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

Form 10-Q

(Mark One)

☒ QUARTERLY REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended **September 30, 2011**

☐ TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE EXCHANGE ACT

For the transition period from _____ to _____

Commission file number **001-31392**

PLURISTEM THERAPEUTICS INC.

(Exact name of registrant as specified in its charter)

Nevada	**98-0351734**
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

MATAM Advanced Technology Park, Building No. 20, Haifa, Israel 31905

(Address of principal executive offices)

+972-74-710-7171

(Registrant's telephone number)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the past 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registration was required to submit and post such files).

Yes ☒ No ☐

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 definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐	Accelerated filer ☐
Non-accelerated filer ☐	Smaller reporting company ☒
(Do not check if a smaller reporting company)	

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ☐ No ☒

State the number of shares outstanding of each of the issuer's classes of common stock as of the latest practicable date: 43,779,291common shares issued as of November 4, 2011.

PART I - FINANCIAL INFORMATION

Item 1. Financial Statements.

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY

CONSOLIDATED FINANCIAL STATEMENTS

As of September 30, 2011

(unaudited)

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
CONSOLIDATED FINANCIAL STATEMENTS

As of September 30, 2011

U.S. DOLLARS IN THOUSANDS

(Unaudited)

INDEX

CONSOLIDATED BALANCE SHEETS

U.S. Dollars in thousands

	Note	September 30, 2011 Unaudited	June 30, 2011 Audited
ASSETS			
CURRENT ASSETS:			
Cash and cash equivalents		$ 13,633	$ 42,829
Short term bank deposits		31,658	-
Marketable securities	3	513	-
Prepaid expenses		334	314
Other accounts receivable		225	154
Total current assets		46,363	43,297
LONG-TERM ASSETS:			
Long-term deposits and restricted deposits		866	179
Severance pay fund		459	452
Property and equipment, net		2,156	2,088
Total long-term assets		3,481	2,719
Total assets		$ 49,844	$ 46,016

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED BALANCE SHEETS

U.S. Dollars in thousands

	Note	September 30, 2011 Unaudited	June 30, 2011 Audited
LIABILITIES AND STOCKHOLDERS' EQUITY			
CURRENT LIABILITIES			
Trade payables		$ 1,076	$ 1,177
Accrued expenses		376	208
Deferred revenues		923	-
Advanced payment		2,000	-
Other accounts payable		670	633
Total current liabilities		5,045	2,018
LONG-TERM LIABILITIES			
Deferred revenues		3,923	-
Accrued severance pay		582	576
Total long term liabilities		4,505	576
COMMITMENTS AND CONTINGENCIES	5		
STOCKHOLDERS' EQUITY			
Share capital:	6		
Common stock $0.00001 par value: Authorized: 100,000,000 shares Issued and outstanding: 42,985,243 shares as of September 30, 2011, 42,443,185 shares as of June 30, 2011.		- (*)	- (*)
Additional paid-in capital		95,739	94,375
Accumulated deficit		(55,446)	(50,953)
Other comprehensive income		1	-
		40,294	43,422
		$ 49,844	$ 46,016

(*) Less than $1.

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENTS OF OPERATIONS

U.S. Dollars in thousands (except share and per share data)

	Three months ended September 30,		Year ended June 30,
	2011	2010	2011
	Unaudited	Unaudited	Audited
Revenues	$ 154	$ -	$ -
Research and development expenses	(2,868)	(1,501)	(8,311)
Less participation by the Office of the Chief Scientist and other parties	19	503	1,682
Research and development expenses, net	(2,849)	(998)	(6,629)
General and administrative expenses	(1,637)	(756)	(4,485)
Operating loss	(4,332)	(1,754)	(11,114)
Financial (expenses) income, net	(161)	65	266
Net loss for the period	$ (4,493)	$ (1,689)	$ (10,848)
Loss per share:			
Basic and diluted net loss per share	$ (0.11)	$ (0.08)	$ (0.35)
Weighted average number of shares used in computing basic and diluted net loss per share	42,779,293	21,012,208	31,198,825

The accompanying notes are an integral part of the consolidated financial statements.

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (AUDITED)

U.S. Dollars in thousands (except share and per share data)

	Common Stock		Additional Paid-in	Deficit	Total Stockholders'
	Shares	Amount	Capital	Accumulated	Equity
Balance as of July 1, 2010	20,888,781	$ (*)	$ 44,086	$ (40,105)	$ 3,981
Issuance of common stock and warrants related to October 2010 agreements, net of issuance costs of $244	4,375,000	(*)	5,006	-	5,006
Issuance of common stock and warrants related to February 2011 secondary offering, net of issuance costs of $2,970	12,650,000	(*)	38,142	-	38,142
Exercise of warrants by investors and finders	2,442,714	(*)	3,593	-	3,593
Exercise of options by employees and consultants	103,943	(*)	68	-	68
Issuance of common stock related to investor relations agreements	90,000	(*)	155	-	155
Stock based compensation to employees, directors and non-employees consultants	1,892,747	(*)	3,325	-	3,325
Net loss for the period	-	-	-	(10,848)	(10,848)
Balance as of June 30, 2011	42,443,185	$ (*)	$ 94,375	$ (50,953)	$ 43,422

(*) Less than $1.

The accompanying notes are an integral part of the consolidated financial statements.

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (UNAUDITED)

U.S. Dollars in thousands (except share and per share data)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive gain	Deficit Accumulated	Total Stockholders' Equity
	Shares	Amount				
Balance as of July 1, 2011	42,443,185	$ (*)	$ 94,375	$ -	$ (50,953)	$ 43,422
Exercise of options by employees and consultants	12,500	(*)	8	-	-	8
Exercise of warrants by investors and finders	198,714	(*)	315	-	-	315
Stock based compensation to employees, directors and non-employees consultants	330,844	(*)	1,041	-	-	1,041
Unrealized gain on available for sale marketable securities	-	-	-	1	-	1
Net loss for the period	-	-	-	-	(4,493)	(4,493)
Balance as of September 30, 2011	42,985,243	$ (*)	$ 95,739	$ 1	$ (55,446)	$ 40,294

(*) Less than $1.

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

U.S. Dollars in thousands

	Three months ended September 30,		Year ended June 30,
	2011	2010	2011
	Unaudited	Unaudited	Audited
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net loss	$ (4,493)	$ (1,689)	$ (10,848)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation	97	70	312
Capital loss	-	8	8
Impairment of property and equipment	-	-	11
Stock-based compensation to employees, directors and non-employees consultants	1,041	462	3,325
Stock compensation to investor relations consultants	-	36	155
Decrease (increase) in other accounts receivable	(76)	425	656
Decrease (increase) in prepaid expenses	(20)	(39)	(273)
Increase (decrease) in trade payables	(87)	1	455
Increase in other accounts payable and accrued expenses	205	33	375
Increase in deferred revenues	4,846	-	-
Increase in advanced payment	2,000	-	-
Increase in interest receivable on short-term deposit	(74)	(4)	15
Linkage differences and interest on short-term restricted lease deposit	15	-	-
Linkage differences and interest on long-term restricted lease deposit	4	(1)	(4)
Amortization of discount, premium and changes in accrued interest from marketable securities	4	-	-
Accrued severance pay, net	(1)	10	58
Net cash provided by operating activities	$ 3,461	$ (688)	$ (5,755)
CASH FLOWS FROM INVESTING ACTIVITIES:			
Purchase of property and equipment	$ (179)	$ (426)	$ (962)
Investment in short-term deposits	(31,599)	-	-
Proceeds from short-term deposits	-	400	898
Proceeds from sale of property and equipment	-	28	29
Investment in long-term deposits	(690)	-	(14)
Repayment of long-term restricted deposit	4	2	13
Purchase of available for sale marketable securities	(516)	-	-
Net cash provided by (used in) investing activities	$ (32,980)	$ 4	$ (36)

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

U.S. Dollars in thousands

	Three months ended September 30,		Year ended June 30,
	2011	2010	2011
	Unaudited	Unaudited	Audited
CASH FLOWS FROM FINANCING ACTIVITIES:			
Issuance of common stock and warrants, net of issuance costs	$ -	$ 252	$ 43,400
Exercise of warrants and options	323	-	3,661
Repayment of long-term loan	-	(24)	(24)
Net cash provided by financing activities	$ 323	$ 228	$ 47,037
Increase (decrease) in cash and cash equivalents	(29,196)	(456)	41,246
Cash and cash equivalents at the beginning of the period	42,829	1,583	1,583
Cash and cash equivalents at the end of the period	$ 13,633	$ 1,127	$ 42,829
(a) Supplemental disclosure of cash flow activities:			
Cash paid during the period for:			
Taxes paid due to non-deductible expenses	$ 8	$ 5	$ 11
(b) Supplemental disclosure of non-cash activities:			
Increase in fair value of marketable securities	$ 1	$ -	$ -
Purchase of property and equipment in credit	$ 109	$ 73	$ 123

The accompanying notes are an integral part of the consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. Dollars in thousands (except per share amounts)

NOTE 1:-GENERAL

a. Pluristem Therapeutics Inc., a Nevada corporation, was incorporated on May 11, 2001. Pluristem Therapeutics Inc. has a wholly owned subsidiary, Pluristem Ltd. (the "Subsidiary"), which is incorporated under the laws of the State of Israel. Pluristem Therapeutics Inc. and the Subsidiary are referred to as the "Company".

b. The Company is a bio-therapeutic company developing standardized cell therapy products from human placenta for the treatment of multiple disorders. The Company have sustained operating losses and expects such losses to continue in the foreseeable future. The Company's accumulated losses aggregated to $55,446 through September 30, 2011 and the Company incurred a net loss of $4,493 for the three months ended September 30, 2011. There is no assurance that profitable operations, if ever achieved, could be sustained on a continuing basis.

The Company plans to continue to finance its operations with sales of equity securities, entering into licensing technology agreements such as United Therapeutics Corporation ("United Therapeutics"), agreement and from grants to support its R&D activity. In the longer term, the Company plans to finance its operations from revenues from sales of products.

The Company was in the development stage from its inception until July 2011 (see 2a below).

c. Since December 10, 2007, the Company's shares of common stock have been traded on the NASDAQ Capital Market under the symbol PSTI. On May 7, 2007, the Company's shares also began trading on Europe's Frankfurt Stock Exchange under the symbol PJT.

On December 19, 2010, the Company's shares began trading on the Tel-Aviv Stock Exchange under the symbol "PLTR".

d. Licence Agreement:

On June 19, 2011, the Company entered into an exclusive license agreement, or the License Agreement, with United Therapeutics, for the use of its PLX cells to develop and commercialize a cell-based product for the treatment of Pulmonary Hypertension ("PAH"). The License Agreement provides that United Therapeutics will receive exclusive worldwide license rights for the development and commercialization of the Company's PLX cell-based product to treat PAH. The License Agreement provides for the following consideration payable to the Company: (i) an upfront payment of $7,000 paid in August 2011, which includes $5,000 non-refundable upfront payment and $2,000 refundable advance payment on the development ; (ii) up to $37,500 upon reaching certain regulatory milestones with respect to the development of a product to treat PAH; (iii) reimbursement of up to $10,000 of certain of the Company expenses if the Company establish a manufacturing facility in North America upon meeting certain milestones; (iv) reimbursement of certain costs in connection with the development of the product; and (v) following commercialization of the product, royalties and the purchase of commercial supplies of the developed product from the Company at a specified margin over the Company cost.

On August 2, 2011, the agreement became effective following the consent of the Office of the Chief Scientist of Israel.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. Dollars in thousands (except per share amounts)

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES

a. The accompanying unaudited interim financial statements of Pluristem Therapeutics Inc. have been prepared in accordance with accounting principles generally accepted in the United States of America and the rules of the Securities and Exchange Commission and should be read in conjunction with the audited financial statements and notes thereto contained in Pluristem's latest Annual Report on Form 10-K filed with the SEC. In the opinion of management, all adjustments, consisting of normal recurring adjustments, necessary for a fair presentation of financial position and the results of operations for the interim periods presented have been reflected herein. The results of operations for interim periods are not necessarily indicative of the results to be expected for the full year. Notes to the financial statements that would substantially duplicate the disclosure contained in the audited financial statements for the most recent fiscal year as reported in the Form 10-K have been omitted. Commencing July 2011, the Company ceased to consider itself a development stage company.

b. Short-term deposits

The Company considers all highly liquid investments that are convertible to cash with original maturities of more than three months and less than one year as short-term deposits.

c. Marketable Securities

The Company accounts for its investments in marketable securities in accordance with ASC 320 "Investments - Debt and Equity Securities". The Company determines the classification of marketable securities at the time of purchase and reevaluates such designations as of each balance sheet date. The Company classifies all of its marketable securities as available-for-sale. Available-for-sale marketable securities are carried at fair value, with the unrealized gain and loss reported as a separate component of shareholders' equity, accumulated other comprehensive income (loss).

Realized gain and loss on sales of marketable securities are included in the Company's statements of operations and are derived using the specific identification basis for determining the cost of marketable securities. The amortized cost of available for sale marketable securities is adjusted for amortization of premiums and accretion of discount to maturity. Such amortization, together with interest on available for sale marketable securities, is included in the financial income (expenses), net.

The Company recognizes an impairment charge when a decline in the fair value of its available-for-sale marketable securities below the cost basis is judged to be other-than-temporary. The Company considers various factors in determining whether to recognize an impairment charge, including the length of time the investment has been in a loss position, the extent to which the fair value has been less than the Company's cost basis, the investment's financial condition and the near-term prospects of the issuer. The Company adopted FASB ASC 320-10-65 effective January 1, 2009, which requires an other-than-temporary impairment for debt securities to be separated into (a) the amount representing the credit loss and (b) the amount related to all other factors (provided that the Company does not intend to sell the security and it is not more likely than not that it will be required to sell it before recovery). The Company classifies its marketable securities as available-for-sale and marks them to market with changes to other comprehensive income until realization or occurrence of other than temporary impairment loss.

d. ***Revenue Recognition from the license Agreement with United Therapeutics***

The Company recognizes revenue pursuant to the License Agreement with United Therapeutics in accordance with ASC 625-25 "Revenue Recognition, Multiple-Element Arrangements" .Pursuant to this guidance, the Company determines that its arrangement with United Therapeutics involves multiple revenue-generating deliverables that should be accounted for as a separate units of accounting for revenue recognition purposes.

The Company received an up-front, non-refundable license payment of $5,000. Additional payments totalling $37,500 are subject to the Company's meeting certain milestones.

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (CONT.)

d. ***Revenue Recognition from the license Agreement with United Therapeutics (cont.)***

The non-refundable upfront license fee of $5,000 is deferred and recognized over the related performance period in accordance with SAB 104 "Revenue Recognition". The Company estimated the performance period of the development of approximately 5.5 years. The license fee will be recognized on a straight line basis as revenue over the estimated development period, resulting in revenue of $154 for the three months ended September 30, 2011.

The additional milestones payments will be recognized upon the achievement of the specific milestone, in accordance with EITF Issue No. 08-9, “Milestone Method of Revenue Recognition".

The Company also received a refundable, advance payment on the development, of $2,000 that will be deductible against development expenses as it accrued. This upfront payment received and not recognized as revenues is included in the balance sheet as advanced payment. All expenses related to the development, on cost basis, shall be repaid to the Company by United Therapeutics. The Company will deduct the payments from the R&D expenses in accordance with ASC 730 "Research and Development".

e. ***Impact of recently issued accounting standards:***

On June 16, 2011, the FASB "The Financial Accounting Standards Board (FASB)" issued ASU No. 2011-05, Presentation of Comprehensive Income. This standard eliminates the current option to report other comprehensive income and its components in the statement of changes in shareholders’ equity and provides for either a single continuous statement or two separate statements. Both options require companies to present the components of net income and total net income, the components of other comprehensive income along with a total for other comprehensive income. Companies are also required to present reclassification adjustments for items that are reclassified from other comprehensive income to net income within these statements. This standard will be applied retrospectively for fiscal years beginning after December 15, 2011 with early adoption permitted. The disclosure requirements of this standard will not have a material effect on the Company’s results of operations or financial position as the amendment impacts presentation only.

For additional description of recent accounting pronouncements relevant to the Company, please refer to “Recently issued accounting standards” section included in Note 2 to the Company's Annual Report on Form 10-K for the year ended June 30, 2011.

f. ***Fair value of financial instruments:***

The carrying amounts of the Company's financial instruments, including cash and cash equivalents, available-for-sale marketable securities, short-term deposits, trade payable and other accounts payable and accrued liabilities, approximate fair value because of their generally short term maturities.

The Company accounts for certain assets and liabilities at fair value under FASB ASC 820, “Fair Value Measurements and Disclosures.” Fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or a liability. As a basis for considering such assumptions, FASB ASC 820 establishes a three-tier value hierarchy, which prioritizes the inputs used in the valuation methodologies in measuring fair value:

U.S. Dollars in thousands (except per share amounts)

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (CONT.)

f. ***Fair value of financial instruments (cont.):***

Level 1 - Observable inputs that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets;

Level 2 - Includes other inputs that are directly or indirectly observable in the marketplace, other than quoted prices included in Level 1, such as quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets with insufficient volume or infrequent transactions, or other inputs that are observable (model-derived valuations in which significant inputs are observable), or can be derived principally from or corroborated by observable market data; and

Level 3 - Unobservable inputs which are supported by little or no market activity.

The fair value hierarchy also requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The Company categorized each of its fair value measurements in one of these three levels of hierarchy.

NOTE 3:- MARKETABLE SECURITIES

As of September 30, 2011, all of the Company's marketable securities were classified as available-for-sale.

	September 30, 2011				June 30,2011			
	Amortized cost	Gross unrealized gain	Gross unrealized loss	Fair value	Amortized cost	Gross unrealized gain	Gross unrealized loss	Fair value
Available-for-sale - matures within one year:								
Corporate debentures – fixed interest rate	42	1	-	43	-	-	-	-
Available-for-sale - matures after one year through five years:								
Corporate debentures – fixed interest rate	384	3	(2)	385	-	-	-	-
Available-for-sale - matures after five year through ten years:								
Corporate debentures – fixed interest rate	86	-	(1)	85	-	-	-	-
	512	4	(3)	513	-	-	-	-

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. Dollars in thousands (except per share amounts)

NOTE 4:- FAIR VALUE OF FINANCIAL INSTRUMENTS

In accordance with FASB ASC 820, "Fair Value Measurements and Disclosures," the Company measures its available-for-sale marketable securities contracts at fair value.

	September 30, 2011			June 30, 2011		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Short term deposits	31,658	-	-	-	-	-
Corporate bonds	513	-	-	-	-	-
Foreign currency cash flow hedges	-	(90)	-	-	7	-
Total	32,171	(90)	-	-	7	-

NOTE 5: - COMMITMENTS AND CONTINGENCIES

Commitments and contingencies that occurred during the three months ended September 30, 2011 includes the following:

a. An amount of $686 was pledged by the Company to secure the hedging transactions, credit line and bank guarantees.

b. In July 2011 the Company has entered into an agreement with MTM – Scientific Industries Center Haifa Ltd., for the leasing and construction of a new state-of-the-art GMP manufacturing facility. The new facility will be located near the Company's headquarters and existing facilities in MATAM Park, Haifa, Israel. According to the agreement, the lease of the new facility is expected to commence in January 2012 for a period of approximately 5 years with an option to extend the lease for an additional 5 years period.

The Company has issued an additional bank guarantee in favor of MTM in the amount of approximately $263.

NOTE 6: - SHARE CAPITAL AND STOCK OPTIONS

a. The Company's authorized common stock consists of 100,000,000 shares with a par value of $0.00001 per share. All shares have equal voting rights and are entitled to one vote per share in all matters to be voted upon by stockholders. The shares have no pre-emptive, subscription, conversion or redemption rights and may be issued only as fully paid and non-assessable shares. Holders of the common stock are entitled to equal ratable rights to dividends and distributions with respect to the common stock, as may be declared by the Board of Directors out of funds legally available.

The Company's authorized preferred stock consists of 10,000,000 shares of preferred stock, par value $0.00001 per share, with series, rights, preferences, privileges and restrictions as may be designated from time to time by the Company's Board of Directors. No shares of preferred stock have been currently issued.

b. In July-September 2011, a total of 60,000 warrants were exercised via a "cashless" manner, resulting in the issuance of 23,514 shares of common stock to investors of the Company. In addition 175,200 warrants were exercised and resulted in the issuance of 175,200 shares of common stock by investors of the Company. The aggregate cash consideration received was $315.

U.S. Dollars in thousands (except per share amounts)

NOTE 6: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

c. The following table summarizes the issuance of shares of common stock to the Company's investor relations consultants as compensation for their services since July 1, 2010.

Period of service	Number of shares issued	Fair market value of the shares issued at the issuance date	Expenses in the statements of operations for the Year ended June 30	
			2011	2012
July 2010 – March 2011	90,000	155	155	-
Total	**90,000**	**$ 155**	**$ 155**	$ -

The issuance of shares to the consultants was in some cases in addition to cash compensation the consultants were entitled to.

U.S. Dollars in thousands (except per share amounts)

NOTE 6: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

d. Options, warrants, restricted stock and restricted stock units to employees, directors and consultants:

The Company has approved two incentive option plans from 2003 and from 2005 (the "2003 Plan" and the "2005 Plan", and collectively, the "Plans"). Under these Plans, options, restricted stock and restricted stock units (the "Awards") may be granted to the Company's officers, directors, employees and consultants. Any Awards that are cancelled or forfeited before expiration become available for future grants.

As of September 30, 2011, the number of shares of common stock authorized for issuance under the 2005 Plan amounted to 10,187,764. 2,346,716 shares are still available for future grant under the 2005 Plan as of September 30, 2011. Under the 2003 Plan 20,500 options are authorized for issuance, and 13,040 options are still available for future grant as of September 30, 2011.

a. Options to employees and directors:

The Company accounted for its options to employees and directors under the fair value method in accordance with ASC 718, "Compensation — Stock Compensation". A summary of the Company's share option activity for options granted to employees and directors under the Plans is as follows:

	Three months ended September 30, 2011			
	Number	Weighted Average Exercise Price	Weighted Average Remaining Contractual Terms (in years)	Aggregate Intrinsic Value Price
Options outstanding at beginning of period	2,200,616	$ 3.84		
Options exercised	(7,500)	0.62		
Options forfeited	(9,384)	3.54		
Options outstanding at end of the period	2,183,732	$ 3.86	5.51	$ 824
Options exercisable at the end of the period	2,183,732	$ 3.86	5.51	$ 824
Options vested and expected to vest	2,183,732	$ 3.86	5.51	$ 824

Intrinsic value of exercisable options (the difference between the Company's closing stock price on the last trading day in the period and the exercise price, multiplied by the number of in-the-money options) represents the amount that would have been received by the employees and directors option holders had all option holders exercised their options on September 30, 2011. This amount changes based on the fair market value of the Company's common stock.

Compensation expenses related to options granted to employees and directors were recorded as follows:

	Three months ended September 30,	
	2011	2010
Research and development expenses	$ -	$ 4
General and administrative expenses	-	2
	$ -	$ 6

U.S. Dollars in thousands (except per share amounts)

NOTE 6: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

d. Options, warrants, restricted stock and restricted stock units to employees, directors and consultants (cont.):

b. Options and warrants to non-employees:

A summary of the Company's activity related to options and warrants to consultants is as follows:

	Three months ended September 30, 2011			
	Number	Weighted Average Exercise Price	Weighted Average Remaining Contractual Terms (in years)	Aggregate Intrinsic Value Price
Options and warrants outstanding at beginning of period	425,000	$ 3.65		
Options and warrants exercised	(5,000)	$ 0.62		
Options and warrants outstanding at end of the period	420,000	$ 3.68	4.71	$ 351
Options and warrants exercisable at the end of the period	373,000	$ 4.01	4.88	$ 300
Options and warrants vested and expected to vest	420,000	$ 3.68	4.71	$ 351

Compensation expenses related to options and warrants granted to consultants were recorded as follows:

	Three months ended September 30,	
	2011	2010
Research and development expenses	$ 10	$ 10
General and administrative expenses	7	1
	$ 17	$ 11

Future expenses related to options and warrants granted to consultants for an average time of almost two years is $23.

U.S. Dollars in thousands (except per share amounts)

NOTE 6: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

d. Options, warrants, restricted stock and restricted stock units to employees, directors and consultants (cont.):

c. Restricted stock and restricted stock units to employees and directors:

The following table summarizes the activities for unvested restricted stock units and restricted stock granted to employees and directors for the three months ended September 30, 2011:

	Number
Unvested at the beginning of period	2,138,955
Forfeited	(10,623)
Vested	(305,845)
Unvested at the end of the period	1,822,487
Expected to vest after September 30, 2011	1,784,207

Compensation expenses related to restricted stock and restricted stock units granted to employees and directors were recorded as follows:

	Three months ended September 30,	
	2011	2010
Research and development expenses	$ 253	$ 135
General and administrative expenses	679	233
	$ 932	$ 368

Future expenses related to restricted stock and restricted stock units granted to employees and directors for an average time of almost two years is $1,826.

U.S. Dollars in thousands (except per share amounts)

NOTE 6: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

d. Options, warrants, restricted stock and restricted stock units to employees, directors and consultants (cont.):

d. Restricted stock and restricted stock units to consultants:

The following table summarizes the activities for unvested restricted stock units and restricted stock granted to consultants for the three months ended September 30, 2011:

	Number
Unvested at the beginning of period	149,998
Vested	(24,999)
Unvested at the end of the period	124,999
Expected to vest after September 30, 2011	124,999

Compensation expenses related to restricted stock and restricted stock units granted to consultants were recorded as follows:

	Three months ended September 30,	
	2011	2010
Research and development expenses	$ 92	$ 24
General and administrative expenses	-	53
	$ 92	$ 77

Future expenses related to restricted stock and restricted stock units granted to consultants for an average time of almost two years is $90.

U.S. Dollars in thousands (except per share amounts)

NOTE 6: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

e. Summary of warrants and options:

A summary of all the warrants and options outstanding as of September 30, 2011 is presented in this table:

Warrants / Options	Exercise Price per Share	Options and Warrants for Common Stock	Options and Warrants Exercisable	Weighted Average Remaining Contractual Terms(in years)
Warrants:	$ 1.00	2,059,972	2,059,972	2.17
	$ 1.12	114,794	114,794	0.57
	$ 1.20	12,500	12,500	1.05
	$ 1.25 – 1.28	774,642	774,642	1.24
	$ 1.40 - $ 1.50	1,806,707	1,806,707	3.08
	$ 1.60	181,221	181,221	3.53
	$ 1.80 - $ 1.96	3,752,345	3,752,345	2.71
	$ 2.50	81,298	81,298	0.71
	$ 4.20	5,060,000	5,060,000	4.84
	$ 5.00	2,394,585	2,394,585	0.74
Total warrants		**16,238,064**	**16,238,064**	
Options:	$ 0.00	98,000	86,000	8.02
	$ 0.62	482,112	482,112	7.12
	$ 1.04-$ 1.45	145,006	110,006	3.87
	$ 2.97	20,000	20,000	6.61
	$ 3.50	982,938	982,938	4.92
	$ 3.72 - $ 3.80	32,696	32,696	5.01
	$ 4.00	42,500	42,500	5.05
	$ 4.38 - $ 4.40	474,060	474,060	5.48
	$ 6.80	36,250	36,250	6.12
	$ 8.20	46,670	46,670	4.29
	$ 20.00	142,500	142,500	4.73
Total options		**2,502,732**	**2,455,732**	
Total warrants and options		**18,740,796**	**18,693,796**	

This summary does not include 1,947,487 restricted stock units that are not vested as of September 30, 2011.

NOTE 7: - SUBSEQUENT EVENTS

a. On October 30, 2011, the Company's wholly owned Israeli subsidiary, Pluristem Ltd. ("Pluristem"), entered into an agreement for the design and construction of a manufacturing facility of bio-pharmaceutical products (the "Agreement") with Biopharmax Group (1996) Ltd., a company specializing in the design and construction of biotechnological and pharmaceutical facilities (the "Contractor"). Under the terms of the Agreement, the Contractor is required to design and construct Pluristem's new manufacturing facility, in a space to be leased as of January 2012, as a turn key project (the "Project") that will meet the requirements of the U.S., Canadian, Israeli and European regulatory authorities and current Good Manufacturing Practices (cGMP). The Project is planned to be completed in the fourth calendar quarter of 2012. The Contractor is required to pay certain penalties for not meeting the time schedule agreed between the parties.

   Pursuant to the terms of the Agreement, the Contractor is eligible to receive aggregate consideration of NIS 22,800 (approximately $6,247 based on current exchange ratio of $1=NIS3.65) plus value added tax. Pluristem has the option to pay a certain portion of the said consideration in up to 2,000,000 shares of Common Stock of the Company (the "Shares"). The net cash consideration received by Contractor from the immediate sale of the Shares shall be deducted from the aggregate consideration owed to the Contractor; or in the event that Contractor elects to hold the Shares rather than selling them, the value of the Shares based on the closing price of the Company's shares of common stock on Nasdaq on the date in which the Shares have been issued to Contractor shall be deducted from the aggregate consideration owed to the Contractor. Pursuant to the terms of the Agreement, the Contractor shall provide Pluristem certain guarantees in connection with the performance of the Contractor's obligations under the Agreement.

   Pluristem may terminate the Agreement at any time by a written notice to the Contractor. In case of termination by Pluristem for convenience, Pluristem shall be required to pay penalty of $250 in addition to the payment for the services provided by the Contractor prior to the termination date.

b. In early November 2011, a Memorandum of Law for Socioeconomic Change (Legislative Amendments) (Taxes), 2011 (the "Memorandum of Law"), was published. The Memorandum of Law proposes, among others, to cancel, effective from 2012, the scheduled progressive reduction in the corporate tax rate. The Memorandum of Law also proposes to raise the corporate tax rate to 25% in 2012. In view of the proposed increase in the corporate tax rate to 25% in 2012, the real capital gains tax rate and the real betterment tax rate will also be increased.

   The Company estimates that the approval by the Israeli Parliament of the Memorandum of Law as described above is not expected to have a material effect on the financial statements of Pluristem Ltd.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Forward - Looking Statements

This quarterly report on Form 10-Q contains certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and other Federal securities laws, and is subject to the safe-harbor created by such Act and laws. Forward-looking statements may include statements regarding our goals, beliefs, strategies, objectives, plans, including product and technology developments, future financial conditions, results or projections or current expectations. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "expect," "plan," "anticipate," "believe," "estimate," "predict," "potential" or "continue," the negative of such terms, or other comparable terminology. These statements are subject to known and unknown risks, uncertainties, assumptions and other factors that may cause actual results to be materially different from those contemplated by the forward-looking statements. Such forward-looking statements appear in this Item 2 – "Management's Discussion and Analysis of Financial Condition and Results of Operations," and include, but are not limited to, statements regarding the following: the expected development and potential benefits from our products in treating various medical conditions, the safety and efficacy of our PLX-PAD product as well as the extent to which it is tolerated, our plans, intentions or expectations regarding clinical studies and publication of results of such studies, our expectations regarding our short and long-term capital requirements and sufficiency of our capital resources, our plans to raise additional funding, including non-dilutive funding and governmental grants, the success of our plans to develop in house manufacturing capacity of clinical grade PLX cells in commercial quantities and information with respect to any other plans and strategies for our business. Our business and operations are subject to substantial risks, which increase the uncertainty inherent in the forward-looking statements contained in this report. Except as required by law, we undertake no obligation to release publicly the result of any revision to these forward-looking statements that may be made to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. Further information on potential factors that could affect our business is described under the heading "Risk Factors" in Part I, Item 1A of our Annual Report on Form 10-K for the fiscal year ended June 30, 2011. Readers are also urged to carefully review and consider the various disclosures we have made in that report.

As used in this quarterly report, the terms "we", "us", "our", the "company" and "Pluristem" mean Pluristem Therapeutics Inc. and our wholly owned subsidiary, Pluristem Ltd., unless otherwise indicated or as otherwise required by the context.

Overview

We are a leading bio-therapeutic company developing standardized cell therapy products for the treatment of life threatening diseases. We are developing a pipeline of products, stored ready-to-use, derived from human placenta, a non-controversial, non-embryonic, adult cell source. Placental-derived adherent stromal cells are grown in the Company's proprietary PluriX™ three-dimensional process that allows cells to grow in a more natural environment and enable us to produce large quantities of clinical grade cells. We refer to the cells that are grown in the PluriX™ as our PLacental eXpanded cells, or PLX cells. We are expanding our in-house manufacturing capacity so that we will be able to grow large scale quantities of our cells efficiently and without reliance on outside vendors.

Our strategy is to develop and manufacture cell therapy products for the treatment of multiple disorders via several routes of administration. We plan to execute this strategy both independently, using our own personnel and via relationships with research and clinical institutions, or in collaboration with other companies, such as United Therapeutics Corporation, or United. We plan to have in-house manufacturing capacity of clinical grade PLX cells in commercial quantities and to control all of our proprietary manufacturing processes in order to assist in executing this strategy.

We believe that intramuscular administration which means that the cells are administrated locally to the muscle and not systemically, may be suited for a number of different clinical indications. Such indications include peripheral artery disease, or PAD, critical limb ischemia, or CLI, intermittent claudication, muscle injuries, thromboangiitis obliterans, or Buerger's disease, neuropathic pain, wound healing and orthopedic injuries. In addition, we have reported pre-clinical studies utilizing successfully our proprietary PLX cells when administered systemically via the intravenous route in treating multiple sclerosis, ischemic stroke, inflammatory bowel disease and radiation exposure. Under our exclusive license agreement with United, we plan to participate in the development and commercialization of a PLX cell-based product for the treatment of Pulmonary Arterial Hypertension, or PAH.

Our first product in development, called PLX-PAD, is intended to improve the quality of life of millions of people suffering from PAD. In November 2011, following completion of twelve month clinical follow-ups using our PLX cells in CLI, the end-stage of PAD, we announced that the data collected from our two open-label, dose-escalation, Phase I clinical trials conducted in the United States and Germany demonstrated a safe immunologic profile at all dosage levels and found PLX-PAD to be potentially effective in treating patients suffering from CLI. During the Phase I clinical trials we have collected information regarding the Amputation Free Survival (AFS) rate and since our Phase I clinical trials did not include control groups, we compared the data with another published CLI trial's control data (Historical Data). The data showed that from a total of twenty-seven patients, four treatment failures (Event) occurred during the observation period of twelve months, which resulted in an AFS rate of 85.2%, as opposed to Historical Data of 66.8% for the same time period. This corresponded to an Event rate of 14.8%, as opposed to Historical Data showing a 33.2% Event rate.

Recent Developments

In June 2011, we entered into an exclusive license agreement, or the License Agreement, with United, for the use of our PLX cells to develop and commercialize a cell-based product for the treatment of PAH. The License Agreement provides that United will receive exclusive worldwide license rights for the development and commercialization of our PLX cell-based product to treat PAH. The License Agreement provides for the following consideration payable to us: (i) $7 million paid to us in August 2011; (ii) up to $37.5 million upon reaching certain regulatory milestones with respect to the development of a product to treat PAH; (iii) reimbursement of up to $10 million of certain of our expenses if we establish a manufacturing facility in North America upon meeting certain milestones; (iv) reimbursement of certain costs in connection with the development of the product; and (v) following commercialization of the product, royalties and the purchase of commercial supplies of the developed product from us at a specified margin over our cost.

In July 2011, we entered into an agreement with MTM – Scientific Industries Center Haifa Ltd. for the lease and construction of a new state-of-the-art GMP manufacturing facility. The new facility will be located near our headquarters and existing facilities in MATAM Park, Haifa, Israel. The lease of the new facility is expected to commence in January 2012 for a period of approximately five years with an option to extend the lease for an additional 5 years.

In August 2011, the U.S. Food and Drug Administration granted our PLX cells orphan status designation for the treatment of Buerger's disease. A concurrent application in Europe at the European Medicine Agencys's Committee for Orphan Medicinal Products is pending

In September 2011, we announced that animal studies we have conducted suggest that our PLX cells may be effective in treating life threatening hematopoietic complications associated with Acute Radiation Syndrome.

In October 2011, we entered into an agreement for the design and construction of a manufacturing facility of bio-pharmaceutical products, or the Construction Agreement, with Biopharmax Group (1996) Ltd., a company specializing in the design and construction of biotechnological and pharmaceutical facilities, or the Contractor. Under the terms of the Construction Agreement, the Contractor is required to design and construct our new manufacturing facility, in a space to be leased as of January 2012, as a turn key project, or the Project, that will meet the requirements of the U.S., Canadian, Israeli and European regulatory authorities and current Good Manufacturing Practices (cGMP). The Project is planned to be completed in the fourth calendar quarter of 2012. The Contractor is required to pay certain penalties for not meeting the time schedule agreed between the parties.

Pursuant to the terms of the Construction Agreement, the Contractor is eligible to receive an aggregate consideration of NIS 22,800,000 (approximately $6,246,575 based on the then current exchange ratio of $1=NIS3.65) plus value added tax. We have the option to pay a certain portion of the said consideration in up to 2,000,000 shares of our common stock. We may terminate the Construction Agreement at any time by a written notice to the Contractor. In case of termination by us for convenience, we shall be required to pay the Contractor $250,000 in addition to the payment for the services provided by the Contractor prior to the termination date.

Critical accounting policies

Our financial statements and accompanying notes are prepared in accordance with U.S. GAAP. Preparing financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, and expenses. These estimates and assumptions are affected by management's application of accounting policies. We believe that understanding the basis and nature of the estimates and assumptions involved with the following aspects of our consolidated financial statements is critical to an understanding of our financials statements.

Revenue Recognition

We recognize revenue pursuant to the License Agreement with United in accordance with ASC 625-25 "Revenue Recognition, Multiple-Element Arrangements". Pursuant to this guidance, we determined that our arrangement with United involves multiple revenue-generating deliverables that should be accounted for as separate units of accounting for revenue recognition purposes.

We received an up-front, non-refundable license payment of $5,000,000. Additional payments totaling $37.5 million are subject to our Company's meeting certain milestones. The non-refundable upfront license fee of $5,000,000 is deferred and recognized over the related performance period in accordance with SAB 104 "Revenue Recognition". We estimated the performance period of the development of approximately 5.5 years. Future changes in estimates of the performance period may materially impact the timing and amounts of future revenue recognized. The license fee will be recognized on a straight line basis as revenue over the estimated development period, resulting in revenue of $154,000 for the three months ended September 30, 2011.

The additional milestones payments will be recognized upon the achievement of the specific milestone, in accordance with EITF Issue No. 08-9, “Milestone Method of Revenue Recognition"

We also received a refundable, advance payment on the development, of $2,000,000 that will be deductible against development expenses as it accrued. This upfront payment received and not recognized as revenues is included in the balance sheet as advanced payment. All expenses related to the development, on cost basis, shall be repaid to us by United. We will deduct the payments from the R&D expenses in accordance with ASC 730 "Research and Development".

RESULTS OF OPERATIONS – THREE MONTHS ENDED SEPTEMBER 30, 2011 COMPARED TO THREE MONTHS ENDED SEPTEMBER 30, 2010.

Revenues

Revenues for the three months ended September 30, 2011 in the amount of $154,000 are from the United license agreement. We did not generate revenues during the three months ended September 30, 2010.

Research and Development

Research and development expenses, net of participation of the OCS and other grants, for the three months ended September 30, 2011 increased by 185% from $998,000 for the three months ended September 30, 2010 to $2,849,000. This significant increase is attributed to the following reasons: The material increase in our in-house research and development activity, the increase in expenses related to the clinical and preclinical trials we are involved with and timing of approval of the OCS program. The material increase in research and development expenses resulted from increase in our salaries and lab materials expenses due to, among other things, hiring 20 new employees since September 2010. In addition, the OCS program for the year beginning in March 2011 has not yet been approved, resulting in a decrease in the participation of the OCS recorded in the statements of operation of $490,000, compared to the first quarter of the previous year.

General and Administrative

General and administrative expenses for the three months ended September 30, 2011 increased by 116% from $756,000 for the three months ended September 30, 2010 to $1,637,000 mainly due to stock-based compensation expenses related to our employees and consultants which increased by approximately $520,000, and due to general and administrative costs related to the United agreement such as bonuses that our officers and directors were entitled to as part of our bonus plan and legal fees involved.

Financial Income, net

Financial income decreased from an income of $65,000 for the three months ended September 30, 2010 to expense of $161,000 for the three months ended September 30, 2011. This decrease is attributed to exchange rate adjustments and costs of hedging transactions, partially offset by an increase in interest income on bank deposits due to higher cash balances.

Net Loss

Net loss for the three months ended September 30, 2011 was $4,493,000, as compared to net loss of $1,689,000 for the three months ended September 30, 2010. Net loss per share for the three months ended September 30, 2011 was $0.11, as compared to $0.08 for the three months ended September 30, 2010.

For the periods ended September 30, 2011 and September 30, 2010, we had weighted average shares of common stock outstanding of 42,779,293 and 21,012,208, respectively, that were used in the computations of net loss per share. The increase in weighted average common shares outstanding reflects mainly the shares of common stock issued in offerings that took place since September 2010 and shares issued as a result of exercise of warrants and options.

Liquidity and Capital Resources

As of September 30, 2011, total current assets were $46,363,000 and total current liabilities were $5,045,000. On September 30, 2011, we had a working capital surplus of $41,318,000, Stockholders' equity of $40,294,000 and an accumulated deficit of $55,446,000. We finance our operations and plan to continue doing so from our existing cash, licensing agreements, funds from grants from the OCS and issuances of our securities.

Cash and cash equivalents as of September 30, 2011 amounted to $13,633,000. This is a decrease of $29,196,000 from the $42,829,000 reported as of June 30, 2011, which is due, mainly, to our investing in short-term and long-term bank deposits and in marketable securities, as further detailed below. Cash balances decreased in the three months ended September 30, 2011 for the reasons presented below.

Operating activities provided cash of $3,461,000 in the three months ended September 30, 2011. Cash provided by operating activities in the three months ended September 30, 2011 primarily consisted of receiving the upfront payment related to the License Agreement with United in the amount of $7,000,000 partially offset by payments of salaries to our employees, and payments of fees to our consultants, subcontractors and professional services providers including costs of clinical studies.

Investing activities used cash of $32,980,000 in the three months ended September 30, 2011. The investing activities consisted primarily of investing in short-term and long-term bank deposits and in marketable securities. The investments were made in accordance with the policy set by our investment committee which aims to preserve our financial assets, maintain adequate liquidity and maximize return. Such policy further provides that we should hold the vast majority of our current assets in bank deposits and the remainder of our current assets is to be invested in government bonds and a combination of corporate bonds and relatively low risk stocks. As of today, the currency of our financial portfolio is mainly in USD and we use forward and options contracts in order to hedge our exposures to currencies other than the USD.

Financing activities generated cash of $323,000 during the three months ended September 30, 2011 from exercise of warrants by shareholders and exercise of options by employees and consultants.

During the last quarter, 175,200 warrants were exercised in consideration for $315,360, and 60,000 warrants were exercised on a cashless basis for 23,514 shares of stock.

During the three months ended September 30, 2011 we received approximately $16,000 from the OCS towards our research and development expenses. The OCS has supported our activity in the past five years. In March 2011, we filed an application for a sixth year program for the period March 2011 until February 2012. There is no assurance that the OCS will approve a grant for the sixth year's R&D activity. The amount of the grant is also not certain.

We have accumulated a deficit of $55,446,000 since our inception in May 2001. We do not expect to generate any revenues from sales of products in the next twelve months. Our products will likely not be ready for sale for at least three years, if at all. We expect to generate revenues, which in the short and medium terms will unlikely exceed our costs of operations, from sale of licenses to use our technology or products, as we have in the License Agreement we entered into in August 2011 with United. Our management believes that we may need to raise additional funds before we have cash flow from operations that can materially decrease our dependence on our existing cash and other liquidity resources. We are continually looking for sources of funding, including non-diluting sources such as the OCS grants. We have effective shelf registration statement which we may use in the future to raise additional funds.

We believe that the funds we have will be sufficient for operating until approximately the end of fiscal year of 2014.

Off Balance Sheet Arrangements

We have no off balance sheet arrangements.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures **-** We maintain a system of disclosure controls and procedures that are designed for the purposes of ensuring that information required to be disclosed in our SEC reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer (CEO) and our Chief Financial Officer (CFO), as appropriate to allow timely decisions regarding required disclosures.

As of the end of the period covered by this report, we carried out an evaluation, under the supervision and with the participation of our CEO and our CFO, of the effectiveness of our disclosure controls and procedures as defined in Rule 13a-15(e) of the Securities Exchange Act of 1934, as amended. Based on that evaluation, our CEO and CFO concluded that our disclosure controls and procedures are effective.

Changes in Internal Control Over Financial Reporting - There has been no change in our internal control over financial reporting during the first quarter of fiscal 2012 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 6. Exhibits.

10.1 Summary of Lease Agreement dated January 22, 2003, by and between Pluristem Ltd. and MTM – Scientific Industries Center Haifa Ltd., as supplemented on December 11, 2005, June 12, 2007 and July 19, 2011 (incorporated by reference to Exhibit 10.2 of our annual report on Form 10-K filed on September 12, 2011).

31.1* Rule 13a-14(a) Certification of Chief Executive Officer.

31.2* Rule 13a-14(a) Certification of Chief Financial Officer.

32.1** Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350.

32.2** Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350.

101 ** The following materials from our Quarterly Report on Form 10-Q for the quarter ended September 30, 2011 formatted in XBRL (eXtensible Business Reporting Language): (i) the Consolidated Balance Sheets, (ii) the Consolidated Statements of Operations, (iii) the Condensed Consolidated Statements of Cash Flows, (iv) the Statements of Changes in Stockholders (Deficiency) and (v) related notes to these financial statements, tagged as blocks of text.

*Filed herewith.

**Furnished herewith.

SIGNATURES

In accordance with the requirements of the Exchange Act, the registrant caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PLURISTEM THERAPEUTICS INC.

By: /s/ Zami Aberman
Zami Aberman, Chief Executive Officer
(Principal Executive Officer)
Date: November 9, 2011

By: /s/ Yaky Yanay
Yaky Yanay, Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)
Date: November 9, 2011

Exhibit 31.1

CERTIFICATION

I, Zami Aberman, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Pluristem Therapeutics Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13(a)-15(f) and 15d-15(f)) of the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 9, 2011

/s/ Zami Aberman

Zami Aberman
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION

I, Yaky Yanay, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Pluristem Therapeutics Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13(a)-15(f) and 15d-15(f)) of the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 9, 2011

/s/ Yaky Yanay

Yaky Yanay
Chief Financial Officer and Secretary
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350

In connection with the Quarterly Report (the "**Report**") of Pluristem Therapeutics Inc. (the "**Company**") on Form 10-Q for the period ended September 30, 2011, as filed with the Securities and Exchange Commission on the date hereof, I, Zami Aberman, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. 1350, as adopted pursuant to 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 9, 2011

By: /s/ Zami Aberman

Zami Aberman
Chief Executive Officer

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350

In connection with the Quarterly Report (the "**Report**") of Pluristem Therapeutics Inc. (the "**Company**") on Form 10-Q for the period ended September 30, 2011, as filed with the Securities and Exchange Commission on the date hereof, I, Yaky Yany, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. 1350, as adopted pursuant to 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 9, 2011

By: /s/ Yaky Yanay

Yaky Yanay
Chief Financial Officer