



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

DIVISION OF  
CORPORATION FINANCE

Mail Stop 4720

October 30, 2015

Via E-mail

Johan M. (Thijs) Spoor  
President  
AzurRx BioPharma, Inc.  
760 Parkside Avenue  
Downstate Biotechnology Incubator, Suite 217  
Brooklyn, New York 11226

**Re: AzurRx BioPharma, Inc.  
Amendment No. 1 to Draft Registration Statement on Form S-1  
Submitted October 16, 2015  
CIK No. 0001604191**

Dear Mr. Spoor:

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.

Risk Factors

Risks Related to Our Business and Industry

Our President currently serves as an executive officer of another public..., page 15

1. We note your response to comment two, including your statement that Mr. Spoor plans to allocate a majority of his time to AzurRx after completion of the offering. The statement does not provide sufficient information about Mr. Spoor's ability to devote sufficient time to AzurRx. Please revise to quantify the amount of time Mr. Spoor dedicated to FluoroPharma Medical in recent periods and discuss whether you expect that the time Mr. Spoor will need to dedicate to FluoroPharma Medical will change following the

completion of the offering. If FluoroPharma Medical's needs have changed and they no longer require as much of Mr. Spoor's time and attention, please explain.

Intellectual Property, page 41

2. We note your response to comment 15. Please revise your disclosure to clarify that the patent dates are tied to the date of issuance and the time will not begin to run until the patent is issued and note the period of protection you will receive if the patent is issued.

Notes to Consolidated Financial Statements, AzurRx BioPharma, Inc., June 30, 2015, December 31, 2014 and Predecessor for December 31, 2013

Note 2 - Significant Accounting Policies

Fair Value Measurement, page F-10

3. Please refer to your response to comment 22. In footnote six you state that the contingent consideration consists of a \$2.0 million milestone due upon receipt of the first approval by the Food and Drug Administration of a New Drug Application or Biologic License Application for a business product; royalty payments equal to 2.5% of net sales of business product up to \$100.0 million and 1.5% of net sales of business product in excess of \$100.0 million and ten percent of the Transaction Value received in connection with a sale or transfer of the pharmaceutical development business of Protea Europe. Please tell us why you believe it is appropriate to use a Black-Scholes Option Pricing Model in determining the fair value of the contingent consideration considering the nature of the events triggering payment.

Exhibits

4. We note your response to comment 26 and disagree with your statement that Exhibit G outside the purview of your relationship with Mayoly as the agreement is attached to your agreement with Mayoly and is referenced in the provision defining "patents." It is inappropriate to file an agreement without its exhibits unless the exhibits are redacted pursuant to a confidential treatment request. Please refile the agreement with Exhibit G. Alternatively, if the contents of Exhibit G are not material to investors and disclosure of the information would result in competitive harm, please amend your confidential treatment request to provide the required analysis.

Johan M. (Thijs) Spoor  
AzurRx BioPharma, Inc.  
October 30, 2015  
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You may contact Keira Nakada at (202) 551-3659 or Joel Parker at (202) 551-3651 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) 551-3675 with any other questions.

Sincerely,

/s/ Suzanne Hayes

Suzanne Hayes  
Assistant Director  
Office of Healthcare and Insurance

cc: Via E-mail  
David J. Levine, Esq.  
Loeb & Loeb LLP