Mail Stop 6010

October 30, 2008

Craig A. Dionne, PhD
Chief Executive Officer and President
9901 IH 10 West, Suite 800
San Antonio, TX 78230

Re: GenSpera, Inc.
Registration Statement on Form S-1
Filed October 3, 2008
File No. 333-153829

Dear Dr. Dionne:

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. Please provide us proofs of all graphic, visual or photographic information you will provide in the printed prospectus prior to its use.

Prospectus

3. Please provide the complete mailing address and telephone number of your principal executive offices on the cover page to the prospectus, as required by Item 503(b) of Regulation S-K.

Risk Factors, page 5

General

4. Please delete the statement "Additional risks and uncertainties not currently known or that we currently believe to be immaterial could also materially and adversely affect our business, financial condition, operating results and/or cash flow." Your risk factors section should describe all of your material risks and should not refer to risks that are not described in this document.

5. Item 503(c) of Regulation S-K requires that you "set forth each risk factor under a subcaption that adequately describes the risk." Some of the current risk factor subcaptions do not adequately describe the risk, do not relate to the text provided below the subcaption, or are vague. For example, the subcaption stating that "Development and commercialization, if any, of our therapeutic compounds may incur scrutiny under the Convention on Biological Diversity Treaty" does not adequately describe the risk related to such scrutiny; the discussion following the subcaption that begins "Because the Company or its collaborators must obtain regulatory approval to market its products in the United States and other countries…" does not reflect the specific risk you discuss in the text. Please review each risk factor and revise as necessary to succinctly state in your subheading the risks that result from the facts or uncertainties facing the company or this offering. Generally speaking, you will best accomplish this by phrasing the risk factor subcaption in the form of a statement of cause and effect, "If X, then Y" or "Because of X, Y is probable."

"Since the Company has a limited operating history you cannot rely upon the Company's limited historical performance to make an investment decision." page 5

6. You state in the second paragraph following this risk factor that no assurances can be given that the company will be able to accomplish its goals "In part because of the Company's past operating results…" Please explain what other factors will contribute to this uncertainty.

7. If you have not generated any revenues since your inception, please revise this risk factor to clarify and disclose this fact.

"The Company will need to raise additional capital to continue operations…" page 5

8. In the discussion to follow this risk factor you state that the company anticipates the need to raise additional capital "based on current proposed plans and assumptions relating to its operations (including the timetable of…new product development)." Please include a discussion of the proposed plans and timetable of new product candidate development in the Business section.

9. Please quantify the amount of additional financing you expect you will need based on the company's "current proposed plans and assumptions".

10. Please enumerate what "other operating costs" will be funded with any additional capital raised and the estimated amount allocated to each category.

"The Company may have difficulty raising needed capital in the future…" page 5

11. Please move your discussion regarding the need for additional financing to the previous risk factor and expand your discussion in this risk factor to address the risk discussed in the subheading, that your limited operating history and business risks may make it difficult for you to raise needed capital.

"The Company relies on technologies that it may not be able to commercially develop…" page 6

12. Please define "pro-drug" technologies where it is first used in the prospectus.

13. Please expand this risk factor to provide a more robust discussion as to why the company may not be able to develop its technologies. For example, describe why your proposed products or services may have no significant commercial utility.

"Inability to complete pre-clinical and clinical testing and trials will impair the viability of the Company." page 6

14. Please provide details in the Business section as to the "current therapies" you expect your proposed products to compete with.

"The Company's additional financing requirements could result in dilution to existing stockholders." page 7

15. Please add a sentence to this disclosure to clarify that if the company issues additional shares of authorized but unissued common stock or preferred stock, stockholders will experience a decrease in their percentage ownership of the company's shares.

"The Company may not be able to adequately protect against piracy of intellectual property in foreign jurisdictions." page 7

16. To the extent you are aware that you have any intellectual property that is being infringed upon or that you have been notified of a third party's belief that you are infringing on their intellectual property, please revise to disclose the situation and the potential consequences.

17. Please identify any measures you have put into place to protect your intellectual property rights and discuss the limitations of these measures.

"The Company's products may not receive FDA approval, which would prevent the Company from commercially marketing its products and producing revenues." page 7

18. Given your disclaimer that the company "cannot yet accurately predict when it might first submit any Investigational New Drug…application to the FDA", please consider the appropriateness of your statement on pages 16 and 23 that the company plans to submit an IND in the fourth quarter of 2008.

"The Company's competition includes both public and private organizations and collaborations among academic institutions and large pharmaceutical companies…" page 8

19. Please delete the following sentence: "Of course, any of the world's largest pharmaceutical companies represent a significant actual or potential competitor with vastly greater resources than the Company's." This sentence is vague.

"The Company depends on non-employee consultants and scientific contractors to help it develop and test its products…" page 8

20. Please name any key non-employee consultants and scientific contractors. To the extent you have not already done so, describe the terms of any material agreements with them in the Business section and include the agreements as exhibits to the registration statement.

"We may not be able to establish and maintain strategic relationships with research institutions and scientific contractors…" page 8

21. Please provide material details about the "strategic relationships" you have which are currently covered by the referenced non-binding letters of understanding in the Business section. Name any key relationships in this risk factor. You should also file copies of the letters as exhibits to the registration statement, or please provide us with an analysis supporting your determination that the letters are not material.

"We intend to rely upon the third-party FDA-approved manufacturers for our products…" page 8

22. Please revise your disclosure to state that you will rely "exclusively" on FDA-approved licensees and partners, rather than "extensively", since you currently have no internal manufacturing capabilities and no present plans to develop such capabilities.

23. Please revise the subcaption of this risk factor to include suppliers, as addressed in the discussion paragraph.

24. Please identify the contract manufacturers or suppliers that you substantially rely on. If you have determined that you are not substantially dependent on these parties, please provide us with an analysis supporting this determination.

"The Company may be subject to litigation that will be costly to defend or pursue and uncertain in its outcome." page 8

25. Please revise to disclose whether there have been threats of litigation or whether any litigation or legal actions are currently outstanding or pending involving the company.

"The Company may not be able to obtain third-party patient reimbursement or favorable product pricing, which would reduce its ability to operate profitably." page 9

26. This risk factor as currently written could apply to any issuer who is a biotechnology company or any biotechnology offering. Please revise to address the company more specifically.

"The Company's products may be expensive to manufacture, and they may not be profitable if the Company is unable to control the costs to manufacture them." page 9

27. Please provide further details as to why there are fewer potential manufacturers for the company's proposed products as opposed to other drugs currently on the

market, why the company's proposed products require a greater level of needed expertise, and the "other general conditions affecting manufacturers of its products." For instance, if the technology for pro-drug research does not currently exist in the market and the manufacturers would have to develop new and unique methods, please so state.

"In order to secure market share and generate revenues, the Company's proposed products…" page 9

28. Please describe the "established treatment methods" and "more conventional drugs and therapies manufactured and marketed by major pharmaceutical companies" with which the company's proposed products will compete.

"We depend on Craig A. Dionne, PhD for our continued operations and future success…" page 9

29. Please state Craig A. Dionne's positions with the company. Please disclose the term and termination provisions of his employment agreement with the Company. Also, disclose whether Dr. Dionne has plans to retire or leave your company in the near future.

30. Please also consider placing the second paragraph following this risk factor under a new subcaption relating to the attraction and retention of new management personnel. Please discuss the extent that you have experienced difficulties attracting and retaining management personnel in the past, and the estimated costs of hiring new personnel.

"Our business is dependent upon securing sufficient quantities of a natural product that currently grows naturally in very specific locations located outside of the United States." page 9

31. Please briefly explain the function of 12ADT, the therapeutic component of your proposed products, where it is first used in the prospectus.

32. Please provide the name of your third party supplier of *Thapsia garganica* in this risk factor.

33. Consider moving the last sentence of this risk factor disclosure to a separate risk factor addressing contingencies and risks relating to weather variations in the specific countries from which *Thapsia garganica* is obtained.

"Commercial requirements, if any, for our therapeutic products may require use to secure land for cultivation and harvesting of the seeks derived from Thapsia garganica." page 10

34. Please quantify how much you believe it would cost to "secure approximately 100 acres of land to cultivate and grow *Thapsia garganica*."

"Thapsia garganica and Thapsigargin, when brought into contact with the skin, can cause severe irritation." page 10

35. Please provide your basis for the following statement: "It has been known for centuries that the plant *Thapsia garganica* can cause severe skin irritation when contact is made between the plant and the skin."

36. Please explain what the Medical Pharmacopeia is.

"Thapsia garganica is a plant that to our knowledge is not grown in the United States…" page 11

37. Please revise this risk factor subcaption to clearly address the risk to the company in the event the company is responsible for the accidental scatter of seeds and growth of *Thapsia garganica* in the United States.

"The Company cannot assure you that adequate insurance coverage will be available in the future on acceptable terms…" page 12

38. Please quantify the level of coverage of the liability insurance policy maintained for your directors and officers and the cost to you of such policy, if material, as well as the anticipated cost of your commercial insurance policies, if material.

"There is no public market for the Company's securities and no assurances can be given that one will ever develop." page 12

39. Please expand your discussion in this risk factor to explain that your stock is not traded on an exchange or on the OTC Bulletin Board and that this is your initial registration. Please also explain that even if it is quoted on the OTC Bulletin Board, the trading volume may be limited, making it difficult for an investor to sell shares.

"When and if the Company becomes a public company, the Company faces risks related to compliance with corporate governance and financial reporting standards." page 12

40. Please quantify the expected material increase in the company's legal and financial compliance costs in the event the company becomes a public company.

41. Please discuss the measures that are being taken, or plan to be taken, to address and remedy the "material weaknesses and deficiencies" that exist at this time in the company's internal controls. Please also describe the material weaknesses and deficiencies.

"The Company does not intend to pay cash dividends on its common stock in the foreseeable future." page 12

42. Please list the "other factors" to be considered by the board of directors in determining whether or not to pay cash dividends in the future.

43. Since you do not intend to pay dividends, disclose that any gains on an investment will need to come through an increase in the stock price, which may or may not occur.

"Our issuance of additional common shares or preferred shares, or options or warrants to purchase those shares…" page 12

44. Please revise this subcaption to provide a succinct description of the risks related to the issuance of additional shares. Please consider moving the portion of the heading following the phrase "as a result of…" to the text following the subcaption, and please provide details of the impact of such specific risks.

45. Please provide investors with the definition of "blank check" preferred shares.

"Our Officers and Scientific Advisors beneficially own approximately 52% of our outstanding common shares…" page 13

46. Please revise this subcaption to provide a succinct description of the risks related to the majority control of the company's officers and scientific advisors. Please provide the details of such risks in the discussion following the subcaption.

Forward-Looking Statements, page 13

47. Please delete the phrase in the last paragraph on page 13 that reads "You should not place undue reliance on any forward-looking statement as a prediction of actual results or developments." Although we do not object to the other cautionary language in this section, this phrase could be read as a disclaimer of information in your filing.

Use of Proceeds, page 14

48. Please disclose the amount of proceeds the company may receive upon the

exercise of warrants.

49. Your disclosure states that any proceeds from the exercise of warrants will be used for "working capital" and "general corporate purposes." Please revise your disclosure to be specific in how the company intends to use these proceeds and break down "general corporate purposes" into meaningful categories and quantify the amounts to be spent on each.

Our Business, page 14

General

50. Please expand your disclosure to include a more robust discussion of your business development. Please describe how your business was formed, including who were the founders and how you acquired your technology. It appears you were assigned the proprietary rights in your technology in April 2008. Please explain the focus of your business prior to that time.

51. Please clarify your disclosure throughout the prospectus to identify the precise target markets and indications for your proposed products. The table on page 16 states that the indications are solid tumors and prostrate cancer. In other parts of the prospectus you state the indications include various forms of solid tumors; including breast, urinary bladder, kidney and prostate cancer. On page 24 you discuss testing G-202 in Phase II clinical trials in "metastatic breast cancer patients" and "cancer patients." Please provide a consistent and accurate description of your target indications. If it is too early in the pre-clinical development process to determine target indications, please state this fact.

52. Throughout the prospectus you make various claims regarding your product candidates or target markets. For example you state:

    - "We believe that we have validated G-202 as a drug candidate to treat various forms of solid tumors; including breast, urinary bladder, kidney and prostate cancer."

    - "Nonetheless, these anti-angiogenic drugs have only a limited therapeutic effect with increased median patient survival times of only a few months."

    - "G-202 destroys new and existing blood vessels in tumors."

    - "We have also identified a clinically and commercially viable formulation for G-202."

Please explain the basis for these and other similar claims regarding the strengths of your product candidates or regarding your target market.

Masking/Targeting Agent, page 15

53. Please define "masking/targeting agent".

54. We refer to your graphic titled "How to make our pro-drugs" and have the following comments:

    - Please revise your disclosure to clarify the statement that "E until it finds an enzyme found selectively at our marget siteOthat cuts off the marking/targeting agent." It appears that the text was altered when the chart was placed in the document.

    - Please explain why the active drug is "no longer soluble" upon reaching its target site.

    - Some of the descriptions in the graphic are illegible due to font size and color. Please revise all descriptions so that they are legible to the reader.

Our Pro-Drug Development Candidates, page 16

55. Please describe the pre-clinical testing you have completed to date, including where the testing was conducted, by whom, the results of such testing, and describe where you are in the pre-clinical process. For example, describe if you expect to complete additional tests before submitting your IND with the FDA. Describe the "successful preliminary stability studies of seeds, manufacturing intermediates and final drug substance" and "pilot toxicology studies in rats and monkeys" you refer to on page 23. Provide a basis for your statements that the studies are successful.

56. Please revise your disclosure to provide a complete description of your grants supporting laboratory research mentioned in the table on page 16. Please describe the material terms of each grant, including, but not limited to, the aggregate amounts, stipulations and term. Please also file any relevant agreements as exhibits.

Manufacturing and Development Strategy and Commercialization Strategy, page 16

57. To the extent you have not already done so, please describe any current arrangements or agreements, upon which you are substantially dependent or that are otherwise material to your business, with contract research organizations,

contract manufacturing organizations, or third party licensees regarding the research, development, manufacture, marketing and distribution of your proposed products. For each agreement that is a material contract, describe all material terms, including

- Each parties 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;
- Term and termination provisions.

To that effect, we note your Alliance Agreement with InB:Hauser Pharmaceutical Services, your sole source agreement with Thapsibiza, SL, your Master Services Consulting Agreement with Regulatory and Toxicology Services Corporation and your agreement with Ambiopharm. To the extent you have not already done so, please file each agreement that is a material contract as an exhibit. See Item 601(b)(10) of Regulation S-K.

58. We refer to your statement that, "After Phase I/II clinical trials, our experimental drugs will then be licensed to third parties." If you have already secured agreements third party licensees, please revise your disclosure to clarify and to disclose the details of those arrangement as requested in our comment above. Otherwise, it appears that you have no way to ensure that you will be able to secure third party licenses for your experimental drugs. Please revise your disclosure to indicate these are your "plans" or that you "expect" to complete these steps.

<u>Competition, page 18</u>

59. Please clarify who you expect to be your key and direct competitors and how you expect to compete with these competitors.

<u>Patents and Proprietary Rights, page 18</u>

60. Please describe the arrangements or agreements under which you received an assignment of the intellectual property that underlies your technology, including any considered paid or given, the names of the inventors from whom the technology was assigned, the company's relationship with each of the inventors and any continuing obligations of the inventors. Any material agreements should also be included as exhibits to the registration statement.

61. Please describe any technology you have licensed and how it relates to your

business plan and proposed products. We note your reference to "licensed technology" on page 25, your reference to a license of intellectual property from Messrs. Isaacs and Denmeade on page 31 and numerous references to licenses in the footnotes to the financial statements. Describe the material terms of any relevant license agreements, including, but not limited to payment provisions, the existence of royalty provisions, aggregate milestones, usage restrictions, exclusivity provisions, obligations/rights to defend, other rights obtained and obligations that must be met to keep the license in place, duration and termination provisions. Any material agreements should also be included as exhibits to the registration statement.

62. Please revise the sentence beginning "Under the Bayh-Dole Act of 1980…" to clarify the purpose of the United States government's license in the intellectual property. It is unclear what is meant by a license to "practice or have practiced…the intellectual property".

Manufacturing and Development, page 19

63. Please reconcile the consistency of the terms "12ADT" and "12-ADT" throughout the document.

64. Please define *T. garganica* where it is first used.

Government Regulation, page 19

65. Please provide a list of the foreign countries in which the company plans to apply for approval to commence clinical trials and subsequently sell and market its product candidates.

Other Regulatory Requirements, page 22

66. To the extent material to an understanding of your business, please describe the costs and effects of compliance with environmental laws (federal, state and local), as required by paragraph (h)(4)(xi) of Item 101 of Regulation S-K.

Employees, page 22

67. Please clarify if your two employees are your two executive officers. Please add a risk factor that discusses your reliance on these two persons.

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 22

Plan of Operation, page 23

68. You explain that some of the statements in the prospectus are forward-looking statements "for purposes of the safe harbor provisions under the Private Securities Litigation Reform Act of 1995." Section 27A of the Securities Act specifically excludes from protection statements you make in connection with initial public offerings. Please either:
    - delete any references to the Private Securities Litigation Reform Act; or
    - make clear, each time you refer to the Litigation Reform Act, that the safe harbor does not apply to your company.

69. Much of the discussion in this section relates to the description of your business and business plan. Please move this discussion to the business section of your prospectus under appropriate subheadings in the business section.

70. Please delete any references throughout the registration statement to yourself as a "pharmaceutical company." You currently have no "pharmaceuticals" that have been approved by the FDA.

71. Please delete your statement regarding your "core expertise of identifying promising treatments and bringing them into the clinic, and to do so in a relatively 'lean' manner." You have yet to bring any product candidates into clinical development.

72. We refer to your statement regarding "experienced contract organizations known to" you. You do not currently describe any contractual or other relationships you have with contract organizations. Please provide your basis for this statement. Alternatively, delete the statement.

73. Your current description of your relationship with John Hopkins University is incomplete. On page 23 you state that "laboratory research is continuing in the laboratories of our co-founders at John Hopkins University using funds derived from standard academic channels" and that the "continued characterization of our lead molecules and the development of second generation approaches to the current programs will continue in the laboratories of Drs. Isaacs and Denmeade at John Hopkins University using funds obtained from traditional academic channels." Please provide a complete description of any oral or written arrangements or agreements you have with referenced laboratories, John Hopkins University, your co-founders and any relevant academic channels, naming all parties involved. Your description should address what research is being

conducted, by whom, where the funds are coming from, how the company benefits from any such arrangements and the respective parties' obligations. Describe your relationship with Drs. Isaacs and Denmeade. 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.

74. Please explain your reference to your intellectual property development on page 23. Your disclosure on page 18 indicates that the intellectual property underlying your technology was assigned to you in April 2008. We also note your statement on page 14 that you have "developed proprietary technologies." Please explain why you state that your intellectual property was developed. Alternatively, delete these statements.

75. You refer to "significant progress in other key areas such as drug manufacture, toxicology, and clinical and regulatory activities for our lead compound G-202" on page 23. Since you have not yet started clinical testing or received any regulatory approvals, please revise this statement to delete your references to significant progress in clinical and regulatory activities.

76. Please expand your description of any oral or written understandings or arrangements you have with John Hopkins Oncology Center and Wisconsin Comprehensive Cancer Center. We note your references to these organizations on pages 23 and 24.

77. In the second to last paragraph of the *Plan of Operation* section you state that you will "retain the discretion to allocate the cash proceeds of this offering", however you state multiple times throughout the filing that the company itself will not receive any of the proceeds from the offering, but rather that the selling stockholders will receive all proceeds. Please reconcile these statements.

78. In the last sentence of the *Plan of Operation* section, you state that you will apply additional capital raised to "the other pipeline drugs and development of other business opportunities such as diagnostic imaging." Please list the "other pipeline drugs" (as found on page 16 of the filing) and explain the reference to diagnostic imaging as a planned stipulated business opportunity.

<u>Results of Operations, page 25</u>

79. Please explain why patent costs accounted for part of your research and development costs in 2007. Your disclosure on page 18 indicates that the intellectual property underlying your technology was assigned to you in April 2008.

80. If the decrease or increase in each expense line item is a result of several factors, please quantify the amount of change due to each factor. Please refer to FRC Section 501.04.

81. We believe that your disclosures about historical research and development expenses and estimated future expenses related to your major research and development projects could be enhanced for investors. Please refer to the Division of Corporation Finance "Current Issues and Rulemaking Projects Quarterly Update" under section VIII – Industry Specific Issues – Accounting and Disclosure by Companies Engaged in Research and Development Activities. You can find it at the following website address: http://www.sec.gov/divisions/corpfin/cfcrq032001.htm. Please revise your MD&A to disclose the following information for each of your major research and development projects.

    a. The current status of the project;
    b. The costs incurred during each period presented and to date on each project;
    c. The nature, timing and estimated costs of the efforts necessary to complete each project;
    d. The anticipated completion dates of each project;
    e. The risks and uncertainties associated with completing development on schedule, and the consequences to operations, financial position and liquidity if each project is not completed timely; and finally
    f. The period in which material net cash inflows from significant projects are expected to commence for each project.

    Regarding b., if you do not maintain any research and development costs by project, disclose that fact and explain why management does not maintain and evaluate research and development costs by project. Provide other quantitative or qualitative disclosure that indicates the amount of the company's resources being used on the project.

    Regarding c. and d., disclose the amount or range of estimated costs and timing to complete the phase in process and each future phase. To the extent that information is not estimable, disclose those facts and circumstances indicating the uncertainties that preclude you from making a reasonable estimate.

Liquidity and Capital Resources, page 27

82. Please provide the name of the majority stockholder who has provided financing of the company's operations in the form of promissory notes aggregating $155,000, as discussed on page 31. Please also describe all material terms of the notes, including the maturity dates, interest rates and any material covenants.

83. Please quantify the "substantial portion of the proceeds of the common stock units" expended to "support ongoing operations and research and development activities.

84. Please reconcile the following two disclosures:

- On page 27 in the fourth paragraph of the *Liquidity and Capital Resources* section you state the following: "We anticipate that our available cash and expected equity sales will be sufficient to finance our current activities for at least twelve months from the date of the financial statements."

- On page 5 in the *Risk Factors* section you state the following: "The Company anticipates, based on current proposed plans and assumptions relating to its operations…and financing the Company has undertaken prior to the date of this prospectus, that its current working capital will be sufficient to satisfy contemplated cash requirements for approximately 6 months… As of September 12, 2008, the Company has cash and cash equivalents on hand of $1,858,041. Presently, the Company has a monthly cash burn rate of approximately $300,000. Accordingly, the Company will need to raise additional capital to fund anticipated operating expenses and future expansion after such 6 month period."

85. If the financial statements that you are referring to in the first statement above are for the year ended December 31, 2007, then the statement claims that available cash and equity sales will be sufficient to fund operations through December 31, 2008. The second statement provides that working capital will be sufficient until approximately 6 months from September 12, 2008, which is March 12, 2009. Please consider revising the disclosure on page 27 to reconcile the two statements.

86. Please disclose the factors that caused your cash flows from operations and investing activities to change for the periods presented. The format of this discussion should not merely replicate the information that is already readily discernable from the statement of cash flows.

<u>Management, page 28</u>

<u>Directors, page 28</u>

87. Item 401(e) of Regulation S-K requires that registrants describe the business experience of each director during the past five years. Please clarify the approximate number of years Scott Ogilvie has been employed by Gulf Enterprises International, Ltd ("Gulf"). If he has not been employed by Gulf for at least the past five years, please provide the name of his employer immediately prior to Gulf.

Committees, page 28

88. On page 28 you state that the board of directors currently does not have any committees. However, on the following page you state that the company's 2007 Equity Compensation Plan is administered by a "committee of non-employee directors appointed by the board of directors." Please reconcile these statements. Because there are only three directors on the company's board of directors, only two of which appear to be non-employees (Farah and Ogilvie), it would seem that these two individuals would be the two non-employee directors appointed to administer the 2007 Plan. Please name the two members of this committee to clarify.

89. Item 407(e) requires that if the "registrant does not have a standing compensation committee or committee performing similar functions, state the basis for the view of the board of directors that it is appropriate for the registrant not to have such a committee and identify each director who participates in the consideration of executive officer and director compensation." Although you state on page 28 that the company intends to establish a compensation committee, you do not clearly identify each director who participates in the consideration of executive officer and director compensation. Please revise accordingly.

Executive Officers and Significant Employees, page 28

90. Item 401(e) of Regulation S-K requires that "when an executive officer…has been employed by the registrant…for less than five years, a brief explanation shall be included as to the nature of the responsibility undertaken by the individual in prior positions to provide adequate disclosure of his prior business experience." Because Russell Richerson, PhD, was employed by the company in July of 2008, and therefore has been employed by the company for less than five years, please list the "numerous management roles" that Richerson held at Abbott Laboratories, and please clarify whether or not Richerson was employed by Abbott immediately prior to joining the company.

Executive Compensation, page 28

91. Please explain the reason for the large disparity between Dr. Dionne's compensation of $20,000 in 2007 and his approved annual salary of $240,000.

92. Your disclosure on page 30 indicates that options were granted to your executive officers. Please provide the disclosure required by Item 402(p) of Regulation S-K for the outstanding equity awards for your executive officers. Also, if there were no option grants to or option exercises by your executive officers in the 2007 fiscal year, please revise your disclosure to clarify.

Equity Compensation Plan Information, page 29

Issuance and Awards, page 29

93. Please name the consultants that were awarded stock options in the first half of 2008. Also, please identify the number of options received by each of the members of the board of directors, the Scientific Advisory Board and each consultant.

Certain Relationships and Related Transactions, page 30

94. Please delete the statement that "This summary . . . does not purport to be complete and is qualified in its entirety by reference to the respective agreements, a copy of each of which is filed or incorporated by reference as an exhibit to this report." The summary should describe all material terms of the agreements.

95. We note that Dr. Dionne's beneficial ownership is 21.5%. We also note that you refer to him as your "majority stockholder." Please reconcile these statements.

Selling Stockholders, page 32

96. Please briefly describe the private placements in which the shares being registered were issued to the selling stockholders.

97. Please remove your reference to "the triggering anti-dilution protective provisions with regard to the common stock and warrants" or provide us your analysis as to why those shares would be covered by this prospectus.

98. Please disclose who has voting and dispositive control of New Giles, LLC.

99. Footnote 7 to the table on page 32 states that the company issued 255,900 warrants to TR Winston & Company, LLC in connection with its July and August offering. However, on page 27 you state that TR Winston received only 81,800 warrants in connection with this offering. Further, we note that your disclosure in the final bullet point on page 63 states that "we issued to TR Winston & Company, LLC a warrant to purchase 278,400 common shares." Please clarify how many warrants were issued to TR Winston and reconcile throughout the registration statement.

Description of Securities, page 33

Common Stock, page 33

100. Please briefly describe the anti-dilution provisions that exist in the warrants and debentures and the price and volume conditions in the warrants that make the warrants callable.

Registration Rights, page 33

101. Please disclose whether or not the company has commenced paying the "monthly partial liquidated damages, in cash, in the amount of 1.5% of the aggregate purchase price paid by the holder for any unregistered securities" as a consequence of missing the September 27, 2008 filing deadline for this registration statement. (We note that the registration statement was filed on October 3, 2008).

Shares Eligible for Future Sale, page 34

Rule 701, page 35

102. Please advise us supplementally how you have calculated that 7,458,518 shares of common stock are "restricted securities" and the shares disclosed in the table at the bottom of page 34.

Experts, page 37

103. We note your reference to a going concern qualification from your auditors, but such qualification does not appear in the audit opinion provided. Please explain.

Item 13. Other Expenses of Issuance and Distribution, page 61

104. Please clarify whether or not the selling stockholders will pay any of the expenses listed in this section.

Item 15. Recent Sales of Unregistered Securities, page 62

105. Please disclose details of the "financial milestones" which must be met in order for the remaining 16,000 outstanding common stock options granted to "a consultant," referenced at the bottom of page 62, to vest.

Item 17. Undertakings, page 64

106. Please delete the final paragraph on page 64, included pursuant to Item 512(b) of

Regulation S-K. Because the registration statement does not incorporate by reference any Exchange Act documents filed subsequent to the effective date of the registration statement, this disclosure is inappropriate.

Notes to Financial Statements for the Years Ended December 31, 2007 and 2006

Note 1 – Summary of Accounting Policies

Research and Development, page 44

107. Disclose the types of costs included in research and development, including salaries, contractor fees, building costs, utilities, administrative expenses and allocations of corporate costs.

Note 3 – Convertible Notes Payable – Stockholder, page 47

108. Please tell us your analysis of whether the conversion option should be a derivative liability.

Notes to Financial Statements for the Six Month Periods Ended June 30, 2008 and 2007

Note 4 – Intellectual Property, page 57

109. Please explain to us how your capitalization of the license agreements covering patents, which appear to be used in research and development activities, complies with paragraph 11(c) of SFAS 2. If you believe the license agreement has an alternative future use, please demonstrate this to us in your response.

110. Please include the estimated aggregate amortization expense for each of the five succeeding fiscal years as required by paragraphs 45.a.(3) of SFAS 142.

Note 5 – Stock Options and Warrants, page 58

111. Please break out the activity for options and warrants separately.

112. Please include the disclosures required by paragraphs A240(d)(1) and (2) of SFAS 123R related to the weighted-average remaining contractual term and aggregate intrinsic value for options outstanding and exercisable as well as paragraph A240(h) related to non-vested awards.

Note 6 – Subsequent Events, page 58

113. Please tell us how you have accounted for the warrants issued in July and August

2008 and the accounting literature that you considered.

Exhibit 5.01 Legal Opinion

114. Please expand the legal opinion to opine that the shares already issued and outstanding are validly issued, fully paid and non-assessable. Currently your opinion only covers these points for the shares underlying the warrants.

* * * * *

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 Vanessa Robertson at (202) 551-3649 or Joel Parker at (202) 551-3651 if you have questions regarding comments on the financial statements and related matters. Please contact Laura Crotty at (202) 551-3563, Sonia Barros at (202) 551-3655 or myself at (202) 551-3715 with any other questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director

cc: Raul Silvestre
Law Offices of Raul Silvestre & Associates, APLC
31200 Via Colinas, Suite 200
Westlake Village, CA 91362