

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): SEPTEMBER 7, 2007

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 8.01. OTHER EVENTS.

On September 7, 2007, Enzo Biochem, Inc. (the "Company"), issued a press release announcing that it has filed a Notice of Appeal with the Court of Appeals for the Federal Circuit following the grant yesterday of defendants' summary judgment motion of patent invalidity in Enzo v. Applera et al., before the United States District Court, District of Connecticut. The press release issued by the Company announcing the foregoing is included as Exhibit 99.1 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.

EXHIBIT NO. DESCRIPTION

99.1 Press Release of Enzo Biochem, Inc., dated September 7, 2007.

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: September 7, 2007

By: /s/ Elazar Rabbani

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

EXHIBIT INDEX

EXHIBIT NO.	DESCRIPTION
99.1	Press Release of Enzo Biochem, Inc., dated September 7, 2007.

[ENZO BIOCHEM LOGO]

news
release

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

ENZO BIOCHEM, INC. FILES APPEAL TO FEDERAL COURT DECISION

NEW YORK, NY, September 7, 2007 - -- Enzo Biochem, Inc. (NYSE:ENZ) reported today that it has filed a Notice of Appeal with the Court of Appeals for the Federal Circuit following the grant yesterday of defendants' summary judgment motion of patent invalidity in Enzo v. Applera et al., before the United States District Court, District of Connecticut. Enzo's action seeks recovery from defendants for past infringement of three pioneering patents, all of which expired in 2004.

Enzo's lead counsel in this action, Scott Robertson of Goodwin Procter LLP, stated, "We have reviewed the District Court's decision and respectfully believe that the court, among other things, improperly resolved issues of fact that we are confident Enzo would have prevailed upon at trial. Enzo has filed an appeal with the Federal Circuit seeking to reverse this ruling and intends to vigorously pursue its claims against defendants. We have every belief that the Federal Circuit will overturn this decision, and that Enzo will ultimately prevail."

The patents at issue are based on the work of Dr. David C. Ward at Yale University. Dr Ward's patents have been recognized by the scientific and biotechnology communities for more than 20 years as groundbreaking achievements in the field of nucleic acid labeling and detection. Based on his work, Dr. Ward has been inducted into the National Academy of Sciences.

Barry Weiner, President of Enzo stated, "It should be noted that this ruling relates solely to three expired patents, and that it is unrelated to Enzo's ongoing operating business. Nor is it related to other ongoing litigation which we continue to prosecute. While disappointing, we believe that the ruling is not reflective of the facts in the case and it certainly does not impact our intellectual property portfolio of more than 200 patents."

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. Enzo's Life Sciences division develops, produces and markets proprietary labeling and detection products for gene sequencing and genetic analysis. Its catalog of over 300 products serves the molecular biology, drug discovery and pathology research markets. 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 uveitis, Crohn's Disease, and NASH (non-alcoholic steatohepatitis), and conducts pre-clinical research 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. Enzo's Clinical Labs division provides routine and esoteric reference laboratory services for physicians in the New York Metropolitan area. Underpinning the Company's technology and operations is an extensive intellectual property estate in which Enzo owns or licenses over 200 patents worldwide and has pending applications for over 180 more. 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.

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Contacts:

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