



DIVISION OF
CORPORATION FINANCE

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

June 24, 2010

Manny Villafana
Chairman and Chief Executive Officer
Kips Bay Medical, Inc.
3405 Annapolis Lane North, Suite 200
Minneapolis, Minnesota, 55447

**Re: Kips Bay Medical, Inc.
Amendment No. 2 to Registration Statement on Form S-1
Filed June 11, 2010
File No. 333-165940**

Dear Mr. Villafana:

We have reviewed your amended 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.

Our Solutions, page 3

1. We note your response to prior comment 4 and reissue. Your revised disclosure appears to identify a risk that you deem immaterial. If the risk is immaterial, please tell us why you have listed it as one of the two disadvantages you highlight in your summary. Revise this section to identify and briefly discuss the most significant risks to your offering.

Risk Factors, page 7

2. Refer to prior comment 5. It remains unclear how you determined that you need not file the investigator agreements or the clinical trial agreements as exhibits. Please provide us supplementally with copies of these agreements.

Research and Development Expenses, page 29

3. Please revise the final paragraph of this section to explain the phrase “proof of concept.”

Royalty payments, page 41

4. We note your response to prior comment 10 and the additional disclosure on page 41. Please address the uncertainty regarding the circumstances under which the intellectual property rights may revert to Medtronic in your intellectual property risk factor disclosure.
5. We note that use the terms “complete and “conduct” in your revisions in response to prior comment 12. Revise to clarify that “conduct” means “complete” or clarify the different meanings of these terms for purposes of your disclosure.

Intellectual Property, page 52

6. We note your response to prior comment 14. With regard to the disclosure that you have added at page 3 of the prospectus, please revise to relocate this disclosure to the first page of the prospectus. In addition, please cross-reference to your disclosure under Intellectual Property on page 52. Alternatively, please tell us why revisions to make the disclosure more prominent are not necessary.
7. Refer to the eighth sentence of the third paragraph of this section. Please revise to disclose the reasons for your optimism that you will overcome the patent rejections.
8. Refer to the final sentence of the third paragraph of this section. Please discuss the likelihood that you would be able to purchase or replicate some or all of the competitive advantages you believe that you derive from your eSVS.

Competition, page 54

9. While we note your response to prior comment 18, it still appears that the fail rate of CABG is a competitive feature. As you indicate in the final sentence of your supplemental response, it is a factor that relates to the selection of your product over other competing products. If you believe that fail rate is one of a variety of factors considered by physicians, please revise to disclose your belief and state whether you believe the fail rate of CABG and eSVS are positive or negative factors.

United States, page 64

10. Please revise to include the information contained in the second paragraph of your response to prior comment 20.

Exhibits

11. Refer to comment 60 in our letter dated May 5, 2010. On the basis of your undertaking in response to that comment, please tell us why you have filed the form of indemnification agreement. Also, with a view to disclosure, please tell us when you expect to enter into indemnification agreements with each of Arch Smith, Robert Munzenrider and Robert Sheehy given your disclosure on page 68 that they will not become directors until the closing of the offering.

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.

Manny Villafana
Kips Bay Medical, Inc.
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You may contact Julie Sherman at (202) 551-3640 or Jeffrey Jaramillo, Accounting Branch Chief at (202) 551-3212 if you have questions regarding comments on the financial statements and related matters. Please contact Ruairi Regan at (202) 551-3269 or me at (202) 551-3314 with any other questions.

Sincerely,

Daniel Morris
Special Counsel

cc (by facsimile): Robert K. Ranum, Esq.