

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): OCTOBER 13, 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 October 13, 2006, Enzo Biochem, Inc., a New York corporation (the "Company"), issued a press release discussing its financial results for its fiscal year ended July 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.

EXHIBIT NO.	DESCRIPTION
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99.1	Press Release of Enzo Biochem, Inc., dated October 13, 2006.

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: October 13, 2006

By: /s/ Elazar Rabbani

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

EXHIBIT INDEX

EXHIBIT NO. -----	DESCRIPTION -----
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[ENZO LOGO]

NEWS
 RELEASE
 =====
 ENZO BIOCHEM, INC.
 527 MADISON AVENUE
 NEW YORK, NY 10022

FOR IMMEDIATE RELEASE

ENZO BIOCHEM REPORTS RESULTS
 FOR FISCAL 2006 AND FOURTH QUARTER

NEW YORK, NY, October 13, 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 three and twelve months ended July 31, 2006.

"Fiscal 2006 was a year that was marked by numerous accomplishments for Enzo and reflected the continued investments in our life sciences business, therapeutic development programs and clinical laboratory" said Barry Weiner, President. "These investments, which impacted the results, have already yielded tangible benefits. Among others, benefits are reflected in our expanded intellectual property coverage in the rapidly growing genomics and molecular diagnostics fields. Also, we have made significant strides in strategically positioning all three of our units in alignment with the emerging new trends in the healthcare industry."

"During Fiscal 2006, Enzo received three important patents covering fundamental technologies in the areas of nucleic acid labeling, the design of microarrays and processes for producing therapeutic proteins and RNA in living cells. Additionally, the Company was granted an interference in the area of DNA amplification. Enzo augmented its senior management group with the addition of two executives with extensive experience in the life sciences and finance fields. Enzo Therapeutics reported continued progress on several fronts, and has multiple projects in clinical trials. We have acquired and are renovating a new manufacturing and research facility for Enzo Life Sciences and Therapeutics. We are also focusing on new licensing agreements that will materially enhance our product mix and strengthen our competitive position. Additionally, we recently announced agreements with UnitedHealthcare and Aetna insurance providers to increase the market opportunities for Enzo Clinical Labs.

"Over the past fiscal year, the Company invested in developing and protecting its intellectual property portfolio resulting in a significant increase in legal fees. We have made progress with outstanding litigations as reflected by the recently announced settlement with Sigma-Aldrich. The results of this settlement will be reflected in our first quarter fiscal 2007 results."

Revenues for the fourth quarter were \$9.9 million, compared with \$10.9 million in the corresponding year-ago period. For the full year, revenues totaled \$39.8 million, compared with \$43.4 million in the prior year. The fourth quarter loss before tax benefit totaled \$5.0 million as compared to a loss of \$3.5 million in the year-ago period. For the full year, the loss before tax benefit was \$17.0 million, compared with income before taxes of \$5.2 million (including the \$14 million pre-tax gain from the Digene settlement) a year ago. The fourth quarter net loss was \$4.5

million, or \$(.14) per share, compared with a net loss of \$2.0 million or \$(.06) per share a year ago. For the full year, the net loss totaled \$15.7 million, or \$(.49) per share compared with net income of \$3.0 million, or \$.09 per share a year ago. The after-tax gain of the Digene settlement contributed \$8.1 million, or \$.25 per share towards net income a year ago. In addition, both the fourth quarter and the full year 2006 were negatively affected by the inability to record a full tax benefit on the pre-tax losses incurred.

Results in fiscal 2006 were impacted by litigation expenses of approximately \$7.4 million, compared to \$5.5 million in fiscal 2005. Selling, general and administrative expenses of \$25.0 million for 2006 compared to \$20.1 million for 2005 reflecting increased outlays of \$1.2 million for corporate governance and \$1.5 million in compensation expense (non-cash) as a result of the adoption of SFAS 123(R). While research and development expenses for the year declined 7%, to \$7.9 million, the Company increased its clinical trial related costs by \$1.0 million, which was offset by reductions in other expenses. Aided by improved billing and collection procedures, the provision for uncollectible accounts receivables declined for the year by 27%, or \$1.3 million.

Results for the quarter were impacted by an overall increase in expenses of \$0.9 million from the comparable period the previous year. The expenses that increased were consistent with the year, discussed above, except that research and development expenses increased by \$0.5 million over the prior year period due to increased clinical trial related costs offset by a 45% reduction or \$0.6 million in the provision for uncollectible accounts

receivable.

On July 31, 2006, working capital exceeded \$80 million, and cash and cash equivalents approximated \$70 million. These figures are after giving effect to a \$3.2 million capital expenditure for the acquisition of a new building that will become the new Life Sciences and Therapeutics operating facility.

Enzo Clinical Labs' full year revenue was \$31.9 million, compared to \$32.9 million last year. Operating income declined to \$0.1 million, from \$2.8 million a year ago. At Enzo Life Sciences, reflecting competitive pricing conditions, total revenues for the year were \$7.9 million, compared with \$10.5 million last year. The operating loss at Life Sciences amounted to \$0.2 million, compared to operating income in the prior year of \$14.6 million (which included a \$14.0 million gain from the Digene settlement). A new licensing strategy and business development program is being implemented at Enzo Life Sciences to improve operating results going forward. Enzo Therapeutics incurred a loss of \$4.2 million in 2006 versus a loss of \$3.1 million in 2005 reflecting expanded clinical trial activity.

Enzo Therapeutics is currently conducting four clinical trials. A Phase I/II study of our STEALTHVECTOR(R)HGTV43(TM) construct for managing HIV-1 infection, which is designed to increase the percentage of engineered cells in circulation, is enrolling subjects. An expanded Phase II study of Alequel(TM), the Company's proprietary immune regulation drug for treating Crohn's disease is underway as is a Phase II study of EGS21, our small molecule immune regulation therapy. EGS21 is being evaluated as a possible enhancement for Alequel. In addition, a Phase II study of EGS21 for treating non-alcoholic steatohepatitis (NASH) is currently enrolling subjects. Protocols are being prepared for a Phase I/II clinical trial of B27PD, the Company's immune regulation drug for autoimmune uveitis, with the objective of conducting trials in both the U.S. and Europe. Additionally, we have a pipeline of compounds in pre-clinical studies involving bone growth, glucose levels and compounds to inhibit tumor proliferation in both IN VITRO and IN VIVO animal models of colon cancer.

A CONFERENCE CALL CONDUCTED BY ENZO BIOCHEM, INC. MANAGEMENT WILL TAKE PLACE ON MONDAY OCTOBER 16, 2006 AT 8:30 AM E.T. IT CAN BE ACCESSED BY DIALING 1-877-692-2086. INTERNATIONAL CALLERS CAN DIAL 1-973-582-2734. PLEASE REFERENCE PIN NUMBER 7985202. 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 JUNE 26, 2006. THE REPLAY OF THE CONFERENCE CALL CAN BE ACCESSED BY DIALING 1-877-519-4471, AND, WHEN PROMPTED, USE PIN NUMBER 7985202. 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.

Contact: For: Enzo Biochem, Inc. or Ed Lewis, CEOcast, Inc., 212-732-4300
Steve Anreder, 212-532-3232

ENZO BIOCHEM, INC.
(unaudited)
(in thousands,
except per share data)

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Ended	Fiscal Year Ended				Three Months		
	July 31,				July 31,		
	2006	NOTES	2005	NOTES	2006	NOTES	2005
<S> Total revenues	\$39,826		\$43,403		\$9,915		\$10,867
(Loss) income before income taxes	(\$17,009)	A	\$5,217	B	(\$4,955)	C	(\$3,459)
Benefit (provision) for income taxes E	1,342	D	(2,213)	E	449	F	1,467
Net (loss) income	(\$15,667)		\$3,004		(\$4,506)		(\$1,992)
Basic (loss) income per share	(\$0.49)		\$0.09		(\$0.14)		(\$0.06)
Diluted (loss) income per share	(\$0.49)		\$0.09		(\$0.14)		(\$0.06)
Weighted Average Common Shares:							
Basic	32,215		32,097		32,258		32,142
Diluted	32,215		32,763		32,258		32,142

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	July 31, 2006 (in thousands)	July 31, 2005 (in thousands)
<S> Cash, Cash Equivalents and Marketable Securities	\$69,854	\$83,695
Working Capital	\$80,161	\$96,280
Total Assets	\$101,524	\$116,466
Total Stockholders' Equity	\$95,587	\$108,267

</TABLE>

NOTES:

- A - INCLUDES \$1.6 MILLION IN COMPENSATION COSTS RESULTING FROM ADOPTION OF SFAS 123(R)
- B - INCLUDES \$14.0 MILLION PRE-TAX GAIN ON PATENT LITIGATION SETTLEMENT
- C - INCLUDES \$.3 MILLION IN COMPENSATION COSTS RESULTING FROM ADOPTION OF SFAS 123(R)
- D - REFLECTS AN EFFECTIVE TAX BENEFIT RATE OF 8%
- E - REFLECTS AN EFFECTIVE INCOME TAX RATE OF 42%

F - REFLECTS AN EFFECTIVE TAX BENEFIT RATE OF 9%