

VIA FACSIMILE and U.S. Mail
Mail Stop 4720

February 22, 2010

Michael Cohen
President, Chief Executive Officer and Chairman of the Board
Proteonomix, Inc.
187 Mill Lane
Mountainside, New Jersey 07052

**Re: Proteonomix, Inc.
Registration Statement on Form 10-12G/A
Filed January 28, 2010
File No. 000-53750**

Dear Mr. Cohen:

We have reviewed your January 28, 2010 response to our January 25, 2010 comment letter and have the following additional comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-12G/A filed January 28, 2010

General

1. We note your Form 8-K filed on February 18, 2010 which announced your newly formed wholly-owned subsidiary, StromaCel, Inc. Please update the disclosure in your filing, where appropriate, to reflect the formation of this new subsidiary.
2. We note your response to our prior comment 1 and advise you that the following statement still appears in the registration statement on page 9: "The results were

that Matrix NC-138 reduces both deep and subtle wrinkles...It was observed that Matrix NC-138 led to a refinement of the skin texture and contributed to a youthful look. Additionally, Matrix NC-138 increased moisture content of the skin. The moisture content was clearly improved compared to placebo control after four weeks of application.” Please delete this statement from the filing.

Item 1. Business, page 3

3. We note your response to our prior comment 5 and advise you that Exhibit A to Exhibit 10.46 remains blank. Please refile the agreement with Exhibit A included.
4. We note your response to our prior comment 9. Please revise your disclosure in Item 7 “Certain Relationships and Related Transactions, and Director Independence” beginning on page 29 of the filing to include a description of the December 30, 2009 loan from Michael Cohen to the company for the manufacture and packaging of 10,000 cosmeceutical kits.

Item 4. Security Ownership of Certain Beneficial Owners and Management, page 22

5. We note your response to our prior comment 12 and the following sentence on page 25 of the revised filing: “Dr. McNiece on January 2, 2007 became a member of the Chief Scientific Officer and on November 11, 2009 he became Vice-President of Scientific Development.” This statement, as written, is confusing. If you mean that Dr. McNiece became a member of the Scientific Advisory Board, please revise accordingly. Otherwise, please explain what you mean when you say Dr. McNiece became a member “of the Chief Scientific Officer.”

Consolidated Financial Statements years ended December 31, 2008 and 2007

Report of Independent Registered Public Accounting Firm, page F-3

6. Please tell us why your auditor did not dual date its report to address the new disclosures included in Note 8 - Commitments. Otherwise, please include a report that has been revised by your auditor to address the new disclosure.

Note 9 – Stockholders’ Equity (Deficit), page F-20

7. Please revise your disclosures to address your accounting for the signing bonus issuable to your Chief Financial Officer. We note your disclosure on page 27 that the stock was fair valued on the grant date and that the shares have not been issued to date.

Consolidated Financial Statements for the nine months ended September 30, 2009 and 2008

8. Please revise your interim financial statements based on the preceding audited financial statement comments, as applicable.

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As appropriate, please amend your filing in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested supplemental information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

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 all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. 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.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert this action as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as a confirmation of the fact that those requesting acceleration are

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aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

Please contact Laura Crotty at (202) 551-3563, Daniel S. Greenspan, Special Counsel, at (202) 551-3623 or myself at (202) 551-3715 with any questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director