



DIVISION OF
CORPORATION FINANCE

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

May 13, 2014

Via E-mail

Kenneth Londoner
Executive Chairman
BioSig Technologies, Inc.
12424 Wilshire Boulevard, Suite 745
Los Angeles, CA 90025

**Re: BioSig Technologies, Inc.
Amendment No. 5 to Registration Statement on Form S-1
Filed May 1, 2014
File No. 333-190080**

Dear Mr. Londoner:

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.

Overview, page 1

1. We note your response to prior comment 2; however, it remains unclear whether your disclosure includes all required information regarding the factual basis alleged to underlie the dispute about the status of your technology. For example, does the dispute involve allegations regarding (1) the status and capabilities of a prototype or (2) the system performance during animal studies? In this regard, please tell us your basis for concluding that the proof of concept unit "performed well" as disclosed on pages 23 and 28; were there any negative results from this or any other testing of your potential product?

Selling Stockholders, page 45

2. As with your responses to each of our comments, we are unable to provide you any comfort regarding the accuracy of your analyses or conclusions, including those in your

response to prior comment 12. Please note the acknowledgements mentioned at the end of this letter that must accompany any request to accelerate the effective date of your registration statement.

Certain Relationships and Related Party Transactions, page 56

3. Please expand your response to prior comment 13 to tell us how your disclosure in this section is reconcilable to the second, third and last paragraphs of Note 3 on page F-12.

Rule 144, page 58

4. Please expand your response to prior comment 14 to tell us when you believe your affiliates can resell their securities. See the disclosure required by Regulation S-K Item 201(a)(2)(ii).

Exhibits, page II-4

5. Please file the exhibits identified as “to be filed by amendment.”

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

Kenneth Londoner
BioSig Technologies, Inc.
May 13, 2014
Page 3

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.

You may contact Gary Todd at (202) 551-3605 if you have questions regarding comments on the financial statements and related matters. Please contact Joseph McCann at (202) 551-6262 or me at (202) 551-3617 with any other questions.

Sincerely,

/s/ Russell Mancuso

Russell Mancuso
Branch Chief

cc (via e-mail): Rick A. Werner, Esq.