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UNITED STATES  
**SECURITIES AND EXCHANGE COMMISSION**

WASHINGTON, DC 20549

**FORM 8-K**

CURRENT REPORT PURSUANT  
TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934

Date of report (Date of earliest event reported): **October 19, 2017**

**PLURISTEM THERAPEUTICS INC.**

(Exact Name of Registrant as Specified in Its Charter)

**Nevada**

(State or Other Jurisdiction of Incorporation)

**001-31392**

(Commission File Number)

**98-0351734**

(IRS Employer Identification No.)

**MATAM Advanced Technology Park  
Building No. 5  
Haifa, Israel**

(Address of Principal Executive Offices)

**31905**

(Zip Code)

**011 972 74 7108607**

(Registrant's Telephone Number, Including Area Code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- ☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- ☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- ☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- ☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

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**Item 8.01. Other Events.**

On October 19, 2017, the registrant announced that the U.S. Food and Drug Administration has granted the registrant's PLX-R18 cell therapy Orphan Drug Designation for the prevention and treatment of Acute Radiation Syndrome.

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

**PLURISTEM THERAPEUTICS INC.**

Date: October 19, 2017

By: /s/ Erez Egozi  
Name: Erez Egozi  
Title: Chief Financial Officer

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