



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 4546

August 3, 2016

Johan M. (Thijs) Spoor
President and Chief Executive Officer
AzurRx BioPharma, Inc.
760 Parkside Avenue
Downstate Biotechnology Incubator, Suite 217
Brooklyn, NY 11226

**Re: AzurRx BioPharma, Inc.
Amendment No. 1 to Registration Statement on Form S-1
Filed July 29, 2016
File No. 333-212511**

Dear Mr. Spoor:

We have reviewed your amended 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. Unless we note otherwise, our references to prior comments are to comments in our July 26, 2016 letter.

Capitalization, page 25

1. "Notes payable" reflected in the table herein appears to include both "convertible promissory notes" and "convertible debt" on the balance sheet. Therefore, the conversion of convertible promissory notes into OID convertible notes does not appear to increase Notes payable. If this is correct, please revise your pro forma disclosure, (ii).
2. Please tell us where you disclose the terms of \$1,859,000 OID convertible debt that were issued subsequent to March 31, 2016.

3. Please provide us an analysis to support why no beneficial conversion feature needs to be reflected in the pro forma for convertible preferred stock or convertible notes.

Note 10 – Original Issue Discounted Convertible Notes, page F-17

4. In your response to previous comment 1, you reference December 31, 2015 common stock fair value for estimating the value of the conversion feature at March 31, 2016. Please confirm that no significant event occurred between December 31, 2015 and March 31, 2016 that affected the fair value of your common stock. Otherwise, please revise your analysis.
5. Refer to your response to comment 4 in our letter dated June 30, 2016 and address the following:
 - Tell us the technique(s) you used to fair value the common stock underlying your convertible debt;
 - Tell us the significant factors contributing to the difference in the fair value of common stock at March 31, 2016 to the midpoint of your estimated IPO price range of \$7.00; and
 - Quantify the impact that each factor identified above has had on your common stock fair value. In this regard, it may be helpful to tell us what the common stock fair value would have been on March 31, 2016 if you had assumed 100% probability in the IPO event while holding all other assumptions constant.

You may contact Keira Nakada at (202) 551-3659 or Lisa Vanjoske at (202) 551-3614 if you have questions regarding comments on the financial statements and related matters. Please contact Josh Samples at (202) 551-3199 or me at (202) 551-3675 with any other questions.

Sincerely,

/s/ Suzanne Hayes

Suzanne Hayes
Assistant Director
Office of Healthcare and Insurance

cc: David J. Levine, Esq.
Loeb & Loeb LLP