



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

Mail Stop 3030

June 5, 2009

Via U.S. Mail and Fax (510) 352-7401

Michael Henighan  
Chief Financial Officer  
Alpha Innotech Corp.  
2401 Merced St.  
San Leandro, CA 94577

**Re: Alpha Innotech Corp.  
Form 10-K for the fiscal year ended December 31, 2008  
Filed March 27, 2009  
File No. 001-14257**

Dear Mr. Henighan:

We have reviewed your filings and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. Where indicated, we think you should revise your future filings 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 comment or on any other aspects of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the fiscal year ended December 31, 2008

Item 7. Managements' Discussion and Analysis of Financial Condition and Results of Operations, page 11

Critical Accounting Policies and Estimates, page 11

Share-Based Employee Compensation, page 13

1. We see that the expected life assumption used in the calculation of fair value of stock options under the Black-Scholes option pricing model decreased from 10 years at December 31, 2007 to 6.25 years at December 31, 2008. Please tell us and revise future filings to disclose the circumstances that resulted in the change in assumptions.

Comparison of the Years Ended December 31, 2008 and 2007, page 16

2. In future filings, please provide a more detailed discussion of the underlying reasons for increases or decreases in revenues. For example, you should state why there was an increase in sales of branded products worldwide and why there were decreased sales to GE Healthcare.

Liquidity and Capital Resources, page 17

3. We see that you have \$648,000 in cash at December 31, 2008 and that the loans from Bridge Bank and the loan from Agility Capital LLC and Montage Capital LLC amounting to over \$3 million are due in 2009. Please tell us and revise future filings to provide specific disclosure of your plan to refinance the loans or to obtain additional capital to satisfy your obligations.

Consolidated Financial Statements

Note 1. Summary of Significant Accounting Practices, page 25

4. We see from page 26 that foreign currency translation adjustments are charged or credited to other comprehensive income. We also note the disclosure on page 27 that there were no differences between net income (loss) and comprehensive income (loss). Please reconcile these two disclosures.

Note 3. Balance Sheet Components, page 30

5. We reference the disclosure that amortization of loan costs is included in general and administrative expenses for the years ended December 31, 2008 and 2007. Please tell us how you considered whether your debt costs should be amortized to

interest expense over the contractual term of the debt using the effective interest method.

Item 9A (T). Controls and Procedures, page 39

6. We note your disclosure that your assessment of internal control over financial reporting was conducted using the criteria in *Internal Control over Financial Reporting – Guidance for Smaller Public Companies* issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”). Please tell us specifically what control framework you applied in performing your assessment of internal control over financial reporting. In that regard, please tell us how the framework you used is an acceptable framework as discussed in SEC Release No. 33-8810: Commission Guidance Regarding Management's Report on Internal Control over Financial Reporting under Section 13(a) or 15(d) of the Securities Exchange Act of 1934.
7. We note in your disclosure that one of the material weaknesses resulted in “significant audit adjustments to the quarterly and annual financial statements as well as insufficient compliance with U.S GAAP and SEC reporting requirements.” Please tell us and revise future filings to provide a discussion of the types of audit adjustments recorded and indicate which GAAP rules and SEC requirements you were not in compliance with. In addition, your disclosure should state the areas of the financial statement that were impacted by the material weakness.

Changes in Internal Control Over Financial Reporting, page 40

8. It is unclear from your disclosure what, if any, changes in internal control over financial reporting occurred in the fourth quarter of 2008. For example, you disclose the various steps taken to remediate your material weaknesses but it is unclear when these efforts were made and what changes occurred during the fourth quarter. Please revise future filings to clearly state the nature and timing of changes in your internal control over financial reporting that occurred during the most recent quarter that have materially affected, or are reasonably likely to materially affect, your internal control over financial reporting. Refer to Item 308(c) of Regulation S-K.

Form 10-Q for the fiscal quarter ended March 31, 2009

Condensed Consolidated Financial Statements

Note 1. Summary of Significant Accounting Policies, page 5  
Recent Accounting Pronouncements, page 6

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9. Please tell us how you considered the impact on your financial statements of EITF 07-05, Determining Whether an Instrument (or Embedded Feature) Is Indexed to an Entity's Own Stock, which is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years.

Note 4. Debt, page 9

10. We see that you have a convertible note with ETP/FBR Venture Capital II, LLC. Please tell us how you considered the impact of FASB Staff Position No. APB 14-1, Accounting for Convertible Debt Instruments That May Be Settled in Cash upon Conversion (Including Partial Cash Settlement).

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your response that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your response to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

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 our review of your filing or in response to our comments on your filing.

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You may contact Praveen Kartholy at (202) 551-3778 or me at (202) 551-3664 if you have questions regarding these comments. In this regard, do not hesitate to contact Brian Cascio, Accounting Branch Chief, at (202) 551-3676.

Sincerely,

Kristin Lochhead  
Accounting Reviewer