
As filed with the Securities and Exchange Commission on June 5, 2014
Registration No. 333-_____

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM S-8
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

PLURISTEM THERAPEUTICS INC.

(Exact name of registrant as specified in its charter)

Nevada
(State or other jurisdiction of incorporation or organization)

98-0351734
(I.R.S. Employer Identification No.)

MATAM Advanced Technology Park, Building No. 5, Haifa, Israel 31905
(Address of Principal Executive Offices) (Zip Code)

Pluristem Therapeutics Inc. Amended and Restated 2005 Stock Option Plan
(Full title of the plan)

Nevada Agency and Transfer Company
50 West Liberty Street, Suite 880
Reno, NV 89501
(Name and address of agent for service)

(775) 322-0626
(Telephone number, including area code, of agent for service)

Copy to:
Howard E. Berkenblit
Shy S. Baranov
Zysman, Aharoni, Gayer and Sullivan & Worcester LLP
One Post Office Square
Boston, Massachusetts 02110
Telephone: (617) 338-2800
Fax: (617) 338-2880

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐

Non-accelerated filer ☐

(Do not check if a smaller reporting company)

Accelerated filer ☒

Smaller reporting company ☐

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered (1)	Proposed maximum offering price per share	Proposed maximum aggregate offering price	Amount of registration fee
Common Stock, \$0.00001 par value	900,000	\$ 3.305(2)	\$ 2,974,500(2)	\$ 383.12

(1) In accordance with Rule 416(a) under the Securities Act of 1933, as amended (the “**Securities Act**”), this Registration Statement shall be deemed to cover an indeterminate number of additional securities that may from time to time be offered or issued to prevent dilution resulting from stock splits, stock dividends or similar transactions.

(2) Estimated in accordance with Rules 457(h)(1) and 457(c) promulgated under the Securities Act, solely for the purpose of calculating the registration fee, based on \$3.305, the average of the high and low prices of the Common Stock on the Nasdaq Capital Market on June 4, 2014.

EXPLANATORY NOTE

On October 20, 2009, Pluristem Therapeutics Inc. (the “**Company**” or the “**Registrant**”) filed a Registration Statement on Form S-8 (File No. 333-162577) (the “**Original Registration Statement**”) with the U.S. Securities and Exchange Commission (the “**Commission**”) to register an aggregate of 4,697,328 shares of common stock of the Company that may be issued pursuant to the Company’s Amended and Restated 2005 Stock Option Plan as amended (the “**Plan**”).

On April 28, 2011, the Company filed another Registration Statement on Form S-8 (File No. 333-173777) (the “**Second Registration Statement**”) with the Commission to register an additional 5,368,849 shares of common stock of the Company that may be issued pursuant to the Plan.

Pursuant to the Plan the number of shares of common stock of the Company made available under the Plan, shall be automatically increased to be equal to 16% of the number of shares of common stock issued and outstanding of the Company on a fully diluted basis immediately prior to the grant of securities.

The Company is filing this Registration Statement on Form S-8 to register an additional 900,000 shares of common stock of the Company, which may be issued in connection with securities awards which have been granted or may hereafter be granted under the Plan.

Pursuant to General Instruction E to Form S-8, the contents of the Original Registration Statement and the Second Registration Statement are incorporated herein by reference, except as revised herein.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

All information required by Part I to be contained in the prospectus is omitted from this Registration Statement in accordance with Rule 428 and the introductory note to Part I of Form S-8, in each case under the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following additional documents, which have been filed by the Company with the Commission under the Securities Exchange Act of 1934 (the “**Exchange Act**”), are incorporated by reference in and made a part of this Registration Statement, as of their respective dates:

- (a) Annual Report on Form 10-K for the fiscal year ended June 30, 2013 filed with the Commission on September 11, 2013;
- (b) Quarterly Reports on Form 10-Q for the quarter ended September 30, 2013 filed with the Commission on November 5, 2013, for the quarter ended December 31, 2013 filed with the Commission on February 5, 2014, and for the quarter ended March 31, 2014, filed with the Commission on May 8, 2014;
- (c) Current Reports on Form 8-K filed on September 16, 2013, December 17, 2013, January 21, 2014, February 5, 2014 and May 22, 2014; and
- (d) The description of the Company’s common stock contained in the Registration Statement on Form 8-A filed on December 10, 2007, under the Exchange Act, including any amendment or report filed or to be filed for the purpose of updating such description.

In addition to the foregoing, all documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act subsequently filed by the Registrant which state that they are incorporated by reference herein, prior to the filing of a post-effective amendment which indicates that all securities offered hereunder have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be part hereof from the date of filing of such documents and reports.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement herein, or in any subsequently filed document which also is or is deemed to be incorporated by reference, modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

Item 8. Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
4.1*	Composite Copy of the Company’s Articles of Incorporation, as amended on May 22, 2014.
4.2	Amended By-laws of the Company (incorporated by reference to Exhibit 3.1 of the Company’s Quarterly Report on Form 10-Q filed with the Commission February 9, 2012).
5.1*	Opinion of Zysman, Aharoni, Gayer and Sullivan & Worcester LLP.
23.1*	Consent of Zysman, Aharoni, Gayer and Sullivan & Worcester LLP (contained in the opinion of Zysman, Aharoni, Gayer and Sullivan & Worcester LLP filed herewith as Exhibit 5.1).
23.2*	Consent of Kost Forer Gabbay & Kasierer, a member of Ernst & Young Global.
24.1*	Powers of Attorney (included in the signature page to this Registration Statement).
99.1	The Company’s Amended and Restated 2005 Stock Option Plan (incorporated by reference to Exhibit 10.1 of the Company’s Current Report on Form 8-K filed with the Commission on January 23, 2009).

* Filed herewith.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Haifa, Israel, on June 5, 2014.

PLURISTEM THERAPEUTICS INC.

By: /s/ Zami Aberman
Zami Aberman
Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of Pluristem Therapeutics Inc. hereby constitute and appoint Zami Aberman and Boaz Gur-Lavie, and each of them singly, our true and lawful attorneys-in-fact, with full power to them in any and all capacities, to sign any and all amendments to this Registration Statement on Form S-8 (including any post-effective amendments thereto), and to file the same, with exhibits thereto and other documents in connection therewith, with the Commission, hereby ratifying and confirming all that each of said attorneys-in-fact may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ Zami Aberman</u> Zami Aberman	Chief Executive Officer and Chairman of the Board	June 5, 2014
<u>/s/ Boaz Gur-Lavie</u> Boaz Gur-Lavie	Secretary and Chief Financial Officer (Principal Financial and Accounting Officer)	June 5, 2014
<u>/s/ Israel Ben-Yoram</u> Israel Ben-Yoram	Director	June 5, 2014
<u>/s/ Isaac Braun</u> Isaac Braun	Director	June 5, 2014
<u>/s/ Mark Germain</u> Mark Germain	Director	June 5, 2014
<u>/s/ Moria Kwait</u> Moria Kwait	Director	June 5, 2014
<u>/s/ Hava Meretzky</u> Hava Meretzky	Director	June 5, 2014
<u>/s/ Nachum Rosman</u> Nachum Rosman	Director	June 5, 2014
<u>/s/ Doron Shorrer</u> Doron Shorrer	Director	June 5, 2014

PLURISTEM THERAPEUTICS INC.

AMENDED AND RESTATED ARTICLES OF INCORPORATION

As amended as of May 22, 2014

FIRST

The name of this corporation is PLURISTEM THERAPEUTICS INC.

SECOND

Its principal office in the State of Nevada is located at 502 East John Street, Carson City, Nevada, 89706. The name and address of its resident agent is CSC Services of Nevada, Inc., at the above address.

THIRD

The purpose or purposes for which the corporation is organized:

To engage in and carry on any lawful business activity or trade, and any activities necessary, convenient, or desirable to accomplish such purposes, not forbidden by law or by these articles of incorporation.

FOURTH

The aggregate number of shares which the corporation shall have authority to issue is: (i) Two Hundred Million (200,000,000) shares of Common Stock, par value \$0.00001 each (the "Common Stock"), and (ii) Ten Million (10,000,000) shares of preferred stock, par value \$0.00001 each, which may be issued in one or more series at the discretion of the Board of Directors (the "Preferred Stock"). The Board of Directors is hereby vested with authority to fix by resolution or resolutions the designations and the powers, preferences and relative, participating, optional or other special rights, and qualifications, limitations or restrictions thereof, including without limitation the dividend rate, conversion or exchange rights, redemption price and liquidation preference, of any series of shares of Preferred Stock, and to fix the number of shares constituting any such series, and to increase or decrease the number of shares of any such series (but not below the number of shares thereof then outstanding). In case the number of shares of any such series shall be so decreased, the shares constituting such decrease shall resume the status which they had prior to the adoption of the resolution or resolutions originally fixing the number of shares of such series. All shares of any one series shall be alike in every particular except as otherwise provided by these Articles of Incorporation or the Nevada Revised Statutes.

FIFTH

The governing board of this corporation shall be known as directors, and the number of directors may from time to time be increased or decreased in such manner as shall be provided by the bylaws of this corporation.

There are two members of the Board of Directors at the date of filing these Restated Articles of Incorporation and their names and postal addresses are:

NAME	POST OFFICE ADDRESS
Harvey M.J. Lawson	464 Somerset St., North Vancouver, B.C., Canada V7N1G3
John Carl Guterres	#1408 - 1327 E. Keith Rd., North Vancouver, B.C., Canada V7J 3T5

The number of members of the Board of Directors shall not be less than one nor more than thirteen.

SIXTH

The capital stock, after the amount of the subscription price, or par value, has been paid in shall not be subject to assessment to pay the debts of the corporation.

SEVENTH

The corporation is to have perpetual existence.

EIGHTH

In furtherance, and not in limitation of the powers conferred by statute, the board of directors is expressly authorized:

Subject to the bylaws, if any, adopted by the stockholders, to make, alter, amend or repeal the bylaws of the corporation.

To fix the amount to be reserved as working capital over and above its capital stock paid in, to authorize and cause to be executed mortgages and liens upon the real and personal property of this corporation.

To authorize the guaranty by the corporation of the securities, evidences of indebtedness and obligations of other persons, corporations or business entities.

To set apart out of any funds of the corporation available for dividends a reserve or reserves for any proper purpose and to abolish any such reserve.

By resolution passed by a majority of the whole board, to designate one (1) or more committees, each committee to consist of one (1) or more of the directors of the corporation, which, to the extent provided in the resolution or in the bylaws of the corporation, shall have and may exercise the powers of the board of directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it. Such committee or committees shall have such name or names as may be stated in the bylaws of the corporation or as may be determined from time to time by resolution adopted by the board of directors.

When and as authorized by the affirmative vote of stockholders holding stock entitling them to exercise at least a majority of the voting power given at a stockholders' meeting called for that purpose, or when authorized by the written consent of the holders of at least a majority of the voting stock issued and outstanding, the board of directors shall have power and authority at any meeting to sell, lease or exchange all of the property and assets of the corporation, including its good will and its corporate franchises, upon such terms and conditions as its board of directors deem expedient and for the best interests of the corporation.

All the corporate powers of the corporation shall be exercised by the board of directors except as otherwise herein or in the bylaws or by law.

NINTH

Meeting of stockholders may be held outside the State of Nevada, if the bylaws so provide. The books of the corporation may be kept (subject to any provision contained in the statutes) outside the State of Nevada at such place or places as may be designated from time to time by the board of directors or in the bylaws of the corporation.

TENTH

This corporation reserves the right to amend alter, change or repeal any provision contained in the Restated Articles of Incorporation, in the manner now or hereafter prescribed by statute, or by the Restated Articles of Incorporation, and all rights conferred upon stockholders herein are granted subject to this reservation.

ELEVENTH

The corporation shall indemnify its officers, directors, employees and agents to the full extent permitted by the laws of the State of Nevada.

A director or officer of the corporation shall not be personally liable to the corporation or its stockholders for damages for breach of fiduciary duty as a director or officer, but this article shall not eliminate or limit the liability of a director or officer for (i) acts or omissions which involve intentional misconduct, fraud or a knowing violation of the law or (ii) the unlawful payment of dividends. Any repeal or modification of this article by stockholders of the corporation shall be prospective only, and shall not adversely affect any limitation on the personal liability of a director or officer of the corporation for acts or omissions prior to such repeal or modification.

TWELFTH

Every person who was or is a party to, or is threatened to be made a party to, or is involved in any such action, suit or proceeding, whether civil, criminal, administrative or investigative, by the reason of the fact that he or she, or a person with whom he or she is a legal representative, is or was a director of the corporation, or who is serving at the request of the corporation as a director or officer of another corporation, or is a representative in a partnership, joint venture, trust or other enterprise, shall be indemnified and held harmless to the fullest extent legally permissible under the laws of the State of Nevada from time to time against all expenses, liability and loss (including attorneys' fees, judgments, fines, and amounts paid or to be paid in a settlement) reasonably incurred or suffered by him or her in connection therewith. Such right of indemnification shall be a contract right which may be enforced in any manner desired by such person. The expenses of officers and directors incurred in defending a civil suit or proceeding must be paid by the corporation as incurred and in advance of the final disposition of the action, suit, or proceeding, under receipt of an undertaking by or on behalf of the director or officer to repay the amount if it is ultimately determined by a court of competent jurisdiction that he or she is not entitled to be indemnified by the corporation. Such right of indemnification shall not be exclusive of any other right of such directors, officers or representatives may have or hereafter acquire, and, without limiting the generality of such statement, they shall be entitled to their respective rights of indemnification under any bylaw, agreement, vote of stockholders, provision of law, or otherwise, as well as their rights under this article.

Without limiting the application of the foregoing, the board of directors may adopt by-laws from time to time with respect to indemnification, to provide at all times the fullest indemnification permitted by the laws of the State of Nevada, and may cause the corporation to purchase or maintain insurance on behalf of any person who is or was a director or officer.

Letterhead of Zysman, Aharoni, Gayer and Sullivan & Worcester LLP

June 5, 2014

Pluristem Therapeutics Inc.
MATAM Advanced Technology Park,
Building No. 5, Haifa,
Israel 31905

Re: Registration of Shares under the Pluristem Therapeutics Inc. Amended and Restated 2005 Stock Option Plan

Dear Ladies and Gentlemen:

In connection with the registration under the Securities Act of 1933, as amended (the “**Act**”), by Pluristem Therapeutic Inc., a Nevada corporation (the “**Company**”), of 900,000 shares of its common stock, par value \$0.00001 per share (“**Common Stock**”), that are to be issued under the Company’s Amended and Restated 2005 Stock Option Plan (the “**Plan**”), including shares of common stock issuable upon the exercise of options and vesting and exercise of restricted stock units (“**RSUs**”) granted and to be granted pursuant to the provisions of the Plan (all such shares issued or to be issued thereunder referred to herein as, the “**Registered Shares**”), the following opinion is furnished to you to be filed with the Securities and Exchange Commission (the “**Commission**”) as Exhibit 5.1 to the Company’s Registration statement on Form S-8 (the “**Registration Statement**”) under the Act.

We have acted as counsel to the Company in connection with the Registration Statement and we have examined originals or copies, certified or otherwise identified to our satisfaction, of the Registration Statement, the Articles of Incorporation of the Company, as currently in effect, the Amended By-laws of the Company, as currently in effect, the minute books and corporate records of the Company, and such other documents as we have considered necessary and appropriate in order to furnish the opinion hereinafter set forth.

In our examination of the foregoing documents, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as copies, the authenticity of the originals of such latter documents and the legal competence of all signatories to such documents. For purposes of our opinion, we have examined an official compilation of “Title 7 – Business Associations; Securities; Commodities, Chapter – 78 – Private Corporations” of the Nevada Revised Statutes. Such examination was limited to the provisions of such statute only, and did not include any annotations or commentary related thereto. Other than such examination and our examination of the documents indicated above, we have made no other examination in connection with this opinion.

Based on and subject to the foregoing, we are of the opinion that, when issued in accordance with the terms of the Plan and the options, RSUs or other rights granted thereunder, the Registered Shares will be duly authorized, validly issued, fully paid and nonassessable by the Company.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the reference to our firm in the Prospectus forming a part of the Registration Statement. In giving such consent, we do not thereby admit that we come within the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission promulgated thereunder.

Very truly yours,

/s/ ZYSMAN, AHARONI, GAYER AND SULLIVAN & WORCESTER LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the registration statement on Form S-8 pertaining to the Pluristem Therapeutics Inc. (the "Company") Amended and Restated 2005 Stock Option Plan, of our reports dated September 11, 2013, with respect to the Company's consolidated financial statements and the effectiveness of internal control over financial reporting of the Company included in its Annual Report on Form 10-K for the year ended June 30, 2013, filed with the Securities and Exchange Commission.

/s/ Kost Forer Gabbay & Kasierer

KOST, FORER, GABBAY and KASIERER
A member of Ernst & Young Global

Haifa, Israel
June 5, 2014
