

December 29, 2011

VIA EDGAR AND FEDERAL EXPRESS

United States Securities and Exchange Commission
Division of Corporate Finance
100 F Street, NE
Washington, DC 20549-3561
Attention: Amanda Ravitz, Assistant Director

Re: Sunshine Heart, Inc. Registration Statement on Form 10 (File No. 001-35312) (the "Registration Statement")

Ladies and Gentlemen:

On behalf of Sunshine Heart, Inc. (the "Company"), we are transmitting the following responses of the Company to the comments of the Commission's staff (the "Staff") as set forth in the letter of Amanda Ravitz, Assistant Director, dated December 23, 2011 (the "Comment Letter"). We have enclosed for your reference two courtesy copies of Amendment No. 2 to the Registration Statement (the "Amendment") in a clean version and two copies of the Amendment in a version marked to show changes from Amendment No. 1 to the Registration Statement.

The responses herein were provided to this firm by the Company. In this letter, we have recited the comment from the Staff in italicized, bold type and have followed the comment with the Company's response in regular type. References in this letter to we, our or us mean the Company or its advisors, as the context may require. All references to page numbers in the Company's responses refer to page numbers in the Amendment.

Overview, page 1

1. *We note your response to prior comment 10. Please revise the summary to include disclosure that all revenue during 2009 and 2010 was derived from your feasibility clinical trials.*

Company Response: The Company revised page 1 to disclose that all of its revenue for the years ended December 31, 2010 and 2009 was derived solely from sales in conjunction with its feasibility clinical trial.

Our Product, page 2

2. *Expand your discussion of the adverse consequences if your product is turned off for extended periods of time. In addition, please clarify whether use of the product, including turning it off and on, requires a visit to a medical facility.*

Company Response: The Company revised page 2 to disclose that, in addition to the potential return of a patient's prior heart failure symptoms, a patient could experience a loss of any improvement in the patient's condition resulting from use of the C-Pulse System or worsening of the patient's heart failure symptoms compared to when the patient began receiving treatment if the C-Pulse System is not used as instructed. The Company is unable to provide any more specific information regarding the potential adverse consequences of turning the C-Pulse System off for extended periods of time because the particular response of a person to non-compliant use of the Company's product varies from patient to patient. The Company also revised page 2 to clarify that patients are not required to visit a medical facility when turning the C-Pulse System on or off.

Clinical Development, page 3

3. *We note your response to prior comment 6. Please revise the second-to-last paragraph of this section to disclose the anticipated end date of the IDE study.*

Company Response: The Company revised the paragraph cited in the Staff's comment to disclose that the anticipated end date of its IDE study is in 2015.

Sales and Marketing, page 3

4. *Please disclose the anticipated timetable for the expansion of your sales into Europe and throughout the world.*

Company Response: In response to the Staff's comment, the Company revised page 3 to disclose that it expects to begin sales in Europe in the middle of 2012 and to clarify that expansion in Europe beyond the initial countries targeted, or in other parts of the world, is subject to uncertainties. Due to these uncertainties, the Company has not established anticipated timetables for expansion beyond the countries in Europe where it intends to initially commence sales.

Manufacturers and Suppliers, page 3

5. *We note that you do not have any material long-term agreements with your suppliers. However, please revise to clarify whether you have any suppliers on which you materially rely.*

Company Response: In response to the Staff's comment, the Company revised this section to clarify that all critical components of the Company's product are single sourced and therefore any unwillingness or inability of a supplier to provide a component of the Company's product would interrupt and adversely affected the Company's business. The Company further added disclosure that, in light of these facts, the Company materially relies on each of its suppliers in the short term.

Competition, page 4

6. *We note your response to prior comment 9. Please revise to disclose that the potential disadvantages of the C-Pulse System are not fully known.*

Company Response: In response to the Staff's comment, the Company revised its disclosure to state that the potential competitive disadvantages of the Company's product are not fully known.

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Properties, page 27

7. *We note your revised disclosure in this section. Please continue to provide updated disclosure with your subsequent amendments. In this regard, we note that you anticipate moving your operations in late December 2011.*

Company Response: On page 27, the Company updated its disclosure to reflect that relocation of the Company's headquarters is expected to be completed in January 2012.

Summary Compensation Table, page 33

8. *Given your disclosure in the last paragraph on page 33 that your employment agreement with Mr. Rosa provides for a salary of \$250,000, please provide additional disclosure clarifying why the summary compensation table indicates that Mr. Rosa received \$280,000 in base salary in 2011.*

Company Response: As disclosed on page 33, Mr. Rosa's employment agreement provided him with a base salary of \$250,000, subject to annual review of the Company's board of directors. The Company entered into its employment agreement with Mr. Rosa on November 1, 2009. In connection with subsequent annual reviews, the Company's board of directors has increased Mr. Rosa's annual base salary to be greater than the \$250,000 per year initially agreed upon with Mr. Rosa. The Company revised page 33 to disclose Mr. Rosa's current annual base salary. The \$280,000 amount included in the Summary Compensation Table with respect to Mr. Rosa represents the amount of salary earned by Mr. Rosa for the Company's most recently completed fiscal year based on his base salary as in effect throughout that period.

9. *We note your response to prior comment 15. With a view to disclosure, please describe for us the nature and extent of your chief executive officer's consultation of certain publicly available information. For instance, please tell us the type of information that the chief executive officer consulted and how this information served as a "reference point."*

Company Response: In response to the Staff's comment, the Company revised its disclosure on page 34 to disclose that the publicly available information consulted by the Company's chief executive officer consisted of proxy statements filed with the Commission and that he used the information gathered to confirm that the salaries he recommends for the Company's other named executive officers is not, in his opinion, significantly above or below the salaries of persons occupying similar positions at the companies included in the information so gathered.

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Please do not hesitate to call me at 612-766-8134 if you have any questions or comments regarding the foregoing or if we can be of service in facilitating your review of this filing.

Sincerely,

/s/ Matthew R. Kuhn

Matthew R. Kuhn

Enclosures

cc: Alicia Lam, Staff Attorney, Securities and Exchange Commission (w encl.)
Daniel Morris, Special Counsel, Securities and Exchange Commission (w/out encl.)
David Rosa, Chief Executive Officer, Sunshine Heart, Inc. (w/out encl.)
Jeffrey Mathiesen, Chief Financial Officer, Sunshine, Inc. (w/out encl.)

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