## FORM 4

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

OMB APPROVAL

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## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

| 1. Name and Address of Reporting Person <sup>*</sup><br>Shaaltiel Yoseph |  |  | 2. Issuer Name <b>and</b> Ticker or Trading Symbol<br>Protalix BioTherapeutics, Inc. [PLX] | 5. Relationship of Reporting Person(s) to<br>Issuer<br>(Check all applicable)   |   |   |  |  |
|--|--|--|--|---|---|---|--|--|
|  | O PROTALIX BIOTHERAPEUTICS, 2<br>NUNIT STREET, SCIENCE PARK, POB |  | 3. Date of Earliest Transaction<br>(Month/Day/Year)<br>06/21/2010                          | X X   | Director<br>Officer (give<br>title below)<br>Executive VP | 10% Owner<br>Other<br>(specify<br>below)<br>R&D |  |  |
| (Street)   |  |  | 4. If Amendment, Date of Original Filed<br>(Month/Day/Year)                                | <ul> <li>6. Individual or Joint/Group Filing</li> <li>(Check Applicable Line)</li> <li>X Form filed by One Reporting Person</li> <li>Form filed by More than One</li> <li>Reporting Person</li> </ul> |   |   |  |  |

| Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned |  |   |                                     |   |   |                  |       |   |  |   |  |  |
|--|--|---|-------------------------------------|---|---|------------------|-------|---|--|---|--|--|
| 1.Title of<br>Security<br>(Instr. 3)   | 2. Transaction<br>Date<br>(Month/Day/Year) | 2A. Deemed<br>Execution Date,<br>if any<br>(Month/Day/Year) | 3.<br>Transac<br>Code<br>(Instr. 8) |   | 4. Securiti<br>Acquired (<br>Disposed o<br>(Instr. 3, 4 | A) or<br>of (D   | )     | 5. Amount of<br>Securities<br>Beneficially<br>Owned | 6.<br>Ownership<br>Form:<br>Direct (D) | 7. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |  |  |
|  |  |   | Code                                | v | Amount  | (A)<br>or<br>(D) | Price | Reported (<br>Transaction(s) (<br>(Instr. 3 and     | or Indirect<br>(I)<br>(Instr. 4)       |   |  |  |
| Common<br>Stock  | 06/21/2010                                 |   | S                                   |   | 52,973 <sup>(1)</sup>                                   | D                | \$ 7  | 816,781   | D                                      |   |  |  |

|   | Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned         (e.g., puts, calls, warrants, options, convertible securities) |  |  |      |   |           |     |                            |                    |  |  |   |  |  |                                       |
|---|--|--|--|------|---|-----------|-----|----------------------------|--------------------|--|--|---|--|--|---------------------------------------|
| 1. Title of<br>Derivative<br>Security<br>(Instr. 3) | 2.<br>Conversion<br>or Exercise<br>Price of<br>Derivative<br>Security  | 3. Transaction<br>Date<br>(Month/Day/Year) | 3A. Deemed 4.<br>Execution Date, Transaction |      |   | Number of |     | 6. Date<br>Exercisable and |                    | 7. Title and<br>Amount of<br>Underlying<br>Securities<br>(Instr. 3 and<br>4) |  | 8. Price of<br>Derivative<br>Security<br>(Instr. 5) | 9. Number of<br>Derivative<br>Securities<br>Beneficially<br>Owned<br>Following<br>Reported<br>Transaction(s)<br>(Instr. 4) | 10.<br>Ownership<br>Form of<br>Derivative<br>Security:<br>Direct (D)<br>or Indirect<br>(I)<br>(Instr. 4) | Beneficial<br>Ownership<br>(Instr. 4) |
|   |  |  |  | Code | v | (A)       | (D) | Date<br>Exercisable        | Expiration<br>Date | Title  | Amount<br>or<br>Number<br>of<br>Shares |   |  |  |                                       |

**Explanation of Responses:** 

1. The sales reported on this Form 4 were effected pursuant to a Rule 10b5-1 trading plan.

/s/ Yossi Maimon, POA06/23/2010\*\* Signature of Reporting<br/>PersonDate

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.