



June 11, 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. 7 to Form S-1 ("Amendment No. 7"), marked to show changes from Amendment No. 6 to Registration Statement on Form S-1 of the Company (File No. 333-190080), filed with the Securities and Exchange Commission (the "Commission") on May 22, 2014 ("Amendment No. 6"). We acknowledge receipt of the letter of comment dated June 6, 2014 (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.

Overview, page 1

- 1. We note your revisions in response to prior comment 1. If Mr. Drachman alleges that the study data he *received* indicated that your system would not perform in the manner that was communicated to him, please clarify your disclosure which currently states that he alleges that the *withheld* data led him to doubt the communications.**

Response:

The Company has revised its disclosure on pages 1 and 35 of Amendment No. 7 to clarify that Mr. Drachman alleges that the highly limited information that he received, rather than the information that was withheld, led him to doubt that the actual performance of the PURE EP System would be consistent with the statements communicated to him.

Certain Relationships and Related Party Transactions, page 57

- 2. We note your response to prior comment 3. Please tell us:**
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- where you have revised your disclosure in this section to reflect the transaction mentioned in the third paragraph to Note 3 on page F-12.
- where you have disclosed the composition of the amount mentioned in the second paragraph to Note 3 on page F-12 as you have in your response such that investors can understand the amount and terms under which disclosed compensation has been deferred.
- why your revised disclosure on page 57 no longer discloses the November 21, 2012 transaction with Mr. Londoner.
- who provided the \$10,500 related-party advance that is reflected on your March 31, 2014 balance sheet and where this transaction is reflected in your disclosure concerning related-party transactions.

Response:

The Company has revised and expanded its disclosure in the sixth paragraph of the “Certain Relationships and Related Party Transactions” section on page 57 of Amendment No. 7 with respect to the transaction mentioned in the third paragraph to Note 3 on page F-12. The Company notes that the warrants to purchase an aggregate 53,830 shares of common stock at an exercise price of \$2.61 per share, as described in Note 3, include warrants issued to (i) Mr. Londoner to purchase 47,848 shares of common stock and (ii) Mr. Steinhouse to purchase 5,982 shares of common stock. These warrants were issued to the holders of Series C Preferred Stock, which included Mr. Londoner and Mr. Steinhouse, as consideration for amendments to the terms of the securities purchase agreement and registration rights agreement related to the Series C Preferred Stock in July 2013 and October 2013. As a result of the amendment to the terms of the Series C Preferred Stock on March 27, 2014, the full-ratchet anti-dilution protection provision of the warrants decreased the exercise price of the warrants from \$2.61 to \$1.50 per share and increased the number of shares issuable under each warrant to 83,256 shares for Mr. Londoner and 10,408 shares for Mr. Steinhouse.

The Company has revised and expanded its disclosure on pages 39, 57 and 58 of Amendment No. 7 to clarify the composition of the amounts mentioned in the second paragraph of Note 3 on page F-12. In addition, please refer to the itemized schedules below, which sets forth each amount due to related parties as of December 31, 2013 and December 31, 2012 and where such amount is disclosed in Amendment No. 7.

Accrued interest and expenses due to related parties as of December 31, 2013

Related Party	Amount	Section	Page
Anna & Co., Inc.	\$ 7,000	Certain Relationships and Related Party Transactions	58
Asher Holzer	\$ 152,500	Certain Relationships and Related Party Transactions	57
Ken Londoner	\$ 54,980	Executive Compensation	39
Miko Consulting Group, Inc.	\$ 12,531	Certain Relationships and Related Party Transactions	58
Ken Londoner	\$ 17,687	Certain Relationships and Related Party Transactions	58
Steve Chaussy	\$ 110	Certain Relationships and Related Party Transactions	58
Total:	\$ 244,808		

Accrued interest and expenses due to related parties as of December 31, 2012

Related Party	Amount	Section	Page
Ken Londoner	\$ 36,056	Certain Relationships and Related Party Transactions	57
Budimir Drakulic	\$ 7,573	Certain Relationships and Related Party Transactions	57
Endicott Management Partners, LLC	\$ 5,000	Certain Relationships and Related Party Transactions	57
Ken Londoner	\$ 1,195 *	Certain Relationships and Related Party Transactions	57
Ken Londoner	\$ 3,763 *	Certain Relationships and Related Party Transactions	57
John Steinhouse	\$ 597 *	Certain Relationships and Related Party Transactions	57
Total:	\$ 54,184		

*Please note that such amounts are disclosed as accrued interest on outstanding promissory notes.

The Company has re-inserted the disclosure related to the November 21, 2012 transaction with Mr. Londoner on page 57 of Amendment No. 7, which had been removed inadvertently from Amendment No. 6.

The Company has added disclosure on pages 57 and 58 of Amendment No. 7 with respect to the \$10,500 related-party advance that is reflected on the March 31, 2014 balance sheet, which represents (i) \$10,000 advanced to the Company by Mr. Steinhouse on March 5, 2014, which was repaid in full on April 3, 2014 and (ii) \$500 that was previously advanced by Dr. Drakulic in April 2011, but which remains unpaid as of the date hereof.

Rule 144, page 59

- 3. We note your response to prior comment 4. However, it remains unclear how this section fully complies with Regulation S-K Item 201(a)(2)(ii) since your disclosure currently addresses only a fraction of the outstanding shares. Please advise or revise.**

Response:

The Company has revised and expanded its disclosure on pages 59 and 60 of Amendment No. 7 to address the full number of outstanding shares and when the Company believes that such shares are or will become eligible for resale under Rule 144 by non-affiliates and affiliates, respectively.

In addition to the foregoing responses, the Company notes that it still expects to achieve the milestones set forth on pages 24 and 29 of Amendment No. 7 during the second fiscal quarter ended June 30, 2014.

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.