Mail Stop 4720

August 31, 2009

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
Filed August 4, 2009
File No. 000-53750

Dear Mr. Cohen:

We have reviewed your filing and have the following 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.

General

1. Please note that where we provide examples to illustrate what we mean by our comments, they are examples and not complete lists. If our comments are applicable to portions of the filing that we have not cited as examples, please make the appropriate changes in accordance with our comments.

2. We note that on August 19, 2009 the company filed a Form 8-K disclosing the appointment of a new Chief Financial Officer. Please update all relevant portions of the filing to reflect this change in management.

3. Please ensure that all headings and subheadings are distinguishable throughout the filing.

Item 1. Business, page 1

4. Please supplementally provide your basis for each of the following statements:
    - "Further, our protein molecules form a complex structure that enhances skin firmness and elasticity and delivers essential complexes that assist in the support of cells found in human tissues. We have found that Matrix NC138, when combined with our carrier agents and applied to the skin surface, penetrates the outer epidermal layer. Once within the extracellular matrix environment of the skin, the components enhance the production of type 4 collagen in the skin, helping to reduce the appearance of superficial wrinkles." (Page 2)
    - "Our results show a greater than ten-fold replication without genomic changes." (Page 2)
    - "In the next few years, we anticipate that treatments based on stem cells…will be used for as many patients to treat as many different ailments…as are drug therapies and surgery used currently for such disorders." (Page 2)
    - "The reason for the surge of interest in cell therapy is that cells used for therapy often are more effective than chemical therapeutics." (Page 2)
    - "Combined with our patent pending device and enzyme separation medium used to separate stem cells while they are growing which we have named ESEF 99, ES 400 grown cells show less than 1% destructive tumor formation in progressive generations. By contrast, current competitors' stem cell lines demonstrate an 80% probability of destructive tumor formation in successive generations." (Page 4)
    - "CB-500 enhances the rate of growth of a stem cell colony three-fold." (Page 4)
    - "In addition, the expansion technology combined with our patent pending aliquot system provide for an increase in supply." (Page 5)

Overview, page 1

5. Please expand your disclosure to include a more robust discussion of the development of your business, your subsidiaries and predecessors, during the last three years. For instance, we note that in Note 1 to the Consolidated Financial Statements you state that Azurel, Ltd. was discharged from bankruptcy in May 2006; however, you do not mention this bankruptcy in the Business section as required by Item 101(a)(1) of Regulation S-K. In addition, you should include a discussion of Azurel's merger with National Stem Cell, Inc. in 2006. Please ensure that the general development of the business over the past three years has been addressed in its entirety in this section of the registration statement.

6. Please include in your Business discussion:
    - The sources and availability of raw materials and the names of your principal suppliers;
    - The regulatory regime governing the current and anticipated business activities of the Company and its subsidiaries, including:

  - the governmental agencies that regulate your business;
  - a summary of any existing or probable regulations that materially affect, or may materially affect, the company's operations and the effect on your business; and
  - the need for any governmental approvals of your products, services and research activities, including cosmeceuticals and cosmetic products; and
- An estimate of the amount spent during each of the last two fiscal years on research and development.

7. Please explain what "identification biomarker," "cell surface markers" and "beta cells" are the first time you use these terms on page 1.

8. We note your statement on page 1 that certain technologies have been licensed to the company in perpetuity. Please revise your disclosure to identify who the technologies were licensed from and the material terms of the license agreements, including the following:
   - Each party's obligations, including research and development funding obligations and obligations to defend patents;
   - Fees paid to date, including upfront payments and annual payments,
   - Aggregate potential payments, including milestone payments;
   - Existence of royalty provisions; and
   - Term and termination provisions.

   Please also file any relevant agreements as exhibits to the registration statement. See Item 601(b)(10) of Regulation S-K.

9. We note the following statement on page 1: "Based on the results of our research, we anticipate that the cells that we are able to isolate will substantially reduce, if not eliminate, rejection when transplanted into the liver of a diabetic patient." Please revise your disclosure to describe the results of your research supporting this statement.

10. Please provide more detail about the scientific bases underlying your cell therapies. For example, you should explain to the lay reader how stem cells harvested from the patient's pancreas are capable of being converted into islet cells, and why these converted cells are then transplanted into the liver of the diabetic patient, an organ which does not normally secrete insulin.

11. Your disclosure about the procedures you intend to use in your stem cell therapies and the results you anticipate observing are prospective and speculative, so it is unclear how far along you are in your research and testing. Please clarify the current stage of development for these therapies and your anticipated developmental timeline.

12. We note the following statement on page 1: "We will require additional funding to submit these islet cells and our protocols for research to create beta cells in conjunction with the University of Miami during 2009." Please revise your disclosure to quantify the

additional funding needed and explain where you hope to procure such funds. In addition, please discuss the nature and extent of the University of Miami's involvement in these activities.

13. On page 1 you state that Proteoderm "introduced" the company's cosmeceutical at an Anti-Aging Conference in August 2008, but later state that the company has entered into an agreement with Smeena Khan, M.D., to conduct a multi-center clinical study of the effects of the Proteoderm skin care line. You also state that you have received your first order for ten thousand skin care kits under your Cosmetic Sales Agreement and expect to make delivery of the kits in 2009. It is unclear from your disclosure whether or not your cosmeceuticals are ready for sale to the public. Please clarify at what stage in development, clinical testing and commercialization your cosmeceutical skin care line is, and when in 2009 you anticipate delivering the ordered kits.

14. We note your mention at the top of page 2 of the agreement for the licensing, sale and distribution of Proteoderm's cosmeceutical kit with "two China-based companies." Please revise your disclosure to identify the two companies and describe the material terms of the agreement, including the following:
    - Each party's obligations;
    - Fees paid to date, including upfront payments and annual payments,
    - Aggregate potential payments, including milestone payments;
    - Existence of royalty provisions; and
    - Term and termination provisions.

15. Please revise your disclosure on page 2 to describe the material terms of your agreement with Smeena Khan, M.D., under which you plan to conduct a multi-center clinical study of the effects of Proteoderm's skin care line, including the following:
    - The anticipated commencement date of the study;
    - Each parties obligations;
    - Fees paid to date, including upfront payments;
    - Aggregate potential payments, including milestone payments; and
    - Term and termination provisions.

16. We note your statement that your data for Phase I umbilical cord expansion is derived from your patent pending growth medium and matrix to grow hES, but that you are no longer expanding hES derived stem cells. Please

17. Please define "genomic changes" where first used on page 2.

<u>The Market, page 2</u>

18. Please revise your disclosure to remove the statement that your research and development program has "demonstrated results," as this might suggest that your product development is more advanced than it is. If you are referring only to the fact that your research and development efforts have led to a number of pending patent applications, then you should

make this clear. Similarly, please remove the statement that you have "multiple therapeutic treatments and products" or clarify that you have not received any revenues from these and none of these treatments and products have yet been commercialized.

19. We note the following statement on page 3: "SBNY collects its samples using facilities and personnel of BioGenetics Corporation, the Sperm and Embryo Bank of New Jersey and Saint Luke's Hospital in New York City." Because SBNY is your sole source of revenue at this point in time, agreements governing its relationship with third parties for use of facilities and personnel could be considered material under Item 601(b)(10) of Regulation S-K. Therefore, please revise your disclosure to describe your relationship with BioGenetics Corporation, the Sperm and Embryo Bank of New Jersey and Saint Luke's Hospital, any such agreements and the material terms of each, including term and termination provisions. Please also file any relevant agreements as exhibits to the registration statement.

20. Please disclose where your reproductive cell and storage facility is accredited, the agency or body which confers accreditation, and discuss the criteria required to obtain and maintain your facility's accreditation.

21. We note the following statements on page 3: "Our approach is to develop from bone marrow, cord blood derived stem cells and organ specific stem cells candidate therapies that comply with FDA protocols already in effect for therapeutic transplantation with such stem cells. As a result, we can bypass laborious and time-consuming studies for safety and efficacy that the FDA requires of our competitors before advancing to human clinical trials and eventually to market." Please revise your disclosure to describe the referenced FDA protocols and expand your disclosure to explain what studies you believe you can bypass, why you believe you can bypass these studies and whether or not your potential products will still require approval from the FDA. If FDA approval will be required, discuss the status of the approval within the FDA approval process and the steps involved for such approval. See Item 101(h)(4)(viii) of Regulation S-K.

22. Please explain what you mean by "immune suppression" where used on page 4.

23. We note the following statement on page 4: "Our expansion technology is based on our unique growth medium and not a reactor." Please expand your disclosure to describe your "unique growth medium" and how it compares and contrasts to the use of a reactor.

24. We note your reference to your "patent pending protein," which occurs in women during childbirth. Please clarify which protein you are describing and clarify whether you have applied for a patent with respect to this protein itself.

25. With respect to your disclosure under the caption "Our Current and Future Products," please revise this section to make clear which of your products are current and which are future products. Consider adding captions or subtitles to your disclosure to help with this differentiation.

26. Please describe the material terms of the assignment agreement between The Johns Hopkins University and National Stem Cell, Inc. discussed on page 4, including the following:
    - Each party's obligations;
    - Fees paid to date, including upfront payments and annual payments,
    - Aggregate potential payments, including milestone payments;
    - Existence of royalty provisions; and
    - Term and termination provisions.

    Please also file the agreement as an exhibit to the registration statement.

27. Please revise your disclosure to explain what is meant by "xeno free of animal product" where used on page 4.

28. We note that your growth platforms are based on components that are FDA approved for transplant for human beings. Please clarify whether your growth platforms require FDA approval and, if so, the status of such approvals.

29. Please revise your disclosure to explain what you mean when you say "platform CB-500 is a complete medium and scaffolding" on page 4.

30. Please revise your disclosure to explain what you mean by "without differentiation" in the phrase "accelerated growth of cells without differentiation" on page 4.

31. Please expand your disclosure under the subheading "Products related to cord blood storage" on page 4 to include a discussion of the following:
    - Whether Michael Cohen developed the technology on behalf of the company while employed by the company, or whether the rights to the technology were assigned by him to the company;
    - Whether the FlexPak-5 will be used for internal purposes only or marketed to the public; and
    - The importance of the FlexPak-5 technology to the company's operations.

32. We note your statement on page 5 that pursuant to the terms of the outstanding purchase order under your Cosmetic Sales Agreement, you must demonstrate your financial ability to manufacture fifty thousand kits before payment for the first order will be made. Please expand your disclosure to discuss:
    - How you intend to satisfy the requirement to demonstrate your financial ability to manufacture fifty thousand kits;
    - your likelihood of success or failure in meeting this condition, and the consequences thereof; and
    - the status of your fulfillment of the order for the first tem thousand kits.

    We remind you that your disclosure should be fair and balanced.

33. Please provide a complete description of the material terms of any oral or written arrangements or agreements you have with San Mar Laboratories, Inc. and The University of Miami for the production of Proteoderm cosmeceutical products and Matrix NC 138™, respectively. All material contracts, whether oral or written, should be included as exhibits to the registration statement. You may provide summaries of oral contracts as exhibits to the registration statement if necessary.

34. We note the following statement on page 5: "Cohen received the right to receive 20% of the outstanding shares of the common stock of Proteoderm, in the event it should become a public company." Please discuss any plans or steps taken to take Proteoderm public.

35. We note the following statement on page 5: "We anticipate that we will have enough data for the FDA Phase I trial, although no guarantees can be given." Please revise your disclosure to include a prediction of when you believe you will have compiled sufficient data and when you plan to commence your Phase I trial for cord blood expansion.

36. We note the following statement on page 5: "Thus the units of other cord blood banks are single use only and can only be used for one patient once unfrozen." Please add disclosure following this statement to explain how your company's technology is different and will "provide for an increase in supply."

37. We note your reference to a catalogue of intellectual properties and patent applications on page 1 and references to various patents pending and patent applications throughout your Business discussion. For the convenience of the reader, please identify all the measures you have put into place to protect your intellectual property rights and discuss the limitations of these measures. In addition, please briefly discuss the Company's historical and ongoing efforts to patent its intellectual property, including the following:
    - how many patents have been issued in the U.S. and otherwise, and what products, processes or technology do they cover?
    - how many are pending, and what products, processes or technology do they cover?
    - whether you are aware of any actual or potential infringement claims, either asserted by you or against you; and
    - whether you are aware of any material exposure or significant gaps, either actual or foreseeable, with respect to your efforts to protect your intellectual property.

Item 2. Financial Information

Overview, page 6

38. We note the following statement on page 6: "In March, 2008, we emerged from the development stage." Please explain what you mean by this statement.

39. We note the following statement on page 6: "We performed research and development that enable us to gain and retain ownership of the intellectual property, which led to the creation of our current products." Please revise your disclosure to list the intellectual

property to which you refer.

40. We note that you incurred $2,181,756 of professional, consulting and marketing fees during the six months ended June 30, 2008 that did not recur in the six month period ended June 30, 2009. Please describe in more detail the nature of these fees.

Liquidity and Capital Resources, page 7

41. Please revise your disclosure to include the company's monthly cash burn rate.

42. We note the following statements on page 7: "We estimate that we will require approximately $2,000,000 in additional capital to sustain our operations at their current level through fiscal 2009 and that we will require as much as $3,000,000 in additional revenues or $3,500,000 in additional funding to achieve our projected growth plan. Although we believe the additional capital we will require will be provided either through new equity investment, debt and/or increased revenue, we cannot assure you that the equity investment will be made, we can obtain debt at acceptable terms or that we can generate sufficient revenue to maintain projected operating levels." Please revise your disclosure to more specifically identify the company's plans to obtain the needed equity investment and/or debt and a timetable for doing so, if known. If you have no specific plans or timetable, please so state. Also, please clearly state that the company's only source of revenue to date is SBNY which reported revenues of $55,125 for the six months ended June 30, 2009, $132,038 for the fiscal year ended December 31, 2008 and a net loss of $33,235 for the 2008 fiscal year.

43. Please revise your statement on page 7 that failure to obtain the necessary funding "could impair" your ability to stay in business to state that failure "would" impair your ability to stay in business.

Critical Accounting Policies, page 7

44. We note that you reiterated the policy notes included in your financial statements. Critical Accounting Polices should supplement, not duplicate, the accounting policies disclosed in the notes to the financial statements. Please disclose your analysis of the judgments and uncertainties involved in applying these accounting principles at a given time and the potential impact on your financial statements of the variability that is reasonably likely to result from their application over time. Such disclosures explaining the likelihood that any materially different amounts would be reported under different conditions, using different assumptions is consistent with the objective of Management's Discussion and Analysis. See Release 33-8350.

Revenue recognition, page 8

45. We note your statement on page 2 that "Proteoderm has recently executed, with two China-based companies, an agreement for the licensing, sale, and distribution of its cosmeceutical kit in China, Hong Kong and Taiwan" and your policy note on this page

and in the notes to the consolidated financial statements regarding revenues from support agreements. Please disclose the significant terms and characteristics of your material arrangements/agreements, including the services to be delivered by each party, the contract period, and obligations of the parties. Disclose the accounting treatment applied to your material agreements.

Item 3. Properties, page 12

46. Please provide a complete description of the material terms of your oral month-to-month lease with Biogenetics and include a summary of this arrangement as an exhibit to the registration statement.

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

47. For each individual listed, please revise the beneficial ownership table on page 12 to accurately state all positions held with the company. For instance, Michael Cohen is only listed as President; however, your disclosure on page 13 indicates that he is also the Chief Executive Officer and Chairman of the Board.

48. We note that your website lists Stan Cipkowski and Mark Ast as directors of the company; however, they do not appear in the beneficial ownership table on page 12 or the list of directors and executive officers on page 13. Please reconcile.

49. Please supplementally provide us with an analysis as to why you do not believe Dr. Ian McNiece should be listed in the beneficial ownership table as a named executive officer.

Item 5. Directors and Executive Officers, page 13

50. We note that the first paragraph of this section is repeated. Please delete the repetitive section.

51. Item 401(e) of Regulation S-K requires that registrants describe the business experience of each officer and director during the past five years. Please revise your disclosure to specify the date when each person joined the Company and include the following:
    - The name of the "large multi-specialty, interdisciplinary physician group in Woodbridge, New Jersey" where Dr. Kenneth Steiner is employed;
    - Antonio Moura's employment from 2006 until the present;
    - The "two periods" during which Joel Pensley was in partnership with other attorneys, if within the last five years;
    - Dr. Ian McNiece's employment during the last five years prior to joining the Stem Cell Institute at the University of Miami in July 2007; and
    - How long Dr. Barbara Nabrit-Stephens has been the Medical Director for Blue Cross Blue Shield of Florida.

52. Please provide the basis for the following statement on page 13: "In that capacity, he was

instrumental in securing working capital that propelled the company from $4,000,000 to over $36,000,000 in annual sales."

53. Please provide the basis for the following statement on page 13: "In that capacity, he was instrumental in securing working capital that propelled the company from $4,000,000 to over $36,000,000 in annual sales."

54. Please describe the function and responsibilities of your Science Advisory Board and disclose the material terms of your consulting agreements with these Board members.

55. We note that your website lists only Dr. Barbara Nabrit-Stephens and Shulamit Levenberg as Scientific Advisors which differs from your disclosure on pages 14 and 15. Please reconcile.

56. We note the following statement on page 15: "As of the date of this registration statement, we have one full-time employee, 10 consultants, and two professionals." Please name the one full-time employee and whether or not the "consultants" include executive officers of the company. Also, please explain what the title "professional" means in this context.

Item 6. Executive Compensation, page 15

57. Please provide the Outstanding Equity Awards at Fiscal Year-End Table required by Item 402(p).

58. We note your statement on page 16 that you do not compensate members of the Board of Directors for acting as such. However, to the extent that any of your members of the Board, including Scientific Advisory Board members, have received awards or payment of any kind from the Company during the last completed fiscal year, please be advised that you must provide the Director Compensation Table required by Item 402(r) of Regulation S-K. We refer you to the table of Recent Sales of Unregistered Securities on page 18, which shows shares issued to members of your Scientific Advisory Board in 2009. Moreover, it appears that you did compensate regular Board directors for acting as such in 2007. Therefore, it does not appear accurate to say that you do not compensate such members, only that you did not, if true, compensate these members in the last fiscal year.

59. It appears that the salary listed for Michael Cohen in the Summary Compensation Table for 2007 should be $250,000 rather than $250.000. Please revise.

60. We note that the Summary Compensation Table is missing the "All Other Compensation" and "Total" columns. Please revise. We note that the expense allowance for health care and vehicles of $40,000 should be listed in the All Other Compensation column.

61. We note that the 480,000 shares of common stock issued to Mr. Pensley and the 104,000 shares of common stock issued to Mr. Moura under each individual's retainer agreement

are not listed in the Summary Compensation Table on page 15. Please revise the table to reflect all stock awards made in 2007 and 2008.

62. We note footnote 2 to the Summary Compensation Table states that Dr. Steiner will receive 350,000 shares at the conclusion of his consulting agreement in May 2010, such shares "to be valued at market in each period in which they are earned." Please clarify in the footnote how the Company determines the periods in which the shares are earned and disclose how many shares Dr. Steiner has earned to date and the value thereof.

63. We note the following statement on page 15: "Pursuant to the agreement, Mr. Cohen is entitled to receive a salary of $250,000 per annum, plus an annual bonus of up to 30% of the base salary, such bonus to be based on the achievement of milestones to be established each year by the Board of Directors." You have not disclosed the milestones established by the board of directors for the 2008 fiscal year. Please revise your disclosure to include the following:
    - A description of each milestone established by the board for the 2008 fiscal year;
    - A discussion of the level of achievement of each milestone; and
    - A discussion of how the level of achievement affected the actual bonus paid.

    To the extent that the milestones are quantified, the discussion in your registration statement should also be quantified.

64. We note the following statement on page 16: "He will receive an aggregate of 350,000 upon completion of the two-year term of the agreement." Please insert the word "Shares" after 350,000.

65. Please file as exhibits to the registration statement the amendments to Kenneth Steiner and Antonio Moura's consulting agreements, as discussed on page 16.

Item 7. Certain Relationships and Related Transactions, and Director Independence, page 16

66. Please provide the terms of the $246,773 and the $67,370 lent by Mr. Cohen and Mr. Pensley, respectively, to the Company and file the underlying agreements governing this debt as exhibits to the Form 10 registration statement. You may provide summaries of oral contracts as exhibits to the registration statement if necessary. Please refer to Item 404(a)(5) of Regulation S-K for a description of the disclosure that is required with respect to this indebtedness.

67. Please provide the disclosure required by Item 407(a) of Regulation S-K.

Item 8. Legal Proceedings, page 16

68. It does not appear that you have provided all of the information required by Item 103 of Regulation S-K as to the litigation with Scott Crompton relating to the return of 10,000 shares of your common stock. Please revise your disclosure to include the name of the

court or agency in which the proceedings are pending, the date instituted, the principal parties thereto, a description of the factual basis alleged to underlie the proceeding and the relief sought.

Item 9. Market Price of and Dividends on the Registrant's Common Equity and Related Stockholder Matters, page 17

69. Please disclose the price of your common stock as of the latest practicable date, as required by Item 201(a)(1)(v) of Regulation S-K.

70. It appears that the quarter ended December 31, 2007 has mistakenly been listed as the quarter ended December 31, 2009 in the high/low bid table provided on page 17. Please revise.

Item 10. Recent Sales of Unregistered Securities, page 18

71. We note that you have listed a bonus of 5,000 Shares paid to Erin Maurer on April 14, 2008 in the table on page 18. Please provide a footnote describing Erin Maurer's relationship to the company, the circumstances under which this bonus was paid and what services were rendered in exchange for the bonus payment.

72. Pursuant to Item 701(d) of Regulation S-K, please revise your disclosure to discuss the facts relied upon to make the exemption discussed at the bottom of page 18 available for the listed transactions.

Item 12. Indemnification of Directors and Officers, page 19

73. We note the following statement on page 19: "Our Certificate of Incorporation and Bylaws provide that we will indemnify and hold harmless, to the fullest extent permitted by Section 145 of the Delaware General Corporation Law, as amended from time to time, each person that such section grants us the power to indemnify." Please revise your disclosure to more specifically state the persons that Section 145 grants you the power to indemnify.

Consolidated Financial Statements at December 31, 2008

Consolidated Statements of Cash Flows, page F-7

74. On page F-19 you disclose that you reduced the amount payable to the Johns Hopkins University by $96,250 under a settlement agreement. The reduction in the amounts payable did not require a cash payment. Please tell us how you accounted for this transaction and cite authoritative accounting literature.

Notes to Consolidated Financial Statements December 31, 2008 and 2007, page F-8

Note 1 – Organization and Basis of Presentation, page F-8

75. We note the following statement on page F-8: "Proteoderm, Inc. has generated no revenues in 2008." Please revise this sentence to state that Proteoderm has generated no revenues "since inception," rather than simply referring to the last fiscal year.

76. We note the following statement on page F-8: "The Company has recently emerged from the development stage and has *incurred substantial research* and has continued to develop…." (Emphasis added). The emphasized phrase appears to be incomplete. Please revise.

Note 2 – Summary of Significant Accounting Policies, page F-9

Development Stage, page F-9

77. You disclose that you emerged from the development stage in March 2008. You also disclosed that you are currently gathering data for a Phase 1 trial for cord blood expansion and that you completed development of cosmeceutical products and anticipate sales to begin in the last quarter of 2009. This sales projection is presumably based on your disclosure on page 5 that you entered into an agreement with two China-based companies to distribute cosmeceutical products in January 2009. Since you have not generated revenues in your principal stem-cell business to-date and you did not have an agreement in place to distribute cosmeceutical products until 2009 it is not clear why you stated that you are no longer a development stage company in March 2008. A development stage company is defined in paragraph 8 of SFAS7 as a business whose principal operations have commenced but which has no significant revenues. Since you did not have any revenues in your primary businesses in 2008 it appears that you were a development stage company in 2008. In addition, the last paragraph of the report of independent registered public accounting firm on page F-3 refers to you as a development stage company. Please revise to provide the disclosures required by paragraphs 11 and 12 of SFAS 7.

Fair Value of Financial Instruments (other than Derivative Financial Instruments), page F-10

78. Please disclose the amount recorded in your consolidated statements of operations to revalue the notes payable at fair value at the end of all periods presented.

Revenue Recognition, page F-10

79. Please revise to disclose your revenue recognition policy for each revenue source, including revenues from government grants.

Inventory, page F-14

80. The number of days inventory is outstanding has approximated 4,000 days or more over

the last fiscal two years and through June 30 2009. Please disclose the nature of your finished goods and the expected shelf-life prior to expiration of your finished goods. Please disclose your policy for evaluating inventory obsolescence and the amount of any inventory reserves for obsolescence.

Note 5 – Promissory Notes, page F-18

81. In Note 5 you discuss outstanding promissory notes set to mature on January 30, 2009. Please revise your disclosure to discuss the current status of these notes and file each as an exhibit to the registration statement.

82. You disclose that the amendment to the promissory note did not constitute a material modification under EITF 96-19. Please provide us the analysis that supports your conclusion that the amendment to the promissory notes did not constitute a material modification.

Note 7 – Licensing Agreement, page F-19

83. Please clarify the reasons for discontinuing the license agreement with The Johns Hopkins University given that your current disclosure that "certain internal JHU intellectual timeline issues" is not sufficiently informative. Please also disclose the factors regarding the timing of the recognition of the forgiveness of debt that resulted in a gain on extinguishment.

Note 8 – Commitments, page F-19

84. On page 16 you disclosed your legal proceedings. Please disclose all legal proceedings and contingencies in the footnotes.

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

Common Stock

85. You disclose that you issued 582,200 shares of common stock in conversion of loans and accrued compensation to the President of $1,318,617. Please tell us the date that the loans and accrued compensation were converted into common stock, the date the conversion was approved and provide us with documentation that supports the assumed fair value of $2.26 per common share.

Note 11 – Fair Value Measurements, page F-24

86. Please tell us why is appropriate to include Notes payable in Level 1 in the fair value hierarchy table given that there do not appear to be identical notes payable in active markets and revise your presentation as appropriate.

Notes to Consolidated Financial Statements June 30, 2009 and 2008 (Unaudited), page F-33

87. In Note 6 to the unaudited financial statements for the six months ended June 30, 2009 and 2008 you state that as of June 30, 2009 the company had $333,715 outstanding in unsecured loans and advances with officers. This does not appear to be consistent with the information provided on page 16. Please reconcile.

Exhibit List, page 20

88. Please file as an exhibit to the registration statement a list of subsidiaries, as required by Item 601(b)(21) of Regulation S-K.

* * * * *

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 filings reviewed by the staff to be certain that they have provided all information investors require for an informed 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 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.

You may contact Ibolya Ignat at (202) 551-3656 or Gus Rodriguez at (202) 551-3752 if you have questions regarding comments on the financial statements and related matters. Please contact Laura Crotty at (202) 551-3563, Daniel S. Greenspan at (202) 551-3623 or myself at (202) 551-3715 with any other questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director