



DIVISION OF
CORPORATION FINANCE

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

March 8, 2012

Steven C. Eror
Chief Executive Officer
Fresh Medical Laboratories, Inc.
757 East South Temple, Suite 150
Salt Lake City, Utah 84102

**Re: Fresh Medical Laboratories, Inc.
Registration Statement on Form 10
Filed February 10, 2012
File No. 000-54600**

Dear Mr. Eror:

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 further comments.

1. Please note that this filing will become effective automatically 60 days after the date you initially filed it. If this filing was made voluntarily, you should consider withdrawing it prior to the effective date if comments remain outstanding. You could then refile when you are prepared to resolve the comments. Please tell us whether you intend to file a request for withdrawal before the automatic effectiveness date of this registration statement if comments remain outstanding.

Item 1. Business, page 2

2. Since you do not appear to have sold any products, please revise throughout to remove claims about you and the characteristics of your product or its benefits, or revise to indicate that they represent management's belief. Examples include the disclosure on page 3 about the "first accurate and reliable bioconductance measurement method" and "superior discrimination" and the disclosure on page 6 that thoracic surgeons and radiologists may benefit.

3. Please define or remove technical terms, such as “transthoracic bioconductance,” “diaphoretic electrodes,” “non-calcified solitary pulmonary nodules,” and “adjunctive diagnostic.” In addition, explain what you mean by a “well-controlled proof of concept trial.”
4. Please provide us copies of the sources of all third-party data included in the filing. Please mark the materials so that they are keyed to the disclosure. For factual industry claims which currently do not have a source, please provide one. For sources which are several years old, tell us why you cannot provide more current data.

Corporate Background, page 2

5. Please revise to describe the steps you need to take and the capital and timelines necessary to generate revenue from your planned business.

Research and Clinical Trials, page 4

6. Please clearly explain your “relationships with sites” and “close links with centers” mentioned in the first bullet point and your “research relationship” mentioned in the last bullet point in this section.

Patents, page 7

7. Please expand the disclosure in the schedule on page 8 to state when the patents expire. Also, clarify the references in the schedule to “AU,” “ORD,” “CON,” “DIV” and “ALLOWED.”
8. Please tell us whether any of the patents mentioned in the schedule are patents of BioMeridian Corporation mentioned on page 8.

License Agreements, page 8

9. We note the disclosure in Note 8 on page F-25 that your license agreement is with “certain stockholders.” Please clarify whether the “certain stockholders” are stockholders of your company and, if applicable, identify the stockholders and quantify their ownership. Also, tell us why you did not file as exhibits the license agreements and letter of intent mentioned on page 8.
10. Please expand the disclosure in this section to discuss the material terms of the license agreement, such as the graduated schedule and royalty payments based on the percentage of the aggregate worldwide sales mentioned in the fourth sentence of this section. In addition, please clarify what part of your product the technology you license addresses.

11. Please expand the disclosure in this section to discuss the development costs incurred as of the most recent practicable date. We note the disclosure in the fifth sentence of this section about the remaining minimum development costs required per the licensing agreement is \$2,500,000 as of December 31, 2010.

Government Regulations, page 8

12. Please significantly expand the disclosure in this section to discuss in detail the material government regulations that are applicable to your business, including standard processing times for approval to test and market your products. In addition, provide an anticipated timeline for your 510(k) De Novo submission to the FDA and other anticipated actions by you before regulatory bodies.

Manufacturing, page 9

13. Please disclose the material terms of your agreements with your contract manufacturers. Also, file as exhibits the agreements with your manufacturers, if material.

Distribution, page 10

14. Please disclose the status of your market development regarding partners in international markets. We note your July 12, 2010 and June 10, 2011 press releases on your website that you entered into agreements with companies in Japan and Mexico, respectively.
15. Please revise the disclosure in the last paragraph of this section to clarify your plans.

Results of Operations, page 11

16. Please briefly describe the government grant income of approximately \$250,000 in 2009 and 2010, such as whether the grant was limited to \$250,000 and why you received the grant.
17. Please briefly disclose why license revenue declined from 2010 to 2011, such as whether the license was only for one year or whether the license was terminated.

Liquidity and Capital Resources, page 12

18. We note your disclosure that there is substantial doubt regarding your ability to continue as a going concern and your disclosure that you anticipate incurring significant expenditures in 2012 in pursuit of your business plan. Accordingly, please expand to describe the cash requirements necessary for you to continue your

business as a going concern, including disclosure of the dollar amount of financing you believe is required to continue your business over the next twelve months. For further guidance, refer to Section IV.A. of Securities Act Release 33-8350 “Commission Guidance Regarding Management's Discussion and Analysis of Financial Condition and Results of Operations.”

19. As a related matter, please also address how you intend on satisfying the cash requirements of your planned purchase of the BioMeridian patents and trade secrets.
20. Please clarify how your disclosure reflects the amount of funds needed for compliance with your obligations under the federal securities laws.

Item 4. Security Ownership of Certain Beneficial Owners and Management, page 12

21. Please ensure that your table includes share that the holder has the right to acquire within 60 days. We note in this regard that you have outstanding warrants which may be exercisable within 60 days.

Item 5. Directors and Executive Officers, page 13

22. Please revise the description of each person’s business experience to avoid qualitative or marketing language, such as that an officer “grew profitable revenue to \$30 million” or “has made substantial contributions to advancements in breast, esophageal and lung cancer.” Also, provide specific positions and duties for 5 years.
23. Please briefly disclose the specific experience, qualifications, attributes or skills that led to the conclusion that Messrs. Error, Raybould, Tulane and Fresh and Dr. Adams should serve as directors.

Item 6. Executive Compensation, page 15

24. Please provide compensation tables in the format required by Item 402 of Regulation S-K.
25. Please tell us, with a view to disclosure, why the salaries for the year ended December 31, 2011 of Messrs. Error and Garff mentioned in the table on page 15 differ from their salaries mentioned on page 2 of exhibits 10.2 and 10.3 respectively.

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Compensation Table for Directors, page 16

26. Please tell us where you disclosed in the table on page 16 the compensation to a director mentioned in the second paragraph on page F-11.

Certain Relationships and Related Transactions, and Director Independence, page 16

27. Please update the disclosure in this section. We note the disclosure throughout this section of accrued interest and notes payable as of December 31, 2010.
28. Please expand the disclosure to disclose the material terms of the agreements and identify the parties and to file the agreements.

Item 10. Recent Sales of Unregistered Securities, page 18

29. We note the issuances of shares as compensation for services mentioned in this section. However, you have disclosed other issuances on page F-16 that are not mentioned in this section and issuances since December 31, 2010. Please revise the disclosure in this section to include all the information required by Item 701 of Regulation S-K.

Item 13. Financial Statements and Supplementary Data, page F-1

30. Please update the financial statements when required by Article 8 of Regulation S-X.

Item 15. Financial Statements and Exhibits, page 29

31. Please file as an exhibit the agreement with Headwaters BD, LLC mentioned in the last paragraph on page F-11.

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;

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- 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 Praveen Kartholy, Staff Accountant, at (202) 551-3778 or Gary Todd, Reviewing Accountant, at (202) 551-3605 if you have questions regarding comments on the financial statements and related matters. Please contact Tom Jones at (202) 551-3602 or me at (202) 551-3625 with any other questions.

Sincerely,

/s/ Amanda Ravitz

Amanda Ravitz
Assistant Director

cc (via e-mail): David Rees, Esq.