September 16, 2020

RA Session, II President and Chief Executive Officer Taysha Gene Therapies, Inc. 2280 Inwood Road Dallas, TX 75235

Re: Taysha Gene Amendment No. 1 to Registration Statement on Form S-1 Filed September 8, File No. 333-248559

Dear Mr. Session:

Therapies, Inc.

2020

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. Amendment No. 1 to Registration Statement on Form S-1 filed September 8,

2020

Our Pipeline, page 2

1. We note your response to prior comment 3 and reissue our comment. Please revise your table to depict the current status of your product candidates in a manner that is consistent with the regulatory process for drug development. Including the following changes:

We will not object to separate columns for discovery and preclinical, but object to the a separate column for "construct selection" as that should be considered part of the discovery and/or preclinical work. The Term "IND-enabling" assumes the outcome of the preclinical work, as the FDA will determine whether the results of the preclinical activities support an IND. Please revise your table to clarify that the second column refers to preclinical work. With respect to the column heading "Pivotal Trial," our concern is that the table depicts the status of the product candidate in a manner that is not consistent with the RA Session, II Taysha Gene Therapies, Inc. September 16, 2020 Page 2 regulatory process for drug development with separate column for phases 1, 2 and 3. We will not object to columns for phase 1/2 and/or 2/3 trials if the trials are designed to meet the requirements of both phases represented. With respect to "Clinical expected..." text for TSHA-101, TSHA-102, TSHA-103 and TSHA-104, please revise to indicate when you expect to file an IND.

To the extent you have already submitted an IND, we have no further concerns with respect to the current disclosure. History and Team, page 7 2. We note your response to comment 7. As noted in your response, the identification appears to suggest that potential investors may consider investments made bv these institutional investors as a factor in making their investment decisions without knowing the amount of their investment in total or on a per share basis, their investment strategies or whether these institutional investors continue to hold their shares. Additionally, as these shareholders are not subject to the reporting requirements of Section 16, investors will not know when they decide to sell their shares. Therefore, we continue to believe the disclosure is inappropriate for the registration statement. Exhibits 3. Please file the employment agreement or offer letter, as applicable, with each of Kamran Alam and Suyash Prasad as exhibits to your registration statement. 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 time for us to review any amendment prior to the requested effective date of the registration statement. You may contact Li Xiao at 202-551-4391 or Angela Connell at 202-551-3426 if you have questions regarding comments on the financial statements and related matters. Please contact Alan Campbell at 202-551-4224 or Suzanne Hayes at 202-551-3675 with any other questions.

FirstName LastNameRA Session, II Corporation Finance

Sincerely, Division of

Comapany NameTaysha Gene Therapies, Inc.

Office of Life

Sciences September 16, 2020 Page 2 Madison Jones cc: FirstName LastName