

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G

Under the Securities Exchange Act of 1934
(Amendment No. 4)*

Enzo Biochem, Inc.

(Name of Issuer)

Common Stock, \$.01 par value

(Title of Class of Securities)

294100102

(CUSIP Number)

Check the following box if a fee is being paid with this statement [].

(A fee is not required only if the filing person: (1) has a previous statement on file reporting beneficial ownership of more than five percent of the class of securities described in Item 1; and (2) has filed no amendment subsequent thereto reporting beneficial ownership of five percent or less of such class.) (See Rule 13d-7.)

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

[] Rule 13d-1(b)

[x] Rule 13d-1(c)

[] Rule 13d-1(d)

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CUSIP No. 294100102

13G

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1 NAME OF REPORTING PERSON
S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

J. Morton Davis

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*

(a) []
(b) []

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

United States

NUMBER OF SHARES	5	SOLE VOTING POWER 2,110,073
BENEFICIALLY OWNED BY EACH	6	SHARED VOTING POWER 12,733
REPORTING PERSON WITH	7	SOLE DISPOSITIVE POWER 2,100,073
	8	SHARED DISPOSITIVE POWER 12,733

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,843,676

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

8.8%

12 TYPE OF REPORTING PERSON*

IN

*SEE INSTRUCTIONS BEFORE FILLING OUT

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Item 1. (a) Name of Issuer:

Enzo Biochem, Inc.

(b) Address of Issuer's Principal Executive Offices:

60 Executive Blvd
Farmingdale, NY 11735

Item 2. (a) Name of Person Filing:

J. Morton Davis.

(b) Address of Principal Business Office:

Mr. Davis' business address is 44 Wall Street,
New York, New York 10005 (1).

(c) Citizenship:

Mr. Davis is a United States citizen.

(d) Title of Class of Securities:

Common Stock, \$.01 par value ("shares")

(e) CUSIP Number:

294100102

Item 3. If this statement is filed pursuant to Rules 13d-1(b), or 13d-2(b), check whether the person filing is a:

- (a) [] Broker or Dealer registered under Section 15 of the Act
- (b) [] Bank as defined in section 3(a)(6) of the Act
- (c) [] Insurance Company as defined in section 3(a)(19) of the Act
- (d) [] Investment Company registered under section 8 of the Investment Company Act
- (e) [] Investment Adviser registered under section 203 of the Investment Advisers Act of 1940
- (f) [] Employee Benefit Plan, Pension Fund which is subject to the provisions of the Employee Retirement Income Security Act of 1974 or Endowment Fund; see Section 240.13d-1(b)(1)(ii)(F)
- (g) [] Parent Holding Company, in accordance with Section 240.13d-1(b)(1)(ii)(G)
- (h) [] Group, in accordance with Section 240.13d-1(b)(1)(ii)(H)
- (i) [] A church plan that is excluded from definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940.

(1) J. Morton Davis is the sole shareholder of Blair Investment, a broker-dealer registered under the Securities Exchange Act of 1934.

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Item 4. Ownership.

- (a) (b) As of December 31, 2004, Mr. Davis may be deemed to beneficially own (1) 2,843,676 shares or 8.8% of the Issuer's shares issued and outstanding as follows (i) 30,525 shares owned directly by Mr. Davis, (ii) 1,416,052 shares owned directly by Blair Investment, (iii) 663,446 shares owned by Engex, Inc. (2), (iv) 12,733 shares owned by an investment advisor whose principal is Mr. Davis, and (v) 720,870 shares owned by Rosalind Davidowitz, Mr. Davis' wife (3).
- (c) Mr. Davis has sole power to vote or to direct the vote, to dispose or to direct the disposition of those shares owned by Blair Investment. Rosalind Davidowitz has sole power to dispose or to direct the disposition of those shares owned directly by her (4). Voting and dispositive decisions regarding shares owned by Engex are made by Mr. Davis as Chairman of the Board.

Item 5. Ownership of Five Percent of class.

Not applicable.

Item 6. Ownership of More Than Five Percent on Behalf of Another Person.

Not applicable.

Item 7. Identification and Classification of the Subsidiary which Acquired the Security Being Reported on By the Parent Holding Company.

Not applicable.

Item 8. Identification and Classification of Members of the Group.

Not applicable.

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- (1) Not included herein are shares owned by Kinder Investments, L.P. ("Kinder"), shares owned by Venturetek, L.P. ("Venturetek") and shares owned by Sutton Partners, L.P. ("Sutton"). The limited partners of Kinder, Venturetek, and Sutton are the children and grandchildren of Mr. Davis. Mr. Davis disclaims for purposes of Section 13 or otherwise beneficial ownership of any Enzo Biochem, Inc. shares owned by Kinder, Venturetek and Sutton. Kinder, Venturetek and Sutton disclaim for

purposes of Section 13 or otherwise ownership of any Enzo Biochem, Inc. shares owned by Blair Investment or Mr. Davis.

- (2) Engex, Inc. ("Engex") is an investment company registered under Section 8 of the Investment Company Act. Mr. Davis is reporting as a beneficial owner of the securities owned by Engex because of his role as investment advisor to Engex. Filing of this statement shall not be deemed an admission by J. Morton Davis that he beneficially owns the securities attributed to Engex for any purpose. J. Morton Davis expressly disclaims beneficial ownership of all securities held by Engex for any purpose.
- (3) Filing of this statement shall not be deemed an admission by J. Morton Davis that he beneficially owns the securities attributed to Ms. Davidowitz for any purpose. J. Morton Davis expressly disclaims beneficial ownership of all securities held by Ms. Davidowitz for any purpose.

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Item 9. Notice of Dissolution of Group.

Not applicable.

Item 10. Certification.

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired in the ordinary course of business and were not acquired for the purpose of and do not have the effect of changing or influencing the control of the issuer of such securities and were not acquired in connection with or as a participant in any transaction having such purpose or effect.

Signature.

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: February 5, 2005

By: /s/ J. Morton Davis

J. Morton Davis