

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): MARCH 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.)

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.

(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 March 13, 2006, Enzo Biochem, Inc., a New York corporation (the "Company"), issued a press release discussing its financial results for its second fiscal quarter ended January 31, 2006. A copy of the press release is furnished as Exhibit 99.1 to this report.

ITEM 8.01. OTHER EVENTS.

On March 14, 2006, the Company issued a press release announcing that its wholly owned subsidiary Enzo Therapeutics has initiated a Phase II clinical trial to evaluate its immunomodulatory candidate drug EGS21 as a therapeutic for managing Crohn's disease. A Phase I safety trial of EGS21 was successfully concluded last year. The study is being conducted at Hebrew University Hadassah Medical Center where subject enrollment is proceeding. The press release issued by the Company announcing the foregoing is included as Exhibit 99.2 to this Current Report on Form 8-K and is incorporated by reference in its entirety into this Item 8.01.

ITEM 9.01. FINANCIAL STATEMENTS AND EXHIBITS.

(c) Exhibits.  
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Exhibit No. -----	Description -----
99.1	Press Release of Enzo Biochem, Inc., dated March 13, 2006, discussing financial results for second fiscal quarter ended January 31, 2006.
99.2	Press Release of Enzo Biochem, Inc., dated March 14, 2006, announcing initiation of Phase II clinical trial.

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: March 13, 2006

By: /s/ Barry Weiner  
-----  
Barry Weiner  
President and Chief Financial Officer

EXHIBIT INDEX

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[ENZO LOGO]

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

FOR IMMEDIATE RELEASE

ENZO BIOCHEM REPORTS  
 SECOND QUARTER RESULTS

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 HIV-1 STEALTH VECTOR TRIAL INITIATED

FARMINGDALE, NY, March 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 announced operating results for the three and six months ended January 31, 2006.

For the fiscal second quarter, total revenues amounted to \$10.1 million, compared to \$11.2 million in the corresponding year-ago period. Gross profit totaled \$6.3 million, compared with \$7.8 million a year ago. The net loss totaled \$4.4 million, compared with a loss of \$0.5 million in 2005. The results reflect, in addition to lower sales volume in the Life Sciences division, a non-cash charge for options expense under SFAS 123 (R) "Accounting for Share Based Payment" and higher Sarbanes Oxley Section 404-related accounting fees and other corporate governance expenditures.

"The past few months have been productive ones for Enzo," said Barry Weiner, President. "After extensive work, we received approval to continue our evaluation of HGTV43(R), our gene therapy medicine for HIV, which was initiated today. We are planning to begin a Phase II study for EGS21(TM) testing the effect of this candidate drug in the management of Crohn's disease. This treatment is expected to complement Alequel(TM), the Company's oral immune regulation product, which is also in a Phase II trial. On the intellectual property front, the Company received a patent award for a potentially far-reaching technology applicable to a wide variety of DNA diagnostic and medical research products. Our results reflect the continued investment in R&D and people, both administrative and professional, as we position Enzo for the years ahead, in addition to supporting our litigation efforts in order to protect our valuable intellectual property."

At Enzo Clinical Labs, revenues totaled \$8.0 million, approximating year-ago second quarter levels. Reflecting increased costs associated with the performance of certain tests, gross margin declined to 57% from 64% year-over-year. Enzo Life Sciences revenue amounted to \$2.1 million, compared to \$3.3 million a year ago. The results at

Enzo Life Sciences were impacted by the non- recognition of sales from certain distributors as a result of ongoing legal issues, as well as a decrease in direct sales. Gross margins at Life Sciences were 82% versus 83% in the year-ago quarter.

Selling, general and administrative expenses for the fiscal 2006 second quarter increased to \$7.3 million, from \$4.7 million in the prior year's period, reflecting higher costs in the marketing activities at Enzo Clinical Labs, increased expenses associated with compliance with Sarbanes-Oxley legislation and new governance-related procedures, and a non-cash charge of \$0.4 million related to stock-based compensation. Research and development expenses were comparable to the year ago quarter. In addition, during the fiscal 2006 second quarter, the Company incurred legal expenses totaling \$1.6 million, compared to \$1.2 million a year ago. Legal expense increased as a result of higher expenses surrounding patent litigation and added patent costs associated with continued development of the Company's intellectual property.

For the six months, revenues amounted to \$20.3 million, compared with \$21.6 million a year ago. Gross profit totaled \$12.4 million, compared with \$14.6 million in the corresponding year ago period. The net loss for the first half amounted to \$7.7 million, compared to net income of \$6.5 million a year ago, which included the Digene Corporation-related gain of \$14 million as a result of the patent litigation settlement.

As of January 31, 2006, working capital amounted to \$90.1 million, and cash and cash equivalents totaled \$76.4 million. There was no debt. Total stockholders equity amounted to \$102.0 million.

With a number of clinical trials already underway, Enzo announced today the official initiation of the Phase I-II clinical evaluation of the Company's Stealth Vector HGTV43(TM) gene construct for HIV-1 infection. The protocol for this study has been designed to increase the number of stem cells that engraft in the subject's bone marrow. Enrollment is expected to begin shortly. In addition, Enzo Therapeutics is planning the initiation of a Phase II clinical

trial to evaluate EGS21, involving an immunomodulatory candidate drug based on glucosylceramide for the management of Crohn's Disease. This is in addition to the ongoing Phase II study of Alequel(TM), which involves a wider and more diverse subject population than a previous clinical trial of the treatment. Also being planned is a Phase II for the study in Germany of Uveitis, an orphan drug candidate for treating chronic inflammation of the eye; a date to initiate the study has not as yet been set.

Enzo Biochem's intellectual property was further enhanced with the grant in this quarter of U.S. Patent No. 6,992,180, which, among other aspects, covers nucleic acid labeling molecules that are attached through the phosphate portion of the nucleic acid, either directly or indirectly. The technology can be applied to a range of commercial products, some of which are currently used for both diagnostics and medical research products. The current annual market for gene-based testing is estimated to be as high as \$1 billion.

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. 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](http://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.

AN INFORMATIONAL CALL CONDUCTED BY ENZO BIOCHEM, INC. MANAGEMENT WILL TAKE PLACE ON TUESDAY MARCH 14, 2006 AT 9:00 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 7143926. INTERESTED PARTIES MAY ALSO LISTEN OVER THE INTERNET AT [WWW.INVESTORCALENDAR.COM](http://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 MARCH 28, 2006. THE REPLAY OF THE CONFERENCE CALL CAN BE ACCESSED BY DIALING 1-877-519-4471, AND, WHEN PROMPTED, USE PIN NUMBER 7143926. INTERNATIONAL CALLERS CAN DIAL 1-973-341-3080, USING THE SAME PIN NUMBER.

- TABLE FOLLOWS -

<TABLE>  
<CAPTION>

	ENZO BIOCHEM, INC UNAUDITED (IN THOUSANDS, EXCEPT PER SHARE DATA)			
	SIX MONTHS ENDED JANUARY 31,		THREE MONTHS ENDED JANUARY 31,	
<S>	<C>	<C>	<C>	<C>
2005	2006	2005	2006	
-----	-----	-----	-----	-----
TOTAL REVENUES	\$20,281	\$21,536	\$10,116	
\$11,235	-----	-----	-----	-----
-----				

(LOSS) INCOME BEFORE INCOME TAXES (\$944)	(\$8,260)	\$11,228	(\$5,098)
BENEFIT (PROVISION) FOR INCOME TAXES \$416	\$536	(\$4,736)	\$659
----- NET (LOSS) INCOME (\$528)	----- (\$7,724)	----- \$6,492	----- (\$4,439)
----- BASIC (LOSS) INCOME PER SHARE (\$0.02)	----- (\$0.24)	----- \$0.20	----- (\$0.14)
DILUTED (LOSS) INCOME PER SHARE (\$0.02)	----- (\$0.24)	----- \$0.20	----- (\$0.14)
COMMON SHARE-BASIC 32,076	32,179	32,062	32,200
COMMON SHARE-DILUTED 32,076	32,179	32,739	32,200

<CAPTION>

	January 31, 2006 (IN THOUSANDS) (Unaudited)	July 31, 2005 (IN THOUSANDS)
	-----	-----
<S>	<C>	<C>
CASH AND MARKETABLE SECURITIES	\$76,362	\$83,695
WORKING CAPITAL	\$90,117	\$97,012
STOCKHOLDERS' EQUITY	\$102,018	\$108,267
TOTAL ASSETS	\$107,341	\$116,466

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CONTACT:

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

[ENZO LOGO]

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

FOR IMMEDIATE RELEASE

ENZO BIOCHEM INITIATES PHASE II TRIAL  
 OF IMMUNOMODULATORY COMPOUND FOR CROHN'S DISEASE

Farmingdale, NY, March 14, 2006 -- Enzo Biochem, Inc. (NYSE:ENZ) announced today that its wholly owned subsidiary Enzo Therapeutics has initiated a Phase II clinical trial to evaluate its immunomodulatory candidate drug EGS21 as a therapeutic for managing Crohn's disease. A Phase I safety trial of EGS21 was successfully concluded last year. The study is being conducted at Hebrew University Hadassah Medical Center where subject enrollment is proceeding.

The study is based on promising preclinical studies in animal model systems that were carried out by Enzo scientists and collaborators. The results of these studies, presented at several international meetings, demonstrated that EGS21 acts on immune regulatory (NKT) cells and therefore could impact the immune response in the body by modulating its function and adjusting it to a normal state.

The administration of EGS21 to animals with experimental allergic colitis resulted in marked alleviation of disease symptoms, with a significant improvement of the macroscopic and microscopic colitis scores in those mice that received the candidate drug compared to placebo. Alleviation of colitis symptoms by EGS21 treatment was associated in animal studies with a significant increase of intrahepatic CD8+ T cell trapping (peripheral/intrahepatic CD4+/CD8+ ratio increased by 68% in the control group compared to placebo animals). The beneficial effect of EGS21 on colitis was associated with a 17% increase of the intrahepatic NKT cell number and a 9% decrease of the peripheral/intrahepatic NKT cell ratio. In mice without colitis, treatment led to a 66% reduction of the intrahepatic NKT cell number and a 50% decrease of the peripheral/intrahepatic NKT cell ratio. Administration of EGS21 led to a decreased serum IFN $\alpha$  level in the first group of mice compared to placebo (52 vs. 87 pg/ml, respectively,  $p < 0.05$ ).

Preclinical laboratory studies suggest that EGS21, because of its demonstrated action on immune NKT cells, could function as an important candidate in the treatment of a variety of immune mediated diseases. A Phase II clinical trial on the effect of EGS21 on subjects with NASH (non-alcoholic steatohepatitis) and its associated metabolic syndrome is currently underway.

Crohn's disease is a chronic, serious inflammatory disease of the gastrointestinal tract that affects at least one half million Americans, according to the Crohn's & Colitis Foundation of America. The disease is triggered by an immune mediated inflammatory response that can cause extensive intestinal damage. The disease usually is characterized by diarrhea, abdominal pain and fever, as well as loss of appetite and weight loss. Crohn's disease afflicts people of all ages, but most cases are diagnosed before age 30.

Enzo said that EGS21, together with the Company's current oral immune regulation platform, could lead to the Company's development and launching of products for treatment of a broad range of immune mediated diseases including hepatitis B virus (HBV) and hepatitis C virus (HCV) associated liver disease, various cancers, Crohn's disease and other forms of inflammatory bowel diseases, HIV, diabetes and graft versus host disease. A Phase II study of the effects of Alequel(TM), Enzo's oral immune regulation drug for the management of Crohn's Disease, which is being applied to a larger group than in previous studies of Alequel(TM), involving a different therapeutic approach than EGS21, is continuing.

## ABOUT ENZO

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