



DIVISION OF  
CORPORATION FINANCE

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

August 29, 2014

Via E-mail

David I. Johnson  
Chief Executive Officer  
Alliqua BioMedical, Inc.  
2150 Cabot Boulevard West  
Langhorne, Pennsylvania 19047

**Re: Alliqua BioMedical, Inc.  
Registration Statement on Form S-3  
Filed August 5, 2014  
File No. 333-197844**

Dear Mr. Johnson:

We have limited our review of your registration statement to those issues we have addressed in our 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. Where 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.

Form S-3

1. We note from paragraphs (a) and (b) of Item 9.01 of your current report on Form 8-K filed on May 6, 2014 your indication that you would provide the financial statements and pro forma financial information required by that item by an amendment to your current report no later than 71 calendar days after the date your current report was required to be filed. We also note that you filed such information on July 21, 2014 which appears to be more than 71 calendar days after your initial filing was due. Please tell us how the amended current report was filed in a timely manner for purposes of General Instruction I.A.3(b) of Form S-3.

2. Please clear any comments that we may issue on your pending confidential treatment request before filing an acceleration request for your registration statement.

#### Table of Co-Registrants

3. We note that you are attempting to include two of your subsidiaries as registrants for the registration of certain guarantees that those subsidiaries may issue. Please note that to properly include such registrants they should each file as a co-registrant along with your registration statement on EDGAR with their own separate CIK number.
4. We note your disclosure that each other subsidiary of Alliqua Biomedical, Inc. that becomes a guarantor is “hereby deemed to be a registrant.” Please include all subsidiary co-registrants on your pending registration statement and remove any disclosure that indicates that subsidiaries that are not currently co-registrants will be deemed to be co-registrants when they become guarantors on securities that you are registering.

#### Prospectus Summary

5. Please include disclosure regarding your going concern opinion, your history of net losses and your accumulated deficit in your prospectus summary.

#### Preferred Stock, page 8

6. We note your reference to “subscription rights” in the second full paragraph on page 9. Please include such securities in your registration statement fee table if you intend to register those securities and remove references to any type of security that you are not registering.

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.

Please contact Tim Buchmiller at (202) 551-3635 or Daniel Morris, Special Counsel, at (202) 551-3314 with any questions.

Sincerely,

/s/ Daniel Morris for

Amanda Ravitz  
Assistant Director

cc: Rick A. Werner, Esq  
Haynes and Boone, LLP