

October 13, 2021

Ren Russo, Pharm.D.
President and Chief Executive Officer
Xilio Therapeutics, Inc.
828 Winter Street
Waltham, Massachusetts 02451

Inc.

Statement on Form S-1
2021

Re: Xilio Therapeutics,
Registration
Filed October 1,
File No. 333-259973

Dear Dr. Russo:

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 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

Our History and Team, page 8

1. We note your revisions in response to prior comment 2 but your response and revised disclosure do not appear to address all of 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.

Refer to Rules 460 and 461 regarding requests for acceleration. Please allow adequate

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time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Michael Fay at 202-551-3812 or Vanessa Robertson at 202-551-3649 if you have questions regarding comments on the financial statements and related matters. Please contact Ada D. Sarmento at 202-551-3798 or Tim Buchmiller at 202-551-3635 with any other questions.

FirstName LastNameRen Russo, Pharm.D.

Corporation Finance
Comapany NameXilio Therapeutics, Inc.

Sciences

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cc: Cynthia T. Mazareas, Esq.

FirstName LastName

Sincerely,

Division of

Office of Life