



DIVISION OF
CORPORATION FINANCE

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

August 26, 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. 4 to Registration Statement on Form S-1
Filed August 12, 2010
File No. 333-165940**

Dear Mr. Villafana:

We have reviewed your amended registration statement and have the following comment. In our comment, 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 comment applies 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 this comment, we may have additional comments.

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1. We note your response to prior comment 2. We also note your response to comment 10 of the staff's letter dated June 4, 2010 in which you state that the company is unable to fully describe several material terms of the reversion rights because the rights were not fully defined in the agreements with Medtronic. Given that the parties have not agreed as to what activities, or lack thereof, will constitute cessation of commercialization, there appears a distinct possibility that the threat of reversion may arise out of a legitimate dispute as to whether commercialization has been ceased as opposed to suspended, delayed or de-prioritized. Given the potential significance of the loss of these rights and the ambiguity of the governing agreements, we reissue our prior comment.

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

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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 comment, 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.

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 Daniel Morris, Special Counsel at (202) 551-3314 with any other questions.

Sincerely,

Russell Mancuso
Branch Chief

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