

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

SCHEDULE 14A

**Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934
(Amendment No. __)**

Filed by the Registrant
Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
 Confidential, For Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
 Definitive Proxy Statement
 Definitive Additional Materials
 Soliciting Material Under Rule 14a-12

Enzo Biochem, Inc.

(Name of Registrant as Specified in Its Charter)

(Name of Person(s) Filing Proxy Statement, if Other Than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required
 Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

(1) Title of each class of securities to which transaction applies:

(2) Aggregate number of securities to which transaction applies:

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

(4) Proposed maximum aggregate value of transaction:

(5) Total fee paid:

- Fee paid previously with preliminary materials.

Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

(1) Amount previously paid:

(2) Form, Schedule or Registration Statement No.:

(3) Filing Party:

(4) Date Filed:

Enzo Biochem, Inc., a New York corporation (“Enzo” or the “Company”), previously furnished to the Company’s shareholders a definitive proxy statement dated November 16, 2010 (the “Proxy Statement”) in connection with the solicitation of proxies by the Board of Directors of the Company (the “Board of Directors” or the “Board”) for the Company’s 2010 Annual Meeting of Shareholders and for any adjournments or postponements thereof (the “Annual Meeting”). The Annual Meeting will be held at The Yale Club, 50 Vanderbilt Avenue, New York, New York 10017, on January 14, 2011, at 9:00 a.m., New York City time.

As disclosed in the Proxy Statement, Mr. Shahram K. Rabbani (“Shahram Rabbani”) submitted a letter (the “Shahram Notice”) to the Company stating that he intended to nominate at the Annual Meeting a competing slate of two insurgent Class II Director-candidates not nominated by the Board and to solicit votes from shareholders of the Company to elect such insurgent Class II Director-candidates to the Board, in opposition to the Board’s two Class II Director-nominees — Mr. Barry W. Weiner and Dr. Bernard L. Kastan.

Following delivery of the Shahram Notice, Shahram Rabbani filed with the Securities and Exchange Commission (the “SEC”) a preliminary proxy statement in connection with the Annual Meeting. Shahram Rabbani’s preliminary proxy statement indicated that he intended to solicit proxies to elect Mr. Kenneth G. Geraghty (“Mr. Geraghty”) to serve as a Class II Director of the Company. The preliminary proxy statement also indicated that Shahram Rabbani’s second purported nominee would not be able to serve as a director of the Company if elected, and had withdrawn his nomination.

On December 14, 2010, counsel to Mr. Geraghty sent a letter to the Company’s counsel, which attached a letter from Mr. Geraghty to the Company (the “Geraghty Withdrawal Letter”), a copy of which is attached hereto as Exhibit A. Pursuant to the Geraghty Withdrawal Letter, Mr. Geraghty withdrew his consent to being nominated for election as a director of the Company at the Annual Meeting, and acknowledged that he would not serve as a director of the Company if elected at the Annual Meeting.

On December 15, 2010, counsel to Shahram Rabbani sent a letter to the Company’s counsel (the “Shahram Rabbani Withdrawal Letter”), a copy of which is attached hereto as Exhibit B. The Shahram Rabbani Withdrawal Letter stated that, in light of the Geraghty Withdrawal Letter, Mr. Rabbani “will not be filing a definitive proxy statement with the SEC and, will not be soliciting proxies from any Enzo shareholder, concerning the 2010 annual shareholder meeting, scheduled for January 2011.”

Important Information and Where to Find It

On November 16, 2010, the Company filed its definitive Proxy Statement with the SEC in connection with its Annual Meeting to be held on January 14, 2011. Enzo mailed the definitive Proxy Statement, together with a **WHITE** proxy card, to all shareholders of record of Company common stock as of November 19, 2010, the record date for the Annual Meeting. The Company also may be filing other documents with the SEC regarding the Annual Meeting. **Before making any voting decision, shareholders are urged to read the definitive Proxy Statement and other relevant documents filed with the SEC carefully and in their entirety, because they contain (or will contain) important information about the matters to be considered at the Annual Meeting.** Shareholders may obtain free copies of the definitive Proxy Statement in connection with the Annual Meeting, and any other relevant documents filed with the SEC at the Internet website maintained by the SEC at www.sec.gov. In addition, the documents filed by the Company with the SEC will also be available for free at the Company’s Internet website at www.enzo.com, or by writing to Enzo Biochem, Inc., 527 Madison Avenue, New York, New York 10022; Attention: President. In addition, copies of the Company’s proxy materials may be requested by contacting the Company’s proxy solicitor, D.F. King & Co., Inc., toll free at (800) 967-5079 or collect at (212) 269-5550 or via e-mail at enzo@dfking.com.

The Company and its directors, executive officers and certain other employees may be deemed to be participants in the Board's solicitation of proxies in connection with the Annual Meeting. Detailed information regarding the names, affiliations and interests of individuals who may be deemed to be participants in the Board's solicitation of proxies in connection with the Annual Meeting is included in the Company's definitive Proxy Statement filed with the SEC on November 16, 2010.

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December 14, 2010

Via Facsimile (212) 209-4801 and Federal Express

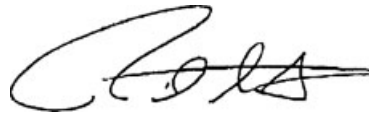
Martin S. Siegel, Esq.
Brown Rudnick LLP
Seven Times Square
New York, NY 10036

Re: Enzo Biochem, Inc. ("Enzo")

Dear Mr. Siegel:

Please see the enclosed letter from Kenneth G. Geraghty to Enzo.

Very truly yours,

A handwritten signature in black ink, appearing to read 'R. Scharlat', with a large, sweeping flourish at the end.

Richard I. Scharlat

RIS:ah
Enclosure

Kenneth G. Geraghty
74 Great Road
Jaffrey, New Hampshire 03452

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

Attn: Corporate Secretary

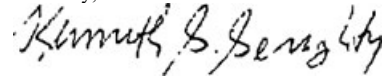
December 14, 2010

To Whom It May Concern:

I hereby withdraw my consent to being nominated for election as a director of Enzo Biochem, Inc. ("Enzo") at Enzo's 2010 annual meeting currently scheduled to be held on January 14, 2011 (the "2010 Annual Meeting"). Further, I acknowledge that I would not serve as a director of Enzo if elected at the 2010 Annual Meeting.

I trust that Enzo will comply with its obligations under the Federal securities laws related to this letter.

Sincerely,



Kenneth G. Geraghty

Exhibit B

LAW OFFICES

KRAVET & VOGEL, LLP

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DONALD J. KRAVET
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OF COUNSEL:

HOWARD J. AUGUST
SCOTT H. GREENFIELD

MARIA E. RODI

December 15, 2010

By Facsimile (212) 209-4801 and Federal Express

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Brown Rudnick LLP
Seven Times Square
New York, New York 10036

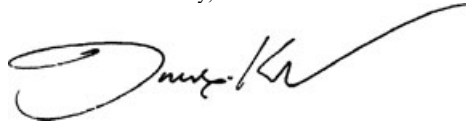
Re: *Enzo Biochem, Inc. v. Sharham K. Rabbani, et al*
Case No.: 10 Civ. 9025 (BSJ)

Dear Mr. Siegel:

We have been retained to represent Mr. Sharham K. Rabbani in connection with the above matter. We are in receipt of Mr. Kenneth Geraghty's letter to Enzo Biochem, Inc., ("Enzo") dated December 14, 2010 (copy attached).

In light of Mr. Geraghty's letter to Enzo, Mr. Rabbani will not be filing a definitive proxy statement with the SEC and, will not be soliciting proxies from any Enzo shareholder, concerning the 2010 annual shareholder meeting, scheduled for January 2011.

Yours truly,



Donald J. Kravet

Encl.
