



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 4720

July 18, 2016

Dr. Rodger Novak
Chief Executive Officer
CRISPR Therapeutics, Inc.
200 Sidney St.
Cambridge, MA 02139

**Re: CRISPR Therapeutics AG
Amendment No. 1 to Draft Registration Statement on Form S-1
Submitted June 29, 2016
Amendment No. 2 to Draft Registration Statement on Form S-1
Submitted July 8, 2016
CIK No. 0001674416**

Dear Dr. Novak:

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.

Amendment No. 1

Notes to Consolidated Financial Statements

Note 7. Convertible Loans

Conversion of Convertible Loans to Series B Preferred Shares, page F-21

1. Regarding the conversion of the Bayer convertible loan into Series B Preferred Shares, please provide us an analysis, including specific reference to authoritative literature, supporting your accounting whereby you accounted for the conversion as an accretion and recognized an \$8 million charge for interest.

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2. Regarding the conversion of the Vertex convertible loan into Series B Preferred Shares, please provide us an analysis, including specific reference to authoritative literature, supporting your accounting as a debt extinguishment and recording an \$11.5 million gain.

Note 9. Significant Contracts
Joint Venture with Bayer Healthcare LLC, page F-27

3. Please provide us an analysis, including specific reference to authoritative literature, supporting the following regarding the Bayer Joint Venture:
 - For recording your investment in the joint venture upon contributing \$.1 million in cash and licensing your proprietary CRISPR/Cas9 gene editing technology and intellectual property for selected disease indications at the fair value of the equity interest in the Joint Venture of \$36.4 million;
 - Why it is appropriate to reflect a deferred gain of \$63.6 million related to the license before obtaining patent holder consent; and
 - Why you do not recognize losses of \$36.4 million for the three months ended March 31, 2016 for the joint venture considering that your investment is recorded at \$36.4 million and therefore has not been reduced to zero.

Amendment No. 2

Exhibit Index

4. We note you are seeking confidential treatment of portions of certain agreements filed as exhibits. Please note we will provide any comments on your application separately.

You may contact Christine Torney at (202) 551-3652 or James Rosenberg at (202) 551-3679 if you have questions regarding comments on the financial statements and related matters. Please contact Michael Gershon at (202) 551-6598 or Mary Beth Breslin at (202) 551-3625 with any other questions.

Sincerely,

/S/ Suzanne Hayes
Suzanne Hayes
Assistant Director
Office of Healthcare and Insurance

cc: Robert E. Puopolo, Esq.