
**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 **December 31, 2010**

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

(State or other jurisdiction of incorporation or organization)

98-0351734

(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: 41,324,035 common shares issued as of February 1, 2011.

PART I - FINANCIAL INFORMATION

Item 1. Financial Statements.

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

CONSOLIDATED FINANCIAL STATEMENTS

As of December 31, 2010

(unaudited)

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)
CONSOLIDATED FINANCIAL STATEMENTS

As of December 31, 2010

U.S. DOLLARS IN THOUSANDS

(Unaudited)

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CONSOLIDATED BALANCE SHEETS

U.S. Dollars in thousands

	December 31, 2010	June 30, 2010
	Unaudited	Audited
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 4,739	\$ 1,583
Short term bank deposit	-	913
Prepaid expenses	56	41
Accounts receivable from the Office of the Chief Scientist	361	706
Other accounts receivable	375	362
Total current assets	5,531	3,605
LONG-TERM ASSETS:		
Long-term deposits and restricted deposits	176	168
Severance pay fund	359	294
Property and equipment, net	1,816	1,555
Total long-term assets	2,351	2,017
Total assets	\$ 7,882	\$ 5,622

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

CONSOLIDATED BALANCE SHEETS

U.S. Dollars in thousands

	December 31, 2010 Unaudited	June 30, 2010 Audited
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Trade payables	\$ 926	\$ 791
Accrued expenses	85	118
Other accounts payable	468	372
<u>Total</u> current liabilities	<u>1,479</u>	<u>1,281</u>
LONG-TERM LIABILITIES		
Accrued severance pay	420	360
	<u>420</u>	<u>360</u>
STOCKHOLDERS' EQUITY		
Share capital:		
Common stock \$0.00001 par value:		
Authorized: 100,000,000 shares		
Issued: 26,489,904 shares as of December 31, 2010, 21,458,707 shares as of June 30, 2010.		
Outstanding: 26,489,904 shares as of December 31, 2010, 20,888,781 shares as of June 30, 2010.	- ^(*)	- ^(*)
Additional paid-in capital	50,598	44,086
Accumulated deficit during the development stage	(44,615)	(40,105)
	<u>5,983</u>	<u>3,981</u>
	<u><u>\$ 7,882</u></u>	<u><u>\$ 5,622</u></u>

(*) Less than \$1.

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

CONSOLIDATED STATEMENTS OF OPERATIONS (UNAUDITED)

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

	Six months ended December 31,		Three months ended December 31,		Period from May 11, 2001 (Inception) through December 31, 2010
	2010	2009	2010	2009	
Research and development expenses	\$ 3,687	\$ 2,803	\$ 2,186	\$ 1,447	\$ 26,967
Less participation by the Office of the Chief Scientist	(1,111)	(989)	(608)	(500)	(6,183)
Research and development expenses, net	2,576	1,814	1,578	947	20,784
General and administrative expenses	2,002	1,645	1,246	875	22,513
Know how write-off	-	-	-	-	2,474
Operating loss	(4,578)	(3,459)	(2,824)	(1,822)	(45,771)
Financial expenses (income), net	(68)	(11)	(3)	9	(1,156)
Net loss for the period	\$ (4,510)	\$ (3,448)	\$ (2,821)	\$ (1,831)	\$ (44,615)
Loss per share:					
Basic and diluted net loss per share	\$ (0.20)	\$ (0.22)	\$ (0.11)	\$ (0.10)	
Weighted average number of shares used in computing basic and diluted net loss per share	22,954,736	15,984,227	24,897,022	17,449,256	

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

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

	Common Stock		Additional Paid-in Capital	Receipts on Account of Common Stock	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficiency)
	Shares	Amount				
Issuance of common stock on July 9, 2001	175,500	\$ (*)	\$ 3	\$ -	\$ -	\$ 3
Balance as of June 30, 2001	175,500	(*)	3	-	-	3
Net loss	-	-	-	-	(78)	(78)
Balance as of June 30, 2002	175,500	(*)	3	-	(78)	(75)
Issuance of common stock on October 14, 2002, net of issuance expenses of \$17	70,665	(*)	83	-	-	83
Forgiveness of debt	-	-	12	-	-	12
Stock cancelled on March 19, 2003	(136,500)	(*)	(*)	-	-	-
Receipts on account of stock and warrants, net of finders and legal fees of \$56	-	-	-	933	-	933
Net loss	-	-	-	-	(463)	(463)
Balance as of June 30, 2003	109,665	\$ (*)	\$ 98	\$ 933	\$ (541)	\$ 490

(*) Less than \$1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

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

	Common Stock		Additional Paid-in Capital		Receipts on Account of Common Stock		Deficit Accumulated During the Development Stage		Total Stockholders' Equity (Deficiency)
	Shares	Amount							
Balance as of July 1, 2003	109,665	\$ (*)	\$ 98	\$ 933	\$ (541)	\$ 490			
Issuance of common stock on July 16, 2003, net of issuance expenses of \$70	3,628	\$ (*)	\$ 1,236	\$ (933)					303
Issuance of common stock on January 20, 2004	15,000	\$ (*)	\$ -	\$ -					(*)
Issuance of warrants on January 20, 2004 for finder's fee	-	\$ -	\$ 192	\$ -					192
Common stock granted to consultants on February 11, 2004	5,000	\$ (*)	\$ 800	\$ -					800
Stock based compensation related to warrants granted to consultants on December 31, 2003	-	\$ -	\$ 358	\$ -					358
Exercise of warrants on April 19, 2004	1,500	\$ (*)	\$ 225	\$ -					225
Net loss for the year	-	\$ -	\$ -	\$ -			\$ (2,011)		\$ (2,011)
Balance as of June 30, 2004	134,793	\$ (*)	\$ 2,909	\$ -	\$ (2,552)	\$ 357			

(*) Less than \$1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

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

	Shares	Common Stock Amount		Additional Paid-in Capital		Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficiency)
Balance as of July 1, 2004	134,793	\$ (*)	\$ 2,909	\$ (2,552)	\$ 357		
Stock-based compensation related to warrants granted to consultants on September 30, 2004	-	-	162	-	-	162	
Issuance of common stock and warrants on November 30, 2004 related to the October 2004 Agreement net of issuance costs of \$29	16,250	(*)	296	-	-	296	
Issuance of common stock and warrants on January 26, 2005 related to the October 2004 Agreement net of issuance costs of \$5	21,500	(*)	425	-	-	425	
Issuance of common stock and warrants on January 31, 2005 related to the January 31, 2005 Agreement	35,000	(*)	-	-	-	(*)	
Issuance of common stock and options on February 15, 2005 to former director of the Company	250	(*)	14	-	-	14	
Issuance of common stock and warrants on February 16, 2005 related to the January 31, 2005 Agreement	25,000	(*)	-	-	-	(*)	

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STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

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

	Common Stock		Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficiency)
	Shares	Amount			
Issuance of warrants on February 16, 2005 for finder fee related to the January 31, 2005 Agreement	-	-	144	-	144
Issuance of common stock and warrants on March 3, 2005 related to the January 24, 2005 Agreement net of issuance costs of \$24	60,000	(*)	1,176	-	1,176
Issuance of common stock on March 3, 2005 for finder fee related to the January 24, 2005 Agreement	9,225	(*)	(*)	-	-
Issuance of common stock and warrants on March 3, 2005 related to the October 2004 Agreement net of issuance costs of \$6	3,750	(*)	69	-	69
Issuance of common stock and warrants to the Chief Executive Officer on March 23, 2005	12,000	(*)	696	-	696
Issuance of common stock on March 23, 2005 related to the October 2004 Agreement	1,000	(*)	20	-	20

(*) Less than \$1.

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STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

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

	Common Stock		Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficiency)
	Shares	Amount			
Classification of a liability in respect of warrants to additional paid in capital, net of issuance costs of \$ 178	-	-	542	-	542
Net loss for the year	-	-	-	(2,098)	(2,098)
Balance as of June 30, 2005	318,768	(*)	6,453	(4,650)	1,803
Exercise of warrants on November 28, 2005 to finders related to the January 24, 2005 agreement	400	(*)	-	-	-
Exercise of warrants on January 25, 2006 to finders related to the January 25, 2005 Agreement	50	(*)	-	-	-
Reclassification of warrants from equity to liabilities due to application of ASC 815-40	-	-	(8)	-	(8)
Net loss for the year	-	-	-	(2,439)	(2,439)
Balance as of June 30, 2006	319,218	\$ (*)	\$ 6,445	\$ (7,089)	\$ (644)

(*) Less than \$1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

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

	Common Stock		Additional Paid-in Capital	Receipts on Account of Common Stock	Accumulated Other Comprehensive Loss	Deficit Accumulated During the Development Stage	Total Stockholders' Equity
	Shares	Amount					
Balance as of July 1, 2006	319,218	\$ (*)	\$ 6,445	\$ -	\$ -	\$ (7,089)	\$ (644)
Conversion of convertible debenture, net of issuance costs of \$440	1,019,815	(*)	1,787	-	-	-	1,787
Classification of a liability in respect of warrants	-	-	360	-	-	-	360
Classification of deferred issuance expenses	-	-	(379)	-	-	-	(379)
Classification of a liability in respect of options granted to non-employees consultants	-	-	116	-	-	-	116
Compensation related to options granted to employees and directors	-	-	2,386	-	-	-	2,386
Compensation related to options granted to non-employee consultants	-	-	938	-	-	-	938
Exercise of warrants related to the April 3, 2006 agreement net of issuance costs of \$114	75,692	(*)	1,022	-	-	-	1,022

(*) Less than \$1.

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STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

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

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Receipts on Account of Common Stock	Accumulated Other Comprehensive Loss	Deficit Accumulated During the Development Stage	Total Stockholders' Equity	Total Comprehensive Loss
Cashless exercise of warrants related to the April 3, 2006 agreement	46,674	(*)	(*)	-	-	-	-	-
Issuance of common stock on May and June 2007 related to the May 14, 2007 agreement, net of issuance costs of \$64	3,126,177	(*)	7,751	-	-	-	7,751	368
Receipts on account of shares	-	-	-	368	-	-	-	368
Cashless exercise of warrants related to the May 14, 2007 issuance	366,534	(*)	(*)	-	-	-	-	-
Issuance of warrants to investors related to the May 14, 2007 agreement	-	-	651	-	-	-	651	-
Unrealized loss on available for sale securities	-	-	-	-	(30)	-	(30)	\$ (30)
Net loss for the year	-	-	-	-	-	(8,429)	(8,429)	-
Balance as of June 30, 2007	4,954,110	\$ (")	\$ 21,077	\$ 368	\$ (30)	\$ (15,518)	\$ 5,897	\$ (8,459)
Total comprehensive loss								

(*) Less than \$1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

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

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Receipts on Account of Common Stock	Accumulated Other Comprehensive Loss	Deficit Accumulated During the Development Stage	Total Stockholders' Equity	Total Comprehensive Loss
Balance as of July 1, 2007	4,954,110	\$ (*)	\$ 21,077	\$ 368	\$ (30)	\$ (15,518)	\$ 5,897	
Issuance of common stock related to investors relation agreements	69,500	(*)	275	-	-	-	275	
Issuance of common stock in July 2007 - June 2008 related to the May 14, 2007 Agreement	908,408	(*)	2,246	(368)	-	-	1,878	
Cashless exercise of warrants related to the May 14, 2007 Agreement	1,009,697	(*)	(*)	-	-	-	-	
Compensation related to options granted to employees and directors	-	-	4,204	-	-	-	4,204	
Compensation related to options granted to non-employees consultants	-	-	543	-	-	-	543	
Realized loss on available for sale securities	-	-	-	-	30	-	30	\$ 30
Net loss for the year	-	-	-	-	-	(10,498)	(10,498)	(10,498)
Balance as of June 30, 2008	6,941,715	\$ (*)	\$ 28,345	\$ -	\$ -	\$ (26,016)	\$ 2,329	\$ (10,468)
Total comprehensive loss								

(*) Less than \$1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

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

	Common Stock		Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity
	Shares	Amount			
Balance as of July 1, 2008	6,941,715	\$ (6,941,715)	\$ 28,345	\$ (26,016)	\$ 2,329
Issuance of common stock related to investor relations agreements	171,389	\$ (171,389)	\$ 133	\$ -	\$ 133
Issuance of common stock and warrants related to the August 6, 2008 agreement, net of issuance costs of \$125	1,391,304	\$ (1,391,304)	\$ 1,475	\$ -	\$ 1,475
Issuance of common stock and warrants related to the September 2008 agreement, net of issuance costs of \$62	900,000	\$ (900,000)	\$ 973	\$ -	\$ 973
Issuance of common stock and warrants in November 2008 -January 2009, net of issuance costs of \$39	1,746,575	\$ (1,746,575)	\$ 660	\$ -	\$ 660
Issuance of common stock and warrants related to the January 20, 2009 agreement, net of issuance costs of \$5	216,818	\$ (216,818)	\$ 90	\$ -	\$ 90
Issuance of common stock and warrants related to the January 29, 2009 agreement, net of issuance costs of \$90	969,826	\$ (969,826)	\$ 1,035	\$ -	\$ 1,035
Issuance of common stock and warrants related to the May 5, 2009 agreement, net of issuance costs of \$104	888,406	\$ (888,406)	\$ 1,229	\$ -	\$ 1,229
Compensation related to options granted to employees and directors	-	\$ -	\$ 1,315	\$ -	\$ 1,315
Compensation related to options and warrants granted to non-employee consultants	-	\$ -	\$ 97	\$ -	\$ 97
Compensation related to restricted stock granted to employees and directors	427,228	\$ (427,228)	\$ 642	\$ -	\$ 642

(*) Less than \$1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

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

	Common Stock		Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity
	Shares	Amount			
Compensation related to restricted stock granted to non-employee consultants	23,625	(*)	52	-	52
Net loss for the period	-	-	-	(6,636)	(6,636)
Balance as of June 30, 2009	13,676,886	\$ (*)	\$ 36,046	\$ (32,652)	\$ 3,394

(*) Less than \$1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

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

	Common Stock		Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity
	Shares	Amount			
Balance as of July 1, 2009	13,676,886	\$ (*)	\$ 36,046	\$ (32,652)	\$ 3,394
Issuance of common stock and warrants related to November 2008 through January 2009 agreements (on July 2009)	1,058,708	\$ (*)	\$ 794	\$ -	\$ 794
Issuance of common stock and warrants related to October 2009 agreements, net of issuance costs of \$242	2,702,822	\$ (*)	\$ 2,785	\$ -	\$ 2,785
Issuance of common stock and warrants related to April 2010 agreements, net of issuance costs of \$54	2,393,329	\$ (*)	\$ 2,627	\$ -	\$ 2,627
Issuance of common stock related to investor relations agreements	1,929	\$ (*)	\$ 13	\$ -	\$ 13
Exercise of options by employee	3,747	\$ (*)	\$ 2	\$ -	\$ 2
Compensation related to options granted to employees and directors	-	\$ -	\$ 211	\$ -	\$ 211
Compensation related to options and warrants granted to non-employee consultants	-	\$ -	\$ 161	\$ -	\$ 161
Compensation related to restricted stock and restricted stock units granted to employees and directors	981,586	\$ (*)	\$ 1,357	\$ -	\$ 1,357
Compensation related to restricted stock and restricted stock units granted to non-employee consultants	69,774	\$ (*)	\$ 90	\$ -	\$ 90
Net loss for the period	-	\$ -	\$ -	\$ (7,453)	\$ (7,453)
Balance as of June 30, 2010	20,888,781	\$ (*)	\$ 44,086	\$ (40,105)	\$ 3,981

(*) Less than \$1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY) (UNAUDITED)

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

	Common Stock		Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity
	Shares	Amount			
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
Exercise of options by employee	5,000	(*)	5	-	5
Receipts on account of exercise of warrants	-	(*)	12	-	12
Issuance of common stock related to investor relations agreements	60,000	(*)	78	-	78
Compensation related to options granted to employees and directors	-	-	7	-	7
Compensation related to options and warrants granted to non-employee consultants	-	-	18	-	18
Compensation related to restricted stock and restricted stock units granted to employees and directors	1,070,752	(*)	1,238	-	1,238
Compensation related to restricted stock and restricted stock units granted to non-employee consultants	90,371	(*)	148	-	148
Net loss for the period	-	-	-	\$ (4,510)	\$ (4,510)
Balance as of December 31, 2010	26,489,904	\$ (*)	\$ 50,598	\$ (44,615)	\$ 5,983

(*) Less than \$1.

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

CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

U.S. Dollars in thousands

	Six months ended December 31,		Period from May 11, 2001 (inception) Through December 31,
	2010	2009	2010
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net loss	\$ (4,510)	\$ (3,448)	\$ (44,615)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation	144	97	896
Capital loss	8	-	12
Impairment of property and equipment	-	-	54
Know-how write-off	-	-	2,474
Amortization of deferred issuance costs	-	-	604
Stock-based compensation to employees and directors	1,245	695	11,360
Stock-based compensation to non-employees consultants	219	150	2,768
Stock compensation to investor relations consultants	78	32	1,291
Know-how licensors – imputed interest	-	-	55
Salary grant in shares and warrants	-	-	711
Decrease (increase) in other accounts receivable	317	394	(475)
Decrease (increase) in prepaid expenses	(15)	28	34
Increase in trade payables	254	86	843
Increase in other accounts payable and accrued expenses	34	67	19
Increase in interest receivable on short-term deposit	15	-	-
Increase in accrued interest due to related parties	-	-	3
Linkage differences and interest on long-term restricted lease deposit	(3)	2	(4)
Change in fair value of liability in respect of warrants	-	-	(2,696)
Fair value of warrants granted to investors	-	-	651
Amortization of discount and changes in accrued interest on convertible debentures	-	-	128
Amortization of discount and changes in accrued interest from marketable securities	-	-	(9)
Loss from sale of investments of available-for-sale marketable securities	-	-	106
Impairment and realized loss on available-for-sale marketable securities	-	-	372
Accrued severance pay, net	(5)	(5)	61
Net cash used in operating activities	\$ (2,219)	\$ (1,902)	\$ (25,357)

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

CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

U.S. Dollars in thousands

	Six months ended December 31,		Period from May 11, 2001 (inception) through June 30,
	2010	2009	2010
CASH FLOWS FROM INVESTING ACTIVITIES:			
Acquisition of Pluristem Ltd. (1)	\$ -	\$ -	\$ 32
Purchase of property and equipment	(560)	(124)	(2,554)
Investment in short-term deposits	-	(2,500)	(2,500)
Repayment of short-term deposits	898	-	2,500
Proceeds from sale of property and equipment	28	-	60
Investment in long-term deposits	(12)	(7)	(241)
Repayment of long-term restricted deposit	13	-	80
Purchase of available for sale marketable securities	-	-	(3,784)
Proceeds from sale of available for sale marketable securities	-	-	3,314
Purchase of know-how	-	-	(2,062)
Net cash provided by (used in) investing activities	<u>367</u>	<u>(2,631)</u>	<u>(5,155)</u>
CASH FLOWS FROM FINANCING ACTIVITIES:			
Issuance of common stock and warrants, net of issuance costs	\$ 5,015	\$ 3,579	\$ 32,360
Exercise of warrants and options	17	2	1,041
Issuance of convertible debenture	-	-	2,584
Issuance expenses related to convertible debentures	-	-	(440)
Repayment of know-how licensors	-	-	(300)
Repayment of notes and loan payable to related parties	-	-	(70)
Proceeds from notes and loan payable to related parties	-	-	78
Receipt of long-term loan	-	-	49
Repayment of long-term loan	(24)	(4)	(51)
Net cash provided by financing activities	<u>5,008</u>	<u>3,577</u>	<u>35,251</u>
Increase (decrease) in cash and cash equivalents	3,156	(956)	4,739
Cash and cash equivalents at the beginning of the period	1,583	2,339	-
Cash and cash equivalents at the end of the period	<u>\$ 4,739</u>	<u>\$ 1,383</u>	<u>\$ 4,739</u>

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

CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

U.S. Dollars in thousands

	Six months ended December 31,		Period from May 11, 2001 (inception) through December 31,
	2010	2009	2010
(a) Supplemental disclosure of cash flow activities:			
Cash paid during the period for:			
Taxes paid due to non-deductible expenses	\$ 7	\$ 1	\$ 61
Interest paid	\$ -	\$ 1	\$ 18
(b) Supplemental disclosure of non-cash activities:			
Classification of liabilities and deferred issuance expenses into equity	\$ -	\$ -	\$ 97
Conversion of convertible debenture	\$ -	\$ -	\$ 2,227
Purchase of property and equipment in credit	\$ 73	\$ 43	\$ 73
Issuance of shares in consideration of accounts receivable	\$ 243	\$ -	\$ 243
(1) Acquisition of Pluristem Ltd.			
Fair value of assets acquired and liabilities assumed at the acquisition date:			
Working capital (excluding cash and cash equivalents)			\$ (427)
Long-term restricted lease deposit			19
Property and equipment			130
In-process research and development write-off			246
			\$ (32)

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 and commenced operations on May 11, 2001, under the name A. I. Software Inc. which was changed as of June 30, 2003 to Pluristem Life Systems Inc. On November 26, 2007, its name was changed to Pluristem Therapeutics Inc. Pluristem Therapeutics Inc. has a wholly owned subsidiary, Pluristem Ltd. ("the Subsidiary"), which is incorporated under the laws of Israel. Pluristem Therapeutics Inc. and its Subsidiary are referred to as "the Company".
- b. The Company is devoting substantially all of its efforts towards conducting research and development of adherent stromal cells production technology and the commercialization of cell therapy products. Accordingly, the Company is considered to be in the development stage, as defined in Accounting Standards Codification™ ("ASC") 915. In the course of such activities, the Company has sustained operating losses and expects such losses to continue in the foreseeable future. The Company has not generated any revenues or product sales and has not achieved profitable operations or positive cash flows from operations. The Company's accumulated losses during the development stage aggregated to \$44,615 through December 31, 2010 and the Company incurred net loss of \$4,510 and negative cash flow from operating activities in the amount of \$2,219 for the six months ended December 31, 2010. 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 and research and development grants. On February 1, 2011, the Company closed a public offering of shares and warrants in net consideration of approximately \$38,000 (also see note 4(b)). In the longer term, the Company plans to finance its operations from revenues from product sales or licensing of its technology.

- c. Since December 10, 2007, the Company's shares of common stock have been traded on the NASDAQ Capital Market under the symbol PSTI. The shares were previously traded on the OTC Bulletin Board under the trading symbol "PLRS.OB". 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 Tel-Aviv Stock Exchange, under the symbol PLTR.

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES

- A. The accompanying unaudited interim financial statements of Pluristem Therapeutics Inc., a development stage company, 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 the Company's latest Annual Report filed with the SEC on Form 10-K. 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 Company's Annual Report on Form 10-K have been omitted.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES

B. Impact of recently issued accounting standards:

In July 2010, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update 2010-20 "ASU 2010-20" Disclosures about the Credit Quality of Financing Receivables and the Allowance for Credit Losses". ASU 2010-20 is an update of Accounting Standards Codification Topic 310, Receivables. This update requires enhanced disclosures on a disaggregated basis about the nature of the credit risk inherent in the portfolio of financing receivables; how that risk is analyzed and assessed in arriving at the allowance for credit losses; and the changes and reasons for those changes in the allowance for credit losses.

The disclosures required under ASU 2010-20 as of the end of a reporting period are effective for interim and annual reporting periods ending on or after December 15, 2010. The adoption of the update does not have a material impact on the Company's financial condition or results of operations.

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS

a. On December 22, 2009, the Company's authorized common stock was increased from 30,000,000 shares with a par value of \$0.00001 per share to 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.

On July 1, 2008, the authorized share capital of the Company was increased by authorizing 10,000,000 shares of preferred stock, par value \$0.00001 each, 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. On July 9, 2001, the Company issued 175,500 shares of common stock in consideration for \$2.50, which was received on July 27, 2001.

c. On October 14, 2002, the Company issued 70,665 shares of common stock at a price of approximately \$1.40 per common share in consideration for \$100 before issuance costs of \$17. On March 19, 2003, two directors each returned 68,250 shares of common stock with a par value of \$2.00 per share, for cancellation, for no consideration.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

d. In July 2003, the Company issued an aggregate of 3,628 units comprised of 3,628 shares of common stock and 7,256 warrants to a group of investors, for total consideration of \$1,236 (net of issuance costs of \$70), under a private placement. The consideration was paid partly in the year ended June 30, 2003 (\$933) and the balance was paid in the year ended June 30, 2004.

In this placement each unit was comprised of one share of common stock and two warrants, the first warrant was exercisable within a year from the date of issuance for one share of common stock at a price of \$450 per share. The second warrant is exercisable within five years from the date of issuance for one share of common stock at a price of \$540 per share. All the warrants expired unexercised.

e. On January 20, 2004, the Company consummated a private equity placement with a group of investors (the "Investors"). The Company issued 15,000 units in consideration for net proceeds of \$1,273 (net of issuance costs of \$227). Each unit is comprised of 15,000 shares of common stock and 15,000 warrants. Each warrant is exercisable into one share of common stock at a price of \$150 per share, and may be exercised until January 31, 2007. On March 18, 2004, a registration statement on Form SB-2 was declared effective and the above-mentioned common stock was registered for re-sale. If the effectiveness of the Registration Statement is suspended subsequent to the effective date of registration (March 18, 2004), for more than certain permitted periods, as described in the private equity placement agreement, the Company shall pay penalties to the Investors in respect of the liquidated damages.

According to ASC 815-40, the Company classified the warrants as liabilities according to their fair value as remeasured at each reporting period until exercised or expired. Changes in the fair value of the warrants were reported in the statements of operations as financial income or expense.

The Company allocated the gross amount received of \$1,500 to the par value of the shares issued (\$0.03) and to the liability in respect of the warrants issued (\$1,499.97). The amount allocated to the liability was less than the fair value of the warrants at grant date. On January 31, 2007 all the warrants expired unexercised.

In addition, the Company issued 1,500 warrants to finders in connection with this private placement, exercisable into 1,500 common shares at a price of \$150 per common share until January 31, 2007. The fair value of the warrants issued in the amounts of \$192 was recorded as deferred issuance costs and is amortized over a period of three years. On April 19, 2004, the finders exercised the warrants.

f. In October 2004, the Company consummated a private placement offering ("the October 2004 Agreement") pursuant to which it issued 42,500 units. Each unit is comprised of one share of common stock and one warrant. The warrant is exercisable for one common stock at an exercise price of \$60 per share, subject to certain adjustments. The units were issued as follows:

In November 2004, the Company issued according to the October 2004 Agreement 16,250 units comprised of 16,250 shares of common stock and 16,250 warrants to a group of investors, for total consideration of \$296 (net of cash issuance costs of \$29), and additional 600 warrants to finders as finders' fees.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

f. (cont.)

In January 2005, the Company issued according to the October 2004 Agreement an additional 21,500 units for total consideration of \$425 (net of cash issuance costs of \$5), and additional 450 warrants were issued to finders as finders' fees.

In March 2005, the Company issued according to the October 2004 Agreement additional 3,750 units for total consideration of \$69 (net of cash issuance costs of \$6), and additional 175 warrants were issued to finders as finders' fees.

In March 2005, the Company issued according to the October 2004 Agreement 1,000 common shares and 1,000 share purchase warrants to one investor for total consideration of \$20 which was paid to the Company in May 2005.

On November 30, 2006, all the warrants expired unexercised.

g. On January 24, 2005, the Company consummated a private placement offering (the "January 24, 2005 Agreement") which was closed on March 3, 2005 and issued 60,000 units in consideration for \$1,176 (net of cash issuance costs of \$24). Each unit is comprised of one share of common stock and one warrant. The warrant is exercisable for one share of common stock at a price of \$60 per share. On November 30, 2006, all the warrants expired unexercised. Under this agreement the Company issued to finders 9,225 shares and 2,375 warrants with exercise price of \$500 per share exercisable until November 2007. On November 30, 2007, 1,925 unexercised warrants expired.

h. On January 31, 2005, the Company consummated a private equity placement offering (the "January 31, 2005 Agreement") with a group of investors according to which it issued 60,000 units in consideration for net proceeds of \$1,137 (net of issuance costs of \$63). Each unit is comprised of one share of common stock and one warrant. Each warrant is exercisable into one share of common stock at a price of \$60 per share. The January 31, 2005 Agreement includes a finder's fee of a cash amount equal to 5% of the amount invested (\$60) and issuance of warrants for number of shares equal to 5% of the number of shares that were issued (3,000) with an exercise price of \$20 per share, subject to certain adjustments, exercisable until November 30, 2006.

According to ASC 815-40, the Company classified the warrants as liabilities according to their fair value as remeasured at each reporting period until exercised or expired. Changes in the fair value of the warrants will be reported in the statements of operations as financial income or expense.

As of the date of the issuance, the Company allocated the gross amount received of \$1,200 to the par value of the shares issued (\$0.12) and to the liability in respect of the warrants issued (\$1,200). Issuance expenses in the amount of \$63 and finder's fee in the amount of \$144 were recorded as deferred issuance costs. The amount allocated to the liability was less than the fair value of the warrants at grant date. On May 13, 2005, the Registration Statement became effective and the Company was no longer subject to possible penalties. As such, the liability and the deferred issuance costs related to the agreement has been classified to the Stockholders Equity as Additional Paid in Capital. As of May 13, 2005, the fair value of the liability in respect of the warrants issued was \$720 and the amount of the deferred issuance costs was \$178.

On November 30, 2006, all the warrants expired unexercised.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

- i. On March 23, 2005, the Company issued 12,000 shares of common stock and 12,000 options as a bonus to the then Chief Executive Officer, Dr. Shai Meretzki, in connection with the issuance of a Notice of Allowance by the United States Patent Office for patent application number 09/890,401. Salary expenses of \$696 were recognized in respect of this bonus based on the quoted market price of the Company's stock and the fair value of the options granted using the Black-Scholes valuation model. On November 30, 2006, all the warrants expired unexercised.
- j. On February 11, 2004, the Company issued an aggregate amount of 5,000 shares of common stock to a consultant and service provider as compensation for carrying out investor relations activities during the year 2004. Total compensation, measured as the grant date fair market value of the stock, amounted to \$800 and was recorded as an operating expense in the statement of operations in the year ended June 30, 2004.
- k. On November 28, 2005, 400 warrants, which were issued to finders as finder fees related to the January 24, 2005 Agreement, were exercised.
- l. On January 25, 2006, 50 warrants, which were issued to finders as finder fees related to the January 24, 2005 Agreement, were exercised.
- m. Convertible Debenture

On April 3, 2006, the Company issued Senior Secured Convertible Debentures (the "Debentures"), for gross proceeds of \$3,000. In conjunction with this financing, the Company issued 236,976 warrants exercisable for three years at an exercise price of \$15.00 per share. The Company paid a finder's fee of 10% in cash and issued 47,394 warrants exercisable for three years, half of which are exercisable at \$15.00 and half of which are exercisable at \$15.40 per share. The Company also issued 5,000 warrants in connection with the separate finder's fee agreement related to the issuance of the debenture exercisable for three years at an exercise price of \$15.00 per share.

- a. Interest accrued on the Debentures at the rate of 7% per annum, was payable semi-annually on June 30 and December 31 of each year and on conversion and at the maturity date. Interest was payable, at the option of the Company, either (1) in cash, or (2) in shares of common stock at the then applicable conversion price. If the Company failed to deliver stock certificates upon the conversion of the Debentures at the specified time and in the specified manner, the Company was required to make substantial payments to the holders of the Debentures.
- b. The warrants, issued as of April 3, 2006, become first exercisable on the 65th day after issuance. Holders of the warrants were entitled to exercise their warrants on a cashless basis following the first anniversary of issuance if the Registration Statement is not in effect at the time of exercise.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

m. Convertible Debenture (Cont.):

In accordance with ASC 815-40, the Company allocated the consideration paid for the convertible debenture and the warrants as follows:

The warrants were recorded as a liability based on their fair value in the amount of \$951 at grant date. The Company estimated the fair value of the warrants using a Black-Scholes option pricing model, with the following assumptions: volatility of 83%, risk free interest rate of 4.8%, dividend yield of 0%, and an expected life of 36 months. Changes in the fair value are recorded as interest income or expense, as applicable.

The fair value of the conversion feature of the debentures at grant date, in the amount of \$1,951 was recorded as a liability.

The balance of the consideration, in the amount of \$97, was allocated to the debentures. The discount in the amount of \$2,903 was amortized according to the effective rate interest method over the debentures contractual period (24 months).

The fair value of the warrants issued as a finder's fee and the finder's fee in cash amounted to \$535 and were recorded as deferred issuance expenses and are amortized over the Debentures' contractual period. The Company estimated the fair value of the warrants using a Black - Scholes option pricing model, with the following assumptions: volatility of 83%, risk free interest rate of 4.8%, dividend yield of 0%, and an expected life of 36 months.

According to ASC 815-40, in order to classify warrants and options (other than employee stock options) as equity and not as liabilities, the Company should have sufficient authorized and unissued shares of common stock to provide for settlement of those instruments that may require share settlement. Under the terms of the Debentures, the Company may be required to issue an unlimited number of shares to satisfy the debenture's contractual requirements. As such, on April 3, 2006, the Company's warrants and options (other than employee stock options) were classified as liabilities and measured at fair value with changes recognized currently in earnings.

As of November 9, 2006, all of the Debentures, were converted into 969,815 shares. As a result, an amount of \$1,787 was reclassified into common stock and additional paid-in capital as follows: from conversion of the feature embedded in convertible debenture (\$1,951), convertible debenture (\$202), accrued interest (\$74) net of issuance expenses in the amount of \$440. In addition, the warrants and options to consultants in the amount of \$476 and deferred issuance expenses in the amount of \$379 were reclassified as equity.

Pursuant to an investor relations agreement dated April 28, 2006, the Company paid in cash an amount of \$440 on October 19, 2006 and issued 50,000 common shares on November 9, 2006 to certain service providers following reaching certain milestones regarding the conversion of the Debentures as agreed to by the parties.

During the year ended June 30, 2007, 186,529 of the warrants which were issued on April 3, 2006, were exercised. 75,692 warrants were exercised into shares in consideration for \$1,022 (net of cash exercise costs of \$114), and 110,836 warrants were exercised cashless into 46,674 shares. On April 30, 2009, the rest of the warrants expired unexercised.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

n. On May 14, 2007, the Company consummated a private equity placement with a group of investors for an equity investment ("May 2007 Agreement"). The Company sought a minimum of \$7,000 and up to a maximum of \$13,500 for shares of the Company's common stock at a per share price of \$2.50, and warrants to purchase shares at an exercise price of \$5.00 exercisable until five years after the closing date of the agreement.

In May 2007, under the May 2007 Agreement, the Company issued 3,126,177 shares of the Company's common stock and 3,126,177 warrants to purchase the Company's common stock in consideration for \$7,751 (net of cash issuance costs of \$64).

During July and August 2007, under the May 2007 Agreement, the Company issued additional 273,828 shares of the Company's common stock and 273,828 warrants to purchase the Company's common stock in consideration for \$685. The consideration was paid partly prior to the issuance of the shares in the year ended June 30, 2007 (\$368) and was recorded as receipts on account of shares and the balance was paid during July and August 2007.

As part of May 2007 Agreement, the Company signed an escrow agreement according to which the Company granted an option to an investor to invest, under the same conditions defined in the May 2007 Agreement, up to \$5,000 which will be paid in monthly installments over 10 months starting six months subsequent to the closing date. According to the agreement, in the event that the investor fails to make any of the payments within five days of the payment due date, the option to invest the remaining amount will be cancelled. As a result of this agreement, the Company issued 634,580 shares of the Company's common stock and 634,580 warrants to purchase the Company's common stock in consideration for \$1,561 (net of cash issuance costs of \$25). As of March 31, 2008 the option was cancelled.

The total proceeds related to the May 2007 Agreement accumulated as of June 30, 2008 were \$9,997 (net of cash issuance costs of \$89), and 4,034,585 shares and 4,034,585 warrants were issued.

In connection with the May 2007 Agreement, the Company issued 275,320 warrants to finders as finders' fee. The warrants are exercisable for five years from the date of grant at an exercise price of \$2.50 per share.

During 2008 and 2007, 1,361,818 and 500,000 warrants related to the May 2007 Agreement were exercised on a cashless basis for 1,009,697 shares of stock and 366,534 shares of stock, respectively.

o. The Company issued 28,398 warrants to the investors related to the May 2007 Agreement as compensation to investors who delivered the invested amount prior to the closing date of the placement. The warrants are exercisable for five years at an exercise price of \$2.50 per share. The Company recorded the fair value of the warrants as financial expenses in the amount of \$651 in the year ended June 30, 2007. The fair value of these warrants was determined using the Black-Scholes pricing model, assuming a risk free rate of 4.8%, a volatility factor of 128%, dividend yield of 0% and expected life of five years.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

p. In the May 2007 Agreement, there is a provision that requires the Company for a period of four years (subject to acceleration under certain circumstances) not to sell any of the Company's common stock for less than \$0.0125 per share (pre-split price). The May 2007 Agreement provides that any sale below that price must be preceded by consent from each purchaser in the placement.

Since that date, the Company had effected a one-for-200 reverse stock split. The Company decided to proceed and enter into additional security purchase agreements notwithstanding this provision for the following reasons:

- The agreement does not contain any provisions for the adjustment of the specified minimum price in the event of stock splits and the like. If such agreement were to have contained such a provision, the floor price would be \$2.50.
- The majority of purchasers in the private placement have sold the stock purchased in the placement, and thus the number of purchasers whose consent is purportedly required has been substantially reduced. The number of shares outstanding as to which this provision currently applies according the information supplied by transfer agent is 2 million shares.
- An agreement that prevents the Company's Board of Directors from issuing shares that are necessary to finance the Company's business may be unenforceable.

It is unclear what could be the consequences of a court decision that the issuance of shares below \$2.50 per share violates the May 2007 Agreement.

In connection therewith, the Company approved the issuance of warrants to purchase up to 161,724 shares of its common stock to each of the investors who was a party to the May 2007 Agreement that held shares purchased pursuant to such agreement, as of August 6, 2008, conditioned on having the investors execute a general release pursuant to which the Company will be released from liability including, but not limited to, any claims, demands, or causes of action arising out of, relating to, or regarding sales of certain equity securities notwithstanding the above mentioned provision. As of December 31, 2010 the Company received a general release from some of the investors, and issued them warrants to purchase 105,583 shares of its common stock. On November 9, 2010, all of such warrants expired unexercised.

q. On August 6, 2008, the Company sold 1,391,304 shares of the Company's common stock and warrants to purchase 695,652 shares of common stock at an exercise price of \$1.90 to two investors in consideration of \$1,600 pursuant to terms of a securities purchase agreement. The placement agent received a placement fee equal to 6% of the gross purchase price of the Units (excluding any consideration that may be paid in the future upon exercise of the warrants) as well as warrants to purchase 83,478 shares of common stock at an exercise price of \$1.44 per share. The warrants will be exercisable after six months from the closing date through and including August 5, 2013. Total cash issuance costs related to this placement amounted to \$125.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 3 - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

r. On September 22, 2008, the Company sold 900,000 shares of the Company's common stock and warrants to purchase 675,000 shares of common stock to an investor in consideration for \$1,035 pursuant to terms of a securities purchase agreement. The price per share of common stock was \$1.15, and the exercise price of the warrants is \$1.90. The warrants will be exercisable for a period of five years. As part of this transaction, the Company paid a transaction fee to the finders equal to 6% of the actual purchase price and warrants exercisable for five years at an exercise price of \$1.50 per share to purchase 54,000 of the Company's shares of common stock. Total cash issuance costs related to this placement amounted to \$62.

s. From November 2008 through January 2009, the Company entered into a securities purchase agreement with investors, pursuant to which the Company sold 1,746,575 shares of its common stock at a price of \$0.40 per share, for an aggregate purchase price of \$699, and issued warrants to purchase up to an additional 1,746,575 shares of common stock with an exercise price of \$1.00 per share. The warrants will be exercisable after six months from the closing date and will expire after five years. Pursuant to the agreement, the investors have the option, by notice to the Company no later than 10 business days following the release of an official announcement by the Company that it is initiating its first human clinical trials, to purchase an additional 931,507 shares of common stock at a purchase price of \$0.75 per share, for an aggregate purchase price of \$699, and receive therewith warrants to purchase up to an additional 931,507 shares of common stock with an exercise price of \$1.50 per share.

The issuance costs include \$39 in cash and warrants exercisable for five years at an exercise price of \$1.00 per share to purchase 96,579 of the Company's shares of common stock.

t. On January 20, 2009, the Company sold 216,818 shares of its common stock and warrants to purchase 216,818 shares of common stock to investors in consideration for \$95 pursuant to terms of a securities purchase agreement. The price per share of common stock is \$0.44, and the exercise price of the warrants is \$1.00 per share. The warrants will be exercisable after six months from the closing date and will expire after five years. Pursuant to the agreement, the investors have the option, by notice to the Company no later than 10 business days following the release of an official announcement by the Company that it is initiating its first human clinical trials, to purchase an additional 127,200 shares of common stock at a purchase price of \$0.75 per share, for an aggregate purchase price of \$95, and receive therewith warrants to purchase up to an additional 127,200 shares of common stock with an exercise price of \$1.50 per share (the "January 20 Option"). The January 20 Option is exercisable within six months from the closing date. As part of this transaction, the Company paid a transaction fee to finders in an amount of \$5 in cash and issued them warrants exercisable for two years at an exercise price of \$1.00 per share to purchase 12,273 shares of the Company's common stock.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

v. On May 5, 2009, the Company entered into securities purchase agreements with two investors pursuant to which the Company sold 888,406 shares of its common stock and warrants to purchase 488,623 shares of common stock in consideration for \$1,333. The exercise price of the warrants is \$1.96 per share and they will be exercisable for a period of five years commencing six months following the issuance thereof.

The Company paid a transaction fee to finders in an amount of \$104 in cash and issued them warrants exercisable after six months for five years at an exercise price of \$1.875 per share to purchase 53,304 shares of the Company's common stock.

w. On July 7, 2009, the Company announced that the first patient has been enrolled in a Phase I clinical trial of its PLX-PAD product. Upon the occurrence of such event, certain investors had an option from prior agreements from November 2008 through January 2009 to purchase additional shares and warrants. Accordingly, certain investors purchased in July 2009, 1,058,708 shares of common stock at a purchase price of \$0.75 per share, for an aggregate purchase price of \$794, and warrants to purchase up to an additional 1,058,708 shares of common stock with an exercise price of \$1.50 per share. The warrants are exercisable for a period of 4 years and six months commencing six months following the issuance.

x. On October 12, 2009, certain institutional investors purchased 2,702,822 shares of the Company's common stock and warrants to purchase 1,081,129 shares of common stock. The price per share of common stock was \$1.12, and the exercise price of the warrants was \$1.60 per share. The warrants will be exercisable for a period of five years commencing six months following the issuance thereof. The gross proceeds received from this offering were approximately \$3,027. Total cash costs related to this placement amounted to \$242.

y. On April 27, 2010, the Company closed a private placement pursuant to which it sold to certain investors 2,393,329 shares of common stock and warrants to purchase 717,999 shares of common stock and 717,999 shares of common stock, at exercise prices per share of \$1.25 (the "\$1.25 Warrants") and \$1.40 (the "\$1.40 Warrants"), respectively. The price per share of common stock was \$1.12. The aggregate gross proceeds from the sale of the common stock and the warrants were \$2,681. The warrants are exercisable six months following the issuance thereof, for a period of two and a half years and five years thereafter for the \$1.25 Warrants and the \$1.40 Warrants, respectively.

The Company paid a transaction fee to finders in an amount of \$54 in cash and issued them warrants exercisable at an exercise price of \$1.12 per share to purchase 146,144 shares of the Company's common stock.

z. On October 18, 2010, the Company closed a private placement, pursuant to which the Company sold 4,375,000 shares of the Company's common stock at a price of \$1.20 per share and warrants to purchase 2,625,000 shares of common Stock, at an exercise price per share of \$1.80. No separate consideration was paid for the warrants. The warrants have a term of four years and are exercisable starting six months following the issuance thereof. The aggregate gross proceeds from the sale of the shares and the warrants were \$5,250.

The Company paid a transaction fee to finders in an amount of \$244 in cash and issued them warrants to purchase 151,050 shares of the Company's common stock.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

z. (Cont.):

In connection with the purchase agreements, the Company agreed to file a resale registration statement with the Securities and Exchange Commission covering the shares and the shares of common stock issuable upon the exercise of the warrants within 60 days from closing. The registration statement was filed and on December 10, 2010 it became effective.

aa. 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, 2007.

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			Six months ended December 31, 2010	
			Year ended June 30,				
			2008	2009	2010		
July – December 2007	10,000	\$ 149	\$ 149	\$ -	\$ -	\$ -	
February – July 2008	7,500	18	18	-	-	-	
March - September 2008	3,500	8	6	2	-	-	
April – June 2008	50,000	102	102	-	-	-	
July 2008 – June 2009	16,129	10	-	10	-	-	
July – September 2008	40,000	46	-	46	-	-	
October 2008	750	1	-	1	-	-	
October 2008	20,000	12	-	12	-	-	
December 2008 – November 2009	50,000	24	-	14	10	-	
February – July 2009	9,510	12	-	12	-	-	
February – April 2009	30,000	32	-	32	-	-	
April 2009	3,500	4	-	4	-	-	
July 2009	1,929	3	-	-	3	-	
July – December 2010	60,000	78	-	-	-	78	
Total	302,818	\$ 499	\$ 275	\$ 133	\$ 13	\$ 78	

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

bb. 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.

Each option granted under the 2005 Plan, as it was amended and restated on January 21, 2009, is exercisable through the expiration date of the 2005 Plan, which is December 31, 2018, unless stated otherwise. The Awards vest over two years from the date of grant, as follows: 25% vests six months after the date of grant, and the remaining Awards vest monthly, in equal instalments over 18 months unless other vesting schedules are specified. Any Awards that are cancelled or forfeited before expiration become available for future grants.

As of December 31, 2010, the number of shares of common stock authorized for issuance under the 2005 Plan amounted to 7,273,296. 305,447 shares are still available for future grant under the 2005 Plan as of December 31, 2010. Under the 2003 Plan 20,500 options are authorized for issuance, and 12,870 options are still available for future grant.

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. A summary of the Company's share option activity for options granted to employees and directors under the Plans is as follows:

	Six months ended December 31, 2010			
	Number	Weighted Average Exercise Price	Remaining Contractual Terms (in years)	Aggregate Intrinsic Value Price
Options outstanding at beginning of period	2,351,919	\$ 3.73		
Options forfeited	(7,108)	1.16		
Options exercised	(5,000)	1.04		
Options outstanding at end of the period	2,339,811	\$ 3.74	6.13	\$ 494
Options exercisable at the end of the period	2,339,374	\$ 3.74	6.12	\$ 494
Options vested and expected to vest	2,339,789	\$ 3.74	6.13	\$ 494

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

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

a. Options to employees and directors (cont.):

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 December 31, 2010. 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:

	Six months ended		Three months ended		Period from inception through December 31, 2010	
	December 31,		December 31,			
	2010	2009	2010	2009		
Research and development expenses	\$ 3	\$ 52	\$ 1	\$ 20	\$ 2,583	
General and administrative expenses	4	114	-	42	5,540	
	\$ 7	\$ 166	\$ 1	\$ 62	\$ 8,123	

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

bb. 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:

	Six months ended December 31, 2010			
	Number	Weighted Average Exercise Price	Remaining Contractual Terms (in years)	Aggregate Intrinsic Value Price
Options and warrants outstanding at beginning of period	389,750	\$ 3.97		
Options and warrants forfeited	(28,750)	\$ 2.75		
Options and warrants outstanding at end of the period	361,000	\$ 4.06	5.96	\$ 152
Options and warrants exercisable at the end of the period	334,761	\$ 4.38	5.76	\$ 114
Options and warrants vested and expected to vest	361,000	\$ 4.06	5.96	\$ 152

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

	Six months ended December 31,		Three months ended December 31,		Period from inception through December 31, 2010
	2010	2009	2010	2009	
	\$ 17	\$ 61	\$ 7	\$ 31	
Research and development expenses	\$ 17	\$ 61	\$ 7	\$ 31	\$ 1,623
General and administrative expenses	1	62	-	19	802
	<u>\$ 18</u>	<u>\$ 123</u>	<u>\$ 7</u>	<u>\$ 50</u>	<u>\$ 2,425</u>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

bb. 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:

On August 12, 2010, the Company's Compensation Committee approved a grant of total 270,000 restricted shares to two of the Company's officers as a bonus. The shares became fully vested upon meeting a certain milestone.

On October 28, 2010, the Company's Audit Committee approved a grant of total 1,453,000 restricted stock units to the Company's employees and directors.

The following table summarizes the activities for unvested restricted stock units and restricted stock granted to employees and directors for the six months ended December 31, 2010:

	Number
Unvested at the beginning of period	1,356,665
Granted	1,723,000
Forfeited	(33,724)
Vested	(895,725)
Unvested at the end of the period	2,150,216
Expected to vest after December 31, 2010	<u>2,090,947</u>

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

	Six months ended December 31,		Three months ended December 31,		Period from inception through December 31, 2010
	2010	2009	2010	2009	
	\$ 417	\$ 204	\$ 282	\$ 84	
Research and development expenses	\$ 417	\$ 204	\$ 282	\$ 84	\$ 1,249
General and administrative expenses	821	325	588	147	1,988
	<u>\$ 1,238</u>	<u>\$ 529</u>	<u>\$ 870</u>	<u>\$ 231</u>	<u>\$ 3,237</u>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

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

d. Restricted stock and restricted stock units to consultants:

During the six months ended December 31, 2010, the Company granted to several consultants and service providers restricted stock and restricted stock units.

The following table summarizes the activities for unvested restricted stock units and restricted stock granted to consultants for the six months ended December 31, 2010:

	Number
Unvested at the beginning of period	73,261
Granted	225,106
Forfeited	-
Vested	(125,401)
Unvested at the end of the period	172,966
Expected to vest after December 31, 2010	172,966

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

	Six months ended December 31,		Three months ended December 31,		Period from inception through December 31, 2010
	2010	2009	2010	2009	
	\$	\$	\$	\$	
Research and development expenses	\$ 74	\$ 27	\$ 50	\$ 10	\$ 166
General and administrative expenses	127	-	74	-	177
	<u>\$ 201</u>	<u>\$ 27</u>	<u>\$ 124</u>	<u>\$ 10</u>	<u>\$ 343</u>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

cc. Summary of warrants and options:

A summary of all the warrants and options outstanding as of December 31, 2010 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	2.92
	\$ 1.12	146,144	146,144	1.70
	\$ 1.20	105,217	31,100	3.21
	\$ 1.25 - 1.28	817,999	817,999	2.00
	\$ 1.40 - \$ 1.50	1,914,185	1,914,185	3.80
	\$ 1.60	1,081,129	1,081,129	4.28
	\$ 1.80 - \$ 1.96	5,649,221	3,024,221	3.46
	\$ 2.50	81,898	81,898	1.47
	\$ 5.00	2,394,585	2,394,585	1.49
Total warrants		14,250,350	11,551,233	
Options:				
	\$ 0.00	90,000	63,761	8.54
	\$ 0.62	579,555	579,118	7.50
	\$ 1.04	85,006	85,006	7.17
	\$ 2.97	20,000	20,000	7.36
	\$ 3.50	1,020,761	1,020,761	5.47
	\$ 3.72 - \$ 3.80	36,116	36,116	5.23
	\$ 4.00	42,500	42,500	5.80
	\$ 4.38 - \$ 4.40	480,407	480,407	6.15
	\$ 6.80	36,250	36,250	6.87
	\$ 8.20	48,547	48,547	4.86
	\$ 20.00	146,669	146,669	5.32
Total options		2,585,811	2,559,135	
Total warrants and options		16,836,161	14,110,368	

This summary does not include 2,132,036 restricted stock units that are not vested as of December 31, 2010.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 4: - SUBSEQUENT EVENTS

a. During January 2011, 1,754,560 warrants were exercised in consideration for \$3,082, and 570,982 warrants were exercised on a cashless basis for 287,231 shares of common stock.

b. On February 1, 2011, the Company closed a public offering of 11,000,000 units, with each unit consisting of one share of the Company's common stock and one warrant to purchase 0.4 of a share of common stock, at a purchase price of \$3.25 per unit. The warrants in the offering will generally be exercisable for a period of five years commencing 6 months following issuance, at an exercise price of \$4.20 per share. The Company granted the underwriters a 30-day option to purchase from the Company up to an additional 1,650,000 shares of common stock and/or warrants to purchase up to 660,000 shares of common stock to cover over-allotments, if any. The underwriters exercised their overallotment option in full thereby increasing the number of units sold by the company by additional 1,650,000. The net proceeds to the Company are expected to be approximately \$38,000, assuming no exercise of the warrants and after deducting underwriting commissions and discounts and estimated expenses payable by the company associated with the offering.

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 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, 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, our outlook for the coming months 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, 2010. 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 bio-therapeutics company dedicated to the commercialization of non-personalized (allogeneic) cell therapy products for the treatment of several severe degenerative, ischemic and autoimmune disorders. We are developing a pipeline of products, stored ready-to-use, that are derived from human placenta, a non-controversial, non-embryonic, adult stromal cell source. The placental adherent stromal cells, or ASCs, are grown in the company's proprietary PluriX™ three-dimensional bioreactor, which imitates the natural microstructure of the body.

Our first product in development, PLX-PAD, is intended to improve the quality of life of millions of people suffering from peripheral artery disease, or PAD.

We are currently focusing on clinical indications that the route of administration is intramuscular, which means that the cells are administrated locally to the muscle and not systemically. This route of administration may be applicable for several different indications, such as: PAD, critical limb ischemia, or CLI, intermittent claudication, or IC, neuropathic pain, wound healing and orthopedic injuries. In addition, we have reported our pre-clinical studies utilizing our proprietary PLX during the systemic administration in treating for multiple sclerosis, ischemic stroke, and inflammatory bowel disease.

Recent Developments

On December 12, 2010, the Tel-Aviv Stock Exchange, or the TASE, approved the listing of our shares of common stock for trading on the TASE beginning on December 19, 2010, under the ticker symbol PLTR.

We announced on January 18, 2011 that we successfully completed a parallel scientific advisory process with the European Medical Agencies, or the EMA, and the U.S. Food and Drug Administration, or the FDA, regarding our planned clinical development program for PLX-PAD.

We plan to conduct two clinical studies of PLX-PAD, and to file the necessary regulatory documentation requesting the joint approval of the FDA-EMA for a Phase II/III study of PLX-PAD for CLI and a joint approval of the FDA and the Paul Ehrlich Institute (PEI) in Germany to conduct a Phase II study for IC.

In February 2011 we raised approximately \$38 million in a firm commitment underwritten public offering. See 'Liquidity and Capital Resources'.

Other Information

We have not generated revenues since our inception. Historically, we have relied on private placement issuances and public offerings of equity, as well as on governmental grants, to fund our operations.

We do not expect to generate revenues from sales of products in the next 12 months, and therefore we plan to continue to finance our operations from our existing cash resources and governmental grants. Cash used for operations will be affected by numerous known and unknown risks and uncertainties including, but not limited to, our ability to successfully develop and commercialize our products and the degree to which competitive products are introduced to the market. Our products will likely not be ready for sale for at least three years, if at all. We believe that the funds we have, which include net proceeds of approximately \$5 million from a private placement that we closed in October, 2010, or the October 2010 Offering, and approximately \$38 million from a public offering that we closed in February, 2011, together with an approved R&D grant from the Israeli Office of Chief Scientist, or the OCS, will be sufficient for operating until at least the end of calendar year of 2013. As long as our cash flows from operations remain insufficient to fund operations, we will continue depleting our financial resources and seeking additional capital through governmental grants or equity financing. If we raise additional funds through the issuance of equity, the percentage ownership of the company held by existing stockholders will be reduced and those stockholders may experience significant dilution. In addition, new securities may contain rights, preferences or privileges that are senior to those of our common stock.

RESULTS OF OPERATIONS – SIX AND THREE MONTHS ENDED DECEMBER 31, 2010 COMPARED TO SIX AND THREE MONTHS ENDED DECEMBER 31, 2009.

We have not generated any revenues, and we have negative cash flow from operations of \$25,357,000 and have accumulated a deficit of \$44,615,000 since our inception in May 2001. This negative cash flow is mostly attributable to research and development, clinical studies and general and administrative expenses. We estimate our operating cash expenses, net of OCS participation, in the next 12 months will be approximately \$8,000,000.

Research and Development

Research and development expenses, net of participation of the OCS, for the six months ended December 31, 2010 increased by 42% from \$1,814,000 for the six months ended December 31, 2009 to \$2,576,000. This increase is attributed to the increase in our research and development activity and the progress of our clinical studies, including hiring 8 new employees since December 2009.

Research and development expenses, net of participation of the OCS, for the three months ended December 31, 2010 increased by 67% from \$947,000 for the three months ended December 31, 2009 to \$1,578,000. This increase is attributed to the increase in our research and development activity and the progress of our clinical studies, including hiring 8 new employees since December 2009.

General and Administrative

General and administrative expenses for the six months ended December 31, 2010 increased by 22% from \$1,645,000 for the six months ended December 31, 2009 to \$2,002,000 mainly due to stock-based compensation expenses which increased in approximately \$300,000.

General and administrative expenses for the three months ended December 31, 2010 increased by 42% from \$875,000 for the three months ended December 31, 2009 to \$1,246,000 due to an increase in stock-based compensation expenses.

Financial Income, net

Financial income increased from \$11,000 for the six months ended December 31, 2009 to \$68,000 for the six months ended December 31, 2010 due to exchange rate adjustments.

Financial income increased from an expense of \$9,000 for the three months ended December 31, 2009 to income of \$3,000 for the three months ended December 31, 2010 also due to exchange rate adjustments.

Net Loss

Net loss for the six and three months ended December 31, 2010 was \$4,510,000 and \$2,821,000, respectively, as compared to net loss of \$3,448,000 and \$1,831,000 for the six and three months ended December 31, 2009, respectively. Net loss per share for the six and three months ended December 31, 2010 was \$0.20 and \$0.11, respectively, as compared to \$0.22 and \$0.10 for the six and three months ended December 31, 2009.

Liquidity and Capital Resources

As of December 31, 2010, total current assets were \$5,531,000 and total current liabilities were \$1,479,000. On December 31, 2010, we had a working capital surplus of \$4,052,000 and an accumulated deficit of \$44,615,000. We finance our operations and plan to continue doing so from our existing cash, funds from grants from the OCS and issuances of our securities.

Cash and cash equivalents as of December 31, 2010 amounted to \$4,739,000. This is an increase of \$3,156,000 from the \$1,583,000 reported as of June 30, 2010. Cash balances increased in the six months ended December 31, 2010 for the reasons presented below.

Operating activities used cash of \$2,219,000 in the six months ended December 31, 2010. Cash used by operating activities in the six months ended December 31, 2010 primarily consisted of payments of salaries to our employees, and payments of fees to our consultants, subcontractors and professional services providers including costs of the clinical studies, less research and development grants by the OCS.

Investing activities provided cash of \$367,000 in the six months ended December 31, 2010. The investing activities consisted primarily of repayments of short-term deposits, offset by investments in equipment for our R&D facilities and construction of a new research lab.

Financing activities generated cash of \$5,008,000 during the six months ended December 31, 2010. Substantially all of such amount is attributable to the October 2010 Offering.

On October 18, 2010, we closed the October 2010 Offering, pursuant to which we sold 4,375,000 shares of our common stock at a price of \$1.20 per share and warrants to purchase 2,625,000 shares of common stock, at an exercise price per share of \$1.80. No separate consideration was paid for the warrants. The warrants have a term of four years and are exercisable starting six months following the issuance thereof. The aggregate net proceeds from the sale of the shares and the warrants were approximately \$5,006,000.

In connection with the October 2010 Offering, we paid a transaction fee to finders in an amount of \$244,000 in cash and issued them warrants to purchase 151,050 shares of our common stock. We also agreed to file a resale registration statement with the Securities and Exchange Commission covering the shares and the shares of common stock issuable upon the exercise of the warrants within 60 days from closing. The registration statement was filed and on December 10, 2010 it became effective.

On February 1, 2011, we closed a firm commitment underwritten public offering of 11,000,000 units, with each unit consisting of one share of our common stock and one warrant to purchase 0.4 of a share of common stock, at a purchase price of \$3.25 per unit. The warrants in the offering will generally be exercisable for a period of five years commencing 6 months following issuance, at an exercise price of \$4.20 per share. Also, on February 1, 2011 we closed the exercise by the underwriters of their full overallotment option to purchase an additional 1,650,000 shares of common stock and warrants to purchase 660,000 shares of common stock. The net proceeds to us were approximately \$38 million, after deducting underwriting commissions and discounts and estimated expenses payable by us associated with the offering.

During January 2011, 1,754,560 warrants were exercised in consideration for \$3,082,190, and 570,982 warrants were exercised on a cashless basis for 287,231 shares of stock.

During the six months ended December 31, 2010 we received approximately \$1,286,000 from the OCS towards our R&D expenses. The OCS has supported our activity in the past five years. Our current program approved by the OCS is for the period March 2010 until February 2011. On March 2011 we plan to file an application for a sixth year program. There is no assurance that the OCS will approve a grant for another year's R&D activity, the amount of the grant is also not certain.

We believe that the funds we have, together with the approved R&D grant from the OCS, will be sufficient for operating until at least the end of calendar year of 2013.

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 an effective shelf registration statement which we used in a recent public offering we made and may continue to use in the future to raise additional funds.

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 second quarter of fiscal 2011 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

In October 2010 we issued 80,000 restricted stock units to a company controlled by one of our directors in connection with compensation for such director's services to us.

In November 2010, we issued 60,000 shares to an investor relations consultant as partial consideration for services the consultant provides to the company.

All of the above issuances and sales were exempt under Section 4(2) of the Securities Act of 1933, as amended.

Item 6. Exhibits.

- 4.1 Form of Common Stock Purchase Warrant dated October 18, 2010 issued by the Registrant (incorporated by reference to Exhibit 4.1 of our current report on Form 8-K filed October 12, 2010).
- 4.2* Warrant Agreement dated February 1, 2011, by and between the registrant and American Stock Transfer & Trust Company, LLC (including the form of Warrant certificate).
- 10.1 Form of Regulation D Securities Purchase Agreement dated October 11, 2010 for Common Stock and Warrants of the Registrant (incorporated by reference to Exhibit 10.1 of our current report on Form 8-K filed October 12, 2010).
- 10.2 Form of Regulation S Securities Purchase Agreement dated October 12, 2010 for Common Stock and Warrants of the Registrant (incorporated by reference to Exhibit 10.2 of our current report on Form 8-K filed October 12, 2010).
- 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.

*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: February 9, 2011

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

WARRANT AGREEMENT

WARRANT AGREEMENT made as of February 1, 2011 ("Issuance Date"), between Pluristem Therapeutics Inc., a Nevada corporation ("Company"), and American Stock Transfer & Trust Company, LLC, a New York limited liability trust company ("Warrant Agent").

WHEREAS, the Company has sold units ("Units"), each consisting of one share of common stock ("Common Stock") of the Company and 0.4 of a warrant, each whole warrant evidencing the right of the holder thereof to purchase one share of Common Stock for \$4.20, subject to adjustment as described herein (the "Warrants"), pursuant to an Underwriting Agreement between the Company and Oppenheimer & Co, Inc., as Representative of the Underwriters (the "Underwriting Agreement"), dated January 27, 2011; and

WHEREAS, the Units and the shares issuable upon exercise of the Warrants ("Warrant Shares") were issued by the Company in a public offering pursuant to an effective shelf registration statement on Form S-3, Registration No. 333-171334 ("Registration Statement") filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended ("Act"); and

WHEREAS, the Company desires the Warrant Agent to act on behalf of the Company, and the Warrant Agent is willing to so act, in connection with the issuance, registration, transfer, exchange and exercise of the Warrants; and

WHEREAS, the Company desires to provide for the form and provisions of the Warrants, the terms upon which they shall be issued and exercised, and the respective rights, limitation of rights, and immunities of the Company, the Warrant Agent, and the holders of the Warrants; and

WHEREAS, all acts and things have been done and performed which are necessary to make the Warrants, when executed on behalf of the Company and countersigned by or on behalf of the Warrant Agent, as provided herein, the valid, binding and legal obligations of the Company, and to authorize the execution and delivery of this Warrant Agreement.

NOW, THEREFORE, in consideration of the mutual agreements herein contained, the parties hereto agree as follows:

1. Appointment of Warrant Agent. The Company hereby appoints the Warrant Agent to act as agent for the Company for the Warrants, and the Warrant Agent hereby accepts such appointment and agrees to perform the same in accordance with the terms and conditions set forth in this Warrant Agreement.

2. Warrants.

2.1 Form of Warrant. Each Warrant shall be issued in registered form only, shall be in substantially the form of Exhibit A hereto, the provisions of which are incorporated herein, and shall be signed by, or bear the facsimile signature of, the Chairman of the Board or President and Treasurer, Secretary or Assistant Secretary of the Company, and shall bear a facsimile of the Company's seal, if any. In the event the person whose facsimile signature has been placed upon any Warrant shall have ceased to serve in the capacity in which such person signed the Warrant before such Warrant is issued, it may be issued with the same effect as if he or she had not ceased to be such at the date of issuance.

2.2. Effect of Countersignature. Unless and until countersigned by the Warrant Agent pursuant to this Warrant Agreement, a Warrant shall be invalid and of no effect and may not be exercised by the holder thereof.

2.3. Registration.

2.3.1. Warrant Register. The Warrant Agent shall maintain books ("Warrant Register"), for the registration of original issuance and the registration of transfer of the Warrants. Upon the initial issuance of the Warrants, the Warrant Agent shall issue and register the Warrants in the names of the respective holders thereof in such denominations and otherwise in accordance with instructions delivered to the Warrant Agent by the Company. The Warrants may be represented by definitive Warrant Certificates in physical form or by one or more book-entry warrant certificates ("Book-Entry Warrant Certificates") deposited with the Depository Trust Company (the "Depository") and registered in the name of Cede & Co., a nominee of the Depository. Definitive Warrant Certificates shall be in substantially the form annexed hereto as Exhibit A. Ownership of beneficial interests in the Book-Entry Warrant Certificates shall be shown on, and the transfer of such ownership shall be effected through, records maintained (i) by the Depository or its nominee for each Book-Entry Warrant Certificate; (ii) by institutions that have accounts with the Depository (such institution, with respect to a Warrant in its account, a "Participant"); or (iii) directly on the book-entry records of the Warrant Agent with respect only to owners of beneficial interests that request such direct registration.

If the Depository subsequently ceases to make its book-entry settlement system available for the Warrants, the Company may instruct the Warrant Agent regarding making other arrangements for book-entry settlement within ten (10) days after the Depository ceases to make its book-entry settlement available. In the event that the Company does not make alternative arrangements for book-entry settlement within ten (10) days or the Warrants are not eligible for, or it is no longer necessary to have the Warrants available in, book-entry form, the Warrant Agent shall provide written instructions to the Depository to deliver to the Warrant Agent for cancellation each Book-Entry Warrant Certificate, and the Company shall instruct the Warrant Agent to deliver to the Depository definitive Warrant Certificates in physical form evidencing such Warrants.

2.3.2. Beneficial Owner; Registered Holder. The term "beneficial owner" shall mean any person in whose name ownership of a beneficial interest in the Warrants evidenced by (a) a Book-Entry Warrant Certificate is recorded in the records maintained by the Depository or its nominee or (b) a definitive Warrant Certificate is recorded in the book-entry records of the Warrant Agent. Prior to due presentment for registration of transfer of any Warrant, the Company and the Warrant Agent may deem and treat the person in whose name such Warrant shall be registered upon the Warrant Register ("registered holder"), as the absolute owner of such Warrant and of each Warrant represented thereby (notwithstanding any notation of ownership or other writing on the Warrant Certificate made by anyone other than the Company or the Warrant Agent), for the purpose of any exercise thereof, and for all other purposes, and neither the Company nor the Warrant Agent shall be affected by any notice to the contrary.

2.4. Detachability of Warrants. The securities comprising the Units will be issued separately and will be separately transferable immediately upon issuance.

2.5. Uncertificated Warrants. Notwithstanding the foregoing and anything else herein to the contrary, the Warrants may be issued in uncertificated form if so specified by the Company.

3. **Terms and Exercise of Warrants.**

3.1. **Exercise Price.** Each Warrant shall, when countersigned by the Warrant Agent, entitle the registered holder thereof, subject to the provisions of such Warrant and of this Warrant Agreement, to purchase from the Company the number of shares of Common Stock stated therein, at the price of \$4.20 per whole share, subject to the adjustments provided in Section 4 hereof. The term "Exercise Price" as used in this Warrant Agreement refers to the price per share at which Common Stock may be purchased at the time a Warrant is exercised.

3.2. **Duration of Warrants.** A Warrant may be exercised only during the period ("Exercise Period") commencing on August 1, 2011 (the "Initial Date") and terminating at 5:00 P.M., Eastern time on the fifth yearly anniversary of the Initial Date ("Expiration Date"). Each Warrant not exercised on or before the Expiration Date shall become void, and all rights thereunder and all rights in respect thereof under this Warrant Agreement shall cease at the close of business on the Expiration Date.

3.3. **Exercise of Warrants.**

3.3.1. **Exercise and Payment.** A registered holder may exercise a Warrant by delivering, not later than 5:00 P.M., Eastern time, on any Business Day during the Exercise Period (the "Exercise Date") to the Warrant Agent at its corporate trust department (i) the Warrant Certificate evidencing the Warrants to be exercised, or, in the case of a Book-Entry Warrant Certificate, the Warrants to be exercised (the "Book-Entry Warrants") free on the records of the Depository to an account of the Warrant Agent at the Depository designated for such purpose in writing by the Warrant Agent to the Depository from time to time, (ii) an election to purchase the Shares underlying the Warrants to be exercised ("Election to Purchase"), properly completed and executed by the registered holder on the reverse of the Warrant Certificate or, in the case of a Book-Entry Warrant Certificate, properly delivered by the Participant in accordance with the Depository's procedures, and (iii), except as provided in 3.3.8, the Warrant Price for each Warrant to be exercised in lawful money of the United States of America by certified or official bank check or by bank wire transfer in immediately available funds.

If any of (A) the Warrant Certificate or the Book-Entry Warrants, (B) the Election to Purchase, or (C) the Warrant Price therefor, is received by the Warrant Agent after 5:00 P.M., Eastern time, on the specified Exercise Date, the Warrants will be deemed to be received and exercised on the Business Day next succeeding the Exercise Date. If the date specified as the Exercise Date is not a Business Day, the Warrants will be deemed to be received and exercised on the next succeeding day that is a Business Day. If the Warrants are received or deemed to be received after the Expiration Date, the exercise thereof will be null and void and any funds delivered to the Warrant Agent will be returned to the registered holder or Participant, as the case may be, as soon as practicable. In no event will interest accrue on funds deposited with the Warrant Agent in respect of an exercise or attempted exercise of Warrants. The validity of any exercise of Warrants will be determined by the Company in its sole discretion and such determination will be final and binding upon the registered holder and the Warrant Agent. Neither the Company nor the Warrant Agent shall have any obligation to inform a registered holder of the invalidity of any exercise of Warrants.

The Warrant Agent shall deposit all funds received by it in payment of the Warrant Price in the account of the Company maintained with the Warrant Agent for such purpose and shall advise the Company at the end of each day on which funds for the exercise of the Warrants are received of the amount so deposited to its account. The Warrant Agent shall promptly confirm such telephonic advice to the Company in writing.

3.3.2. Issuance of Certificates. The Warrant Agent shall, within a reasonable time, advise the Company and the transfer agent and registrar in respect of (a) the Shares issuable upon such exercise as to the number of Warrants exercised in accordance with the terms and conditions of this Agreement, (b) the instructions of each registered holder or Participant, as the case may be, with respect to delivery of the Warrant Shares issuable upon such exercise, and the delivery of definitive Warrant Certificates, as appropriate, evidencing the balance, if any, of the Warrants remaining after such exercise, (c) in case of a Book-Entry Warrant Certificate, the notation that shall be made to the records maintained by the Depository, its nominee for each Book-Entry Warrant Certificate, or a Participant, as appropriate, evidencing the balance, if any, of the Warrants remaining after such exercise and (d) such other information as the Company or such transfer agent and registrar shall reasonably require.

The Company shall, by 5:00 P.M., Eastern time, on the third Business Day next succeeding the Exercise Date of any Warrant and the clearance of the funds in payment of the Warrant Price (the "Warrant Shares Delivery Date"), execute, issue and deliver to the Warrant Agent, the Warrant Shares to which such registered holder or Participant, as the case may be, is entitled, in fully registered form, registered in such name or names as may be directed by such registered holder or the Participant, as the case may be. Upon receipt of such Warrant Shares, the Warrant Agent shall, by 5:00 P.M., Eastern Time, on the third Business Day next succeeding such Exercise Date, transmit such Warrant Shares to or upon the order of the registered holder or Participant, as the case may be.

In lieu of delivering physical certificates representing the Warrant Shares issuable upon exercise, provided the Company's transfer agent is participating in the Depository's Fast Automated Securities Transfer program, the Company shall use its reasonable best efforts to cause its transfer agent to electronically transmit the Warrant Shares issuable upon exercise to the registered holder or the Participant by crediting the account of the registered holder's prime broker with the Depository or of the Participant through its Deposit Withdrawal Agent Commission system. The time periods for delivery described in the immediately preceding paragraph shall apply to the electronic transmittals described herein.

If the Warrant Agent fails to comply with the preceding paragraphs in this Section 3.3.2 by the Warrant Shares Delivery Date, then the registered holder will have the right to rescind its exercise.

3.3.3. Valid Issuance. All shares of Common Stock issued upon the proper exercise of a Warrant in conformity with this Warrant Agreement shall be validly issued, fully paid and nonassessable.

3.3.4. Dividends. The accrual of dividends, if any, on the Warrant Shares issued upon the valid exercise of any Warrant will be governed by the terms generally applicable to the Common Stock. From and after the issuance of such Warrant Shares, the former holder of the Warrants exercised will be entitled to the benefits generally available to other holders of Common Stock and such former holder's right to receive payments of dividends and any other amounts payable in respect of the Warrant Shares shall be governed by, and shall be subject to, the terms and provisions generally applicable to the Common Stock.

3.3.5 No Fractional Exercise. No fractional Warrant Shares shall be issued upon the exercise of any Warrant. As to any fraction of a Warrant Share which the registered holder would otherwise be entitled to purchase upon such exercise, the Company shall pay a cash adjustment in respect of such fraction in an amount equal to such fraction multiplied by the Fair Market Value (as calculated below) less the Exercise Price. If fewer than all of the Warrants evidenced by a Warrant Certificate are exercised, a new Warrant Certificate for the number of unexercised Warrants remaining shall be executed by the Company and countersigned by the Warrant Agent as provided in Section 2 of this Agreement, and delivered to the holder of this Warrant Certificate at the address specified on the books of the Warrant Agent or as otherwise specified by such registered holder. If fewer than all the Warrants evidenced by a Book-Entry Warrant Certificate are exercised, a notation shall be made to the records maintained by the Depository, its nominee for each Book-Entry Warrant Certificate, or a Participant, as appropriate, evidencing the balance of the Warrants remaining after such exercise.

3.3.6 No Transfer Taxes. The Company shall not be required to pay any stamp or other tax or governmental charge required to be paid in connection with any transfer involved in the issue of the Warrant Shares upon the exercise of Warrants; and in the event that any such transfer is involved, the Company shall not be required to issue or deliver any Warrant Shares until such tax or other charge shall have been paid or it has been established to the Company's satisfaction that no such tax or other charge is due.

3.3.7 Date of Issuance. Each person in whose name any such certificate for shares of Common Stock is issued shall for all purposes be deemed to have become the holder of record of such shares on the date on which the Warrant was surrendered and payment of the Warrant Price was made, irrespective of the date of delivery of such certificate, except that, if the date of such surrender and payment is a date when the stock transfer books of the Company are closed, such person shall be deemed to have become the holder of such shares at the close of business on the next succeeding date on which the stock transfer books are open.

3.3.8 Optional Cashless Exercise. If at any time during the term of this Warrant there is no effective Registration Statement registering, or no current prospectus available for, the issuance or resale of the Warrant Shares by the registered holder, then this Warrant may also be exercised at such time by means of a "cashless exercise" in which the registered holder shall be entitled to receive a certificate for the number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

- (A) = the VWAP (as defined below) on the Trading Day immediately preceding the date of such election;
- (B) = the Exercise Price of this Warrant, as adjusted; and
- (X) = the number of Warrant Shares issuable upon exercise of this Warrant in accordance with the terms of this Warrant by means of a cash exercise rather than a cashless exercise.

The term "VWAP" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market (as defined below), the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (Eastern time), (b) if the OTC Bulletin Board is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the OTC Bulletin Board, (c) if the Common Stock is not then listed or quoted for trading on the OTC Bulletin Board and if prices for the Common Stock are then reported in the "Pink Sheets" published by Pink Sheets, LLC (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Warrant Agent and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

The term “Trading Market” means any of the following U.S. markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE, NYSE AMEX, the NASDAQ Capital Market, the NASDAQ Global Market or the NASDAQ Global Select Market (or any successors to any of the foregoing).

3.3.9 Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the Warrant Shares, the Company shall promptly issue to the registered holder the number of Warrant Shares that are not disputed.

3.3.10 Limitations on Exercise. The Warrant Agent shall not effect any exercise of this Warrant, and a registered holder shall not have the right to exercise any portion of this Warrant to the extent that after giving effect to such issuance after exercise as set forth on the applicable exercise notice, the registered holder (together with the registered holder's Affiliates, and any other person or entity acting as a group together with the registered holder or any of the registered holder's Affiliates), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the registered holder and its Affiliates shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (A) exercise of the remaining, non-exercised portion of this Warrant beneficially owned by the registered holder or any of its Affiliates and (B) exercise or conversion of the unexercised or non-converted portion of any other securities of the Company (including, without limitation, any other equity equivalent securities) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the registered holder or any of its Affiliates. Except as set forth in the preceding sentence, for purposes of this Section 3.3.10, beneficial ownership shall be calculated in accordance with Section 13(d) of the Securities Exchange Act of 1934 and the rules and regulations promulgated thereunder (the “Exchange Act”), it being acknowledged by the registered holder that the Company is not representing to the registered holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the registered holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 3.3.10 applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the registered holder together with any Affiliates) and of which portion of this Warrant is exercisable shall be in the sole discretion of the registered holder, and the submission of an exercise notice shall be deemed to be the registered holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the registered holder together with any Affiliates) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company and the Warrant Agent shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act. For purposes of this Section 3.3.10, in determining the number of outstanding shares of Common Stock, a registered holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report as the case may be, (B) a more recent public announcement by the Company or (C) any other notice by the Company or its transfer agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a registered holder, the Company shall within three (3) Business Days confirm orally and in writing to the registered holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the registered holder or its Affiliates since the date as of which such number of outstanding shares of Common Stock was reported.

The “Beneficial Ownership Limitation” shall be 4.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The registered holder, upon not less than sixty one (61) days' prior notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 1(d), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon exercise of this Warrant held by the registered holder and the provisions of this Section 3.3.10 shall continue to apply. Any such increase or decrease will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this Section 3.3.10 shall be construed, corrected and implemented in a manner so as to effectuate the intended Beneficial Ownership Limitation herein contained. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

3.4. **Buy-in Procedures and Compensation.** If a certificate representing the Warrant Shares is not delivered pursuant to the provisions of Section 3.3.2 on or prior to the Warrant Shares Delivery Date, and if after such date the registered holder is required by its broker to purchase (in an open market transaction or otherwise) or the registered holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the registered holder of the Warrant Shares which the registered holder anticipated receiving upon exercise of the Warrant (a "Buy-In"), then the Company shall (A) pay in cash to the Holder the amount by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue ~~times~~ (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder given by written notice to the Company and the Warrant Agent, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored or deliver to the Holder the number of shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. The registered holder shall provide the Company and the Warrant Agent with written notice of the cash amounts referred to in the preceding sentence and, upon request of the Company, evidence thereof. Nothing herein shall limit a registered holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver certificates representing shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

4. **Adjustments.**

4.1. **Adjustment upon Subdivision or Combination of Common Stock.** If the Company at any time on or after the Subscription Date subdivides (by any stock split, stock dividend, recapitalization, reorganization, scheme, arrangement or otherwise) one or more classes of its outstanding shares of Common Stock into a greater number of shares, the Exercise Price in effect immediately prior to such subdivision will be proportionately reduced and the number of Warrant Shares will be proportionately increased. If the Company at any time on or after the Subscription Date combines (by any stock split, stock dividend, recapitalization, reorganization, scheme, arrangement or otherwise) one or more classes of its outstanding shares of Common Stock into a smaller number of shares, the Exercise Price in effect immediately prior to such combination will be proportionately increased and the number of Warrant Shares will be proportionately decreased. Any adjustment under this Section 4.1 shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.2. **Subsequent Rights Offerings.** If the Company, at any time while the Warrant is outstanding, shall issue rights, options or warrants to all holders of Common Stock (and not to the registered holders of the Warrants) entitling them to subscribe for or purchase shares of Common Stock at a price per share less than the VWAP at the record date mentioned below, then the Exercise Price shall be multiplied by a fraction, of which the denominator shall be the number of shares of the Common Stock outstanding on the date of issuance of such rights or warrants plus the number of additional shares of Common Stock offered for subscription or purchase, and of which the numerator shall be the number of shares of the Common Stock outstanding on the date of issuance of such rights or warrants plus the number of shares which the aggregate offering price of the total number of shares so offered (assuming receipt by the Company in full of all consideration payable upon exercise of such rights, options or warrants) would purchase at such VWAP. Such adjustment shall be made whenever such rights or warrants are issued, and shall become effective immediately after the record date for the determination of stockholders entitled to receive such rights, options or warrants.

4.3. **Pro Rata Distributions.** If the Company, at any time while this Warrant is outstanding, shall distribute to all holders of Common Stock (and not to the registered holders of the Warrants) evidences of its indebtedness or assets (including cash and cash dividends) or rights or warrants to subscribe for or purchase any security other than the Common Stock, then in each such case the Exercise Price shall be adjusted by multiplying the Exercise Price in effect immediately prior to the record date fixed for determination of stockholders entitled to receive such distribution by a fraction of which the denominator shall be the VWAP determined as of the record date mentioned above, and of which the numerator shall be such VWAP on such record date less the then per share fair market value at such record date of the portion of such assets or evidence of indebtedness so distributed applicable to one outstanding share of the Common Stock as determined by the board of directors of the Company in good faith. In either case the adjustments shall be described in a statement provided to each registered holder of the Warrants of the portion of assets or evidences of indebtedness so distributed or such subscription rights applicable to one share of Common Stock. Such adjustment shall be made whenever any such distribution is made and shall become effective immediately after the record date mentioned above.

4.4. **Fundamental Transaction.** If, at any time while this Warrant is outstanding, (i) the Company effects any merger or consolidation of the Company with or into another person or entity, (ii) the Company effects any sale of all or substantially all of its assets in one or a series of related transactions, (iii) any tender offer or exchange offer (whether by the Company or another person or entity) is completed pursuant to which holders of Common Stock are permitted to tender or exchange their shares for other securities, cash or property or (iv) the Company effects any reclassification of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (each "Fundamental Transaction"), then, upon any subsequent exercise of this Warrant, the registered holders of the Warrants each shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the "Alternate Consideration") receivable as a result of such merger, consolidation or disposition of assets by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such event. For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. To the extent necessary to effectuate the foregoing provisions, any successor to the Company or surviving entity in such Fundamental Transaction shall issue to each registered holder of the Warrants a new warrant consistent with the foregoing provisions and evidencing such registered holder's right to exercise such warrant into Alternate Consideration. The terms of any agreement pursuant to which a Fundamental Transaction is effected shall include terms requiring any such successor or surviving entity to comply with the provisions of this Section 4.4 and ensuring that the Warrants (or any such replacement security) will be similarly adjusted upon any subsequent transaction analogous to a Fundamental Transaction. Notwithstanding anything to the contrary, in the event of a Fundamental Transaction that is (1) an all cash transaction, (2) a "Rule 13e-3 transaction" as defined in Rule 13e-3 under the Exchange Act, or (3) a Fundamental Transaction involving a person or entity not traded on a national securities exchange, the NASDAQ Global Select Market, the NASDAQ Global Market, or the NASDAQ Capital Market, the Company or any successor entity shall pay at each registered holder's option, exercisable at any time concurrently with or within 30 days after the consummation of the Fundamental Transaction, an amount of cash equal to the value of this Warrant as determined in accordance with the Black Scholes Option Pricing Model obtained from the "OV" function on Bloomberg L.P. using (A) a price per share of Common Stock equal to the VWAP of the Common Stock for the Trading Day immediately preceding the date of consummation of the applicable Fundamental Transaction, (B) a risk-free interest rate corresponding to the U.S. Treasury rate for 30 day period immediately prior to the consummation of the applicable Fundamental Transaction, (C) an expected volatility equal to the 100 day volatility obtained from the "HVT" function on Bloomberg L.P. determined as of the Trading Day immediately following the public announcement of the applicable Fundamental Transaction, and (D) a remaining option time equal to the time between the date of the public announcement of such transaction and the Termination Date.

4.5. Notices.

4.5.1. Notices of Changes in Warrant. Upon every adjustment of the Warrant Price or the number of shares issuable upon exercise of a Warrant, the Company shall give written notice thereof to the Warrant Agent, which notice shall state the Warrant Price resulting from such adjustment and the increase or decrease, if any, in the number of shares purchasable at such price upon the exercise of a Warrant, setting forth in reasonable detail the method of calculation and the facts upon which such calculation is based. Upon the occurrence of any event specified in Sections 4.1 through 4.4, then, in any such event, the Company shall give written notice to each registered holder of a Warrant, at the last address set forth for such holder in the Warrant Register, of the record date or the effective date of the event. Failure to give such notice, or any defect therein, shall not affect the legality or validity of such event.

4.5.2. Notices of Certain Events to Allow Exercise. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, of any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be mailed to each registered holder of a Warrant, at its last address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to mail such notice or any defect therein or in the mailing thereof shall not affect the validity of the corporate action required to be specified in such notice. Each registered holder of a Warrant is entitled to exercise its Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice.

4.6. **Form of Warrant.** The form of Warrant need not be changed because of any adjustment pursuant to this Section 4, and Warrants issued after such adjustment may state the same Warrant Price and the same number of shares as is stated in the Warrants initially issued pursuant to this Warrant Agreement. However, the Company may at any time in its sole discretion make any change in the form of Warrant that the Company may deem appropriate and that does not affect the substance thereof, and any Warrant thereafter issued or countersigned, whether in exchange or substitution for an outstanding Warrant or otherwise, may be in the form as so changed.

5. **Transfer and Exchange of Warrants.**

5.1. **Registration of Transfer.** The Warrant Agent shall register the transfer, from time to time, of any outstanding Warrant upon the Warrant Register, upon surrender of such Warrant for transfer, properly endorsed with signatures properly guaranteed and accompanied by appropriate instructions for transfer. Upon any such transfer, a new Warrant representing an equal aggregate number of Warrants shall be issued and the old Warrant shall be cancelled by the Warrant Agent. The Warrants so cancelled shall be delivered by the Warrant Agent to the Company from time to time upon request.

5.2. **Procedure for Surrender of Warrants.** Warrants may be surrendered to the Warrant Agent, together with a written request for exchange or transfer, and thereupon the Warrant Agent shall issue in exchange therefor one or more new Warrants as requested by the registered holder of the Warrants so surrendered, representing an equal aggregate number of Warrants; provided, however, that except as otherwise provided herein or in any Book-Entry Warrant Certificate, each Book-Entry Warrant Certificate may be transferred only in whole and only to the Depository, to another nominee of the Depository, to a successor depository, or to a nominee of a successor depository; provided further, however, that in the event that a Warrant surrendered for transfer bears a restrictive legend, the Warrant Agent shall not cancel such Warrant and issue new Warrants in exchange therefor until the Warrant Agent has received an opinion of counsel for the Company stating that such transfer may be made and indicating whether the new Warrants must also bear a restrictive legend. Upon any such registration of transfer, the Company shall execute, and the Warrant Agent shall countersign and deliver, in the name of the designated transferee a new Warrant Certificate or Warrant Certificates of any authorized denomination evidencing in the aggregate a like number of unexercised Warrants.

5.3. **Fractional Warrants.** The Warrant Agent shall not be required to effect any registration of transfer or exchange which will result in the issuance of a warrant certificate for a fraction of a warrant.

5.4. **Service Charges.** No service charge shall be made for any exchange or registration of transfer of Warrants.

5.5. **Warrant Execution and Countersignature.** The Warrant Agent is hereby authorized to countersign and to deliver, in accordance with the terms of this Warrant Agreement, the Warrants required to be issued pursuant to the provisions of this Section 5, and the Company, whenever required by the Warrant Agent, will supply the Warrant Agent with Warrants duly executed on behalf of the Company for such purpose.

6. Other Provisions Relating to Rights of Registered Holders of Warrants.

6.1. No Rights as Stockholder. Except as otherwise specifically provided herein, a registered holder, solely in its capacity as a holder of a Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant Agreement be construed to confer upon a registered holder, solely in its capacity as the registered holder of a Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the registered holder of the Warrant Shares which it is then entitled to receive upon the due exercise of a Warrant. In addition, nothing contained in this Warrant Agreement shall be construed as imposing any liabilities on a registered holder to purchase any securities (upon exercise of a Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company. A Warrant does not entitle the registered holder thereof to any of the rights of a stockholder.

6.2. Lost, Stolen, Mutilated, or Destroyed Warrants. If any Warrant is lost, stolen, mutilated, or destroyed, the Company and the Warrant Agent may on such terms as to indemnity or otherwise as they may in their discretion impose (which shall, in the case of a mutilated Warrant, include the surrender thereof), issue a new Warrant of like denomination, tenor, and date as the Warrant so lost, stolen, mutilated, or destroyed. Any such new Warrant shall constitute a substitute contractual obligation of the Company, whether or not the allegedly lost, stolen, mutilated, or destroyed Warrant shall be at any time enforceable by anyone.

6.3. Reservation of Common Stock. The Company shall at all times reserve and keep available a number of its authorized but unissued shares of Common Stock that will be sufficient to permit the exercise in full of all outstanding Warrants issued pursuant to this Warrant Agreement.

6.4. Noncircumvention. The Company hereby covenants and agrees that the Company will not, by amendment of its corporate charter, bylaws or through any reorganization, transfer of assets, consolidation, merger, scheme of arrangement, dissolution, issue or sale of securities, or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of the Warrants or this Warrant Agreement, and will at all times in good faith carry out all the provisions of the Warrants and this Warrant Agreement. Without limiting the generality of the foregoing, the Company (i) shall not increase the par value of any shares of Common Stock receivable upon the exercise of the Warrants above the Exercise Price then in effect, (ii) shall take all such actions as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable shares of Common Stock upon the exercise of the Warrants, and (iii) shall, so long as the Warrants are outstanding, take all action necessary to reserve and keep available out of its authorized and unissued shares of Common Stock, solely for the purpose of effecting the exercise of the Warrants, 100% of the number of shares of Common Stock issuable upon exercise of the Warrants then outstanding (without regard to any limitations on exercise).

7. Concerning the Warrant Agent and Other Matters.

7.1. Payment of Taxes. The Company will from time to time promptly pay all taxes and charges that may be imposed upon the Company or the Warrant Agent in respect of the issuance or delivery of shares of Common Stock upon the exercise of Warrants, but the Company shall not be obligated to pay any transfer taxes in respect of the Warrants or such shares.

7.2. Resignation, Consolidation, or Merger of Warrant Agent.

7.2.1. Appointment of Successor Warrant Agent. The Warrant Agent, or any successor to it hereafter appointed, may resign its duties and be discharged from all further duties and liabilities hereunder after giving sixty (60) days' notice in writing to the Company. If the office of the Warrant Agent becomes vacant by resignation or incapacity to act or otherwise, the Company shall appoint in writing a successor Warrant Agent in place of the Warrant Agent. If the Company shall fail to make such appointment within a period of 30 days after it has been notified in writing of such resignation or incapacity by the Warrant Agent or by the holder of the Warrant (who shall, with such notice, submit his Warrant for inspection by the Company), then the holder of any Warrant may apply to the Supreme Court of the State of New York for the County of New York for the appointment of a successor Warrant Agent at the Company's cost. Any successor Warrant Agent, whether appointed by the Company or by such court, shall be a corporation organized and existing under the laws of the State of New York, in good standing and having its principal office in the Borough of Manhattan, City and State of New York, and authorized under such laws to exercise corporate trust powers and subject to supervision or examination by federal or state authority. After appointment, any successor Warrant Agent shall be vested with all the authority, powers, rights, immunities, duties, and obligations of its predecessor Warrant Agent with like effect as if originally named as Warrant Agent hereunder, without any further act or deed; but if for any reason it becomes necessary or appropriate, the predecessor Warrant Agent shall execute and deliver, at the expense of the Company, an instrument transferring to such successor Warrant Agent all the authority, powers, and rights of such predecessor Warrant Agent hereunder; and upon request of any successor Warrant Agent the Company shall make, execute, acknowledge, and deliver any and all instruments in writing for more fully and effectually vesting in and confirming to such successor Warrant Agent all such authority, powers, rights, immunities, duties, and obligations.

7.2.2. Notice of Successor Warrant Agent. In the event a successor Warrant Agent shall be appointed, the Company shall give notice thereof to the predecessor Warrant Agent and the transfer agent for the Common Stock not later than the effective date of any such appointment.

7.2.3. Merger or Consolidation of Warrant Agent. Any corporation into which the Warrant Agent may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Warrant Agent shall be a party, or any corporation succeeding to the business of the Warrant Agent, shall be the successor Warrant Agent under this Warrant Agreement without any further act.

7.3. Fees and Expenses of Warrant Agent.

7.3.1. Remuneration. The Company agrees to pay the Warrant Agent reasonable remuneration for its services as such Warrant Agent hereunder and will reimburse the Warrant Agent upon demand for all expenditures that the Warrant Agent may reasonably incur in the execution of its duties hereunder.

7.3.2. Further Assurances. The Company agrees to perform, execute, acknowledge, and deliver or cause to be performed, executed, acknowledged, and delivered all such further and other acts, instruments, and assurances as may reasonably be required by the Warrant Agent for the carrying out or performing of the provisions of this Warrant Agreement.

7.4. Liability of Warrant Agent.

7.4.1. **Reliance on Company Statement.** Whenever in the performance of its duties under this Warrant Agreement, the Warrant Agent shall deem it necessary or desirable that any fact or matter be proved or established by the Company prior to taking or suffering any action hereunder, such fact or matter (unless other evidence in respect thereof be herein specifically prescribed) may be deemed to be conclusively proved and established by a statement signed by the President or Chairman of the Board of the Company and delivered to the Warrant Agent. The Warrant Agent may rely upon such statement for any action taken or suffered in good faith by it pursuant to the provisions of this Warrant Agreement.

7.4.2. **Indemnity.** The Warrant Agent shall be liable hereunder only for its own gross negligence, willful misconduct or bad faith. The Company agrees to indemnify the Warrant Agent and save it harmless against any and all liabilities, including judgments, costs and reasonable counsel fees, for anything done or omitted by the Warrant Agent in the execution of this Warrant Agreement except as a result of the Warrant Agent's gross negligence, willful misconduct, or bad faith.

7.4.3. **Exclusions.** The Warrant Agent shall have no responsibility with respect to the validity of this Warrant Agreement or with respect to the validity or execution of any Warrant (except its countersignature thereof); nor shall it be responsible for any breach by the Company of any covenant or condition contained in this Warrant Agreement or in any Warrant; nor shall it be responsible to make calculations under 3.3.8, 3.3.10 or any adjustments required under the provisions of Section 4 hereof or responsible for the manner, method, or amount of any such adjustment or the ascertaining of the existence of facts that would require any such adjustment; nor shall it by any act hereunder be deemed to make any representation or warranty as to the authorization or reservation of any shares of Common Stock to be issued pursuant to this Warrant Agreement or any Warrant or as to whether any shares of Common Stock will when issued be valid and fully paid and nonassessable.

7.5. **Acceptance of Agency.** The Warrant Agent hereby accepts the agency established by this Warrant Agreement and agrees to perform the same upon the terms and conditions herein set forth and among other things, shall account promptly to the Company with respect to Warrants exercised and concurrently account for, and pay to the Company, all moneys received by the Warrant Agent for the purchase of shares of Common Stock through the exercise of Warrants.

7.6. **Limitation on Liability of Warrant Agent.** In no event shall the Warrant Agent have any liability for any incidental, special, statutory, indirect or consequential damages, or for any loss of profits, revenue, data or cost of cover. The Warrant Agent's liability arising out of or in connection with this Agreement shall not exceed the aggregate amount of all fees (excluding expenses) paid or payable under this Agreement in the twelve month period immediately preceding the date of the first event giving rise to liability.

8. **Miscellaneous Provisions.**

8.1. **Successors.** All the covenants and provisions of this Warrant Agreement by or for the benefit of the Company or the Warrant Agent shall bind and inure to the benefit of their respective successors and assigns.

8.2. **Notices.** Any notice, statement or demand authorized by this Warrant Agreement to be given or made by the Warrant Agent or by the holder of any Warrant to or on the Company shall be sufficiently given when so delivered if by hand or overnight delivery or if sent by certified mail or private courier service within five days after deposit of such notice, postage prepaid, addressed (until another address is filed in writing by the Company with the Warrant Agent), as follows:

Pluristem Therapeutics Inc.
MATAM Advanced Technology Park
Building No. 20
Haifa, 31905, Israel
Attn: Chief Executive Officer

Any notice, statement or demand authorized by this Warrant Agreement to be given or made by the holder of any Warrant or by the Company to or on the Warrant Agent shall be sufficiently given when so delivered if by hand or overnight delivery or if sent by certified mail or private courier service within five days after deposit of such notice, postage prepaid, addressed (until another address is filed in writing by the Warrant Agent with the Company), as follows:

American Stock Transfer & Trust Company, LLC
6201 15th Avenue
Brooklyn, New York 11219
Attn: Administration

with a copy in each case to:

American Stock Transfer & Trust Company, LLC
6201 15th Avenue
Brooklyn, New York 11219
Attn: General Counsel

and

Oppenheimer & Co. Inc.
300 Madison Avenue
4th Floor
New York, NY 10017
Attn: Stuart Barich, Managing Director

8.3. **Applicable law.** The validity, interpretation, and performance of this Warrant Agreement and of the Warrants shall be governed in all respects by the laws of the State of New York, without giving effect to conflicts of law principles that would result in the application of the substantive laws of another jurisdiction. The Company hereby agrees that any action, proceeding or claim against it arising out of or relating in any way to this Warrant Agreement shall be brought and enforced in the courts of the State of New York or the United States District Court for the Southern District of New York, and irrevocably submits to such jurisdiction, which jurisdiction shall be exclusive. The Company hereby waives any objection to such exclusive jurisdiction and that such courts represent an inconvenience forum. Any such process or summons to be served upon the Company may be served by transmitting a copy thereof by registered or certified mail, return receipt requested, postage prepaid, addressed to it at the address set forth in Section 8.2 hereof. Such mailing shall be deemed personal service and shall be legal and binding upon the Company in any action, proceeding or claim.

8.4. **Persons Having Rights under this Warrant Agreement.** Nothing in this Warrant Agreement expressed and nothing that may be implied from any of the provisions hereof is intended, or shall be construed, to confer upon, or give to, any person or corporation other than the parties hereto and the registered holders of the Warrants, any right, remedy, or claim under or by reason of this Warrant Agreement or of any covenant, condition, stipulation, promise, or agreement hereof. All covenants, conditions, stipulations, promises, and agreements contained in this Warrant Agreement shall be for the sole and exclusive benefit of the parties hereto and their successors and assigns and of the registered holders of the Warrants.

8.5. **Examination of the Warrant Agreement.** A copy of this Warrant Agreement shall be available at all reasonable times at the office of the Warrant Agent in the Borough of Manhattan, City and State of New York, for inspection by the registered holder of any Warrant. The Warrant Agent may require any such holder to submit his Warrant for inspection by it.

8.6. **Counterparts.** This Warrant Agreement may be executed in any number of original or facsimile counterparts and each of such counterparts shall for all purposes be deemed to be an original, and all such counterparts shall together constitute but one and the same instrument.

8.7. **Effect of Headings.** The Section headings herein are for convenience only and are not part of this Warrant Agreement and shall not affect the interpretation thereof.

8.8. **Amendments.** This Warrant Agreement may be amended by the parties hereto without the consent of any registered holder: (i) for the purpose of curing any ambiguity or (ii) of curing, correcting or supplementing any defective provision contained herein or (iii) adding or for the purpose of changing any other provisions with respect to matters or questions arising under this Warrant Agreement as the parties may deem necessary or desirable and that the parties deem shall not materially adversely affect the interest of the registered holders. Any modifications or amendments to Section 3.3.10 shall require the written consent of all the registered holders. All other modifications or amendments, including any amendment to increase the Warrant Price or shorten the Exercise Period, shall require the written consent of the registered holders of a majority of the then outstanding Warrants.

8.9. **Severability.** This Warrant Agreement shall be deemed severable, and the invalidity or unenforceability of any term or provision hereof shall not affect the validity or enforceability of this Warrant Agreement or of any other term or provision hereof. Furthermore, in lieu of any such invalid or unenforceable term or provision, the parties hereto intend that there shall be added as a part of this Warrant Agreement a provision as similar in terms to such invalid or unenforceable provision as may be possible and be valid and enforceable.

8.10. **Assignment.** The Warrant Agent may assign this Agreement or any rights granted hereunder, in whole or in part, either to an Affiliate, another division, subsidiaries or in connection with its reorganization or to successors of all or a majority of the Warrant Agent's assets or business, without the prior written consent of the Company.

9. **Certain Definitions.** For purposes of this Warrant, the following terms shall have the following meanings:

9.1. "Affiliate" means, with respect to any Person, any other Person which directly or indirectly through one or more intermediaries Controls, is controlled by, or is under common control with, such Person.

9.2. "Business Day" means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law or executive order to remain closed.

9.3 “Common Stock” means (i) the Company’s shares of Common Stock and (ii) any share capital into which such Common Stock shall have been changed or any share capital resulting from a reclassification of such Common Stock.

9.4 “Control” (including the terms “controlling”, “controlled by” or “under common control with”) means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

9.5 “Expiration Date” means the date that is the fifth year anniversary of the Initial Date or, if such date falls on a day other than a Business Day or on which trading does not take place on the Principal Market (a “Holiday”), the next date that is not a Holiday, as the same may be extended pursuant to Section 3.3.7.

9.6 “Person” means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

[Signature page follows.]

IN WITNESS WHEREOF, this Warrant Agreement has been duly executed by the parties hereto as of the day and year first above written.

PLURISTEM THERAPEUTICS INC.

By: /s/ Yaky Yanay

Name: Yaky Yanay

Title: Chief Financial Officer

AMERICAN STOCK TRANSFER & TRUST COMPANY

By: /s/ David H. Brill

Name: David H. Brill

Title: General Counsel

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: February 9, 2011

/s/ Zami Aberman

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

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: February 9, 2011

/s/ Yaky Yanay

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

**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 December 31, 2010, 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: February 9, 2011

By: /s/ Zami Aberman

Zami Aberman
Chief Executive Officer

**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 December 31, 2010, as filed with the Securities and Exchange Commission on the date hereof, I, Yaky Yanay, 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: February 9, 2011

By: /s/ Yaky Yanay

Yaky Yanay
Chief Financial Officer
