

FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

OMB APPROVAL	
OMB Number:	3235-0287
Estimated average burden hours per response...	0.5

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person* THALENFELD BARBARA E		2. Issuer Name and Ticker or Trading Symbol ENZO BIOCHEM INC [ENZ]		5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director _____ 10% Owner _____ <input checked="" type="checkbox"/> Officer (give title below) _____ Other (specify below) _____ VP, Corporate Development	
(Last)	(First)	(Middle)	3. Date of Earliest Transaction (Month/Day/Year) 08/09/2007		
527 MADISON AVENUE					
(Street)			4. If Amendment, Date Original Filed(Month/Day/Year)		
NEW YORK, NY 10022					
(City)			(State)		
(Zip)					

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock, par value \$0.01 per share	08/09/2007		C		3,191	A	(1)	71,189 (2)	D	

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number. SEC 1474 (9-02)

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Underlying Securities (Instr. 3 and 4)		8. Price of Derivative Security (Instr. 5)	9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
						Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Employee Stock Option	\$ 11.655	08/09/2007		C	3,191	08/27/2007	08/27/2007	Common Stock, par value \$0.01 per share	3,191	\$ 0	43,506 (2)	D	

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
THALENFELD BARBARA E 527 MADISON AVENUE NEW YORK, NY 10022			VP, Corporate Development	

Signatures

/s/ Barbara Thalenfeld	08/13/2007
<small>**Signature of Reporting Person</small>	<small>Date</small>

Explanation of Responses:

* If the form is filed by more than one reporting person, see Instruction 4(b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

- (1) The Reporting Person exercised a stock option to purchase 3,191 shares of Common Stock and paid the exercise price thereof by the surrender of 2,082 shares of Common Stock, for a net gain in outstanding shares of Common Stock of 1,109 shares. The stated exercise price of the stock option was \$11.665.
- (2) As of the date hereof, the Reporting Person directly beneficially owned 20,282 shares of Common Stock, 1,020 shares of Common Stock in Enzo Biochem's 401(K) Plan, and 49,887 options to purchase Common Stock, par value \$0.01 per share, which are exercisable within 60 days from the date hereof.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.