



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

December 13, 2016

Robert Michael Kleine
Chief Executive Officer
Miramar Labs, Inc.
2970 Walsh Avenue
Santa Clara, California 95051

**Re: Miramar Labs, Inc.
Amendment No. 1 to Registration Statement on Form S-1
Filed November 23, 2016
File No. 333-214121**

Dear Mr. Kleine:

We have limited our review of your amended 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. 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 registration statement and the information you provide in response to these comments, we may have additional comments. Unless we note otherwise, our references to prior comments are to comments in our November 10, 2016 letter.

Prospectus Summary, page 1

1. We note your response to prior comment 4. Your disclosure posits several different definitions for hyperhidrosis, and appears to imply that your FDA clearance expands your potential market into the aesthetic space. So an investor can clearly understand the scope and limitations of your current business, please clearly disclose the exact type of hyperhidrosis for which you believe you have FDA clearance, if known. If it is not clear how broad your clearance is, please provide disclosure about the potential for off-label marketing that may exist, and describe any other risks or uncertainties created by this uncertainty, or advise.

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Our success depends on the growing physician adoption....., page 11

2. We note your response to prior comment 8. Please revise this risk factor to address how the absence of third party payor reimbursement for your product impacts your ability to sell your product or compete with alternative treatments.

Clinical Results and Studies, page 69

3. We note your response to prior comment 7. Please revise your disclosure to state the consideration given to gravimetric testing in the statistics disclosed for the DRI-UP Study or advise. In this regard, please revise your disclosure to clarify how the Hyperhidrosis Disease Severity Scale is scored. For instance, is it solely based on subjective responses given by the patient?

Please contact Heather Percival at (202) 551-3498 or me at (202) 551-3528 with any questions.

Sincerely,

/s/ Amanda Ravitz

Amanda Ravitz
Assistant Director
Office of Electronics and Machinery

cc: Philip H. Oettinger
Wilson Sonsini Goodrich & Rosati