



January 21, 2014

VIA EDGAR

Division of Corporation Finance
Securities and Exchange Commission
Washington, D.C. 20549
Attention: Russell Mancuso

**Re: BioSig Technologies, Inc.
Registration Statement on Form S-1, originally filed July 22, 2013
File No. 333-190080, as amended (the "Registration Statement")**

Ladies and Gentlemen:

On behalf of BioSig Technologies, Inc. (the "Company"), transmitted herewith for filing is Amendment No. 3 to Form S-1 ("Amendment No. 3"), marked to show changes from Amendment No. 2 to Registration Statement on Form S-1 of the Company (File No. 333-190080), filed with the Securities and Exchange Commission (the "Commission") on October 4, 2013. We acknowledge receipt of the letter of comment dated October 21, 2013 (the "Comment Letter") from the staff (the "Commission Staff") of the Division of Corporation Finance of the Commission regarding the Registration Statement. The following are the Company's responses to the Comment Letter. The Company's responses are numbered to correspond to the Commission Staff's comments as numbered in the Comment Letter. For your convenience, each of the Commission Staff's comments contained in the Comment Letter have been restated below in their entirety, with the Company's corresponding response set forth immediately under such comment.

Prospectus Cover

- 1. We note your revision in response to prior comment 1. However, the disclosure about sales "not in the public market" that remains as the last clause in the relevant sentence no longer addresses the price at which the shares will be sold – which appears to be the point of the sentence. If you mean that the selling stockholders will sell their securities at the disclosed fixed price until your common shares are quoted on the OTC Bulletin Board and thereafter at prevailing market prices or privately negotiated prices, please say so clearly and directly here and throughout your prospectus where relevant. Also ensure that the sentence refers to the price at which the securities will be sold, not merely the price at which they are offered.**

Response:

The Company has revised the disclosure in the second paragraph under its logo on the prospectus cover, in the Prospectus Summary section and in the Plan of Distribution section of Amendment No. 3 to clarify that the selling stockholders will be selling their shares of common stock at a fixed price until the Company's common stock is quoted on the OTC Bulletin Board, and after the Company's common stock is quoted on the OTC Bulletin Board, the shares of common stock may be sold at prevailing market prices or privately negotiated prices.

Business, page 21

2. **We note your additional disclosure that cites studies and reports. Please update your response to comment 17 in our letter to you dated August 16, 2013.**

Response:

To the Company's knowledge, the studies and data cited and referenced in the "Business" section of Amendment No. 3 represent the most recent relevant studies and data available.

Initial Analysis, page 26

3. **We note that your revised disclosure in response to prior comment 12 indicates that the recording came from a "real-life challenging recording environment"; however, your response and disclosure do not indicate whether this environment is typical.**

Accordingly, please address this aspect of the prior comment. If the data you depict is not typical of data recorded on currently sold equipment, please revise your disclosure to make this clear and indicate the portion of the current recording market that generates data of the type of depict.

Response:

The Company believes that the depicted data on page 27 of Amendment No. 3 represents a typical recording environment. According to S. J. Asirvatham, MD, et. al., obtaining cardiac recordings in a typical electrophysiology laboratory represents a significant challenge. S. J. Asirvatham, MD, et. al., stated: "Successful mapping and ablation in the electrophysiology laboratory is critically dependent on acquiring multiple, low-amplitude, intracardiac signals in the presence of numerous sources of electric noise and interference and displaying these signals in an uncomplicated and clinically relevant fashion, with minimal artifacts. This represents a significant engineering challenge and, in real-life electrophysiology laboratory, is not always successful." ("Signals and Signal Processing for the Electrophysiologist," *Circ Arrhythm Electrophysiol.* 2011;4:965-973). Therefore, characterizing that the data came from a "real-life challenging recording environment" is an accurate representation of the nature of a typical recording environment.

Intellectual Property, page 29

4. **We note your disclosure added in response to prior comment 15. If the absence of a clear agreement assigning the technology to the registrant creates risks or uncertainties concerning the registrant's ownership of the technology that you identify throughout the prospectus as belonging to the registrant, please provide us your analysis supporting your conclusion that you need not highlight this issue in your prospectus summary and include a risk factor to explain.**

Response:

The Company has updated the disclosure on page 30 of Amendment No. 3 with respect to the Company's patent applications. The patent application that the Company filed in December 2013 represents the initial foundational intellectual property upon which its main product, the PURE EP System, can be evaluated. The Company is currently preparing a patent application that includes the intellectual property representing the underlying technology of the PURE EP System. The Company believes that it has full ownership of the technology underlying its products, and neither additional disclosure nor a risk factor discussing the Company's ownership of its technology is necessary.

Biographical Information, page 32

5. **We note your response to prior comment 16 indicating that Mr. Chaussy has not served as an executive officer during the past five years; however, your disclosure that he has acted as a chief financial officer "since 2001" suggests that he still serves as an executive officer at a public company. Please revise your disclosure to provide more specific information regarding when he served in the roles and at each company you have highlighted. Ensure that your disclosure fully addresses the executive officers' business experience during the last five years. In this regard, the experience of your CEO from September 2012 to September 2013 also is unclear; please revise.**

Response:

The Company has revised the disclosure on page 33 of Amendment No. 3 to provide more specific information with respect to Mr. Chaussy's biographical information. Because the Company's former CEO resigned and his biographical information was removed from Amendment No. 3, no further revisions were necessary.

BioSig Technologies, Inc. 2012 Equity Incentive Plan, page 36

6. **According to the first paragraph of this section, it appears that you have granted options for more shares than are reserved under your 2012 plan. Please tell us how such excess grants are possible and the status of those grants.**

Response:

The Company has revised the disclosure on page 38 of Amendment No. 3 to include the accurate number of shares that are reserved for issuance under the Company's 2012 Equity Incentive Plan.

Selling Stockholders, page 39

7. **Your response to prior comment 18 suggests that warrants issued as consideration for amending the registration rights agreement and securities purchase agreement are included in the shares offered by the selling stockholders. If true, please revise this section to clarify, and ensure that your disclosure in this section makes clear the number of shares offered by each selling stockholder that underlie those warrants.**

Response:

The Company has revised the disclosure on pages 43 to 52 of Amendment No. 3 to clarify the number of warrants that were offered to the selling stockholders as consideration for amending the Company's registration rights agreement and securities purchase agreement. Certain of the selling stockholders are only offering half of the warrants that such selling stockholders had received as consideration for amending the Company's registration rights agreement and securities purchase agreement, while the remainder of the selling stockholders are not offering any of the warrants that such selling stockholders had received as consideration for amending the Company's registration rights agreement and securities purchase agreement.

Rule 144, page 46

8. **Please apply the rules that you cite in response to prior comment 21 to your facts and circumstances to tell us, with a view toward clarified disclosure, on what dates material amounts of your securities will be eligible for sale in reliance on Rule 144 and the number of shares eligible for sale on those dates.**

Response:

The Company has revised the disclosure on page 54 of Amendment No. 3 to include the number of shares of the Company's common stock that are currently eligible for sale by non-affiliates of the Company in reliance on Rule 144.

Please direct any questions or comments concerning this response to the undersigned at (212) 659-4974.

Very truly yours,

/s/ Rick A. Werner

Rick A. Werner, Esq.

cc: Kenneth Londoner, BioSig Technologies, Inc.