



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-4631

Mail Stop 4631

May 27, 2010

via U.S. mail and facsimile

Donald G. Cox, CEO
Biomedical Technology Solutions Holdings, Inc.
9800 Mt. Pyramid Court #250
Englewood, Colorado 80112

**RE: Biomedical Technology Solutions Holdings, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2009
Filed May 13, 2010
Form 10-Q for the Fiscal Quarter Ended March 31, 2010
File No. 0-53391**

Dear Mr. Cox:

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 documents in response to these comments in future filings. 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 on any other aspect 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, 2009

Exhibit 31

1. In future filings, please revise the language in the 302 certifications to conform exactly to the language in Item 601(B)(31) of Regulation S-K. We note in particular the inclusion of the certifier's title in the introduction.

Form 10-Q for the Fiscal Quarter Ended March 31, 2010

Item 4. Controls and Procedures, page 21

Disclosure Controls and Procedures, page 21

2. We note that your Principal Executive Officer and Principal Financial Officer concluded that your disclosure controls and procedures are effective as of March 31, 2010. We further note that you did not file your Form 10-K for the fiscal year ended 2009 by the required date. Rule 13a-15(e) indicates that effective controls and procedures would ensure that information required to be disclosed is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms. In light of these facts, please explain to us how your Principal Executive Officer and Principal Financial Officer could conclude that disclosure controls and procedures are effective as of March 31, 2010. In particular, please explain how your conclusion considered the definition of disclosure controls and procedures provided in Rule 13a-15(e). If you are unable to demonstrate that your disclosure controls and procedures are effective as of March 31, 2010, please amend your Form 10-Q for the first quarter of fiscal year 2010 to revise your conclusion on the effectiveness of your disclosure controls and procedures, along with an explanation as to why you concluded your disclosure controls and procedures are ineffective. Finally, we note that you did not file your Form 10-Q for the first quarter of fiscal year 2010 by the required date. We would assume that this untimely filing would need to be considered when assessing the effectiveness of your disclosure controls and procedures as of June 30, 2010.

* * * *

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 letter on EDGAR that keys your responses to our comments and provides any requested information. Detailed response letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing 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.

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

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- 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.

You may contact Tracey Houser, Staff Accountant, at (202) 551-3736, or in her absence, me at (202) 551-3355, if you have questions regarding comments on the financial statements and related matters.

Sincerely,

Terence O'Brien
Accounting Branch Chief