



DIVISION OF
CORPORATION FINANCE

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

December 30, 2010

Richard D. Brounstein
Executive Vice President, Chief Financial Officer
and Secretary
NewCardio, Inc.
2350 Mission College Blvd., Suite 1175
Santa Clara, California 95054

**Re: NewCardio, Inc.
Form 10-K for the Year Ended December 31, 2009
Filed February 24, 2010
File No. 333-132621
Form 10-Q for the Quarterly Period Ended September 30, 2010**

Dear Mr. Brounstein:

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.

Form 10-K for the Year Ended December 31, 2009

File Number

1. We note that the Commission File number you are using for the Form was also used on a Form S-1 filed February 11, 2008. Please advise.

Item 10. Directors, Executive Officers.... page 33
Directors and Executive Officers, page 33

2. In future filings, please provide disclosure required by Item 401(e) of Regulation S-K regarding the qualifications of your directors.

Compensation of the Members of the Board of Directors, page 35

3. Your disclosure in the first paragraph indicates that each director receives a stock grant of 100,000 shares with the chairman receiving 400,000. In future filings, please clarify the frequency and other terms of these grants. We note footnote 3 on page 40.

Item 15. Exhibits, Financial Statements Schedules, page 45

4. We note that you filed as exhibit 10.23 the 2008 consulting agreement with Mr. Blair. Please tell us why you did not file the 2009 consulting agreement mentioned on page 43.
5. Please tell us where you filed the employment agreement with Dr. Panescu mentioned in footnote (1) on page 36. Also, tell us where you filed the three master services agreements you entered into in 2009 as described in the third paragraph on page 9.
6. Please tell us the differences between exhibits 10.5 and 10.12 and 10.7 and 10.14. In addition, we note that certain exhibits are neither incorporated by reference nor filed with your document. Please advise.

Financial Statements

Report of Independent Registered Public Accounting Firm, page F-1

7. We note the second paragraph in the audit report of RBSM LLP improperly refers to the “auditing standards of the Public Company Accounting Oversight Board (United States)”. Paragraph 3 of PCAOB AS 1 requires the auditor to refer to “the standards of the Public Company Accounting Oversight Board (United States)”. Please amend the filing to include a corrected auditor’s report that removes the word “auditing” and properly references “the standards” as required by paragraph 3 of PCAOB AS 1.

Consolidated Statements of Operations, page F-3

8. We note that the amount of selling, general and administrative expenses from the date of inception through December 31, 2009 presented herein is “\$11,5564,320”. This appears to be a typographical error. Please tell us the amount that should have been recorded for the referenced line item and present the correct amount in your future filings, including any amendments. We assume that total selling, general and administrative expenses from the date of inception through December 31, 2009 will be greater than the sum of your selling, general and administrative expenses for 2009 and 2008.

Note 2 – Going Concern Matters, page F-19

9. Please note that filings containing accountant’s reports that are qualified as a result of questions about the entity’s continuing existence must contain appropriate and prominent

disclosure of the registrant's financial difficulties and *viable plans* to overcome these difficulties. Please revise your disclosure in future filings, including any amendments, to address our concern. Refer to FRC 607.2 and AU Section 341 for guidance.

Note 7 – Credit Facility, page F-21

10. Revise your disclosure in future filings, including any amendments, to define the term VWAPs.

Note 8 – Series C Convertible Preferred Stock, page F-22

11. We note that you issued 2,920 shares of Series C Convertible Preferred Stock and this preferred stock contains certain reset and possible redemption provisions which require it to be classified as a liability in the balance sheet. We also note your disclosure that this liability is stated at redemption value net of discounts. Please address the following:
 - Even though you stated that this preferred stock was classified as a liability in the balance sheet, we note that the preferred shares subject to liability conversion of \$784,010 were presented in the mezzanine which is between liability and equity sections. Explain to us why this presentation is consistent with your accounting disclosures and applicable U.S.GAAP.
 - Describe to us the significant terms of reset and possible redemption provisions and tell us how you accounted for them. While we note your reference to FASB ASC 815-40, it does not appear to be sufficient for a reader of your financial statements to understand your accounting. As such, please cite for us and revise future filings, including any amendments, to disclose the specific applicable U.S. GAAP that supports your accounting.
 - Further clarify your accounting for the reset provisions and possible redemption provisions as well as your accounting for the Series C Preferred Stock and related warrants. In your explanation, please include the total proceeds that you raised by the issuance of the preferred stock and how you recorded the amounts in your financial statements.
 - Finally, explain to us in greater detail why you recorded and present the Series C Convertible Preferred Stock at redemption value net of discounts rather than at its fair value. Please cite the accounting guidance that supports your conclusions.

Warrant liability in connection with the issuance of Series A Preferred Stock in December 2007, page F-25

12. We note that on December 1, 2008, the fair value of the warrant liability of \$9,815,847 at the time of the exercise or term modification was reclassified to equity. Please identify for us the specific accounting guidance that supports your conclusion to reclassify and explain to us where this reclassification is recorded in Stockholders' Equity.

Note 10 – Warrants, Stock Options, and Restrictive Stock Units, page F-28

13. We note from the warrant issuance table on page F-28 that 9,435,743 and 1,626,801 warrants were exercised in 2008 and 2009, respectively. Please explain to us where on the stockholders' deficit these exercises are recorded. In your explanation, please tell us how you accounted for these exercises, citing the applicable U.S. GAAP that supports your conclusions.
14. Please revise your disclosure in future filings, including any amendments, to include all disclosures required under FASB ASC 718-10-50. For example, note the requirements of paragraphs 50-2 a. d. h. j. k. and l. thereof.

Exhibit 31

15. In all future filings including the any amendments to Form 10-K and Form 10-Q, please revise the certifications to present them in the *exact* form as set forth in Item 601(b)(31) of Regulation S-K. For example, remove “(the registrant)” after NewCardio, Inc. in paragraph 1 and remove “and evaluated the effectiveness of our internal control over financial reporting, and presented in this report our conclusions about the effectiveness of our internal control over financial reporting” in paragraph 4 (c).

Form 10-Q for the Quarterly Period Ended September 30, 2010

Item 4. Controls and Procedures, page 38

16. We did not note any disclosures under this item. Please note that you are required to include the information called for by Items 307 and 308T (b) of Regulation S-K. Please amend this filing to disclose the conclusions of your principal executive and principal financial officers regarding the effectiveness of your disclosure controls and procedures as of the end of the period covered by the report as well as the disclosures related to changes in internal control over financial reporting.

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.

You may contact Andri Boerman at (202) 551-3645 or Jay Webb, the accounting reviewer, at (202) 551-3603 if you have questions regarding comments on the financial statements and related matters. Please contact Gabe Eckstein at (202) 551-3286 or Tim Buchmiller, Senior Attorney, at (202) 551-3635 with any other questions.

Sincerely,

Martin James
Senior Assistant Chief Accountant