

## 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

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

OMB APPROVAL

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|  |         |          |  |  |  |   |  |  |
|--|---------|----------|--|--|--|---|--|--|
| 1. Name and Address of Reporting Person* |         |          | 2. Issuer Name and Ticker or Trading Symbol<br>PLURISTEM THERAPEUTICS INC [ PSTI ] |  |  | 5. Relationship of Reporting Person(s) to Issuer<br>(Check all applicable)  |  |  |
| Aberman Zami 0001344740                  |         |          |  |  |  | <input checked="" type="checkbox"/> Director 10% Owner<br><input checked="" type="checkbox"/> Officer (give title below) Other (specify below)<br><b>CEO &amp; Chairman</b> |  |  |
| (Last)                                   | (First) | (Middle) | 3. Date of Earliest Transaction (Month/Day/Year)<br>09/16/2014                     |  |  | 6. Individual or Joint/Group Filing (Check Applicable Line)   |  |  |
| 46 HATAPUZ ST.                           |         |          |  |  |  | <input checked="" type="checkbox"/> Form filed by One Reporting Person<br><input type="checkbox"/> Form filed by More than One Reporting Person                             |  |  |
| (Street)                                 | TELMOND | L3       | 4. If Amendment, Date of Original Filed (Month/Day/Year)                           |  |  |   |  |  |
| (City)                                   | (State) | (Zip)    |  |  |  |   |  |  |

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 Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|--------|---|--|---|
|                                 |                                      |  |                                | Code  | V | Amount |   |  |   |
| Common Stock                    | 09/16/2014                           |  | P                              |   |   | 15,000 | A   | \$2.8 <sup>(1)</sup>                                     | 1,730,298 D   |

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 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  |  |  |   |  |

## Explanation of Responses:

1. The purchase was effected on the Tel Aviv Stock Exchange in New Israeli Shekels (NIS) for per share purchase price of NIS 10.14, which per share purchase price has been reported on this Form 4 in U.S. dollars based on an exchange rate of NIS 3.626 per U.S. dollar.

## Remarks:

/s/ Zami Aberman

\*\* Signature of Reporting Person

09/16/2014

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.