FORM 4

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

| OMB APPE | ROVAL |
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| OMB Number: | 3235-0287 |
| Estimated average | burden |
| hours per response | 0.5 |

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

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

| | pe Response | | | | | | | | | | | | | | | |
|---|---|--|--|--|---|---|--------------------------------|---|---|---|--|-------------------|---------------------------------|--|--|--|
| 1. Name and Address of Reporting Person * KASTEN BERNARD L | | | 2. Issuer Name and Ticker or Trading Symbol ENZO BIOCHEM INC [ENZ] | | | | | | _x_ r | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) _X_ Director 10% Owner | | | | | | |
| (Last) (First) (Middle) C/O ENZO BIOCHEM INC., 527 MADISON AVENUE | | | | | 3. Date of Earliest Transaction (Month/Day/Year) 01/21/2015 | | | | | | 0 | officer (give t | itle below) | Othe | r (specify below) | |
| (Street) | | | 4. If An | 4. If Amendment, Date Original Filed(Month/Day/Year) | | | | | | _X_ For | 6. Individual or Joint/Group Filing(Check Applicable Line) _X_Form filed by One Reporting Person Form filed by More than One Reporting Person | | | | | |
| NEW YORK, NY 10022 | | | | | | | | | | | Tomi free by wore than one reporting reason | | | | | |
| (Cit | y) | (State) | (Zip) | | | | Tab | le I - Non-Dei | ivative Secu | rities A | Acquired, D | isposed o | f, or Benefi | cially Owner | 1 | |
| (Instr. 3) Date | | 2. Transaction Date (Month/Day/Yea | Exectar) any | | on Date, if | | e (| 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | D) Owned Transa | Owned Following Transaction(s) | | | Ownership of B | Beneficial | |
| | | | | (Mon | nth/Day | y/Year) | C | Code V | \ / |) or () Pi | (Instr. 2 | (I) | | or Indirect (I | | |
| Reminder: | Report on a s | · | | | | | | | s who resp | | | | | | | 174 (9-02) |
| | • | 3. Transaction | | (e.g., p | puts, ca | alls, wa | rran | in this a curre cquired, Disp ts, options, co | form are no ently valid Co osed of, or B onvertible sec | ot requ DMB co enefici curities | uired to rescontrol num ially Owned | spond ur iber. | nless the fo | orm display | 's | , , |
| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | | 3A. Deemed Execution Date, if | 4. Transact | tion of Of | . Number of Deriva decurities acquired or Dispose of (D) | er ative s (A) sed | in this a curre cquired, Disp ts, options, co | form are no ently valid Co osed of, or Bonvertible sec isable and ate | ot requ OMB co cenefici curities | uired to res control num | Amount | 8. Price of | 9. Number of Derivative Securities Beneficially Owned Following Reported | of 10. Ownership Form of Derivative Security: Direct (D) or Indirect | 11. Nature of Indirec Beneficial Ownershi (Instr. 4) |
| 1. Title of Derivative Security | 2. Conversion or Exercise Price of Derivative | Date | 3A. Deemed Execution Date, if any | 4. Transact | tion of Of | alls, wa Number of Deriva securities acquired or Dispose of (D) Instr. 3, 4 and 5) | er ative s (A) sed | in this a curre cquired, Disp ts, options, co | form are no ently valid Co osed of, or Bonvertible sec isable and ate | ot requ OMB co senefici curities | ially Owned s) 7. Title and of Underlyin Securities | Amount | 8. Price of Derivative Security | 9. Number of Derivative Securities Beneficially Owned Following | of 10. Ownership Form of Derivative Security: Direct (D) or Indirect | 11. Nature of Indirec Beneficial Ownershi (Instr. 4) |

Reporting Owners

| P (0 N / | Relationships | | | | | |
|---|---------------|--------------|---------|-------|--|--|
| Reporting Owner Name / Address | Director | 10% Owner | Officer | Other | | |
| KASTEN BERNARD L C/O ENZO BIOCHEM INC. 527 MADISON AVENUE NEW YORK, NY 10022 | X | | | | | |

Signatures

| /s/ Bernard Kasten | 01/23/2015 |
|---------------------------------|------------|
| **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 70,423 stock options. The options have a five-year term and shall vest in two equal annual installments, beginning January 22, 2016.

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.