

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): **March 24, 2022 (March 23, 2022)**

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)		3508409 (Zip Code)

011 972 74 710 7171
(Registrant's telephone number, including area code)

Not applicable
(Former name or former address, if changed since last report)

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))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.00001 per share	PSTI	The Nasdaq Capital Market

Indicate by check mark whether the registrant is an emerging growth company as defined in 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. ☐

Item 8.01. Other Events.

On March 23, 2022, Pluristem Therapeutics Inc., or the registrant, announced positive final results from its hematology Phase I study to evaluate the safety and exploratory efficacy of intramuscular injections of PLX-R18 in subjects with incomplete hematopoietic recovery following hematopoietic cell transplantation, or HCT.

Data collected over 12 months post-treatment with PLX-R18 demonstrated that (i) PLX-R18 was well-tolerated with a favorable safety profile; (ii) patients treated with PLX-R18 showed an increase in all three blood cell types compared to baseline with platelets ($p<0.001$), hemoglobin ($p=0.01$) and neutrophils ($p=0.15$) levels increasing as early as one month following PLX-R18 administration and enduring up to 12 months following treatment; (iii) following PLX-R18 treatment, the number of transfused units decreased from a mean monthly number of 5.09 for platelets and 2.91 for red blood cells at baseline to 0.55 for platelets and 0 for red blood cells ($p=0.0005$) at 12 months; and (iv) the observed annual mortality rate following PLX-R18 administration was 18% compared to 29% in a cohort of allogeneic HCT recipients with incomplete hematopoietic recovery, obtained from the Center for International Blood and Marrow Transplant Research registry, representing a similar patient population.

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.

By: /s/ Chen Franco-Yehuda

Name: Chen Franco-Yehuda

Title: Chief Financial Officer

Date: March 24, 2022