FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

| 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

OMB APPROVAL OMB Number: Estimated average burden hours per response: 0.5

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

| Name and Address of Reporting Person* Eno Richard P | | | | | | 2. Issuer Name and Ticker or Trading Symbol METABOLIX, INC. [MBLX] | | | | | | | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) X Director 10% Owner | | | |
|--|---|--|---|--|---|--|--------|--|--|---|--|---|--|---|--|--|
| (Last) (First) (Middle) C/O METABOLIX, INC. 21 ERIE STREET | | | | | 3. Date of Earliest Transaction (Month/Day/Year) 09/17/2008 | | | | | | | X Officer (give title below) Other (specify below) Pres. and CEO | | | | pecify |
| (Street) CAMBRIDGE MA 02139 (City) (State) (Zip) | | | | 4. | 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | Individual or Joint/Group Filing (Check Applicable le) X Form filed by One Reporting Person Form filed by More than One Reporting Person | | | | |
| Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned | | | | | | | | | | | | | | | | |
| Date | | | | ransaction e nth/Day/Y | Execut | | | Code (Ins | Transaction Disposed Of (D) (In Code (Instr. 5) | | | Beneficia | s ally following | 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 | Transact (Instr. 3 a | ion(s) | | | (instr. 4) | |
| 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/Yea | 4. Transaction Code (Instr 8) | | | | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | 7. Title and Amount of Securities Underlying Derivative Security (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: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
| | | | | Code | v | (A) | (D) | Date Exercisable | Expiration Date | Title | Amount or Number of Shares | | | | | |
| Stock Option (right to buy) | \$9.2 | 09/17/2008 | | A | | 50,000 | | (1) | 09/17/2018 | Common Stock | 50,000 | \$0 | 50,000 | 0 | D | |

Explanation of Responses:

1. This stock option will vest and become exercisable in 16 equal quarterly installments over a period of 4 years from the grant date.

/s/ Sarah P. Cecil, attorney-in-

fact

09/18/2008

** Signature of Reporting Person

Date

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

- * 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).

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

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 Number.