



DIVISION OF
CORPORATION FINANCE

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

July 26, 2012

Via E-mail

Gary D. Pickett
Chief Financial Officer
Bovie Medical Corporation
734 Walt Whitman Rd.
Melville, NY 11717

**Re: Bovie Medical Corporation
Form 10-K for fiscal year ended December 31, 2011
Filed March 29, 2012
File No. 001-31885**

Dear Mr. Pickett:

We have reviewed your filing 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 within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. 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 filing and the information you provide in response to these comments, we may have additional comments.

Intellectual Property, page 5

1. We note your disclosure on page 5 that some of your patents are nearing the end their term. In future filings, please disclose the duration of your material patents, and the nature of the claims to which those patents relate. Refer to Regulation S-K Item 101(h)(4)(vii).

Compensation of Named Executive Officers, page 39

2. With a view toward amended disclosure, please tell us how you determined not to discuss in this section the penalties against Mr. Citronowicz referenced in your Form 8-K filed November 29, 2011. We note, for example, the forfeiture of stock options mentioned in that document. See Regulation S-K Item 402(o)(2).

3. Please reconcile the information in the table on page 41 regarding Messrs. Pickett and Keen with the information in the table on page 21 of your definitive proxy statement filed May 22, 2012.

Signatures, page 47

4. In your future filings, please indicate who is signing in the capacity of principal accounting officer or controller. Refer to Form 10-K, Signatures, and comment 12 from our letter dated August 25, 2009.

Exhibits

5. We note that multiple exhibits were omitted from Exhibit 99.1 to your Form 8-K on February 28, 2012. Please file those exhibits or tell us how you determined that these exhibits are not required to be filed.

Definitive Proxy Statement on Schedule 14A filed May 22, 2012

6. On pages 5-6 of your definitive proxy statement, you state that broker non-votes will have the same effect as an “against” vote with respect to proposals two and three and that each of those proposals requires “for” votes from the holders of a majority of shares present and entitled to vote in person or by proxy. Given this, please tell us how you determined the voting results you disclosed in the Form 8-K filed July 13, 2012, including how you determined that proposals two and three were approved by the required number of votes “for” those proposals.

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 Exchange Act of 1934 and all applicable Exchange 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.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Gary D. Pickett
Bovie Medical Corporation
July 26, 2012
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Please contact Louis Rambo at (202) 551-3289 or Geoff Kruczek at (202) 551-3641 with any questions.

Sincerely,

/s/ Geoff Kruczek for

Amanda Ravitz
Assistant Director

cc (by E-mail): Adam Silvers, Esq.