



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

July 13, 2018

Via E-mail

Dean Irwin
Chief Executive Officer
Ra Medical Systems, Inc.
2070 Las Palmas Drive
Carlsbad, CA 92011

**Re: Ra Medical Systems, Inc.
Amendment No. 1 to
Draft Registration Statement on Form S-1
Submitted June 28, 2018
CIK No. 0001716621**

Dear Mr. Irwin:

We have reviewed your amended draft 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 providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. 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 the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

Overview, page 1

1. We note your response to comment 12. Please expand your response to clarify whether your intended future DABRA uses, as disclosed in the fourth sentence, will similarly address the results of vascular diseases or the vascular diseases themselves.

Strengths of our Approach – DABRA, page 3

2. Expand your response to comment 4 to address other technical terms the first time they are used, such as dissection or perforation.

We face credit and compliance risk..., page 22

3. Please expand your response to comment 8 to discuss any relevant details about your distributors' location or advise why you do not believe such information is material to an investor's assessment of the risk you describe.

Results of Operations, page 75

4. We note your decrease in direct unit sales in your Dermatology segment for the period ended March 31, 2018 compared to March 31, 2017 and your offsetting increase in income from rentals of your laser products. Please tell us whether a shift exists towards rentals from product purchases and, if so, whether that shift reflects a material trend that must be discussed per Regulation S-K Item 303.

Reimbursement, page 102

5. We note your response to comments 1 and 7 and removed disclosure previously made in the third sentence of this section's second paragraph. Tell us whether your customers' purchases or rentals of your laser products are reimbursable by third-party payors as a portion of the reimbursement of the procedure, and if not, revise to further clarify how this lack of reimbursement would impact your products' marketability.

Note 3 – Restatement and reclassification, page F-15

6. We note your response to comment 28. To enhance an investor's understanding of the restatement, if true, please revise the third sentence of the first bullet on page F-15 to clarify your conclusion that the awards are required to be classified as liabilities remeasured at each reporting date, rather than as "equity-classified" option awards as previously reported.

Item 15. Recent Sales of Unregistered Securities, page II-2

7. Expand your response to comment 29 to provide more information concerning the "investors" disclosed in paragraphs (a) and (c). Your revised disclosure should provide sufficient information to demonstrate the applicability of the exemptions claimed in the paragraph following paragraph (c).

Dean Irwin
Ra Medical Systems, Inc.
July 13, 2018
Page 3

You may contact Eric Atallah at (202) 551-3663 or Kevin Kuhar, Accounting Branch Chief, at (202) 551-3662 if you have questions regarding comments on the financial statements and related matters. Please contact Caleb French at (202) 551-6947 or Heather Percival, Senior Attorney, at (202) 551-3498 with any other questions.

Sincerely,

/s/ Heather Percival for

Amanda Ravitz
Assistant Director
Office of Electronics and Machinery

cc: Martin J. Waters, Esq.
Wilson Sonsini Goodrich & Rosati, P.C.