



DIVISION OF
CORPORATION FINANCE

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

April 18, 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.
Registration Statement on Form S-1
Filed March 21, 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.

General

1. Please include the disclosure required by Items 502(b) and 503(b) of Regulation S-K.
2. We note that you are registering the resale of 60,648,000 shares of common stock. Given the size of the offering relative to the number of shares outstanding held by non-affiliates, the offering of such shares appears to be a primary offering. Because you are not eligible to conduct a primary offering on Form S-3, you are not eligible to conduct a primary at-the-market offering under Rule 415(a)(4). Therefore, please revise the terms of your offering to provide that all offers and sales by selling stockholders will be made at the disclosed fixed price for the duration of the offering and to identify the selling shareholders as underwriters. Alternatively, substantially reduce the size of the offering, in particular the number of shares being offered by Cranshire Capital Master Fund, LTd., Anson Investments Master Fund, Ltd., Capital Ventures International and Heng Hone Ltd. If you disagree with our determination, please advise the staff of the company's

basis for determining that the transaction is appropriately characterized as a transaction that is eligible to be made under Rule 415(a)(1)(i). In this regard, please address the factors referred to Securities Act Rules Compliance and Disclosure Interpretation 612.09, available on our website at www.sec.gov.

Summary, page 4

3. Please also disclose the total dollar value of the common stock underlying the Series C warrants (using the number of shares of common stock underlying the Series C warrants and the market price per share for the common stock on the date you entered into the Securities Purchase Agreement), as well as the total possible shares the selling securityholders may receive upon conversion of the Series C warrants and the combined conversion price of the total number of shares of common stock underlying the Series C warrants calculated by using the conversion price of the Series C warrants on the date of the sale of such warrants and the total possible number of shares the selling securityholders may receive.
4. Please provide us, with a view toward disclosure in the prospectus, with tabular disclosure of the dollar amount of each payment (including the value of any payments to be made in common stock) in connection with the transaction that you have made or may be required to make to any selling securityholder, any affiliate of a selling securityholder, or any person with whom any selling securityholder has a contractual relationship regarding the transaction (including any interest payments, liquidated damages, payments made to “finders” or “placement agents,” and any other payments or potential payments). Please provide footnotes disclosure of the terms of each such payment.

Further, please provide us, with a view toward disclosure in the prospectus, with disclosure of the net proceeds to the issuer from the sale of the warrants and the total possible payments to all selling securityholders and any of their affiliates in the first year following the sale of the warrants.

5. Please provide us, with a view toward disclosure in the prospectus, with tabular disclosure of:
 - the total possible profit to be realized as a result of any conversion discounts for securities underlying any other warrants, options, notes, or other securities of the issuer that are held by the selling securityholders or any affiliates of the selling securityholders, presented in a table with the following information disclosed separately:
 - market price per share of the underlying securities on the date of the sale of that other security;
 - the conversion/exercise price per share as of the date of the sale of that other security, calculated as follows:

- if the conversion/exercise price per share is set at a fixed price, use the price per share on the date of the sale of that other security; and
 - if the conversion/exercise price per share is not set at a fixed price and, instead, is set at a floating rate in relationship to the market price of the underlying security, use the conversion/exercise discount rate and the market rate per share on the date of the sale of that other security and determine the conversion price per share as of that date;
 - the total possible shares to be received under the particular securities (assuming complete conversion/exercise);
 - the combined market price of the total number of underlying shares, calculated by using the market price per share on the date of the sale of that other security and the total possible shares to be received;
 - the total possible shares to be received and the combined conversion price of the total number of shares underlying that other security calculated by using the conversion price on the date of the sale of that other security and the total possible number of underlying shares; and
 - the total possible discount to the market price as of the date of the sale of that other security, calculated by subtracting the total conversion/exercise price on the date of the sale of that other security from the combined market price of the total number of underlying shares on that date.
6. Please provide us, with a view toward disclosure in the prospectus, with tabular disclosure of:
- the gross proceeds paid or payable to the issuer in the warrant transaction;
 - all payments that have been made or that may be required to be made by the issuer that are disclosed in response to comment four above;
 - the resulting net proceeds to the issuer; and
 - the combined total possible profit to be realized as a result of any conversion discounts regarding the securities underlying the warrants and any other warrants, options, notes, or other securities of the issuer that are held by the selling securityholders or any affiliates of the selling securityholders that is disclosed in response to comment five above.

Further, please provide us, with a view toward disclosure in the prospectus, with disclosure – as a percentage – of the total amount of all possible payments as disclosed in

response to comment four and the total possible discount to the market price of the shares underlying the warrants as disclosed in response to comment five divided by the net proceeds to the issuer from the sale of the warrants, as well as the amount of that resulting percentage averaged over the term of the warrants.

7. Please provide us, with a view toward disclosure in the prospectus, with tabular disclosure of all prior securities transactions between the issuer (or any of its predecessors) and the selling securityholders, any affiliates of the selling securityholders, or any person with whom any selling securityholder has a contractual relationship regarding the transaction (or any predecessors of those persons), with the table including the following information disclosed separately for each transaction:
 - the date of the transaction;
 - the number of shares of the class of securities subject to the transaction that were outstanding prior to the transaction;
 - the number of shares of the class of securities subject to the transaction that were outstanding prior to the transaction and held by persons other than the selling securityholders, affiliates of the company, or affiliates of the selling securityholders;
 - the number of shares of the class of securities subject to the transaction that were issued or issuable in connection with the transaction;
 - the percentage of total issued and outstanding securities that were issued or issuable in the transaction (assuming full issuance), with the percentage calculated by taking the number of shares issued and outstanding prior to the applicable transaction and held by persons other than the selling securityholders, affiliates of the company, or affiliates of the selling securityholders, and dividing that number by the number of shares issued or issuable in connection with the applicable transaction;
 - the market price per share of the class of securities subject to the transaction immediately prior to the transaction (reverse split adjusted, if necessary); and
 - the current market price per share of the class of securities subject to the transaction (reverse split adjusted, if necessary).
8. Please provide us, with a view toward disclosure in the prospectus, with tabular disclosure comparing:
 - the number of shares outstanding prior to the warrants transaction that are held by persons other than the selling securityholders, affiliates of the company, and affiliates of the selling securityholders;

- the number of shares registered for resale by the selling securityholders or affiliates of the selling securityholders in prior registration statements;
- the number of shares registered for resale by the selling securityholders or affiliates of the selling securityholders that continue to be held by the selling securityholders or affiliates of the selling securityholders;
- the number of shares that have been sold in registered resale transactions by the selling securityholders or affiliates of the selling securityholders; and
- the number of shares registered for resale on behalf of the selling securityholders or affiliates of the selling securityholders in the current transaction.

In this analysis, the calculation of the number of outstanding shares should not include any securities underlying any outstanding convertible securities, options, or warrants.

9. Please provide us, with a view toward disclosure in the prospectus, with the following information:

- whether – based on information obtained from the selling securityholders – any of the selling securityholders have an existing short position in the company’s common stock and, if any of the selling securityholders have an existing short position in the company’s stock, the following additional information:
 - the date on which each such selling securityholder entered into that short position; and
 - the relationship of the date on which each such selling securityholder entered into that short position to the date of the announcement of the warrants transaction and the filing of the registration statement (*e.g.*, before or after the announcement of the warrants transaction, before the filing or after the filing of the registration statement, etc.).

10. Please provide us, with a view toward disclosure in the prospectus, with:

- a materially complete description of the relationships and arrangements that have existed in the past three years or are to be performed in the future between the issuer (or any of its predecessors) and the selling securityholders, any affiliates of the selling securityholders, or any person with whom any selling securityholder has a contractual relationship regarding the transaction (or any predecessors of those persons) – the information provided should include, in reasonable detail, a complete description of the rights and obligations of the parties in connection with the sale of the warrants; and

- copies of all agreements between the issuer (or any of its predecessors) and the selling securityholders, any affiliates of the selling securityholders, or any person with whom any selling securityholder has a contractual relationship regarding the transaction (or any predecessors of those persons) in connection with the sale of the warrants.

If it is your view that such a description of the relationships and arrangements between and among those parties already is presented in the prospectus and that all agreements between and/or among those parties are included as exhibits to the registration statement, please provide us with confirmation of your view in this regard.

Risk Factors, page 8

11. Please delete your statement that this section describes “some of the material risks inherent in and affecting” your business, as all material risks should be described in your disclosure.
12. Please include a risk factor relating to the risks to your business posed by cybersecurity issues.

Selling Securityholders, page 21

13. With respect to the shares to be offered for resale by each selling security holder that is a legal entity, please disclose the natural person or persons who exercise the sole or shared voting and/or dispositive powers with respect to the shares to be offered by that securityholder.
14. Please revise your disclosure of beneficial ownership to include beneficial ownership without regard to the 4.9% ownership cap.
15. We note that the selling securityholder Equitec Specialists, LLC is an affiliate of a broker-dealer. Please revise your prospectus to state that: (1) Equitec Specialists purchased in the ordinary course of business; and (2) at the time of purchase of the securities you are registering for resale, Equitec Specialists had no agreements or understandings, directly or indirectly, with any person, to distribute the securities. If you are unable to make these statements in the prospectus, the disclosure must state that Equitec Specialists is an underwriter.
16. We note the disclosure in the third paragraph of this section that the sellers identified in the table may have sold their shares “since the date on which the information in the...table is presented,” and that the table contains information as of February 4, 2014. Please revise to clarify that the table is accurate as of the date of the prospectus.
17. Please revise to disclose any position, office or other material relationship which the selling securityholders has had in the last three years with the registrant or any

predecessor. In this regard, we note the inclusion of Punit Dhillon in the table, who appears to be related to Avtar Dhillon, one of your directors.

Use of Proceeds, page 24

18. Please revise to provide the anticipated amount of accrued interest you may have to pay in accordance with the MLSC Loan Agreement, as well as the disclosure required by Instruction 4 to Item 504 of Regulation S-K.

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 30

19. Please revise your disclosure on page 31 to describe in greater detail your plan of operations for the next twelve months, including descriptions of the milestones you anticipate reaching, the anticipated timeframe of each milestone, and the amount and source of funds necessary to achieve each milestone.

Liquidity and Capital Resources, page 34

20. We note your disclosure in the first paragraph of your discussion of working capital. It appears that the reduction in current assets is also attributable to the collection of the promissory note receivable outstanding at September 30, 2013. Please revise to address the promissory note and its collection.

Our Business, page 38

Industry and Competition, page 41

21. We note your reference to a report by MedMarket Diligence, LLC and the National Health Statistic Report from 2006 and the 2009 update in support of statements in your prospectus. Please provide copies of these documents to us. Please mark your furnished support or provide page references in your response to the sections you rely upon for each specific statement.
22. Please revise to enhance your description of the competitive business conditions you face, as well as your competitive position in the industry and methods of competition. Refer to Item 101(h)(4)(iv) of Regulation S-K.

Compensation of Directors, page 50

23. We note that you have adopted a compensation policy for non-employee directors under which they will receive cash. We also note that in the fiscal year ended September 2013 you issued option awards to Dr. Arthur Rosenthal. If option awards will be part of non-director compensation, please describe the parameters of that compensation.

Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters, page 52

24. With respect to the shares held by Fitzroy Ltd., please disclose the natural person or persons or public company who exercise the sole or shared voting and/or dispositive powers over their shares.
25. We note that you list CCA as the beneficial owner of shares in this table, but identify Cranshire Capital Master Fund, Ltd. as the beneficial owner of shares in the Selling Securityholders table. In addition, we note that CCMF is identified as owning 12.8 million shares in the Selling Securityholders table, but that CCA is identified as owning only 10 million shares in this table. Please advise or revise for accuracy and consistency. In addition, please state clearly in the relevant footnote the natural person or persons who exercise the sole or shared voting and/or dispositive powers over the shares held by the relevant Cranshire entity.

Financial Statements, page F-1

Report of Independent Registered Public Accounting Firm, page F-2

26. Please have your independent registered public accounting firm revise: the introductory paragraph to clarify that the firm audited the consolidated balance sheets as of September 30, 2013 and 2012 and the related consolidated statements of operations, changes in stockholders' equity (deficit) and cash flows the years then ended and for the period from inception (March 6, 2006) through September 30, 201; and the opinion paragraph to clarify that the consolidated financial statements present fairly, in all material respects, the financial position of the Arch Therapeutics, Inc. and subsidiaries as of September 30, 2013 and 2012 and the results of their operations and their cash flows for years then ended and for the period from inception (March 6, 2006) through September 30, 2013.

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

27. Please revise to disclose the date and number of shares of stock and warrants issued for cash and for other consideration and the dollar amounts (per share and in total) assigned to the consideration received for each issuance of equity securities, and for each issuance involving noncash consideration, the nature of the non-cash consideration and the basis for assigning amounts. Please refer to ASC 915-215-45-1.

Consolidated Statement of Cash Flows, page F-6

28. Please tell us your basis in GAAP for classifying payments of accrued interest to related party in cash flows from financing activities. Please refer to ASC 230-10-45-15.

29. Please tell us your consideration of classifying noncash interest expense on convertible notes payable and notes payable to related party as an increase in accrued interest payable in changes in operating assets and liabilities rather than in adjustments to reconcile net loss to cash used in operating activities.
30. We noted that Almah had approximately 6,030,000 shares outstanding plus an additional 2,500,000 shares issued in connection with the Coldstream Financing before the forward stock split. Please tell us how you accounted for the stock split and how you determined the number of shares acquired in the reverse merger. Refer to ASC 805-40-45.
31. We note your disclosure in Item 2.01 of Form 8-K filed on June 26, 2013 that the former shareholders of Arch Therapeutics are entitled to receive 2.5 shares of your common stock for each share of stock held immediately prior to the closing of the Merger. Please tell us how you restated the equity structure of Arch Therapeutics using the exchange ratio established in the acquisition agreement to reflect the number of shares issued in the reverse acquisition. In addition, tell us if the number of shares issued to Dr. Norchi and Dr. Dhillon were included in the number of shares issued in the merger transaction. Refer to ASC 805-40-45.

Notes to Consolidated Financial Statements, page F-7

4. Income Taxes, page F-10

32. We note that the federal research and experimentation tax credit carryforwards and the dates that the credits begin to expire disclosed in the first and second paragraphs following the table of net deferred tax assets. Please explain to us why you disclose different amounts of federal tax credit carryforwards and the dates the credits begin to expire in these paragraphs.

7. Convertible Notes Payable, page F-11

33. Please disclose the exchange of the convertible notes and related accrued interest for common stock in the supplemental disclosure of cash flow information and non-cash financing activities presented in the consolidated statement of cash flows.

Exhibit 5.1

34. The registration statement relates to both currently outstanding shares and shares to be issued upon exercise of warrants; however, the opinion refers only to shares to be issued in the future. With respect to the 11,400,000 shares of common stock that are currently outstanding and being registered, please revise to have counsel opine that these shares are, as opposed to will be, duly authorized, validly issued, fully paid, and non-assessable. Please also clarify in the first sentence of the opinion that the "Shares" are currently issued and outstanding.

Exhibit 23.1 - Consent of Independent Public Accounting Firm

35. We note that the report of Moody, Famiglietti & Andronico, LLP dated December 27, 2013 related to your consolidated financial statements for the years ended September 30, 2013 and 2012 and for the period from inception (March 6, 2006) through September 30, 2013 is included in the prospectus and is not incorporated by reference to your annual report for the year ended September 30, 2013. Please have your independent registered public accounting firm revise its consent accordingly.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Act of 1933 and all applicable Securities Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Terrence W. Norchi
Arch Therapeutics Inc.
April 18, 2014
Page 11

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

Sincerely,

/s/ Lilyanna L. Peyser for

Mara Ransom
Assistant Director