 403 of Regulation S-K, please identify the natural person or persons who directly or indirectly exercise sole or shared voting and/or dispositive power with respect to the common stock held by the following beneficial owners:

Lunbeckfonden Invest A/S;
Arix Bioscience Holdings Limited;
Chiesi Ventures, LP;
Columbus Innvierte, F.C.R;
Ysios Biofund II Innvierte, F.C.R.

16. Subsequent Events, page F-26

12. We note your statement that subsequent events was evaluated through May 5, 2021, which you state is when the financial statements were available to be issued. Please address this inconsistency with the audit report date of August 9, 2021. Also ensure that all material subsequent events have been disclosed. In this regard, we note that over 20 million of stock options were granted prior to August 9, 2021 without disclosure of the material terms and corresponding compensation expense to be recognized over the vesting period.
General

13. Please supplementally provide us with copies of all written communications, as defined in Rule 405 under the Securities Act, that you, or anyone authorized to do so on your behalf, present to potential investors Inc. in reliance on Section 5(d) of the Securities Act, whether or not they retainPage 10, 2021 copies 3 of the communications.

FirstName LastName
Elisabet de los Pinos, Ph.D.
FirstName LastNameElisabet de los Pinos, Ph.D.
Aura Biosciences, Inc.
Comapany 10,
September NameAura
2021 Biosciences, Inc.

September
Page 4 10, 2021 Page 4
FirstName LastName

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 Joe McCann at 202-551-6262 with any other questions.

Sincerely,

Division of
Office of Life

Corporation Finance

Sciences
cc: Danielle M. Lauzon