

Via Facsimile and U.S. Mail  
Mail Stop 6010

June 16, 2005

Mr. Barry W. Weiner  
President, Chief Financial Officer, and Director  
Enzo Biochem, Inc.  
60 Executive Boulevard  
Farmingdale, NY 11735

Re: Enzo Biochem, Inc.  
Form 10-K for the fiscal year ended July 31, 2004  
Filed October 14, 2004  
File No. 001-09974

Dear Mr. Weiner:

We have limited our review of your filing to those issues we have addressed in our comments. In our comments, 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.

Item 7. Management's Discussion and Analysis of Financial Condition  
and ..., page 27

Critical Accounting Policies, page 29

1. Please provide us the following information regarding your estimate of contractual allowances and the allowance for doubtful accounts:

a. For each period presented, quantify the amount of changes in estimates of prior period contractual adjustments that you recorded during the current period. For example, for fiscal 2004, this amount would represent the amount of the difference between estimates of contractual adjustments for services provided in fiscal 2003 and the amount of the new estimate or settlement amount that was recorded during fiscal 2004.

b. Quantify the reasonably possible effects that a change in estimate of unsettled amounts from 3rd party payors as of the latest balance sheet date could have on financial position and operations.

c. In a comparative tabular format, quantify the payor mix concentrations and related aging of accounts receivable. The aging schedule may be based on management's own reporting criteria (i.e. unbilled, less than 30 days, 30 to 60 days etc.) or some other reasonable presentation. At a minimum, the disclosure should indicate the past due amounts and a breakdown by payor classification (i.e. Medicare, Medicaid, managed care and other, and self-pay). We would expect self-pay to be separately classified from any other grouping. If your billing system does not have the capacity to provide an aging schedule of your receivables, tell us this fact and clarify how this affects your ability to estimate your allowance for

doubtful accounts.

d. If you have amounts that are pending approval from third party payors (i.e. Medicaid Pending), please quantify these amounts, where they have been classified in your aging buckets, and what payor classification they have been grouped with. If amounts are classified outside of self-pay, tell us why this classification is appropriate and the historical percentage of amounts that get reclassified into self-pay.

Allowance for Doubtful Accounts, page 30

2. We noted that historical collection and payor reimbursement experience is an integral part of the estimation process and that significant changes in payor mix or regulations could have a significant impact on your results of operations and cash flows. In light of this, please tell us how your process sufficiently considered changes in payor mix and decreases in collection rates from Medicare and HMOs, both of which you disclosed on page 32.

Item 9A. Controls and Procedures, page 34

3. Please tell us how your disclosure complies with Item 307 of Regulation S-K, as the definition of disclosure controls and procedures in Exchange Act Rule 13a-15 would appear to encompass more than just ensuring material information is made known to management.

Consolidated Financial Statements and Financial Statement Schedule,  
page F-1

Notes to the Consolidated Financial Statements, page F-7

Note 1 - Business and Summary of Significant Accounting Policies,  
page F-7

4. Please tell us your policy for determining when an allowance is recognized for a receivable or when one is written off, including whether this is based on thresholds for amount or age.

Revenue Recognition, page F-8

5. For each year presented, please tell us the amount by which you reduced revenue for the consideration you paid to distributors for the manufacture of certain products. Please describe the nature of this consideration, how these amounts are measured, when you recognize these amounts and how the recognition and measurement of these amounts is consistent with Issues 3 through 6 of EITF 01-9. To the extent that these amounts are based on estimates, please tell us whether reasonably likely changes in the underlying assumptions have had or could have a material impact on your financial statements.

Note 7 - Litigation, page F-13

6. For each pending lawsuit disclosed where a complaint has been filed against you, please provide us the information required by paragraph 10 of SFAS 5 and tell us why you have not included this information in your disclosure.

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments. Detailed letters greatly facilitate our review. Please file your letter on EDGAR under the form type label CORRESP.

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.

You may contact Tabatha Akins, Staff Accountant, at (202) 551-3658 or Oscar Young, Senior Staff Accountant, at (202) 551-3622 if you have questions regarding comments on the financial statements and related matters. Please contact me at (202) 551-3679 with any other questions.

Sincerely,

Jim B. Rosenberg  
Senior Assistant Chief Accountant

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Barry W. Weiner  
Enzo Biochem, Inc.  
June 16, 2005  
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