



DIVISION OF
CORPORATION FINANCE

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

April 30, 2012

Via E-mail

Ali Haghighi-Mood
President and Chief Executive Officer
Cambridge Heart, Inc.
100 Ames Pond Drive
Tewksbury, MA 01786

**Re: Cambridge Heart, Inc.
Registration Statement on Form S-1
Filed April 13, 2012
File No. 333-180719**

Dear Dr. Haghighi-Mood:

We have limited our review of your registration statement to those issues we have addressed in our 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. Where 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.

Security Ownership..., page 49

1. We note your disclosure on page 56 indicating that Alpha Capital Anstalt beneficially owns 11,363,634 shares. Please revise the beneficial ownership table to reflect Alpha Capital Anstalt's holdings or advise us why you believe they do not need to be identified in the table.

Selling Stockholders, page 55

2. Given the nature and size of the offering, please tell us why the selling stockholders should not be identified as underwriters and tell us your basis for determining that the transaction is appropriately characterized as a transaction that is eligible to be made on a shelf basis under Rule 415(a)(1)(i).

3. We note from note 2 that holders of the convertible notes can elect a “higher percentage” applicable to the conversion and exercise limitations you mention. Please tell us what provision of what exhibit enables them to make that election and how long they are able to change their current election.
4. Please provide us with tabular disclosure of the dollar amount of each payment (including the value of any payments to be made in common stock) in connection with the transaction that you have made or may be required to make to any selling stockholder, any affiliate of a selling stockholder, or any person with whom any selling stockholder has a contractual relationship regarding the transaction (including any interest payments, liquidated damages, payments made to “finders” or “placement agents,” and any other payments or potential payments). Please provide footnote disclosure of the terms of each such payment. Please do not include any repayment of principal on the convertible notes in this disclosure.
5. Please provide us with tabular disclosure of all prior securities transactions between the issuer and the selling stockholders, any affiliates of the selling stockholders, or any person with whom any selling stockholder has a contractual relationship regarding the transaction, with the table including the following information disclosed separately for each transaction:
 - the date of the transaction;
 - the number of shares of the class of securities subject to the transaction that were outstanding prior to the transaction;
 - the number of shares of the class of securities subject to the transaction that were outstanding prior to the transaction and held by persons other than the selling stockholders, affiliates of the company, or affiliates of the selling stockholders;
 - the number of shares of the class of securities subject to the transaction that were issued or issuable in connection with the transaction;
 - the percentage of total issued and outstanding securities that were issued or issuable in the transaction (assuming full issuance), with the percentage calculated by taking the number of shares issued or issuable in connection with the applicable transaction and dividing that number by the number of shares issued and outstanding prior to the applicable transaction and held by persons other than the selling stockholders, affiliates of the company, or affiliates of the selling stockholders;
 - the market price per share of the class of securities subject to the transaction immediately prior to the transaction (reverse split adjusted, if necessary); and
 - the current market price per share of the class of securities subject to the transaction (reverse split adjusted, if necessary).

6. Please provide us with tabular disclosure comparing:
- the number of shares outstanding prior to the convertible note transaction that are held by persons other than the selling stockholders, affiliates of the company, and affiliates of the selling stockholders;
 - the number of shares registered for resale by the selling stockholders or affiliates of the selling stockholders in prior registration statements;
 - the number of shares registered for resale by the selling stockholders or affiliates of the selling stockholders that continue to be held by the selling stockholders or affiliates of the selling stockholders;
 - the number of shares that have been sold in registered resale transactions by the selling stockholders or affiliates of the selling stockholders; and
 - the number of shares registered for resale on behalf of the selling stockholders or affiliates of the selling stockholders in the current transaction.

In this analysis, the calculation of the number of outstanding shares should not include any securities underlying any outstanding convertible securities, options, or warrants.

7. Please tell us whether you have the intention, and a reasonable basis to believe, that you will have the financial ability to make all payments on the overlying securities and whether – based on information obtained from the selling stockholders – any of the selling stockholders have an existing short position in your common stock. If any of the selling stockholders have an existing short position in the company's stock, please tell us the date on which each such selling stockholder entered into that short position and the relationship of the date on which each such selling stockholder entered into that short position to the date of the announcement of the convertible note transaction and the filing of the registration statement (*e.g.*, before or after the announcement of the convertible note transaction, before the filing or after the filing of the registration statement, etc.).
8. Please reconcile your disclosure here regarding the aggregate number of shares registered for resale with the number on your prospectus cover. Also reconcile the number of investors in this table with the number of investors mentioned on page 2.
9. Please show us how you calculated 2,721,830 as the number of shares that “may be issued as interest” on the senior secured convertible promissory notes. Please include all calculations and assumptions underlying your conclusions. For example, what amount of interest do you anticipate paying and what conversion rate did you use and why? As necessary, please also include separate calculations for shares issuable as “Additional Interest.”

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.

Please contact Joseph McCann at (202) 551-6262 or Geoff Kruczek, Senior Attorney, at (202) 551-3641 with any questions.

Sincerely,

/s/ Geoff Kruczek for

Amanda Ravitz
Assistant Director

cc (via email): Michelle L. Basil, Esq. – Nutter McClennen & Fish LLP