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

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

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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

| (Print or Type Responses) | | | | | | | | | | | | |
|--|---------|--|---|-------------|------|----------------|---------------|-------------------------------|---|--|-------------------------|--|
| 1. Name and Address of Reporting Person [*] – Perlysky Dov | | | 2. Issuer Name and Ticker or Trading Symbol ENZO BIOCHEM INC [ENZ] | | | | | | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) X Director 10% Owner | | | |
| (Last) C/O ENZO BIOCHE AVENUE | DIGONI | 3. Date of Earliest Transaction (Month/Day/Year) 01/17/2013 | | | | | | Officer (give title below)Oth | er (specify below | v) | | |
| (Street) NEW YORK, NY 10022 | | | 4. If Amendment, Date Original Filed(Month/Day/Year) | | | | | | 6. Individual or Joint/Group Filing(Check Applicable Line) _X_Form filed by One Reporting Person Form filed by More than One Reporting Person | | | |
| (City) | (State) | (Zip) | | Table I - N | on-D | erivative | Securitie | s Acqu | l lired, Disposed of, or Beneficially Owne | d | | |
| 1.Title of Security (Instr. 3) | | 2. Transaction Date (Month/Day/Year) | | | | Transaction(s) | | Beneficial | | | | |
| | | | (Month/Day/Year) | Code | V | Amount | (A) or (D) | Price | x / | Direct (D) or Indirect (I) (Instr. 4) | Ownership (Instr. 4) | |

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 SEC 1474 (9-02) this form are not required to respond unless the form displays a currently valid OMB control number.

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned

| | (<i>e.g.</i> , puts, calls, warrants, options, convertible securities) | | | | | | | | | | | | | | |
|-------------|---|------------------|--------------------|------------|-----|------------|----------------------------------|----------------|---------------------------|-------------------------|--------|------------|----------------|-------------|-------------|
| 1. Title of | | | 3A. Deemed | 4. | | | . Number 6. Date Exercisable and | | 7. Title and Amount 8. Pr | | | | | 11. Nature | |
| Derivative | Conversion | Date | Execution Date, if | Transact | ion | of Deriva | tive | Expiration Dat | e | of Underlying Derivat | | Derivative | Derivative | Ownership | of Indirect |
| Security | or Exercise | (Month/Day/Year) | | Code | | Securities | | (Month/Day/Y | ear) | Securities Security | | | | Beneficial | |
| (Instr. 3) | Price of | | (Month/Day/Year) | (Instr. 8) |) | Acquired | | (| | (Instr. 3 and 4) (Instr | | (Instr. 5) | ~ | Derivative | Ownership |
| | Derivative | | | | | or Dispos | sed | | | | | | | (Instr. 4) | |
| | Security | | | | | of (D) | | | | | | | 0 | Direct (D) | |
| | | | | | | (Instr. 3, | 4, | | | | | | 1 | or Indirect | |
| | | | | | | and 5) | | | | | | | Transaction(s) | | |
| | | | | | | | | | | | Amount | | (Instr. 4) | (Instr. 4) | |
| | | | | | | | | Date | | | or | | | | |
| | | | | | | | | Exercisable | Expiration Date | | Number | | | | |
| | | | | a 1 | * 7 | (1) | | | | | of | | | | |
| | | | | Code | V | (A) | (D) | | | | Shares | | | | |
| Stock | | | | | | | | | | | | | | | |
| Option | | | | | | | | | | | | | | | |
| (to | | | | | | | | | | Common | | | | | |
| | \$ 2.88 | 01/17/2013 | | Α | | 59,455 | | 01/17/2014 | 01/17/2018(1) | Common Stock | 59,455 | \$ 0 | 59,455 | D | |
| acquire | | | | | | , | | | | Stock | , | | , í | | |
| Common | | | | | | | | | | | | | | | |
| Stock) | | | | | | | | | | | | | | | |

Reporting Owners

| | Relationships | | | | | | |
|--|---------------|--------------|---------|-------|--|--|--|
| Reporting Owner Name / Address | Director | 10% Owner | Officer | Other | | | |
| Perlysky Dov C/O ENZO BIOCHEM, INC. 527 MADISON AVENUE NEW YORK, NY 10022 | Х | | | | | | |

Signatures

| /s/ Dov Perlysky | 01/22/2013 |
|---------------------------------|------------|
| **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).

(1) The Reporting Person was granted 59,455 Options. The Options have a five year term which shall vest in two equal installments commencing on January 17, 2014.

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.