

FORM 5

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

OMB APPROVAL	
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ANNUAL 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).
- Form 3 Holdings Reported
- Form 4 Transactions Reported

1. Name and Address of Reporting Person* RABBANI SHAHRAM K <small>(Last) (First) (Middle)</small> C/O ENZO BIOCHEM, INC., 527 MADISON AVENUE <small>(Street)</small> NEW YORK, NY 10022 <small>(City) (State) (Zip)</small>	2. Issuer Name and Ticker or Trading Symbol ENZO BIOCHEM INC [ENZ] 3. Statement for Issuer's Fiscal Year Ended (Month/Day/Year) 07/31/2008 4. If Amendment, Date Original Filed (Month/Day/Year)	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director <input type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) Treasurer and Secretary 6. Individual or Joint/Group Reporting (check applicable line) <input checked="" type="checkbox"/> Form Filed by One Reporting Person <input type="checkbox"/> Form Filed by More than One Reporting Person
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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 at end of Issuer's Fiscal Year (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
				Amount	(A) or (D)	Price			
Common Stock	08/01/2007		G	1,000	D	\$ 0	1,828,494 (1)	D	
Common Stock	08/01/2007		G	1,000	D	\$ 0	1,828,494 (1)	D	
Common Stock	02/24/2008		G	1,500	D	\$ 0	1,828,494 (1)	D	
Common Stock	02/24/2008		G	1,500	D	\$ 0	1,828,494 (1)	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.

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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 at End of Issuer's Fiscal Year (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					
					(A) (D)							

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
RABBANI SHAHRAM K C/O ENZO BIOCHEM, INC. 527 MADISON AVENUE NEW YORK, NY 10022	X		Treasurer and Secretary	

Signatures

/s/ Shahram Rabbani	09/15/2008
Signature of Reporting Person	Date

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).

Includes (i) 459,528 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof, (ii) 1,354 shares of Common (1) Stock held in the name of the Reporting Person's son, (iii) 1,671 shares of Common Stock that the Reporting Person holds as custodian for certain of his nephews and (iv) 7,500 shares of restricted Common Stock. Includes 4,881 shares of Common Stock held in the Company's 401(k) plan.

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

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