



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

December 4, 2009

Via U.S. Mail and Facsimile to (425) 402-1433

Michael Rice
Chief Executive Officer
BioLife Solutions, Inc.
3303 Monte Villa Parkway, Suite 310
Bothell, WA 98021

**Re: BioLife Solutions, Inc.
Form 10-K for the Fiscal-Year ended December 31, 2008
Filed March 31, 2009
Form 10-Q for the Fiscal-Quarter ended September 30, 2009
File No. 000-18170**

Dear Mr. Rice:

We have reviewed your responses dated October 22, 2009 and November 20, 2009 and additional filings, and have the following comment. Where indicated, we think you should revise your future filings in response to this comment. 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 our comment, we 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.

Form 10-Q for the Quarterly Period Ended September 30, 2009

Financial Statements, page 1

Note 2. Financial Condition and Going Concern, page 4

1. We note from your response letters dated October 22, 2009 and November 20, 2009 that as of January 1, 2009, the company should have bifurcated the separate embedded feature of the notes and accounted for it as a derivative liability, with changes in fair value subsequently measured through earnings each period. Please respond to the following:
 - Please tell us the accounts and amounts of the adjustments you would need to make to the financial statements for each of the March 31, June 30, and September 30, 2009 quarters to reflect the adoption of EITF 07-05 (section 815-40-15 of FASB ASC).
 - Please tell us the method and significant assumptions used to value the derivative liability as of adoption of EITF 07-05 and as of each reporting date (March 31, June 30, and September 30, 2009).
 - In future filings, including your December 31, 2009 Form 10-K, please revise to reflect the adoption of EITF 07-05 and the resulting derivative liability. Clearly disclose to investors your reasons for concluding that prior Form 10-Qs filed in fiscal 2009 should not be amended to reflect your accounting for the derivative liability.
 - Further, in future filings please include appropriate disclosure about the nature of and accounting for the derivative liability, as well as the method and significant assumptions used to value the derivative.

As appropriate, please respond to this comment within 10 business days or tell us when you will provide us with a response. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your response to our comment.

You may contact Kevin Kuhar, Staff Accountant, at (202) 551-3662 or me at (202) 551-3604, if you have questions regarding these comments on the financial statements and related matters. In this regard, do not hesitate to contact Jeffrey Jaramillo, Accounting Branch Chief, at (202) 551-3212.

Sincerely,

Kate Tillan
Assistant Chief Accountant