



DIVISION OF  
CORPORATION FINANCE

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

June 25, 2014

Via E-mail

Terrence W. Norchi  
President and Chief Executive Officer  
Arch Therapeutics Inc.  
20 William St., Suite 270  
Wellesley, MA 02481

**Re: Arch Therapeutics Inc.  
Amendment No. 2 to Registration Statement on Form S-1  
Filed June 19, 2014  
File No. 333-194745**

Dear Mr. Norchi:

We have reviewed your 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.

Summary, page 4

The Offering, page 9

1. We note that the number of shares of common stock subject to outstanding stock option awards disclosed in footnote 3(b) does not agree to your disclosure in Note 3 to the unaudited financial statements. Also, we note that the March 24, 2014 restricted stock award has been omitted from your disclosure. Please advise or revise.

Description of Securities, page 37

Warrants and Options Issued and Outstanding, page 38

2. We note that the number of shares of common stock subject to outstanding stock option awards disclosed in fourth bullet point does not agree to your disclosure in Note 3 to the unaudited financial statements. Please advise or revise.

Consolidated Financial Statements, page F-1

Consolidated Statements of Changes in Stockholders' Equity (Deficit), page F-5

3. We reviewed your responses to comments 9 and 10 in our letter dated June 4, 2014. It is still not clear to us what happened to the 4,000,000 shares, pre-split, as of December 31, 2012 held by Joey Power, former Director, President, Chief Executive Officer, Chief Financial Officer, Chief Accounting Officer, Secretary and Treasurer of Almah. Please tell us how and when Dr. Norchi, Dr. Dhillon and Pundit Dhillion obtained shares in Almah that you mentioned were included in the 41,500,000 shares outstanding immediately before the Merger. As of December 31, 2012, it does not appear they were shareholders in Almah.

Interim Financial Statements

Consolidated Balance Sheets, page F-19

4. We understand that the difference between issued shares and outstanding shares represents unvested restricted stock. Please confirm our understanding or explain to us what the difference represents. If our understanding is correct, please tell us why the restricted shares are not considered outstanding and the basis in GAAP for your presentation.

5. Convertible Notes Payable, page F-26

5. The reference to footnote 1 in Form 10-Q in the first paragraph appears to be incorrect. Please revise or advise.

Exhibit 5.1

6. Please have counsel revise its opinion to include its consent to the inclusion of the opinion as an exhibit and being named in the registration statement.

Please contact Tony Watson, Staff Accountant, at (202) 551-3318 or William Thompson, Accounting Branch Chief, at (202) 551-3344 if you have any questions regarding comments on the financial statements and related matters. Please contact Scott Anderegg, Attorney Adviser, at

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(202) 551-3342, or Lilyanna Peyser, Special Counsel, at (202) 551-3222 with any other questions.

Sincerely,

/s/ Lilyanna Peyser for

Mara Ransom  
Assistant Director