UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 20549

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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 29, 2003

ENZO BIOCHEM, INC.

(Exact Name of Registrant as Specified in Charter)

New York 001-09974 13-2866202 (State or Other Jurisdiction of (Commission File Number) (I.R.S. Employer Incorporation or Organization) Identification No.)

60 Executive Boulevard, Farmingdale, New York 11735
(Address of Principal Executive Offices) (Zip Code)

Registrant's telephone number, including area code: (631) 755-5500

NOT APPLICABLE

(Former name or former address, if changed since last report)

ITEM 12. RESULTS OF OPERATIONS AND FINANCIAL CONDITION.

On October 29, 2003, the Registrant issued a press release announcing its operating results for the quarter and fiscal year ended July 31, 2003. 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.

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SIGNATURES

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

Date: October 29, 2003 Enzo Biochem, Inc.

By: /s/ Barry Weiner

Name: Barry Weiner

Title: Chief Financial Officer

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EXHIBIT INDEX

EXHIBIT DESCRIPTION
----99.1 Registrant's

Registrant's press release dated October 29, 2003 announcing operating results for the quarter and

fiscal year ended July 31, 2003.*

^{*} Furnished herewith.

ENZO BIOCHEM REPORTS OPERATING RESULTS FOR FISCAL YEAR ENDED JULY 31, 2003

FARMINGDALE, NY, October 29, 2003 - 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 fourth quarter and fiscal year ended July 31, 2003.

"While we continued to make important and significant progress in our therapeutic programs and our clinical lab operation, our Life Sciences Division experienced a reduction in orders. This resulted in decreased revenue and a decline in profitability," said Barry Weiner, President. "Nonetheless, Enzo once again ended the year with a profit and in excellent financial condition, with cash flow from operations increasing 27% in fiscal 2003 and a strong cash position. Our research and development activities continue to yield results, including as reported recently, promising new therapeutic platforms."

For the fiscal year ended July 31, 2003, revenues amounted to \$52.8million, compared with \$54.0 million in the prior year. The decline primarily reflected research product revenues at Enzo Life Sciences for the year of \$23.3 million, compared with \$25.9 million a year earlier, due to an absence of orders in the fourth quarter by a single distributor following heavy ordering by it during the first half of the year. Enzo Clinical Labs posted an increase in revenues, to \$29.5 million from \$28.1 million in fiscal 2002. Overall, gross profit amounted to \$41.0 million, compared with \$43.2 million in the prior fiscal year. Expenditures for research and development for the year rose by \$2.1 million to \$8.3 million, reflecting significantly increased activities for the multiple clinical trials both in development and underway. Legal expenditures for the year increased by \$3.5 million to \$5.7 million, principally as a result of two major patent suits that the Company has brought to protect its intellectual property assets. Fiscal 2003 net income amounted to \$3.8 million, or \$0.13 per share fully diluted, compared with \$6.9 million, or \$0.22 per share fully diluted, a year earlier.

Cash flow from operations for the year increased 27%, to \$12.1 million. At year-end, working capital amounted to \$97.7 million, and cash and marketable securities totaled \$78.4 million. There was no debt. Shareholders' equity amounted to \$109.4 million, a new record.

Owing chiefly to the significantly reduced orders noted above of research products, fourth quarter revenues for the Company amounted to \$10.7 million, compared with \$13.8 million in the corresponding year earlier period. Enzo Life Sciences revenues declined to \$2.6 million, compared with \$7.6 million for the comparable quarter a year earlier. In addition to the decrease in orders, the life sciences market segment that Enzo participates in has continued to be negatively impacted by cautious capital spending and

soft end-market demand for "discretionary" life sciences equipment, as well as conservative research and development spending by pharmaceutical companies, according to a recently published industry report. In contrast, Enzo Clinical Labs' fourth quarter revenues rose 30.4%, to \$8.0 million, compared with \$6.1 million a year earlier. In the fourth fiscal quarter, the Company's expanded research and development effort caused an increase in R&D expenses of over \$2 million. Enzo's legal expenses also increased by over \$2 million for the quarter. As a result, for the quarter, the Company incurred a net loss of \$2.5 million, or (\$0.08) per share fully diluted, compared with net income of \$1.7 million, or \$0.06 per share fully diluted, in the corresponding year-earlier quarter.

In fiscal 2003, Enzo Clinical Labs benefited from an increase in volume of higher priced esoteric tests, as well as an improved mix of payors. The gross profit of Enzo Clinical Labs increased by \$2 million, and gross margin rose to 67.5%, from 64.0% in the prior year. Operating profit at Enzo Clinical Labs for 2003 was \$3.0 million versus an operating loss in fiscal 2002 of nearly \$3.8 million, for a net improvement of almost \$6.8 million. The provision for uncollectible receivables last year at the Labs declined sharply, to \$8.7 million, compared with \$14.2 million in fiscal 2002, reflecting both a continued emphasis on the Company's more profitable core clientele and improved collection procedures.

Shipments of products at Enzo Life Sciences fell sharply towards the latter part of fiscal 2003, as a result of a significant decline in orders from Affymetrix, Inc. ("Affymetrix"). The Company announced yesterday that Enzo Life Sciences has commenced a lawsuit against Affymetrix in the U.S. District Court for the Eastern District of New York. The complaint charges that Affymetrix breached its agreement with Enzo by, among other things, misappropriating Enzo assets, and manufacturing and selling Enzo products in violation of the terms of the agreement. The Company has given notice to Affymetrix of termination of its Agreement with the Company. The lawsuit was filed after unsuccessful lengthy negotiations to resolve these and other issues. Enzo Life Sciences remains a

provider of proprietary novel detection systems for the genetics industry, and is currently in the process of placing increasing emphasis on direct sales development. It is anticipated that revenues for Enzo Life Sciences in the first quarter in fiscal 2004 will be comparable to the fourth quarter of fiscal 2003.

Enzo Therapeutics currently has four products in various stages of clinical testing, including a Phase 2 randomized double blind study of the Company's study drug for managing Crohn's Disease. Further studies are planned for EHT899, the Company's medicine for hepatitis B virus-associated chronic hepatitis; ECH18, a formulation to manage hepatitis C virus-associated hepatitis; and Enzo's Stealth Vector(R) HGTV 43 gene medicine for HIV-1 infection. The Company recently unveiled promising new therapeutic platforms for immune-mediated diseases that it is now working on, in addition to immune modulation and gene transfer technology.

"While fiscal 2003 operating results were not as strong as we would have liked," said Mr. Weiner, "the results we continue to achieve in our research and development

efforts, both on the life sciences and therapeutic fronts, are highly encouraging. We anticipate having additional Enzo proprietary medicines in active clinical testing in fiscal 2004, with the objective of bringing these products, providing the test results meet the necessary standards, to market. In Life Sciences, we anticipate continued expansion of our proprietary product line into areas such as amplification and dye technology—important tools for studying how genes function. In addition, our recently expanded marketing group is actively developing programs designed to improve our penetration into additional segments of the genomics research market."

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, with approximately 200 patents worldwide, 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. 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.

A CONFERENCE CALL CONDUCTED BY ENZO BIOCHEM, INC. MANAGEMENT WILL TAKE PLACE ON WEDNESDAY, OCTOBER 29, 2003 AT 8:30 A.M. (ET). IT CAN BE ACCESSED BY DIALING 888-338-6461, INTERNATIONAL CALLERS CAN DIAL 973-935-8509. 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 THROUGH MIDNIGHT NOVEMBER 9, 2003, SHORTLY FOLLOWING THE LIVE CALL. FOR REPLAY, DIAL 877-519-4471(973-341-3080 INTERNATIONALLY). YOU WILL BE PROMPTED FOR PIN NUMBER 4251552.

- Table Follows -

SELECTED STATEMENT OF OPERATIONS DATA

<TABLE> <CAPTION>

| Fiscal Year Ended July 31 | | Three Months Ended July 31 | |
|--|---|--|---|
| | | | |
| Unaudited (IN THOUSANDS EXCEPT PER SHARE DATA) | | | |
| | | | <c></c> |
| \$52 , 767 | \$54,015 | \$10,659 | \$13,781 |
| | | | |
| \$5 , 725 | \$10,340 | (\$4,714) | \$1 , 599 |
| (\$1,881) | (\$3,417) | \$2,191 | \$126 |
| | | | |
| \$3,844 | \$6 , 923 | (\$2,523) | \$1 , 725 |
| ======= | ====== | ====== | ====== |
| \$0.13 | \$0.23 | (\$ 0.08) | \$0.06 |
| \$0.13 | \$0.22 | (\$ 0.08) | \$0.06 |
| | | | |
| 29,904 | 29,866 | 29,955 | 29,879 |
| 30,643 | 30,788 | 31,168 | 30,619 |
| | July 2003 (IN 1) <c> \$52,767 \$5,725 (\$1,881)</c> | July 31 2003 2002 (IN THOUSANDS EXCEPT <c> <c> \$52,767 \$54,015 \$5,725 \$10,340 (\$1,881) (\$3,417) \$3,844 \$6,923 \$0.13 \$0.23 \$0.13 \$0.22 29,904 29,866</c></c> | July 31 2003 2002 2003 Unaudite (IN THOUSANDS EXCEPT PER SHARE DATA) <c> <c> <c> <c> <52,767 \$54,015 \$10,659 \$5,725 \$10,340 (\$4,714) (\$1,881) (\$3,417) \$3,844 \$6,923 (\$2,523) \$0.13 \$0.23 \$0.13 \$0.23 (\$0.08) \$0.13 \$0.22 (\$0.08) 29,904 29,866 29,955</c></c></c></c> |

</TABLE>

<TABLE> <CAPTION>

SELECTED BALANCE SHEET DATA

July 31, 2003 July 31, 2002

 <S>
 (in thousands)

 Cash and Marketable Securities
 \$78,422
 \$67,135

 Working Capital
 \$97,723
 \$92,772

 Stockholders' Equity
 \$109,380
 \$104,733

 Total Assets
 \$115,878
 \$109,291

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