

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 11, 2006

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.)

527 MADISON AVENUE
NEW YORK, NEW YORK

10022

(Address of Principal Executive Offices)

(Zip Code)

(212) 583-0100

(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 OPERATION AND FINANCIAL CONDITION.

(a) The following information, including the Exhibit attached hereto, is being furnished pursuant to this Item 2.02 and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, except as shall be expressly set forth by specific reference in such filing.

On December 11, 2006, Enzo Biochem, Inc., a New York corporation (the "Company"), issued a press release discussing its financial results for its fiscal quarter ended October 31, 2006. A copy of the press release is furnished as Exhibit 99.1 to this report.

ITEM 9.01. FINANCIAL STATEMENTS AND EXHIBITS.

(c) EXHIBITS.

<TABLE>

<CAPTION>

EXHIBIT NO.

DESCRIPTION

<S>

<C>

99.1 Press Release of Enzo Biochem, Inc., dated December 11, 2006.

</TABLE>

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 11, 2006

By: /S/ ELAZAR RABBANI

Dr. Elazar Rabbani
Chairman of the Board and Chief
Executive Officer

EXHIBIT INDEX

<TABLE>
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EXHIBIT NO.
- - - - -

DESCRIPTION

<S>	<C>
99.1	Press Release of Enzo Biochem, Inc., dated December 11, 2006.

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[ENZO LOGO]

news
 release

 Enzo Biochem, Inc.
 527 Madison Avenue
 New York, NY 10022

ENZO BIOCHEM REPORTS IMPROVED FIRST QUARTER FINANCIAL RESULTS

NEW YORK, NY, December 11, 2006 -- 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 reported operating results for the first quarter of fiscal 2007 ended October 31, 2006.

Net revenues for the quarter amounted to \$10.4 million, up 3% from \$10.2 million in the corresponding year-ago quarter. Gross profit, including royalty income, amounted to \$6.4 million, compared with \$6.1 million a year ago. The net loss declined to \$1.2 million, or \$0.04 per fully diluted share, compared with a net loss of \$3.3 million, or \$0.10 per fully diluted share, in the previous year's fiscal first quarter. Improved results included a \$2 million gain on a patent litigation settlement, offset by an increase of \$0.6 million in research and development ("R&D"), and legal expenses.

Clinical and preclinical activities R&D, principally in Enzo Therapeutics, increased 20% in the first quarter, and legal expenses, related principally to protecting the Company's important stake in its intellectual property ("IP"), increased to \$2.2 million, compared with \$1.9 million a year ago. A gain of \$2 million was recorded as the result of the previously announced settlement with Sigma-Aldrich Corp. relating to a suit brought by Enzo alleging, among other things, breach of contract and infringement of patents related to the Company's proprietary labeled nucleotide technology. Sigma-Aldrich was the first of several defendants in the suit to settle.

Revenues at Enzo Clinical Labs amounted to \$8.1 million, slightly higher than revenues of \$8.0 million during the same period last year. With a decline of approximately 20% in the provision for uncollected accounts receivable, the result of investments in new technology and continued improved billing and collection procedures, operating income rose to \$0.4 million, from \$0.1 million a year ago.

Revenues at Enzo Life Sciences amounted to \$2.4 million, compared with \$2.1 million a year ago, an increase of 11%. Product sales decreased by \$0.2 million, but this was offset by a \$0.4 million increase in royalty revenue relating to an on-going licensing agreement. Sequentially, product sales increased by 28% from the preceding July 2006 quarter. Total expenses at Enzo Life Sciences for the quarter declined to \$1.9 million, as compared with \$2.1 million from the year-ago period, due to a decline in research related costs. Operating income advanced to \$0.5 million compared to year ago operating income of \$0.1 million. The gains at Enzo Life Sciences were achieved despite continuing highly competitive conditions in the market for a number of the Company's research products.

At October 31, 2006, working capital exceeded \$79 million, and cash and cash equivalents were approximately \$72 million. Total assets were over \$102.7 million.

"Enzo continued to make progress in the first quarter of fiscal 2007," said Barry Weiner, President. "With the addition of Dr. Gary Cupit as President of Enzo Therapeutics in mid-October, we have rounded out a strong management team with strong developmental and marketing skills that will help to accelerate growth in our businesses. Following the resolution of a Markman hearing, an infringement suit in Connecticut district federal court is now moving towards trial. Likewise, the declaration of interference actions by the U.S. Office of Patents and Trademarks in key genomic

sequencing and nucleic acid labeling technologies, in which Enzo has been named Senior Party in both actions as a result of its earlier filing and research in these fields, heralds even more promising developments for our growing IP estate.

Combined with several patents issued earlier this year, Enzo now is strongly situated with regard to owning technology that is becoming a seminal part of the rapidly evolving field of diagnostics and therapeutics using genomic information. Additionally, our clinical work involving several promising drug candidates continues to move ahead. We similarly are experiencing progress in the Life Sciences area, with greater focus on selling and marketing, while we also prepare to offer new proprietary products to the medical and medical research fields. In our Clinical Laboratory business, we were selected as a regional provider of medical laboratory services for United Healthcare Insurance

Company, an affiliate of United Healthcare Group. (NYSE:UNH), on an expanded basis. The new contract, which begins January 1, 2007, along with our selection earlier in the year by Aetna Health, is expected to enhance our position as a leading regional lab. The pace is quickening throughout our Company, even as we move to heighten operational efficiencies that are increasingly paying off."

A CONFERENCE CALL CONDUCTED BY ENZO BIOCHEM, INC. MANAGEMENT WILL TAKE PLACE ON MONDAY DECEMBER 11, 2006 AT 8:30 AM E.T. IT CAN BE ACCESSED BY DIALING 1-888-562-3356. INTERNATIONAL CALLERS CAN DIAL 1-973-582-2700. PLEASE REFERENCE PIN NUMBER 8179354. INTERESTED PARTIES MAY ALSO LISTEN OVER THE INTERNET AT WWW.INVESTORCALENDAR.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 DECEMBER 25, 2006. THE REPLAY OF THE CONFERENCE CALL CAN BE ACCESSED BY DIALING 1-877-519-4471, AND, WHEN PROMPTED, USE PIN NUMBER 8179354. INTERNATIONAL CALLERS CAN DIAL 1-973-341-3080, USING THE SAME PIN NUMBER.

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, uveitis, and for Crohn's Disease. Pre-clinical research is being conducted on several candidate compounds aimed at producing new mineral and organic bone, including technology that could provide therapy for osteoporosis and fractures, among other applications. 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 200 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.

- TABLE FOLLOWS -

ENZO BIOCHEM, INC.
SELECTED STATEMENT OF OPERATIONS DATA

	Three Months Ended October 31,	
	2006	2005
	----	----
	(unaudited)	(unaudited)
	(IN THOUSANDS EXCEPT PER SHARE DATA)	
Total revenues	\$ 10,442	\$ 10,165
	-----	-----
Loss before income taxes	(1,201)	(3,163)
Provision for income taxes	(45)	(123)
	-----	-----
Net loss	(\$1,246)	(\$3,286)
	=====	=====
Basic loss per common share	(\$0.04)	(\$0.10)
Diluted loss per common share	(\$0.04)	(\$0.10)
Weighted average common share - basic	32,279	32,158
Weighted average common share - diluted	32,279	32,158

SELECTED BALANCE SHEET DATA

OCTOBER 31, 2006 JULY 31, 2006

(unaudited)

(in thousands)

Cash and Cash Equivalents	\$ 71,960	\$ 69,584
Working Capital	\$ 79,331	\$ 80,161
Stockholders' Equity	\$ 94,799	\$ 95,587
Total Assets	\$102,715	\$101,524

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CONTACT:

For: Enzo Biochem, Inc.

Steve Anreder, 212-532-3232

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