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December 17, 2010

United States Securities and Exchange Commission  
Division of Corporate Finance  
100 F Street, N.E.  
Washington, DC 20549

Attn: Aslynn Hogue

Re: Oculus Innovative Sciences, Inc.  
Form 10-K for the fiscal year ended March 31, 2010  
Filed June 8, 2010  
File No. 001-33216

Dear Ms. Hogue:

I am securities counsel for Oculus Innovative Sciences, Inc. (the "Company"). Set forth below is the Company's response to comments received from the staff of the Securities and Exchange Commission (the "Staff") in their letter dated November 8, 2010. The numbering of the response corresponds to the numbering of the comment in the letter from the Staff.

Item 12. Security Ownership of Certain Beneficial Owners....page 75

Comment 1: We note your response to prior comment 3 regarding the beneficial ownership of Robert Burlingame. Please expand your analysis supporting your determination that Robert Burlingame beneficially owned less than 5% of your outstanding common stock to tell us:

- the steps that you took to confirm Robert Burlingame's beneficial ownership;
  - how you considered the Form 4s filed on June 3, 2009; June 19, 2009; and January 7, 2010, including your analysis of the changes between the Form 4s;
  - how you considered the Schedule 13D filed on July 8, 2009 including the reasons for the difference between the Schedule 13D and the disclosure of beneficial ownership in your proxy statement filed on July 29, 2009; and
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- how you determined that all of the 1,386,667 of derivative securities disclosed in the Form 4 dated January 5, 2010 were subject to the 4.99% restriction; for example, we note your disclosure on footnote 4 on pages 19-20 of your proxy statement that warrants for 388,889 shares were subject to this restriction.

Response 1:

To determine the beneficial ownership of Robert Burlingame for purposes of completing the beneficial ownership table in the Company's definitive proxy filed on July 29, 2010, the Company examined Mr. Burlingame's SEC filings and its own SEC filings. The Company also reviewed its own internal records and corresponded with Robert Burlingame to confirm his beneficial ownership of Company securities. The Company considered historical SEC filings as part of determining the entire picture of Mr. Burlingame's ownership of the Company's stock. Additionally, the Company provided such historical information to the Staff in its response letter dated October 29, 2010 because the Staff had issued two comments regarding the ownership of Robert and Seamus Burlingame and we believed such historical information would provide the Staff with context for Robert Burlingame and Seamus Burlingame's ownership on July 15, 2010 as reported in the Company's definitive proxy filed on July 29, 2010. During the year between the Company's definitive proxy filed on July 29, 2009 and the Company's definitive proxy filed on July 29, 2010, Mr. Burlingame disposed of certain of his securities, Mr. Burlingame's options expired pursuant to their terms due to his resignation as a Director of the Company and the Company issued additional shares of common stock diluting Mr. Burlingame's position.

Subsequent to the Company's last letter, the Company reconfirmed Robert Burlingame's ownership. Mr. Burlingame holds shares of the Company's common stock both in his own name and through entities of which he has partial control. In reconfirming Mr. Burlingame's ownership, the Company learned a small portion of Mr. Burlingame's shares are owned through an entity that he partially controls and such shares should be attributed to Mr. Burlingame's beneficial ownership although they were not included at the time the Company calculated Mr. Burlingame's ownership for the Definitive Proxy filed on July 29, 2010. The addition of those shares brings Mr. Burlingame's ownership to approximately 5.4% of the Company's common stock as of July 15, 2010, the date of the beneficial ownership table as filed in the Company's Definitive Proxy on July 29, 2010. Thus, the Company should have included Robert Burlingame as an owner of more than 5% of the Company's common stock in that Definitive Proxy.

The Company considered the following Form 4s filed by Robert Burlingame in the following manner (in addition to the Form 4s requested by the Staff, we have also included a Form 4 filed on March 6, 2009 to be inclusive of the entire February 27, 2009 private placement):

- The Form 4 filed by Robert Burlingame on March 6, 2009 reflects the first tranche of the Purchase Agreement, as described in the Company's Current Report on Form 8-K, filed on February 27, 2009.
  - The Form 4 filed by Robert Burlingame on June 3, 2009 reflects the second tranche of the Purchase Agreement, as described in the Company's Current Report on Form 8-K, filed on February 27, 2009.
  - The Form 4 filed by Robert Burlingame on June 19, 2009 reflects the issuance of the Company's common stock to Mr. Burlingame as compensation for his consulting services, as disclosed in Exhibit 10.52 of the Company's Annual Report on Form 10-K, filed on June 11, 2009.
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- The Form 4 filed by Robert Burlingame on January 7, 2010 reflects the issuance of common stock options as compensation for serving on the Company's Board of Directors. As discussed further below, all common stock options expired following Mr. Burlingame's resignation as a director.

The Company respectfully notes that there are not discrepancies in Robert Burlingame's Schedule 13D and the disclosure in the Company's beneficial ownership table in its proxy statement filed on July 29, 2009. In instances, noted below, Mr. Burlingame, in the interest of transparency, disclosed certain securities that he was not required to disclose pursuant to the rules and regulations of the SEC however he clearly noted the instances where that occurred. The Company respectfully believes such over-disclosure, particularly where it is clearly stated to be such, should not be considered a discrepancy.

Per the Schedule 13D filed by Robert Burlingame on July 8, 2009, he reported beneficial ownership of 1,550,486 shares of common stock. In its beneficial ownership table in its proxy statement filed on July 29, 2009, the Company also reported his ownership of 1,550,486 shares, consisting of direct ownership of 1,294,931 shares of common stock, and deemed ownership of 255,555 shares of common stock. We respectfully note that these items are the same so there is no difference to account for.

Per the Schedule 13D filed by Robert Burlingame on July 8, 2009, he reported derivative ownership of 1,371,667 shares of common stock consisting of:

- 75,000 warrant shares;
- 130,000 common stock options;
- 166,667 Series A warrants, exercisable September 4, 2009;
- 222,222 Series B warrants, exercisable September 4, 2009;
- 333,333 Series A warrants, exercisable December 1, 2009; and
- 444,445 Series B warrants, exercisable December 1, 2009.

In its beneficial ownership table in its proxy statement filed on July 29, 2009, the Company reported derivative ownership of 205,000 shares of common stock consisting of

- 75,000 warrant shares; and
- 130,000 common stock options currently exercisable.

The difference of 1,166,667 derivative shares consist entirely of Series A and Series B warrants (disclosed in the Company's Current Report on Form 8-K, filed on February 27, 2009) that were not exercisable until six months after the date of the issuance of the warrants and were furthermore not exercisable due to the 4.99% limitation. As stated above, the Company does not believe this is an inconsistency but rather over disclosure in the Schedule 13D. The 13D filed by Robert Burlingame included certain warrants as part of his beneficial ownership that he did not need to include under the rules, which Mr. Burlingame went so far as to note in the last sentence of Item 11 of his Schedule 13D.

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Mr. Burlingame's Schedule 13D filed on July 8, 2009 in Item 11 states:

"On September 4, 2009, 166,667 and 222,222 shares of common stock underlying Series A and Series B Warrants issued March 4, 2009, respectively, will become exercisable pursuant to the terms of those warrants. On December 1, 2009, 333,333 and 444,445 shares of common stock underlying Series A and Series B Warrants issued June 1, 2009, respectively, will become exercisable pursuant to the terms of those warrants. The common stock underlying the warrants issued on June 1, 2009 may not be acquired within 60 days until October 2, 2009. *Notwithstanding the foregoing, the reporting person is electing to include these shares in the calculation of beneficial ownership as of the date of this filing.* (emphasis added)"

The Company's disclosure in the beneficial ownership table filed in its Definitive Proxy on July 29, 2009 complies with Regulation S-K, Item 403 and Rule 13d-3 of the Exchange Act and correctly omits such warrants as part of Mr. Burlingame's beneficial ownership.

In reporting the derivative securities owned by Robert Burlingame as of January 7, 2010, the Company respectfully notes that in its letter to the Staff dated October 29, 2010, it stated the 1,386,667 of derivative securities reported by Mr. Burlingame consisted of both warrants and options. The Company further stated only the warrants were subject to the 4.99% restriction. The options, which had no corresponding restriction, had expired pursuant to their terms at the time the Company filed its 2010 proxy due to Mr. Burlingame's resignation as a director.

The Company determined that the 1,386,667 of derivative securities owned by Robert Burlingame as stated in his January 7, 2010 Form 4 were comprised of the following blocks:

Stock options: 130,000 common stock options that that were reported by Mr. Burlingame on his Schedule 13D filed July 8, 2009, consisting of 75,000 options first reported on a Form 3 filed by Mr. Burlingame on January 24, 2007; 15,000 options first reported on a Form 4 filed by Mr. Burlingame on November 16, 2007; 15,000 options first reported on a Form 4 filed by Mr. Burlingame on September 4, 2008; and 25,000 options first reported on a Form 4 filed by Mr. Burlingame on December 11, 2008. Mr. Burlingame also reported receiving 15,000 common stock options on a Form 4 filed on January 7, 2010.

Warrants: 1,166,667 common stock purchase warrants issued to Mr. Burlingame per the February 24, 2009 purchase agreement disclosed on the Company's Current Report on Form 8-K filed February 27, 2009. The warrants were issued in a first tranche of 388,889 warrants, consisting of 166,667 Series A and 222,222 Series B common stock purchase warrants and a second tranche of 777,778 warrants, consisting of 333,333 Series A and 444,445 Series B common stock purchase warrants. Both tranches were reported by Mr. Burlingame on his Schedule 13D filed July 8, 2009 and reported on Form 4s as discussed above.

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Additionally, Mr. Burlingame holds 75,000 common stock purchase warrants that were reported by Mr. Burlingame on his Schedule 13D filed July 8, 2009 and first reported on a Form 3 filed by Mr. Burlingame on January 24, 2007.

Each of the warrants states that the Beneficial Ownership Limitation is initially set at 4.99%, but may be waived by the Holder of the warrant with 61 days notice, whereby the Beneficial Ownership Limitation will be increased to 9.99%. As of the date of this letter, Mr. Burlingame has not notified the Company of his intention to waive the Beneficial Ownership Limitation. Because the Beneficial Ownership table included in the Company's Schedule 14A filed on July 29, 2010 only includes warrants that may be exercised within 60 days, and because Mr. Burlingame has not waived the 4.99% limitation, the Company concluded such warrants should be excluded from Mr. Burlingame's Beneficial Ownership.

Comment 2: We note your response to prior comment 3 Seamus Burlingame beneficially owned approximately 6.0% of your common stock as of July 15, 2010 and that you will "undertake to consider the shares of stock held by Seamus Burlingame in determining disclosures in future filings." Please provide us with the analysis supporting your determination that consideration of the shares of stock held by Seamus Burlingame was not necessary or that disclosure of his beneficial ownership was not required in your proxy statement filed on July 29, 2010.

Response 2: As stated in its prior response to the Staff's Comment 3 in its letter dated October 29, 2010, the Company acknowledges that it excluded Seamus Burlingame from the beneficial ownership table in error. The Company attributes this error to a number of factors. Seamus Burlingame is not and has never been an officer, director or employee of the Company and he beneficially owns less than 10% of the Company's securities. Accordingly, he has not filed a Form 3 or Form 4 with the Securities and Exchange Commission. Seamus Burlingame's sole ownership report was a Schedule 13D filed on July 8, 2009. Additionally, the Company had not issued any securities to Seamus Burlingame since June 1, 2009, as last disclosed on June 4, 2009 in the Company's Current Report on Form 8-K. Finally, the Company had 20,582,342 shares of common stock outstanding as of July 29, 2009, the date of its 2009 Definitive Proxy and 26,277,458 shares of common stock outstanding as of July 15, 2010, the date of the beneficial ownership table in the Company's 2010 Definitive Proxy and the Company believed, in error, Seamus Burlingame's position on July 15, 2010 had been diluted below the 5% threshold necessary to report his holdings.

The Company respectfully disagrees with the Staff's assertion that the Company believes disclosure of shares of stock held by Seamus Burlingame was not necessary. To the contrary, the Company has repeatedly disclosed the transaction in which Seamus Burlingame acquired his shares. The Company initially disclosed this transaction in its Form 8-K filed on February 27, 2009 and Seamus Burlingame disclosed it in a Schedule 13D dated July 8, 2009. The Company has also repeatedly described the transaction in every periodic report it has filed since the original placement of the stock in February 2009. Most recently, the transaction was included under the heading "Common Stock Issued in a Private Placement to a Related Party" on page 65 of the Company's Annual Report on Form 10-K for the year ended March 31, 2010. Accordingly, the Company believes there is substantial disclosure available to its shareholders about the transaction in which Seamus Burlingame acquired his equity interest in the Company.

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Additionally, the Seamus Burlingame has been mentioned by name in several of the Company's SEC filings including the following:

- Seamus Burlingame was referred to by name in the title of Exhibit 10.4, listed on the face of the Current Report on Form 8-K filed by the Company on February 27, 2009, as well as in subsequent references to that Exhibit. Additionally, Seamus Burlingame was referred to by name within Exhibit 10.4 itself.
- Seamus Burlingame filed a Form 13D disclosing his beneficial ownership in the Company on July 8, 2009.
- The Company also included Seamus Burlingame's holdings in the beneficial ownership table in its Definitive Proxy filed on July 29, 2009. In the footnote to that table, the Company also described the transaction and how Seamus Burlingame acquired his equity interest.

The Company respectfully believes that there is substantial public disclosure across over fifteen SEC filings including 10-Qs, a 10-K, S-1s, a Definitive Proxy, an 8-K and a Schedule 13D explaining how Seamus Burlingame made a one-time investment in the Company close to two years ago. While the Company acknowledges that it omitted disclosure of Seamus Burlingame's equity interest in error in one filing, it respectfully notes that the information regarding that transaction is widely available and referred to several times in the Company's Annual Report on Form 10-K for the year ended March 31, 2009 and that the exhibit list in that report also includes a reference to the documentation for the transaction such that any investor could easily find it.

Additionally, the Company believes omitting Seamus Burlingame from the beneficial ownership table in its definitive proxy filed on July 29, 2010 does not represent a material omission in that definitive proxy or the Annual Report on Form 10-K. Mr. Burlingame's holdings are a small percentage, only 1%, over the requirement to report at 5%. Seamus Burlingame has not agreed to purchase additional shares of stock from the Company since he entered into a purchase agreement on February 24, 2009 and that, to date, Seamus Burlingame has been a one-time passive investor. Additionally, at the time the Company filed its definitive proxy on July 29, 2010, Robert Burlingame was no longer a Director of the Company and Seamus had no family relationships to any of the Company's officers or directors.

Furthermore, the Company does not believe that the exclusion of Seamus Burlingame from the Beneficial Ownership Table included in the Company's proxy statement filed on July 29, 2010 would have affected the shareholder vote on matters presented to shareholders at the Annual Meeting. The Directors nominated and subsequently elected, Gregg Alton and Jay Birnbaum, are in no way related to Seamus Burlingame. The Company believes the ratification of Marcum LLP as the Company's independent public accountant would not be affected either particularly because it passed by a wide margin.

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The Company also believes that the outcome of the investor vote regarding the approval of its 2010 Stock Incentive Plan would not have changed based on disclosure of the holdings of Seamus Burlingame in the Company's Definitive Proxy. However, even if the holdings of Mr. Burlingame were sufficiently material to affect the vote of an investor, the approval of the 2010 Stock Incentive Plan did not receive sufficient votes, and the Plan was not approved by shareholders. Consequently, while the Company acknowledges it should have included Seamus Burlingame in the beneficial ownership table of its definitive proxy filed on July 29, 2010, it believes, for the reasons stated above, it should not amend its Definitive Proxy to include such information. As stated in the letter to the Staff dated October 29, 2010, the Company undertakes to carefully assess the Seamus Burlingame's equity ownership in the Company when drafting disclosure in future filings.

Comments 3 and 5: We have respectfully grouped Staff comments 3 and 5 together as they relate to the same subject matter.

Comment 3: We note the final paragraph of your response to prior comment 3. Please tell us what transactions you entered into with Robert or Seamus Burlingame that you did not believe were material as of July 29, 2010, but have increased in importance subsequent to that date. Please tell us how you made the determination not to disclose or file as exhibits these agreements.

Comment 5: It remains unclear from your response to prior comment 6 why you did not file your July 24, 2009 amendment to your commercial agreement to sell Vetericyn products on your September 15, 2009 commercial agreement to sell your Microcyn over-the-counter liquid and gel products. For example, please tell us the basis for your determination that neither contract was material under Rule 404 of Regulation S-K. Please also tell us why you did not file your June 1, 2010 and September 1, 2010 amendments to your commercial agreement to sell your Microcyn over-the-counter liquid and gel products, which you mention on page 10 of your Form 10-Q filed on November 4, 2010.

Response to Comments 3 and 5:

For clarity, the Company respectfully notes that it has fully disclosed in its SEC filings all agreements and transactions entered into directly with Robert or Seamus Burlingame, including the following transactions entered into since January 1, 2009:

- A purchase agreement between the Company and Robert and Seamus Burlingame dated January 26, 2009, disclosed on the Company's Current Report on Form 8-K dated January 29, 2009 (that was subsequently rescinded).
  - A purchase agreement between the Company and Robert and Seamus Burlingame dated February 24, 2009, rescinding and replacing the January 26, 2009 purchase agreement, disclosed on the Company's Current Report on Form 8-K dated February 27, 2009.
  - A Consulting Agreement between the Company and Robert Burlingame, dated April 1, 2009, included as Exhibit 10.52 to the Annual Report on Form 10-K filed on June 11, 2009.
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Additionally, the Company has entered into transactions with entities wholly or partially controlled by Robert Burlingame as further described below. In determining whether to file such contracts or amendment to such contracts, the Company relied upon Item 601(b)(10)(ii) of Regulation S-K which requires the disclosure of contracts made in the ordinary course of business, “except where immaterial in amount or significance.” Additionally, the Company considered its disclosure obligations under Item 404 of Regulation S-K when entering into a transaction with a related party or an entity controlled by a related party as further discussed below.

#### Vetericyn Contracts

On January 26, 2009, the Company entered into the Revenue Sharing and Distribution Agreement with VetCure, Inc. The VetCure agreement provides that the Company would provide the Vetericyn product to VetCure, and VetCure would distribute, market and sell the product. The Company would only earn revenue upon sales by VetCure, however no revenue, royalty or commission was guaranteed to the Company. VetCure, Inc. subsequently changed its name to Vetericyn, Inc. The VetCure Agreement was initially disclosed in Exhibit 10.3 in the Company’s Current Report on Form 8-K dated January 29, 2009. The Company did not believe the VetCure agreement was material at the time it was entered into because the Company, at that time, did not anticipate that the VetCure agreement would generate significant revenues. Additionally, the VetCure Agreement did not meet the \$120,000 requirement to be disclosed pursuant to Item 404 of Regulation S-K. Consequently, the Company was not required to disclose the transaction. However, the Company determined to voluntarily disclose the VetCure agreement in a Form 8-K filed January 29, 2009 in the interest of transparency and to provide information to its shareholders. The Company continued to discuss and disclose this transaction in each of its subsequent periodic reports.

On February 24, 2009, the Revenue Sharing and Distribution Agreement between the Company and Vetericyn, Inc. (formerly VetCure, Inc.) was amended and renamed the Revenue Sharing, Partnership and Distribution Agreement (hereafter, the “RSPDA”). Amendment 1 to the RSPDA expanded Vetericyn, Inc.’s sales territory, and deleted the equity compensation clause. At the time Amendment 1 was entered into, the Company had earned nominal revenue from the RSPDA of approximately \$5,000 and the Company did not believe the RSPDA contract was material. Additionally, the RSPDA did not meet the \$120,000 requirement to be disclosed pursuant to Item 404 of Regulation S-K. However, for the reasons discussed directly above, the Company filed the RSPDA on a Form 8-K on February 27, 2009.

On July 24, 2009, the Company and Vetericyn, Inc. entered into Amendment 2 to the RSPDA. Amendment 2 to the RSPDA changed revenue sharing terms, however, at this time, the Company was still earning only nominal revenue from the RSPDA and the Company did not believe the RSPDA contract was material. Furthermore, Amendment 2 to the RSPDA, as well as the RSPDA as a whole, did not meet the \$120,000 requirement to be disclosed pursuant to Item 404 of Regulation S-K. Accordingly, the Company did not file Amendment 2 to the RSPDA at the time it was entered into because it did not believe the RSPDA as a whole was material and that Amendment 2 to the RSPDA did not contain material revisions to the terms of the original agreement. The Company subsequently filed Amendment 2 to the RSPDA as Exhibit 10.44 to its Form 10-Q filed on November 4, 2010 because, almost a year after Amendment 2 was entered into, the RSPDA began producing material revenue. At that point, the Company determined to file Amendment 2 to the RSPDA.

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On June 1, 2010, the Company and Vetericyn, Inc. entered into Amendment 3 to the RSPDA. Amendment 3 changed revenue sharing terms and expanded Vetericyn Inc.'s sales territory. It was at the time Amendment 3 was entered into, in the Company's first fiscal quarter of 2010, that the Company first began earning significant revenue from the RSPDA. Once the RSPDA began producing significant revenue, the Company reassessed the materiality of the RSPDA and determined to disclose the Amendments to the RSPDA that had not yet been disclosed. Amendment 3 to the RSPDA was included as Exhibit 10.34 to the Company's Quarterly Report on Form 10-Q filed on August 5, 2010.

The Company has repeatedly and consistently disclosed and discussed the original VetCure Agreement and the subsequent RSPDA including in the following filings:

- All of the Company's Quarterly Reports on Form 10-Q from the quarter ending September 30, 2009 until the most recent 10-Q for the quarter ended September 30, 2010;
- the Company's Registration Statement on Form S-1, declared effective on March 26, 2009;
- the Company's Registration Statement on Form S-1, declared effective on July 24, 2009;
- the Company's Annual Report on Form 10-K, for the year ended March 31, 2010; and
- the Company's Definitive Proxy, filed on July 29, 2010.

The Company believes it has provided consistent and continuous disclosure regarding the VetCure and subsequent RSPDA contracts including disclosure that such contracts were entered into with a Director, or former Director and significant shareholder, as the facts dictated. Additionally, such disclosures were consistently identified as Related Party transactions. The Company believes such disclosures meet and exceed its obligations under Item 404 of Regulation S-K.

#### Microcyn Contracts

On September 25, 2009, the Company entered into the Revenue Sharing Distribution Agreement with V&M Industries, Inc. At the time of the initial transaction, V&M Industries was wholly owned by Robert Burlingame. This V&M Agreement was not filed as an exhibit because it was not considered material at that time. Similar to the Vetericyn contract, the V&M Agreement provided that the Company would provide the Microcyn product to V&M Industries and V&M Industries would distribute, market and sell the product. The Company would only earn revenue upon sales by V&M Industries, and no revenue, royalty or commission was guaranteed to the Company. V&M Industries, Inc. subsequently changed its name to Innovacyn, Inc.

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On June 1, 2010, the Company entered into Amendment No. 1 to Exhibit A to Revenue Sharing and Distribution Agreement and to Revenue Sharing Partnership and Distribution Agreement as Revised and Amended, which amended both the Vetericyn agreement and the Innovacyn agreement. The Company respectfully notes the Staff comment number 5 is incorrect in stating that the Company did not file this document. Amendment No. 1 to Exhibit A was filed as Exhibit 10.46 to the Company's Quarterly Report on Form 10-Q on November 4, 2010.

At the time the Company entered into the original Agreements with Vetericyn, Inc. (formerly VetCure, Inc.) to sell Vetericyn products and Innovacyn, Inc. (formerly V&M Industries, Inc.) to sell Microcyn products, (the "Agreements") neither Agreement met the standard of materiality. Neither Agreement guaranteed the Company revenue and, in fact, for almost a year, neither Agreement provided anything other than nominal revenues. As such, the Agreements taken individually or as a whole did not meet the \$120,000 requirement to be disclosed pursuant to Item 404 of Regulation S-K. Furthermore, each Agreement is for distribution of the Company's products. The Company does not have significant distribution capability of its own, and relies extensively on third party distributors to distribute its products. The Company has entered into a number of distribution agreements and considers them a routine part of its business. Thus, the Agreements do not represent a new or different strategic direction for the Company. As such, the Company considered both Agreements to be immaterial however determined to disclose the Vetericyn Agreement because it was with a related party. The Company did not disclose the Microcyn contract because the Company considered, at the time it entered into the Microcyn contract and currently that the Microcyn contract is and continues to be immaterial. Unlike the Vetericyn Agreements, which currently generate a significant portion of the Company's revenues, the Microcyn Agreements still produce nominal revenues. The Company provides disclosure in its periodic reports identifying and describing the Microcyn contracts and further identifies them as related party transactions. However, the Company continues to believe at this time the Microcyn Agreements are immaterial. However, if, in the future, the Microcyn Agreements generate more revenue or become strategically important, the Company undertakes to disclose them at that time. Additionally, if Robert Burlingame continues to be a related party as defined by Item 404 of Regulation S-K and he continues to have a controlling interest in Innovacyn, the Company will consider whether disclosure pursuant to Item 404 of Regulation S-K is appropriate.

The Company most recently described and disclosed both the Vetericyn and Innovacyn Agreements on page 64 of its Annual Report on Form 10-K for the period ending March 31, 2010. The Company believes it has provided all required disclosures regarding the two Agreements.

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Comment 4: We note your response to prior comment 5. Please tell us:

- whether Robert or Seamus Burlingame purchased any shares under their January 26, 2009 purchase agreements before their agreements were rescinded and replaced;
- how replacing the separate purchase agreements with a single new agreement changed the purchase obligations of Robert and Seamus Burlingame;
- whether your disclosure of the purchase agreement includes all material terms; for example, we note your response in prior comment 3 regarding restrictions on the exercise of warrants purchased; and
- how you determined that Seamus Burlingame was not a related party given Instruction 1(a)(iii) and Instruction 1(b)(i) to Regulation S-K Item 404(a).

Response 4: No shares were purchased by Robert or Seamus Burlingame under the rescinded January 26, 2009 agreement.

Replacing the separate purchase agreements with a single new agreement did not affect the purchase obligations of Robert or Seamus Burlingame. The Company described the material change in terms between the agreements in its response letter dated October 29, 2010 in response to Staff Comment 5. The decision to switch from two agreements to one was simply a drafting choice. The Company respectfully notes that a contract can consist of one, two, five or ten separate documents but the contract itself will be determined by the terms and not the form, or multiple forms in which it was drafted. The Company respectfully believes that the drafting decision to combine two documents into one is not important in determining the substance of the contract.

The Company believes it disclosed all material terms in its Current Report on Form 8-K filed February 27, 2009. In addition to describing material terms in the body of the 8-K, the entire purchase agreement was included as Exhibit 10.4. Exhibit A to Exhibit 10.4 contained the warrants issued to Robert and Seamus Burlingame that include the 4.99% limitation in Clause 6. We respectfully believe that the 4.99% is not a "restriction on the exercise of warrants purchased" as stated by the Staff. The holder of the warrants may exercise as much or as little of the warrant as the holder chooses in its sole discretion. If the holder would acquire more than 4.99% of the Company's common stock as a result of the exercise, then the holder may waive the provision and exercise the warrant to the extent they choose. The 4.99% provision does not preclude the holder from exercising the warrant and only imposes a requirement to notify the Company in advance under certain circumstances. Thus, the 4.99% provision is a notice and procedural restriction but does not affect the holder's ability to exercise the warrant at any time subject to the other terms of the warrant. Accordingly, the Company does not believe the 4.99% limitation to be a material term of the warrant because it does not affect the time or economics of how or when the warrant can be exercised.

Seamus Burlingame has never been an Officer, Director or Employee of the Company. Although Robert and Seamus Burlingame are father and son, Robert Burlingame is 75 years old and Seamus Burlingame, his adult son, does not live in the same household. Additionally, at the time the Company filed its Definitive Proxy on July 29, 2010, Robert Burlingame had resigned as a Director of the Company. Robert Burlingame resigned from the Board as a Director on February 10, 2010. Therefore, on July 29, 2010, Seamus Burlingame was not related to any Officers or Directors of the Company.

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Seamus Burlingame has only made one direct investment in the Company based on the transaction he entered into on February 24, 2009. Such transaction has been referred to repeatedly in the Company's filings since February 24, 2009 and additionally in filings made by each of Robert and Seamus Burlingame. Additionally, Seamus Burlingame has been identified by name in the Company's filings in connection with that one-time investment. While we agree that the omission of the repetition of that disclosure in one place in one filing was not in strict compliance with the rules, we believe the totality of the Company's disclosure and the Burlingame's filings have provided shareholders with numerous descriptions of the one-time investment in early 2009 and that such filings include complete documentation such that any investor or shareholder can easily ascertain any information about the transaction necessary to make an informed decision about an investment with the Company.

#### Exhibits

Comment 6: We note that you submitted a request for confidential treatment for three exhibits filed with your Form 10-Q on November 4, 2010, Exhibits 10.44 to 10.46. We will address this request in a separate letter. Please resolve those comments, if any.

Response 6: The Company has not yet received any comments as of the date of this letter but undertakes to work with the Staff to resolve any future comments.

Comment 7: Please tell us how Exhibit 10.50 between you "and the Investors listed on Schedule A" is enforceable given your response to prior comment 7 that Schedule A was never completed. Please also tell us how this affects your other disclosure, such as your risk factor disclosure.

Response 7: The contract is enforceable because each of the Investors that would have been listed on Schedule A signed the contract and paid the Company for their respective securities purchased and the Company issued the securities as contemplated by the contract. Furthermore, there were only two investors to the document, each of whom were identified in the Recitals of the contract and were included as signatories to the contract, thereby including all the information that would otherwise have been included in Schedule A. Furthermore, the Company respectfully notes that a contract can be oral or partially written and it will remain an enforceable contract particularly when all parties to the contract have performed as intended. Consequently, Schedule A was not necessary to the contract to make the contract enforceable. Finally, the contract includes the following clause which protects the enforceability of the remaining clauses of the contract independent of Schedule A:

8.7 Severability. Any provision of this Agreement that is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof but shall be interpreted as if it were written so as to be enforceable to the maximum extent permitted by applicable law, and any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction. To the extent permitted by applicable law, the parties hereby waive any provision of law which renders any provision hereof prohibited or unenforceable in any respect.

The Company believes the contract is fully enforceable and the Company does not believe that any of its other disclosure, including risk factor disclosure, should be revised.

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Exhibit 21.1

Comment 8: We note that your response to prior comment 8 did not clarify your current subsidiaries or tell us how Exhibit 21.1 was consistent with your disclosure in “Principle of Consolidation” on page 52. Thus, we reissue the comment. We also note from page 8 of Exhibit 10.2 to the Form 8-K filed on May 6, 2010 that you are the majority owner of or are in control relationship with MicroMed Laboratories, Inc. and L3 Pharmaceuticals, Inc. As part of your response, please explain how your list of subsidiaries “was correct,” why the two disclosures were inconsistent, and the reason for any changes in the disclosure.

Response 8: Per Item 601(b)(21) of Regulation S-K, the Company is not required to include subsidiaries which, when considered in the aggregate as a single subsidiary, would not constitute a significant subsidiary as of the end of the year covered by its report. Per Rule 1-02(w) of Regulation S-X, a significant subsidiary is one that represents at least 10 percent of the consolidated entity’s income or assets. It was disclosed on page 8 of Exhibit 10.2 to the Form 8-K filed on May 6, 2010 that, concerning both MicroMed Laboratories, Inc. and L3 Pharmaceuticals, Inc., each of these corporations were formed, but no shares have been issued. Neither corporation has any activity nor do they hold any assets. The Company believes that MicroMed Laboratories, Inc. and L3 Pharmaceuticals, are not significant subsidiaries, and are not required to be included in Exhibit 21.1.

If you have further questions or comments, please feel free to contact us. We are happy to cooperate in any way we can.

Regards,

/s/ Amy M. Trombly

Amy M. Trombly, Esq.

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