



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

Mail Stop 4546

September 2, 2015

Via E-mail

Annalisa Jenkins, M.B.B.S., M.R.C.P.
President and Chief Executive Officer
Dimension Therapeutics, Inc.
840 Memorial Drive
Cambridge, MA 02139

**Re: Dimension Therapeutics, Inc.
Amendment No. 1 to
Draft Registration Statement on Form S-1
Submitted August 19, 2015
CIK No. 0001592288**

Dear Dr. Jenkins:

We have reviewed your amended 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.

Prospectus Summary, page 1

1. We note your response to comment 6 and note that the information provided does not support your position relative to your peers. Additionally, the fact that you are the only company with a gene therapy program to treat GSDIa and OTC may mean that

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you are a leader with respect to these indications but not with respect to all gene therapy programs. Please revise to provide additional support or revise your disclosure to more specifically clarify your statements regarding your leadership.

2. We note your response to comment 7. Please provide more information about the basis for your belief that your platform will allow you to expedite the development of pipeline. Do you expect that the platform will provide you with an advantage in producing high quality vectors or is this belief dependent on obtaining Fast Track designation or orphan drug status?

You may contact Franklin Wyman at (202) 551-3660 or Joel Parker at (202) 551-3651 if you have questions regarding comments on the financial statements and related matters. Please contact William H. Dorton, Staff Attorney, at (202) 551-3107 or me at (202) 551-3675 with any other questions.

Sincerely,

/s/ Suzanne Hayes
Suzanne Hayes
Assistant Director