



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

DIVISION OF
CORPORATION FINANCE

December 2, 2014

Via E-mail

Jeffrey D. Marrazzo, Esq.
Chief Executive Officer
Spark Therapeutics, Inc.
3501 Civic Center Boulevard
Philadelphia, PA 19104

**Re: Spark Therapeutics, Inc.
Amendment No. 1 to Draft Registration Statement on Form S-1
Submitted November 17, 2014
CIK No. 0001609351**

Dear Mr. Marrazzo:

We have reviewed amendment no. 1 to 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.

Prospectus Summary
Product Candidates, page 1

1. Please describe the conditions “Leber’s congenital amaurosis (‘LCA’)” and “retinitis pigmentosa (‘RP’)” and the difference between the two conditions the first time you reference them in this section.
2. We note your response to our prior comment 3 and your revised disclosure stating that your “Neurodegenerative Diseases” program is “undisclosed.” If you have not yet identified a molecule and medical indication for this program, it is too preliminary to be considered a true pipeline product. Accordingly, please eliminate the “Neurodegenerative Diseases” program from your pipeline table and any references to neurodegenerative pipeline candidates elsewhere in your prospectus. For example, we

Jeffrey D. Marrazzo, Esq.
Spark Therapeutics, Inc.
December 2, 2014
Page 2

note that pages 1, 69 and 80 reference neurodegenerative product candidates rather than just a neurodegenerative preclinical program.

Risks associated with our business, page 4

3. We note your response to our prior comment 8. Please expand the penultimate bullet point in this section to identify the intellectual property rights that the owner may license to other parties.

Notes to financial statements

(6) Members' equity, page F-11

4. Please refer to prior comment 31. Explain how the minority interest adjustment made in determining the implied fair value per common unit of \$1.04 for the Series 2 common units and \$0.30 for the Series 3 common units relates to the subsequent 5% discount for lack of control.

You may contact Franklin Wyman at (202) 551-3660 or Lisa Vanjoske at (202) 551-3614 if you have questions regarding comments on the financial statements and related matters. Please contact Johnny Gharib at (202) 551-3170 or me at (202) 551-3715 with any other questions.

Sincerely,

/s/ Jeffrey P. Riedler

Jeffrey P. Riedler
Assistant Director

cc: Via E-mail
Lia Der Marderosian, Esq.
Wilmer Cutler Pickering Hale and Dorr LLP