

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 8-K

CURRENT REPORT PURSUANT
TO SECTION 13 OR 15(D) OF THE
SECURITIES EXCHANGE ACT OF 1934

Date of report (Date of earliest event reported): DECEMBER 13 , 2004

ENZO BIOCHEM, INC.

(Exact Name of Registrant as Specified in Its Charter)

NEW YORK

(State or Other Jurisdiction of Incorporation)

001-09974

13-2866202

(Commission File Number)

(IRS Employer Identification No.)

60 EXECUTIVE BOULEVARD
FARMINGDALE, NEW YORK

11735

(Address of Principal Executive Offices)

(Zip Code)

(631-755-5500)

(Registrant's Telephone Number, Including Area Code)

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

ITEM 2.02. RESULTS OF OPERATIONS AND FINANCIAL CONDITION..

On December 13, 2004, the Registrant issued a press release announcing its operating results for the quarter ended October 31, 2004. A copy of the press release is furnished as Exhibit 99.1 to this Current Report.

The information in this Current Report and the exhibit attached hereto are being "furnished" hereunder and shall not be deemed filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), nor shall they be deemed incorporated by reference into any filings made by the Registrant with the Securities and Exchange Commission under the Exchange Act or the Securities Act of 1933, as amended, except as shall be expressly set forth by specific reference in such filings.

2

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ENZO BIOCHEM, INC.

Date: December 13, 2004

By: /s/ Barry Weiner

Barry Weiner
President and Chief Financial Officer

EXHIBIT INDEX

Exhibit No.	Description
99.1	Press Release of Enzo Biochem, Inc., dated December 13, 2004.

[OBJECT OMITTED]

[OBJECT OMITTED]
Enzo Biochem, Inc.
527 Madison Avenue
New York, NY 10022

FOR IMMEDIATE RELEASE

ENZO BIOCHEM REPORTS FISCAL 2005 FIRST QUARTER
OPERATING RESULTS AND SEQUENTIAL GAINS

FARMINGDALE, NY, December 13, 2004 -- Enzo Biochem, Inc. (NYSE:ENZ), a leading biotechnology company specializing in gene identification and genetic and immune regulation technologies for diagnostic and therapeutic applications, today announced higher operating results for the first fiscal quarter ended October 31, 2004, as well as improved sequential comparisons.

For the three months ended October 31, 2004, total operating revenues rose slightly to just over \$10.3 million from the comparable quarter in the prior year. The Company showed a sequential increase of 20.1% over the quarter ended July 31, 2004, which produced revenues of \$8.6 million. In addition, the Company recorded a gain of \$14.0 million in the quarter from the initial payment on the patent litigation settlement with Digene Corporation. Earnings before taxes totaled \$12.2 million, compared to a pre-tax loss of \$0.8 million a year ago. Fiscal 2005 first quarter net income amounted to \$7.0 million, or \$0.21 per fully diluted share. This compares with a year ago loss of over (\$0.3) million, or (\$0.01) per fully diluted share. Per share figures are adjusted for the recent 5% stock dividend.

"Our Company is making good progress and fiscal 2005 is off to a favorable start," said Barry W. Weiner, President. "Enzo Therapeutics continues to move ahead with clinical testing of several exciting and potentially important modalities, and other medicines that have demonstrated promising pre-clinical results. We are also pleased with the inroads being made by our Enzo Life Sciences direct sales force as they promote our expanding line of research products for the genomics market. In addition, Enzo Clinical Labs showed both sequential and quarter over quarter gains due to increases in its test menu and geographic coverage, as well as further adoption of the EnzoDirect(TM) system, the Company's proprietary system for physician connectivity."

Mr. Weiner added, "The settlement with Digene has enabled us to focus more fully on other companies that we believe have infringed our patents. The costs of litigation continue to be expensive, however, we are stronger financially than our Company has ever been, and operationally the outlook is highly encouraging."

In the first quarter, Enzo Biochem did not record any royalty income from Digene since Enzo records royalty income as it is earned based on Digene's reported net sales. Enzo will record a minimum of \$2.5 million royalty income from Digene in the annual period ending September 30, 2005, and a minimum of \$3.5 million in each of the next four annual periods ending September 30. Royalty income is scheduled to be recognized through the patent's expiration on April 24, 2018.

First quarter results reflected slightly higher outlays for legal expenses totaling \$1.1 million, partly related to the Digene settlement, compared with approximately \$1.0 million in the year-ago quarter. Research and development expenses increased 14.5%, to \$2.2 million, owing to broader clinical and pre-clinical therapeutic programs, and new life sciences product development activities. The provision for uncollectible accounts receivable was reduced to \$1.5 million, compared to \$2.4 million a year ago.

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Enzo Biochem, Inc. - Page 2

As of October 31, 2004, the Company had cash and cash equivalents and marketable securities totaling more than \$86.9 million, an increase of \$15.2 million from three months earlier. Working capital totaled \$99.6 million. There is no debt. Stockholders equity totaled \$111.2 million, a record high.

Revenues at Enzo Clinical Labs totaled \$7.8 million, a 4.4% increase over the corresponding year-ago first quarter. Higher outlays for increasing the Company's testing capacity and product expenses for new esoteric tests resulted in gross profit, as a percentage of revenues, of 62.9%, compared with 69.1% a year ago. Operating income for the quarter was \$0.6 million, comparable to the year ago quarter. Sequentially, this represents an increase of over \$1.3 million over the fiscal 2004 fourth quarter.

Enzo Life Sciences continued to make progress as well, with first quarter revenues amounting to \$2.5 million, up from \$2.0 million in the preceding three months, but off slightly from \$2.8 million in the corresponding year-ago period. As was the case in the previous quarter, the shortfall was due to the action of one of Enzo's distributors, Roche Diagnostic Systems, from

which revenues for product sold under an existing agreement were not recognized.

During the fiscal 2005 first quarter, Enzo Therapeutics reported that its Phase II randomized double-blind study of Alequel(TM), the Company's investigational therapeutic modality for management of Crohn's disease, successfully met its clinical endpoints. Expanded studies to include dose escalation and a more diverse subject population are now underway. In addition, encouraging results from pre-clinical studies of Enzo's new immunomodulatory agent EGS21 were presented at the recent annual meeting of the American Association for the Study of Liver Disease. These results indicate that EGS21, a beta-D-glucosylceramide compound could possibly be effective in the treatment of various immune mediated diseases as well as in the management of glucose levels and stem cell transplantation.

ABOUT ENZO

Enzo Biochem is engaged in the research, development and manufacture of innovative health care products based on molecular biology and genetic engineering techniques, and in providing diagnostic services to the medical community. The Company's proprietary labeling and detection products for gene sequencing and genetic analysis are sold to the life sciences market throughout the world. The Company's therapeutic division is in various stages of clinical evaluation of its proprietary gene medicine for HIV-1 infection and its proprietary immune regulation medicines for hepatitis B and hepatitis C infection and for Crohn's disease. The Company also holds a patent covering a method and materials for correcting point mutations or small insertions or deletions of genetic material that would allow for editing and correcting certain abnormalities in genes. The Company owns or licenses over 230 patents worldwide. For more information visit our website www.enzo.com.

Except for historical information, the matters discussed in this news release may be considered "forward-looking" statements within the meaning of Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities Exchange Act of 1934, as amended. Such statements include declarations regarding the intent, belief or current expectations of the Company and its management. Investors are cautioned that any such forward-looking statements are not guarantees of future performance and involve a number of risks and uncertainties that could materially affect actual results. The Company disclaims any obligations to update any forward-looking statement as a result of developments occurring after the date of this press release.

- more -

Enzo Biochem, Inc. - Page 3

AN INFORMATIONAL CALL CONDUCTED BY ENZO BIOCHEM, INC. MANAGEMENT WILL TAKE PLACE ON MONDAY, DECEMBER 13, 2004 AT 8:30 AM E.T. IT CAN BE ACCESSED BY DIALING 1-877-780-2271. INTERNATIONAL CALLERS CAN DIAL 1-973-582-2737. YOU MAY ALSO LISTEN OVER THE INTERNET AT WWW.VCALL.COM. TO LISTEN TO THE LIVE CALL ON THE INTERNET, PLEASE GO TO THE WEB SITE AT LEAST FIFTEEN MINUTES EARLY TO REGISTER, DOWNLOAD AND INSTALL ANY NECESSARY AUDIO SOFTWARE. FOR THOSE WHO CANNOT LISTEN TO THE LIVE BROADCAST, A REPLAY WILL BE AVAILABLE APPROXIMATELY TWO HOURS AFTER THE END OF THE LIVE CALL, THROUGH MIDNIGHT (ET) ON MONDAY, DECEMBER 27, 2004. FOR REPLAY, DIAL 1-877-519-4471 (1-973-341-3080 INTERNATIONALLY). YOU WILL BE PROMPTED FOR PIN NUMBER 5484581.

ENZO BIOCHEM, INC. SELECTED STATEMENT OF OPERATIONS DATA

Three Months Ended
October 31,
2004 2003
(In thousands, except per
Share data)
(unaudited)

Operating revenues	\$10,301	\$10,273
Income (loss) before (provision) benefit for income taxes	\$12,173	(\$816)
(Provision) benefit for income taxes	(\$5,152)	\$493
Net income (loss)	\$7,021	(\$323)
Basic earnings (loss) per share	\$0.22	(\$0.01)
Diluted earnings (loss) per share	\$0.21	(\$0.01)
Common share - basic	32,416	31,507

Common share - diluted

32,907

31,507

SELECTED BALANCE SHEET DATA

	October 31, 2004 (unaudited)	July 31, 2004 (audited)
	(in thousands)	
Cash and Marketable Securities	\$86,915	\$71,741
Working Capital	\$99,550	\$92,260
Stockholders' Equity	\$111,233	\$104,166
Total Assets	\$122,894	\$110,334

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Contact:

For: Enzo Biochem, Inc.

Steve Anreder, 212-532-3232

Or

Ed Lewis, CEOcast, Inc., 212-732-4300