

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

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended March 31, 2010

OR

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

For the transition period from ____ to ____

Commission File Number: 001-32295

ADHEREX TECHNOLOGIES INC.

(Exact Name of Registrant as Specified in Its Charter)

Canada
(State or Other Jurisdiction of
Incorporation or Organization)

20-0442384
(I.R.S. Employer
Identification No.)

501 Eastowne Drive, Suite 140
Chapel Hill, North Carolina
(Address of Principal Executive Offices)

27514
(Zip Code)

Registrant's Telephone Number, Including Area Code: (919) 636-4530

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 preceding 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 is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer

Accelerated Filer

Non-Accelerated Filer (Do not check if smaller reporting company)

Smaller reporting company

Indicated by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES NO

As of May 13, 2010, there were 368,293,451 shares of Adherex Technologies Inc. common stock outstanding.

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PART 1: FINANCIAL INFORMATION
Item 1. Financial Statements

Adherex Technologies Inc.
(a development stage company)
Unaudited Interim Consolidated Balance Sheets
(U.S. Dollars and shares in thousands, except per share amounts)

	<u>March 31,</u> <u>2010</u>	<u>December 31,</u> <u>2009</u>
Assets		
Current assets:		
Cash and cash equivalents	\$ 348	\$ 685
Cash pledged as collateral	-	-
Accounts receivable	43	69
Prepaid expense	75	75
Other current Assets	4	4
Total current assets	<u>470</u>	<u>833</u>
Capital assets	-	-
Leasehold inducements	-	-
Total assets	<u>\$ 470</u>	<u>\$ 833</u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 338	\$ 318
Accrued liabilities	\$ 53	70
Other current liabilities	32	32
Total current liabilities	<u>423</u>	<u>420</u>
Other long-term liabilities	7	7
Deferred lease inducement	-	-
Total liabilities	<u>430</u>	<u>427</u>
Commitments and contingencies		
Stockholders' equity:		
Common stock, no par value; unlimited shares authorized; 128,227 shares issued and outstanding	64,929	64,929
Additional paid-in capital	35,225	35,225
Deficit accumulated during development stage	(101,357)	(100,991)
Accumulated other comprehensive income	1,243	1,243
Total stockholders' equity	<u>40</u>	<u>406</u>
Total liabilities and stockholders' equity	<u>\$ 470</u>	<u>\$ 833</u>

(The accompanying notes are an integral part of these interim consolidated financial statements)

Adherex Technologies Inc.
(a development stage company)
Unaudited Condensed Consolidated Statements of Operations
(U.S. Dollars and shares in thousands, except per share amounts)

	Three Months Ended		Cumulative From September 3, 1996 to March 31, 2010
	March 31, 2010	March 31, 2009	March 31, 2010
Revenue	\$ -	\$ -	\$ -
Operating expenses:			
Research and development	163	1,279	65,053
Impairment of Capital Assets			386
Gain on Deferred lease inducements			(497)
Acquired in-process research and development	-	-	13,094
General and administrative	203	673	24,913
Total operating expenses	<u>366</u>	<u>1,952</u>	<u>102,949</u>
Loss from operations	<u>(366)</u>	<u>(1,952)</u>	<u>(102,949)</u>
Other income (expense):			
Settlement of Cadherin Biomedical Inc. litigation	-	-	(1,283)
Interest expense	-	-	(19)
Loss on impairment of assets held for sale	-	(340)	255
Interest income	-	46	2,797
Total other income and expense, net	<u>-</u>	<u>(294)</u>	<u>1,252</u>
Net loss and comprehensive loss	<u>\$ (366)</u>	<u>\$ (2,246)</u>	<u>\$ (101,199)</u>
Basic and diluted net loss per common share	<u>\$ (0.00)</u>	<u>\$ (0.02)</u>	
Weighted-average common shares used in computing basic and diluted net loss per common share	<u>128,227</u>	<u>128,227</u>	

(The accompanying notes are an integral part of these condensed consolidated financial statements)

Adherex Technologies Inc.
(a development stage company)
Unaudited Condensed Consolidated Statements of Cash Flows
(U.S. Dollars and shares in thousands, except per share amounts)

	Three Months Ended		Cumulative From September 3, 1996 to March 31, 2010
	March 31, 2010	March 31, 2009	March 31, 2010
Cash flows from (used in):			
Operating activities:			
Net loss	\$ (366)	\$ (2,246)	\$ (101,199)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	-	-	1,404
Non-cash Cadherin Biomedical Inc. litigation expense	-	-	1,187
Unrealized foreign exchange loss	-	-	9
Amortization of deferred lease inducements	0	(24)	(412)
Loss on impairment of capital assets	0	340	386
Non-cash severance expense	-	-	168
Stock options issued to consultants	-	5	722
Stock options issued to employees	-	296	7,703
Acquired in-process research and development	-	-	13,094
Changes in operating assets and liabilities	29	(673)	(114)
Net cash used in operating activities	<u>(337)</u>	<u>(2,302)</u>	<u>(77,049)</u>
Investing activities:			
Purchase of capital assets	-	-	(1,440)
Disposal of capital assets	-	-	115
Release of restricted cash	-	-	190
Restricted cash	-	-	(209)
Purchase of short-term investments	-	-	(22,148)
Redemption of short-term investments	-	-	22,791
Investment in Cadherin Biomedical Inc.	-	-	(166)
Acquired intellectual property rights	-	-	(640)
Net cash used in investing activities	<u>-</u>	<u>-</u>	<u>(1,507)</u>
Financing activities:			
Conversion of long-term debt to equity	-	-	68
Long-term debt repayments	-	-	(65)
Capital lease repayments	-	-	(8)
Issuance of common stock, net of issue costs	-	-	76,687
Registration expense	-	-	(465)
Financing expenses	-	-	(544)
Proceeds from convertible note	-	-	3,017
Other liability repayments	-	-	(87)
Security deposits	-	-	35
Proceeds from exercise of stock options	-	-	51
Net cash provided in financing activities	<u>-</u>	<u>-</u>	<u>78,713</u>
			368
Effect of exchange rate changes on cash and cash equivalents	<u>-</u>	<u>-</u>	<u>-</u>
Net change in cash and cash equivalents	<u>(337)</u>	<u>(2,302)</u>	<u>-</u>
Cash and cash equivalents - Beginning of period	<u>685</u>	<u>5,349</u>	<u>-</u>
Cash and cash equivalents - End of period	<u>\$ 348</u>	<u>\$ 3,047</u>	<u>\$ 348</u>

(The accompanying notes are an integral part of these interim consolidated financial statements)

Adherex Technologies Inc.
(a development stage company)
Unaudited Condensed Consolidated Statements of Stockholders' Equity
(U.S. dollars and shares in thousands, except per share information)

	Common Stock		Non-redeemable Preferred Stock of Subsidiary	Additional Paid-in Capital	Accumulated Other Comprehensive Income	Deficit Accumulated During Development Stage	Total Shareholders' Equity
	Number	Amount					
Balance at June 30, 1996	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Issuance of common stock	1,600	-	-	-	-	-	-
Net loss	-	-	-	-	-	(37)	(37)
Balance at June 30, 1997	1,600	-	-	-	-	(37)	(37)
Net loss	-	-	-	-	-	(398)	(398)
Balance at June 30, 1998	1,600	-	-	-	-	(435)	(435)
Exchange of Adherex Inc. shares for Adherex Technologies Inc. shares	(1,600)	-	-	-	-	-	-
Issuance of common stock	4,311	1,615	-	-	-	-	1,615
Cumulative translation adjustment	-	-	-	-	20	-	20
Net loss	-	-	-	-	-	(958)	(958)
Balance at June 30, 1999	4,311	1,615	-	-	20	(1,393)	242
Issuance of common stock	283	793	-	-	-	-	793
Issuance of equity rights	-	-	-	171	-	-	171
Issuance of special warrants	-	-	-	255	-	-	255
Settlement of advances:							
Issuance of common stock	280	175	-	-	-	-	175
Cancellation of common stock	(120)	-	-	-	-	-	-
Cumulative translation adjustment	-	-	-	-	16	-	16
Net loss	-	-	-	-	-	(1,605)	(1,605)
Balance at June 30, 2000	4,754	2,583	-	426	36	(2,998)	47
Issuance of common stock:							
Initial Public Offering ("IPO")	1,333	5,727	-	-	-	(38)	5,689
Other	88	341	-	-	-	-	341
Issuance of special warrants	-	-	-	1,722	-	-	1,722
Conversion of special warrants	547	1,977	-	(1,977)	-	-	-
Issuance of Series A special warrants	-	-	-	4,335	-	-	4,335
Conversion of Series A special warrants	1,248	4,335	-	(4,335)	-	-	-
Conversion of equity rights	62	171	-	(171)	-	-	-
Cumulative translation adjustment	-	-	-	-	182	-	182
Net loss	-	-	-	-	-	(2,524)	(2,524)
Balance at June 30, 2001	8,032	15,134	-	-	218	(5,560)	9,792
Cumulative translation adjustment	-	-	-	-	11	-	11
Net loss	-	-	-	-	-	(3,732)	(3,732)
Balance at June 30, 2002	8,032	15,134	-	-	229	(9,292)	6,071

(The accompanying notes are an integral part of these interim consolidated financial statements)
(continued on next page)

Adherex Technologies Inc.
(a development stage company)
Unaudited Condensed Consolidated Statements of Stockholders' Equity (Continued)
(U.S. dollars and shares in thousands, except per share information)

	Common Stock		Non-redeemable Preferred Stock of Subsidiary	Additional Paid-in Capital	Accumulated Other Comprehensive Income	Deficit Accumulated During Development Stage	Total Shareholders' Equity
	Number	Amount					
Balance at June 30, 2002	8,032	15,134	-	-	229	(9,292)	6,071
Common stock issued for Oxiquant acquisition	8,032	11,077	-	543	-	-	11,620
Exercise of stock options	5	4	-	-	-	-	4
Distribution to shareholders	-	-	-	-	-	(158)	(158)
Stated capital reduction	-	(9,489)	-	9,489	-	-	-
Stock options issued to consultants	-	-	-	4	-	-	4
Equity component of June convertible notes	-	-	-	1,058	-	-	1,058
Financing warrants	-	-	-	53	-	-	53
Cumulative translation adjustment	-	-	-	-	(159)	-	(159)
Net loss	-	-	-	-	-	(17,795)	(17,795)
Balance at June 30, 2003	16,069	16,726	-	11,147	70	(27,245)	698
Stock options issued to consultants	-	-	-	148	-	-	148
Repricing of warrants related to financing	-	-	-	18	-	-	18
Equity component of December convertible notes	-	-	-	1,983	-	-	1,983
Financing warrants	-	-	-	54	-	-	54
Conversion of June convertible notes	1,728	1,216	-	(93)	-	-	1,123
Conversion of December convertible notes	1,085	569	-	(398)	-	-	171
Non-redeemable preferred stock	-	-	1,045	-	-	-	1,045
December private placement	11,522	8,053	-	5,777	-	-	13,830
May private placement	4,669	6,356	-	2,118	-	-	8,474
Exercise of stock options	18	23	-	-	-	-	23
Amalgamation of 2037357 Ontario Inc.	800	660	(1,045)	363	-	-	(22)
Cumulative translation adjustment	-	-	-	-	(219)	-	(219)
Net loss	-	-	-	-	-	(6,872)	(6,872)
Balance at June 30, 2004	35,891	33,603	-	21,117	(149)	(34,117)	20,454
Stock options issued to consultants	-	-	-	39	-	-	39
Stock options issued to employees	-	-	-	604	-	-	604
Cost related to SEC registration	-	(493)	-	-	-	-	(493)
Acquisition of Cadherin Biomedical Inc.	644	1,252	-	-	-	-	1,252
Cumulative translation adjustment	-	-	-	-	1,392	-	1,392
Net loss – six months ended December 31, 2004	-	-	-	-	-	(6,594)	(6,594)
Balance at December 31, 2004	36,535	34,362	-	21,760	1,243	(40,711)	16,654

(The accompanying notes are part of these interim consolidated financial statements)
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Adherex Technologies Inc.
(a development stage company)
Unaudited Interim Consolidated Statements of Stockholders' Equity (Continued)
(U.S. dollars and shares in thousands, except per share information)

	Common Stock		Non-redeemable Preferred Stock of Subsidiary	Additional Paid-in Capital	Accumulated Other Comprehensive Income	Deficit Accumulated During Development Stage	Total Shareholders' Equity
	Number	Amount					
Balance at December 31, 2004	36,535	34,362	-	21,760	1,243	(40,711)	16,654
Financing costs	-	(141)	-	-	-	-	(141)
Exercise of stock options	15	25	-	-	-	-	25
Stock options issued to consultants	-	-	-	276	-	-	276
July private placement	6,079	7,060	-	1,074	-	-	8,134
Net loss	-	-	-	-	-	(13,871)	(13,871)
Balance at December 31, 2005	42,629	41,306	-	23,110	1,243	(54,582)	11,077
Stock options issued to consultants	-	-	-	100	-	-	100
Stock options issued to employees	-	-	-	491	-	-	491
May private placement	7,753	5,218	-	822	-	-	6,040
Net loss	-	-	-	-	-	(16,440)	(16,440)
Balance at December 31, 2006	50,382	46,524	-	24,523	1,243	(71,022)	1,268
Stock options issued to consultants	-	-	-	59	-	-	59
Stock options issued to employees	-	-	-	2,263	-	-	2,263
February financing	75,759	17,842	-	5,379	-	-	23,221
Exercise of warrants	2,086	563	-	131	-	-	694
Net loss	-	-	-	-	-	(13,357)	(13,357)
Balance at December 31, 2007	128,227	64,929	-	32,355	1,243	(84,379)	14,148
Stock options issued to consultants	-	-	-	88	-	-	88
Stock options issued to employees	-	-	-	2,417	-	-	2,417
Net loss	-	-	-	-	-	(13,600)	(13,600)
Balance at December 31, 2008	128,227	64,929	-	34,860	1,243	(97,979)	3,053
Stock options issued to consultants	-	-	-	10	-	-	10
Stock options issued to employees	-	-	-	355	-	-	355
Net loss for quarter	-	-	-	-	-	(3,012)	(3,012)
Balance at December 31, 2009	128,227	64,929	-	35,225	1,243	(100,991)	407
Stock options issued to consultants	-	-	-	-	-	-	-
Stock options issued to employees	-	-	-	-	-	-	-
Net loss for quarter	-	-	-	-	-	(366)	(366)
Balance at March 31, 2010	128,227	\$ 64,929	\$ -	\$ 35,225	\$ 1,243	\$ (101,357)	\$ 40

(The accompanying notes are an integral part of these interim consolidated financial statements)

Adherex Technologies Inc.
(a development stage company)
Notes to Unaudited Interim Consolidated Financial Statements (Continued)
(U.S. dollars and shares in thousands, except per share information)

1. Going Concern

Adherex Technologies Inc. (“Adherex”), together with its wholly owned subsidiaries Oxiquant, Inc. (“Oxiquant”) and Adherex, Inc., both Delaware corporations, and Cadherin Biomedical Inc. (“CBI”), a Canadian corporation, collectively referred to herein as the “Company,” is a development stage biopharmaceutical company focused on cancer therapeutics.

These unaudited interim consolidated financial statements have been prepared using generally accepted accounting principles (“GAAP”) in the United States (“U.S.”) of America that are applicable to a going concern which contemplates that Adherex will continue in operation for the foreseeable future and will be able to realize its assets and discharge its liabilities in the normal course of business.

The Company is a development stage company and during the three months ended March 31, 2010, incurred a net loss of \$366. At March 31, 2010, it had an accumulated deficit of \$101,357 and had experienced negative cash flows from operations since inception in the amount of \$77,049. As further described in Note 5 Subsequent Events, on April 30, 2010, the Company announced the first closing of a \$7.2 million funding into the Company.

These financial statements do not reflect the potentially material adjustments in the carrying values of assets and liabilities, the reported expenses, and the balance sheet classifications used, that would be necessary if the going concern assumption were not appropriate.

2. Significant Accounting Policies

Basis of presentation

The accompanying unaudited interim consolidated financial statements have been prepared in accordance with U.S. GAAP and are the responsibility of the Company’s management. The Company’s independent auditor has not performed a review of these financial statements. These financial statements do not include all of the information and notes required by U.S. GAAP for complete financial statements. Accordingly, these unaudited interim condensed consolidated financial statements should be read in conjunction with the Company’s audited financial statements and notes filed with the Securities and Exchange Commission (“SEC”) in the Company’s Annual Report on Form 10-K for the year ended December 31, 2009. Except as set out below, the Company’s accounting policies are consistent with those presented in the audited financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2009. These unaudited interim consolidated financial statements have been prepared in U.S. dollars.

Adherex Technologies Inc.
(a development stage company)
Notes to Unaudited Interim Consolidated Financial Statements (Continued)
(U.S. dollars and shares in thousands, except per share information)

Use of estimates

The preparation of financial statements in conformity with GAAP requires management to make judgments, assumptions and estimates that affect the amounts reported in these interim condensed consolidated financial statements. Actual results could differ from these estimates. In the opinion of management, these unaudited interim consolidated financial statements include all normal and recurring adjustments, considered necessary for the fair presentation of the Company's financial position at March 31, 2010, and to state fairly the results for the periods presented.

Cash and cash equivalents

Cash and cash equivalents consist of highly liquid investments with original maturities at the date of purchase of three months or less.

The Company places its cash and cash equivalents in investments held by financial institutions in accordance with its investment policy designed to protect the principal investment. At March 31, 2010, the Company had \$3 in money market investments, which typically have minimal risk, and \$345 in cash. The financial markets have been volatile resulting in concerns regarding the recoverability of money market investments. The Company did not experience any loss or write down of its money market investments for the three-month period ended March 31, 2010 and 2009, respectively.

3. Recent Accounting Pronouncements

In January 2010, an update was made to the Fair Value Measurements and Disclosures topic of the FASB codification that requires new disclosures for fair value measurements and provides clarification for existing disclosure requirements. More specifically, this update will require (a) an entity to disclose separately the amounts of significant transfers into and out of Level 1 and 2 fair value measurements and to describe the reasons for the transfers; and (b) information about purchases, sales, issuances, and settlements to be presented separately on a gross basis in the reconciliation of Level 3 fair value measurements. This update is effective for fiscal years beginning after December 15, 2009 except for Level 3 reconciliation disclosures which are effective for fiscal years beginning after December 15, 2010. The Company does not expect the adoption of the guidance to have an impact on the Company's consolidated financial position and results of operations.

Adherex Technologies Inc.
(a development stage company)
Notes to Unaudited Interim Consolidated Financial Statements (Continued)
(U.S. dollars and shares in thousands, except per share information)

4. Stockholders' Equity

Warrants to purchase common stock

At March 31, 2010, the Company had the following warrants outstanding to purchase common stock priced in U.S. dollars with a weighted average exercise price of \$0.44 and a weighted average remaining life of 0.7 years:

Warrant Description	Number Outstanding at March 31 2010	Exercise Price In U.S. Dollars	Expiration Date
Investor warrants	2,326	\$ 0.97	May 7, 2010
	<u>2,326</u>		

The 2,326 warrants with an exercise price of \$0.97 expired on May 7, 2010. Please read Note 5 – Subsequent Events for further details of additional warrants outstanding as of April 30, 2010.

Stock option plan

The Compensation Committee of the Board of Directors administers the Company's stock option plan. The Compensation Committee designates eligible participants to be included under the plan and approves the number of options to be granted from time to time under the plan.

A maximum of 20,000 options (not including 700 options previously issued to the former Chief Executive Officer and specifically approved by the stockholders outside the plan) are authorized for issuance under the plan. The option exercise price for all options issued under the plan is based on the fair value of the underlying shares on the date of grant. The stock option plan, as amended, allows the issuance of U.S. and Canadian dollar denominated grants.

During the three-month periods ended March 31, 2010 and 2009, the Company recognized total stock-based compensation expense of \$0 and \$301, respectively.

Valuation assumptions

There were no options granted in the three month period ended March 31, 2010 and the options granted in the three-month periods ended March 31, 2009 were estimated using the Black-Scholes option-pricing model, using the following weighted average assumptions: expected dividend 0%, risk-free interest rate of 3.15%, expected volatility 85% and a 7 year expected life.

Adherex Technologies Inc.
(a development stage company)
Notes to Unaudited Interim Consolidated Financial Statements (Continued)
(U.S. dollars and shares in thousands, except per share information)

Stock option activity

The following is a summary of option activity for the three-month period ended March 31, 2010 for stock options denominated in Canadian dollars:

	Number of Options	Weighted- average Exercise Price
Outstanding at December 31, 2009	2,623	CAD\$ 2.19
Granted	-	-
Exercised	-	-
Forfeited/cancelled/expired	-	CAD\$ 2.19
Outstanding at March 31, 2010	<u>2,623</u>	<u>CAD\$ 2.19</u>

The following is a summary of option activity for the three-month period ended March 31, 2010 for stock options denominated in U.S. dollars:

	Number of Options	Weighted- average Exercise Price
Outstanding at December 31, 2009	13,201	\$ 0.55
Granted	-	-
Exercised	-	-
Forfeited/cancelled/expired	-	-
Outstanding at March 31, 2010	<u>13,201</u>	<u>\$ 0.55</u>

5. Subsequent Event

On April 30, 2010, Adherex Technologies Inc. (TSX:AHX), announced that it has completed a first closing of a non-brokered private placement ("Private Placement") of 240,066,664 units, at a price of \$0.03 per unit for gross proceeds of CDN\$7,202,000. Adherex intends to raise up to an additional CDN\$1,800,000 by way of a non-brokered private placement which will occur in one or more closings and up to an additional CDN\$12,750,000 by way of a rights offering.

The equity financings will consist of:

- a non-brokered private placement by Adherex of between 240,000,000 and 300,000,000 units, at a price of \$0.03 per unit for gross proceeds of between CDN\$7,200,000 and CDN\$9,000,000; and
- a rights offering to its shareholders for the distribution of rights to subscribe for 425,000,000 units at a price of \$0.03 per unit, for gross proceeds of up to \$12,750,000.

Purchasers of units in the private placement that are existing shareholders of Adherex have agreed not to participate in the rights offering.

Each unit shall consist of one common share and one common share purchase warrant (a "Warrant"). Each Warrant will entitle the holder thereof to purchase one common share of the Company at a purchase price of CDN\$0.08 per share for a period of five years from the issue date. The subscription price for the equity financings represents a 40% discount to the 5 day volume weighted average price of the Company's common shares on the TSX at the date of receipt of the term sheet from Southpoint.

Adherex Technologies Inc.
(a development stage company)
Notes to Unaudited Interim Consolidated Financial Statements (Continued)
(U.S. dollars and shares in thousands, except per share information)

Subject to receiving the required regulatory approvals and as soon as possible after the completion of the first closing of the private placement, it is anticipated that Adherex will file a preliminary short-form prospectus for the rights offering with the securities regulatory authorities in Canada to qualify the distribution of the rights in Canada and a Form S-1 registration statement with the Securities and Exchange Commission to register the transaction in the United States. The commencement of the rights offering will occur promptly following the receipt for the final prospectus in Canada and the effectiveness of the registration statement in the United States. Adherex intends to complete the rights offering as soon as possible thereafter. Adherex intends to announce additional information regarding the rights offering at the time it files the prospectus and registration statement.

Adherex plans to use of proceeds of the sale of the Units will be to (i) conduct and monitor a Phase II Eniluracil study, (ii) satisfy corporate overhead and related expenses, and (iii) pay financing related expenses.

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

CAUTIONARY STATEMENT

The discussion below contains forward-looking statements regarding our financial condition and our results of operations that are based upon our unaudited interim consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles, or GAAP in the United States ("U.S.") and have been prepared by and are the responsibility of the Company's management. The Company's independent auditor has not performed a review of these financial statements. The preparation of these financial statements requires our management to make estimates and judgments that affect the reported amounts of assets, liabilities, income and expenses, and related disclosure of contingent assets and liabilities. We evaluate our estimates on an ongoing basis. Our estimates are based on historical experience and on various other assumptions that we believe to be reasonable.

We operate in a highly competitive environment that involves significant risks and uncertainties, some of which are beyond our control. Our actual results, performance or achievements may be materially different from any results, performance or achievements expressed or implied by such forward-looking statements. Words such as "may," "will," "expect," "might", "believe," "anticipate," "intend," "could," "estimate," "project," "plan," and other similar words are one way to identify such forward-looking statements. Forward-looking statements in this report include, but are not limited to, statements with respect to (1) our anticipated sources and uses of cash and cash equivalents; (2) our anticipated commencement dates, completion dates and results of clinical trials; (3) our efforts to pursue collaborations with the government, industry groups or other companies; (4) our anticipated progress and costs of our clinical and preclinical research and development programs; (5) our corporate and development strategies; (6) our expected results of operations; (7) our anticipated levels of expenditures; (8) our ability to protect our intellectual property; (9) the anticipated applications and efficacy of our drug candidates; (10) our ability to attract and retain key employees; and (11) the nature and scope of potential markets for our drug candidates. All statements, other than statements of historical fact, included in this report that address activities, events or developments that we expect or anticipate will or may occur in the future are forward-looking statements. We include forward-looking statements because we believe it is important to communicate our expectations to our investors. However, all forward-looking statements are based on management's current expectations of future events and are subject to a number of risks and uncertainties, including our need to raise money in the very near term and others as discussed in this report. Although we believe the expectations reflected in the forward-looking statements are based upon reasonable assumptions, we can give no assurance that our expectations will be attained, and we caution you not to place undue reliance on such statements.

Overview

On July 7, 2009, we announced that we intended to focus our remaining financial resources on the development of oral eniluracil. We will focus our resources on the development of a redesigned study combining oral eniluracil, 5-fluorouracil, or 5-FU, and leucovorin targeting anti-cancer indications. After a careful evaluation of the data from the prior GlaxoSmithKline, or GSK, studies and data from our own and other studies using eniluracil, we believe we can begin patient enrollment in a Phase II study with eniluracil, 5-FU and leucovorin within the next nine months. Additionally, throughout the remainder of 2009, we conducted a strategic review of ADH-1 and STS. Our evaluation of ADH-1 resulted in the termination of our license agreement with McGill University. We continue to hold various ADH-1 and small molecule patents that are property of Adherex. We are also supporting an investigator led Phase I study that will combine ADH-1 with gemcitabine. With regards to STS, we continue patient enrollment of our Phase III studies for both the International Childhood Liver Tumour Strategy Group, known as SIOPEL, and the Children's Oncology Group, or COG.

As discussed in Note 5 - Subsequent Events, we recently completed a funding into the Company which will allow for our planned clinical development of eniluracil as well as the support of our remaining programs. We currently have four employees and members of the Board of Directors have agreed to continue to serve for the benefit of the shareholders without further cash compensation.

We are a biopharmaceutical company focused on cancer therapeutics. We have the following products in the clinical stage of development: (1) Eniluracil, an oral dihydropyrimidine dehydrogenase, or DPD, inhibitor, which may improve the tolerability and effectiveness of 5-fluorouracil (5-FU), one of the most widely used oncology drugs in the world; and (2) STS, a chemoprotectant being developed to reduce or prevent hearing loss that may result from treatment with platinum-based chemotherapy drugs and (3) ADH-1, a peptide molecule that selectively targets N-cadherin, a protein present on the blood vessels of solid tumors.

We are evaluating a study design for a Phase II study in which we will dose patients with eniluracil, 5-FU and leucovorin. Our prior eniluracil studies have shown that the dose of eniluracil was too low and consequently provided inadequate inactivation of DPD. We plan to increase the dose of eniluracil and also include leucovorin in our planned clinical trial. Leucovorin potentiates the anticancer activity of 5-FU and has been shown to be well tolerated in patients treated with both eniluracil and 5FU. Leucovorin is uniquely appropriate to eniluracil regimens because it greatly reduces the variability of 5-FU dosing. We are evaluating cancer disease targets for our planned Phase II trial and are currently considering colorectal and breast cancer, where Xeloda is indicated. The combination of eniluracil and 5-FU has been shown to be active and well tolerated against these diseases. However, the previous studies used eniluracil in a ten to one ratio to 5-FU. Because such high ratios of eniluracil to 5-FU were found to decrease the antitumor activity in laboratory animals, our planned study will use a strategy that adequately inactivates DPD and does not have high levels of eniluracil present when 5-FU is administered. We expect to design and commence these studies within the next nine months. We will solicit the assistance of certain key opinion leaders for the design of these studies.

We continue to enroll patients in our Phase III trials of STS with the International Childhood Liver Tumour Strategy Group, known as SIOPEL and the Children's Oncology Group, or COG. The SIOPEL trial is expected to enroll approximately 100 pediatric patients with liver (hepatoblastoma) cancer at participating SIOPEL centers worldwide and the COG study is expected to enroll up to 120 pediatric patients worldwide in five different disease indications.

We have terminated our license agreement with McGill University related to ADH-1. However, Adherex continues to hold various ADH-1 and small molecule patents that are our property. We are also supporting an investigator led Phase I study that will combine ADH-1 with gemcitabine.

Our current prioritization initiative focuses primarily on our clinical activities with eniluracil, as well as logistical and product support of ongoing clinical programs.

In addition to our current development efforts, we continue to pursue collaborations with other pharmaceutical and biotechnology companies, governmental agencies, academic or other corporate collaborators with respect to these molecules. Some of these preclinical molecules are currently being tested under agreements with third parties that may help to advance these products into future clinical development, either by us or under investigator-initiated studies.

The trading of our common stock in the U.S. must now be conducted in the over-the-counter markets, on the pink sheets. Our common stock continues to trade on the Toronto Stock Exchange, or TSX. The TSX also has continued listing standards, including minimum market capitalization and other requirements, that we might not meet in the future, particularly if the price of our common stock does not increase or we are unable to raise capital to continue our operations. On April 22, 2010, the TSX issued an official delisting review of our common stock. The Company has been granted 120 days in which to regain compliance with these requirements.

We have not received and do not expect to have significant revenues from our product candidates until we are either able to sell our product candidates after obtaining applicable regulatory approvals or we establish collaborations that provide us with up-front payments, licensing fees, milestone payments, royalties or other revenue. We experienced net losses of approximately \$366 for the three months ended March 31, 2010 and \$2.2 million for the three months ended March 31, 2009. As of March 31, 2010, our deficit accumulated during development stage was approximately \$101.4 million.

Our operating expenses will depend on many factors, including the progress of our drug development efforts and the implementation of further cost reduction measures. Our research and development expenses, which include expenses associated with our clinical trials, drug manufacturing to support clinical programs, salaries for research and development personnel, stock-based compensation, consulting fees, sponsored research costs, toxicology studies, license fees, milestone payments, and other fees and costs related to the development of product candidates, will depend on the availability of financial resources, the results of our clinical trials and any directives from regulatory agencies, which are difficult to predict. Our general and administration expenses include expenses associated with the compensation of employees, stock-based compensation, professional fees, consulting fees, insurance and other administrative matters associated with our facilities in Chapel Hill, North Carolina in support of our drug development programs.

Results of Operations

Three months ended March 31, 2010 versus three months ended March 31, 2009:

In thousands of U.S. Dollars	Three Months Ended March 31, 2010	%	Three Months Ended March 31, 2009	%	Change
Revenue	\$ -		\$ -		\$ -
Operating expenses:					
Research and development	163	45%	1,279	86%	(1,116)
General and administration	203	55%	673	14%	(470)
Total operating expenses	<u>366</u>	<u>100%</u>	<u>1,952</u>	<u>100%</u>	<u>(1,586)</u>
Loss from operations	<u>366</u>		<u>(1,952)</u>		<u>(1,586)</u>
Loss on impairment of assets held for sale and leasehold inducements	-		(340)		(340)
Other income	-		-		-
Interest income	-		46		46
Net loss and total comprehensive loss	<u>\$ (366)</u>		<u>\$ (2,246)</u>		<u>\$ (3,295)</u>

- Total operating expense decreased significantly in the three months ended March 31, 2010, as compared to the same period in 2009 primarily due to a significant decrease in our overall clinical development studies and reduction in our employee headcount effective April 2009 and continuing through March 31, 2010.
- The Company recorded a loss on impairment of assets related to the write-down of certain assets value held for sale and leasehold improvements during the three months ended March 31, 2010.
- The decrease in interest income in the three months ended March 31, 2010, as compared to the same period in 2009, is due to less cash on hand due to funding our operations during the three months ended March 31, 2010, as compared to the same period in 2009.

Quarterly Information

The following table presents selected consolidated financial data for each of the last eight quarters through March 31, 2010, as prepared under U.S. GAAP (U.S. dollars in thousands, except per share information):

Period	Net Loss for the Period	Basic and Diluted Net Loss per Common Share
September 30, 2007	\$ (3,202)	\$ (0.02)
December 31, 2007	\$ (3,008)	\$ (0.02)
March 31, 2008	\$ (4,304)	\$ (0.03)
June 30, 2008	\$ (3,442)	\$ (0.03)
September 30, 2008	\$ (3,244)	\$ (0.03)
December 31, 2008	\$ (2,610)	\$ (0.02)
March 31, 2009	\$ (2,246)	\$ (0.02)
June 30, 2009	\$ (761)	\$ (0.01)
September 30, 2009	\$ (35)	\$ (0.00)
December 31, 2009	\$ 30	\$ 0.00
March 31, 2010	\$ (366)	\$ (0.00)

Liquidity and Capital Resources

In thousands of U.S. dollars	March 31,	December 31,
	2010	2009
Selected Asset and Liability Data:		
Cash and cash equivalents	\$ 348	\$ 685
Working capital	47	412
Selected Stockholders' Equity Data:		
Common stock	\$ 64,929	\$ 64,929
Deficit accumulated during the development stage	(101,357)	(100,991)
Total stockholders' equity	40	406

We have financed our operations since inception on September 3, 1996 through the sale of equity and debt securities and have raised gross proceeds totaling approximately \$93.0 million through April 30, 2010. We have incurred net losses and negative cash flow from operations each year, and we had an accumulated deficit of approximately \$101.4 million at March 31, 2010. We have not generated any revenues to date through the sale of products. We do not expect to have significant revenues or income, other than interest income, until we are able to sell our product candidates after obtaining applicable regulatory approvals or we establish collaborations that provide us with up-front payments, licensing fees, milestone payments, royalties or other payments.

The net cash flow used in operating activities for the three months ended March 31, 2010 was approximately \$337, as compared to \$2.3 million during the same period in 2009. This decrease is due to a decrease in our overall clinical activities and lower headcount during the three months ended March 31, 2010, as compared to the same period in 2009.

At March 31, 2010, our working capital decreased by approximately \$366 from December 31, 2009 primarily due to funding research and development activities and general corporate operations.

Our projections of further capital requirements are subject to substantial uncertainty. Our working capital requirements may fluctuate in future periods depending upon numerous factors, including: our ability to obtain additional financial resources; our ability to enter into collaborations that provide us with up-front payments, milestones or other payments; results of our research and development activities; progress or lack of progress in our preclinical studies or clinical trials; unfavorable toxicology in our clinical programs, our drug substance requirements to support clinical programs; change in the focus, direction, or costs of our research and development programs; headcount expense; the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing our patent claims; competitive and technological advances; the potential need to develop, acquire or license new technologies and products; our business development activities; new regulatory requirements implemented by regulatory authorities; the timing and outcome of any regulatory review process; and commercialization activities, if any.

Outstanding Share Information

The outstanding share data for our company as of March 31, 2010 (in thousands):

	March 31, 2010
Common shares	128,227
Warrants	2,326
Stock options	15,823
Total	<u>146,376</u>

As described in Note 5 - Subsequent Events, the Company closed a \$7.2 million funding on April 30, 2010 which consists of 240,066,664 units. Each unit represents one common shares and one warrants.

Financial Instruments

We invest excess cash and cash equivalents in high credit quality investments held by financial institutions in accordance with our investment policy designed to protect the principal investment. At March 31, 2010, we had \$0.3 million in cash accounts. We have not experienced any loss or write down of our money market investments for the three months ended March 31, 2010 and 2009, respectively.

Our investment policy is to manage investments to achieve, in the order of importance, the financial objectives of preservation of principal, liquidity and return on investment. Investments may be made in U.S. or Canadian obligations and bank securities, commercial paper of U.S. or Canadian industrial companies, utilities, financial institutions and consumer loan companies, and securities of foreign banks provided the obligations are guaranteed or carry ratings appropriate to the policy. Securities must have a minimum Dun & Bradstreet rating of A for bonds or R1 low for commercial paper. The policy also provides for investment limits on concentrations of securities by issuer and maximum-weighted average time to maturity of twelve months. This policy applies to all of our financial resources.

The policy risks are primarily the opportunity cost of the conservative nature of the allowable investments. As our main purpose is research and development, we have chosen to avoid investments of a trading or speculative nature.

Off-Balance Sheet Arrangements

Since our inception, we have not had any material off-balance sheet arrangements. In addition, we do not engage in trading activities involving non-exchange traded contracts. As such, we are not materially exposed to any financing, liquidity, market or credit risk that could arise if we had engaged in such activities.

Contractual Obligations and Commitments

Since our inception, inflation has not had a material impact on our operations. We had no material commitments for capital expenses as of March 31, 2010.

The following table represents our contractual obligations and commitments at March 31, 2010 (in thousands of U.S. dollars):

	Less than 1 year	1-3 years	3-5 years	More than 5 years	Total
Englert Lease (1)	\$ 50	\$ -	\$ -	\$ -	\$ 50
Eastowne Lease (2)	18	-	-	-	18
Drug purchase commitments (3)	-	25	-	-	25
Total	<u>\$ 68</u>	<u>\$ 25</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 93</u>

- (1) In April 2004, we entered into a lease for facilities in Durham, North Carolina. Amounts shown assume the maximum amounts due under the lease. In July 2008, we entered into an agreement with another company to sublease this facility until September 2010; however, in the event of their default, we would become responsible for the obligation. We are contractually obligated under the lease until September 2010.
- (2) In December 2009, we entered into a lease for new office facilities in Chapel Hill, North Carolina. Amounts shown assume the maximum amounts due under the lease.
- (3) Commitments to our third party manufacturing vendors that supply drug substance primarily for our clinical studies.

Research and Development

Our research and development efforts have been focused on the development of cancer and currently include eniluracil, STS, ADH-1 and various cadherin-based preclinical programs.

We have established relationships with contract research organizations, universities and other institutions, which we utilize to perform many of the day-to-day activities associated with our drug development. Where possible, we have sought to include leading scientific investigators and advisors to enhance our internal capabilities. Research and development issues are reviewed internally and major development issues are presented to the members of our Scientific and Clinical Advisory Board for discussion and review.

Research and development expenses totaled \$163 and \$1.3 million for the three months ended March 31, 2010 and 2009, respectively.

Our product candidates are in various stages of development and still require significant, time-consuming and costly research and development, testing and regulatory clearances. In developing our product candidates, we are subject to risks of failure that are inherent in the development of products based on innovative technologies. For example, it is possible that any or all of these products will be ineffective or toxic, or will otherwise fail to receive the necessary regulatory clearances. There is a risk that our product candidates will be uneconomical to manufacture or market or will not achieve market acceptance. There is also a risk that third parties may hold proprietary rights that preclude us from marketing our product candidates or that others will market a superior or equivalent product. As a result of these factors, we are unable to accurately estimate the nature, timing and future costs necessary to complete the development of these product candidates. In addition, we are unable to reasonably estimate the period when material net cash inflows could commence from the sale, licensing or commercialization of such product candidates, if ever.

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenue and expense during the reporting period. These estimates are based on assumptions and judgments that may be affected by commercial, economic and other factors. Actual results could differ from these estimates.

Our accounting policies are consistent with those presented in our annual consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2009.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Money Market Investments

We are subject to increased risk associated with our cash and cash equivalents due to the recent bank and financial institution failures in the U.S. We maintain an investment portfolio consisting of U.S. or Canadian obligations and bank securities and money market investments in compliance with our investment policy. We do not hold any mortgaged-backed investments in our investment portfolio. Securities must have a minimum Dun & Bradstreet rating of A for bonds or R1 low for commercial paper. The policy also provides for investment limits on concentrations of securities by issuer and maximum-weighted average time to maturity of twelve months. This policy applies to all of our financial resources.

At March 31, 2010, we had \$3 in money market investments which typically have minimal risk. The financial markets have been volatile resulting in concerns regarding the recoverability of money market investments. We have not experienced any loss or write down of our money market investments for the three months ended March 31, 2010 and 2009.

Our investment policy is to manage investments to achieve, in the order of importance, the financial objectives of preservation of principal, liquidity and return on investment. Our risk associated with fluctuating interest rates on our investments is minimal and not significant to the results of operations. We currently do not use interest rate derivative instruments to manage exposure to interest rate changes. As the main purpose is research and development, we have chosen to avoid investments of a trade or speculative nature.

Foreign Currency Exposure

We are subject to foreign currency risks as we conduct certain clinical development activities in Canada, the United Kingdom, Europe and the Pacific Rim. To date, we have not employed the use of derivative instruments; however, we do hold Canadian dollars which we use to pay certain clinical development activities conducted in Canada and research, and other corporate obligations. At March 31, 2010 we held approximately \$0.1 million in Canadian dollars.

Item 4. Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, has evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended or the Exchange Act) as of March 31, 2010. Based on this evaluation, our principal executive officer and principal financial officer concluded that these disclosure controls and procedures are effective and designed to ensure that the information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the requisite time periods.

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) identified in connection with the evaluation of our internal control over financial reporting that occurred during the three month period covered by this Quarterly Report that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II: OTHER INFORMATION

Item 1A. Risk Factors.

The risk factors set forth in our Form 10-K for the fiscal year December 31, 2009 (the “2009 10-K”) include risk relating to the Company’s ability raise substantial additional funds in the very near future to continue our operations. As described in Note 5 - Subsequent Events, the Company closed on April 30, 2010 a \$7.2 million financing. The Company’s disclosure of the need to raise additional capital to continue operations beyond the second quarter of 2010 is no longer applicable.

We may be unable to effectively deploy the proceeds from the April 30, 2010 financing for the development of eniluracil.

In April 2010, we announced the closing of a \$7.2 million financing. This financing requires effective management and deployment of our current employees and consultants. Any inability on our part to manage effectively the deployment of this capital could limit our ability to successfully develop eniluracil.

Item 6. Exhibits

Exhibit No.	Description of Exhibit	Registrant's Form	Dated	Exhibit Number	Filed Herewith
31.1	Certification of Chief Executive Officer of the Company in accordance with Section 302 of the Sarbanes-Oxley Act of 2002				X
31.2	Certification of Chief Financial Officer of the Company in accordance with Section 302 of the Sarbanes-Oxley Act of 2002				X
32.1	Certification of Chief Executive Officer and Chief Financial Officer of the Company in accordance with Section 906 of the Sarbanes-Oxley Act of 2002				X
10.27	Eastowne Lease Agreement				X
10.28	Employment Agreement – Rostislav Raykov				X
10.29	Employment Agreement – Robert Andrade				X
10.30	Employment Agreement – Dr. Thomas Spector				X
10.31	Independent Board Member Agreement – Breen, Bussandri, Porter				X

SIGNATURES

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

Adherex Technologies Inc.

Date: May 13, 2010

By: /s/ Rostislav Raykov
Rostislav Raykov
Chief Executive Officer
(principal executive officer)

Date: May 13, 2010

By: /s/ Robert Andrade
Robert Andrade
Chief Financial Officer
(principal financial and chief accounting officer)

Exhibit 10.27

North Carolina Commercial Lease Agreement

This Commercial Lease Agreement ("Lease") is made and effective the 1st day of January, 2010, by and between **VALFERN HOLDINGS, INC.** ("Landlord") and **ADHEREX TECHNOLOGIES, INC.** ("Tenant").

Landlord is the owner of land and improvements commonly known and numbered as 501 EASTOWNE DR., Ste. 140 CHAPEL HILL, NC 27514 and legally described as follows (the "Building"):

Landlord makes available for lease a portion of the Building designated as Approximately 1,058 RSF, said premises shall be of Suite 140 of the building designated above. (the "Leased Premises").

Landlord desires to lease the Leased Premises to Tenant, and Tenant desires to lease the Leased Premises from Landlord for the term, at the rental and upon the covenants, conditions and provisions herein set forth.

THEREFORE, in consideration of the mutual promises herein, contained and other good and valuable consideration, it is agreed:

1. Term.

A. Landlord hereby leases the Leased Premises including Furniture outlined in Exhibit B to Tenant, and Tenant hereby leases the same from Landlord, for an "Initial Term" beginning the 15th day of January, 2010 and ending the 15th day of January, 2011. Landlord shall use its best efforts to give Tenant possession as nearly as possible at the beginning of the Lease term. If Landlord is unable to timely provide the Leased Premises, rent shall abate for the period of delay. Tenant shall make no other claim against Landlord for any such delay.

B. Tenant may renew the Lease for one extended term of one calendar year. Tenant shall exercise such renewal option, if at all, by giving written notice to Landlord not less than ninety (90) days prior to the expiration of the Initial Term. The renewal term shall be at the rental set forth below and otherwise upon the same covenants, conditions and provisions as provided in this Lease.

2. Rental.

A. Tenant shall pay to Landlord during the Initial Term rental of \$24,281.11 per year, payable in installments of \$2,023.43 per month. Each installment payment shall be due in advance on the fifth day of each calendar month during the lease term to Landlord at Valfern Holdings, Inc. 501 Eastowne Dr., Ste. 145 Chapel Hill, NC 27514 or at such other place designated by written notice from Landlord to Tenant. The rental payment amount for any partial calendar months included in the lease term shall be prorated on a daily basis. Tenant shall also pay to Landlord a "Security Deposit" in the amount of \$2023.43.

B. The rental for any renewal period shall be independently negotiated between the parties and shall be agreed to in writing at such time as Tenant should elect to renew the said lease. The parties at such time shall then sign a lease addendum laying out the annual rent.

3. Use

Notwithstanding the forgoing, Tenant shall not use the Leased Premises for the purposes of storing, manufacturing or selling any explosives, flammables or other inherently dangerous substance, chemical, thing or device.

4. Sublease and Assignment.

Tenant shall have the right without Landlord's consent, to assign this Lease to a corporation with which Tenant may merge or consolidate, to any subsidiary of Tenant, to any corporation under common control with Tenant, or to a purchaser of substantially all of Tenant's assets. Except as set forth above, Tenant shall not sublease all or any part of the Leased Premises, or assign this Lease in whole or in part without Landlord's consent, such consent not to be unreasonably withheld or delayed.

5. Repairs.

During the Lease term, Tenant shall make, at Tenant's expense, all necessary repairs to the Leased Premises. Repairs shall include such items as routine repairs of floors, walls, ceilings, and other parts of the Leased Premises damaged or worn through normal occupancy, except for major mechanical systems or the roof, subject to the obligations of the parties otherwise set forth in this Lease.

6. Alterations and Improvements.

Tenant, at Tenant's expense, shall have the right following Landlord's written consent to remodel, redecorate, and make additions, improvements and replacements of and to all or any part of the Leased Premises from time to time as Tenant may deem desirable, provided the same are made in a workmanlike manner and utilizing good quality materials. Tenant shall have the right to place and install personal property, trade fixtures, equipment and other temporary installations in and upon the Leased Premises, and fasten the same to the premises. All personal property, equipment, machinery, trade fixtures and temporary installations, whether acquired by Tenant at the commencement of the Lease term or placed or installed on the Leased Premises by Tenant thereafter, shall remain Tenant's property free and clear of any claim by Landlord. Tenant shall have the right to remove the same at any time during the term of this Lease provided that all damage to the Leased Premises caused by such removal shall be repaired by Tenant at Tenant's expense.

7. Property Taxes.

Landlord shall pay, prior to delinquency, all general real estate taxes and installments of special assessments coming due during the Lease term on the Leased Premises, and all personal property taxes with respect to Landlord's personal property, if any, on the Leased Premises. Tenant shall be responsible for paying all personal property taxes with respect to Tenant's personal property at the Leased Premises.

8. Association.

Landlord shall pay, prior to delinquency, all association dues for the premises and shall hold harmless the tenant thereof.

9. Utilities.

A. The tenant shall be responsible for any public or private utilities on the premises and shall hold landlord harmless thereto.

B. Tenant shall pay all charges for water, sewer, gas, electricity, telephone, internet, security, janitorial, telephone operator and other services and utilities used by Tenant on the Leased Premises during the term of this Lease unless otherwise expressly agreed in writing by Landlord. In the event that any utility or service provided to the Leased Premises is not separately metered or if the Tenant wishes to utilize any of the aforesaid services from the Landlord, Landlord shall pay the amount due and separately invoice Tenant for Tenant's share of the charges by a separate agreement. Tenant shall pay such amounts within fifteen (15) days of invoice. Tenant acknowledges that the Leased Premises are designed to provide standard office use electrical facilities and standard office lighting. Tenant shall not use any equipment or devices that utilizes excessive electrical energy or which may, in Landlord's reasonable opinion, overload the wiring or interfere with electrical and other services to other tenants.

10. Insurance.

A. If the Leased Premises or any other part of the Building is damaged by fire or other casualty resulting from any act or negligence of Tenant or any of Tenant's agents, employees or invitees, rent shall not be diminished or abated while such damages are under repair, and Tenant shall be responsible for the costs of repair not covered by insurance.

B. Landlord shall maintain fire and extended coverage insurance on the Building and the Leased Premises in such amounts as Landlord shall deem appropriate. Tenant shall be responsible, at its expense, for fire and extended coverage insurance on all of its personal property, including removable trade fixtures, located in the Leased Premises.

C. Tenant and Landlord shall, each at its own expense, maintain a policy or policies of content coverage and comprehensive general liability insurance with respect to the respective activities of each in the Building with the premiums thereon fully paid on or before due date, issued by and binding upon some insurance company approved by Landlord, such insurance to afford minimum protection of not less than \$1,000,000 combined single limit coverage of bodily injury, property damage or combination thereof. Landlord shall be listed as an additional insured on the Tenant's policy or policies of comprehensive general liability insurance and content coverage, and Tenant shall provide Landlord with current Certificates of Insurance evidencing Tenant's compliance with this Paragraph. Tenant shall obtain the agreement of Tenant's insurers to notify Landlord that a policy is due to expire at least (10) days prior to such expiration. Landlord shall not be required to maintain insurance against thefts within the Leased Premises or the Building.

11. Indemnity

Landlord shall not be liable to Tenant or to Tenant's employees, agents, invitees or visitors, or to any other person, for any injury to persons or damage to property on or about the Demised Premises or any adjacent area owned by Landlord caused by the negligence or misconduct of Tenant. Tenant shall not be liable for any injury or damage caused by the negligence or misconduct of Landlord, or Landlord's employees or agents, and Landlord agrees to indemnify and hold Tenant harmless from any loss, expense or damage arising out of such damage or injury.

12. Signs.

Following Landlord's consent, Tenant shall have the right to place on the Leased Premises, at locations selected by Tenant, any signs which are permitted by applicable zoning ordinances and private restrictions. Landlord may refuse consent to any proposed signage that is in Landlord's opinion too large, deceptive, unattractive or otherwise inconsistent with or inappropriate to the Leased Premises or use of any other tenant. Landlord shall assist and cooperate with Tenant in obtaining any necessary permission from governmental authorities or adjoining owners and occupants for Tenant to place or construct the foregoing signs. Tenant shall repair all damage to the Leased Premises resulting from the removal of signs installed by Tenant. Any cost of said signage shall be the sole responsibility of the Tenant.

13. Use of Premises Prior to Commencement Date.

The tenant shall have the right to use the premises in a limited capacity prior to the commencement of this lease at his own risk and liability. Said capacity shall be as follows: Tenant shall have the right to use one cubicle, the conference room and space adjoining the suite to store two file cabinets. Said use shall begin on the 23rd day of December, 2009 and shall cease upon the commencement date of this lease. There shall be no charge for this use of the rental space, provided that the security deposit has been paid in full to the Landlord by the 23rd day of December, 2010.

13. Entry.

Landlord shall have the right to enter upon the Leased Premises at reasonable hours to inspect the same, provided Landlord shall not thereby unreasonably interfere with Tenant's business on the Leased Premises.

14. Parking.

During the term of this Lease, Tenant shall have the non-exclusive use in common with Landlord, other tenants of the Building, their guests and invitees, of the non-reserved common automobile parking areas, driveways, and footways, subject to rules and regulations for the use thereof as prescribed from time to time by Landlord. Landlord reserves the right to designate parking areas within the Building or in reasonable proximity thereto, for Tenant and Tenant's agents and employees. Tenant hereby leases from Landlord one reserved parking space in the parking deck at a location to be designated by the Landlord, which shall be available for use by the Tenant. Other than the single space in such structural parking area, all other parking spaces around the building are available for use by all building users on a first come-first served basis except any spaces that are otherwise reserved. There shall be no additional charge or rental fee for the parking space noted above.

15. Building Rules.

Tenant will comply with the rules of the Building adopted and altered by Landlord from time to time and will cause all of its agents, employees, invitees and visitors to do so; all changes to such rules will be sent by Landlord to Tenant in writing. The initial rules for the Building are attached hereto as Exhibit "A" and incorporated herein for all purposes.

16. Damage and Destruction.

If the Leased Premises or any part thereof or any appurtenance thereto is so damaged by fire, casualty or structural defects that the same cannot be used for Tenant's purposes, then Tenant shall have the right within ninety (90) days following damage to elect by notice to Landlord to terminate this Lease as of the date of such damage. In the event of minor damage to any part of the Leased Premises, and if such damage does not render the Leased Premises unusable for Tenant's purposes, Landlord shall promptly repair such damage at the cost of the Landlord. In making the repairs called for in this paragraph, Landlord shall not be liable for any delays resulting from strikes, governmental restrictions, inability to obtain necessary materials or labor or other matters which are beyond the reasonable control of Landlord. Tenant shall be relieved from paying rent and other charges during any portion of the Lease term that the Leased Premises are inoperable or unfit for occupancy, or use, in whole or in part, for Tenant's purposes. Rentals and other charges paid in advance for any such periods shall be credited on the next ensuing payments, if any, but if no further payments are to be made, any such advance payments shall be refunded to Tenant. The provisions of this paragraph extend not only to the matters aforesaid, but also to any occurrence which is beyond Tenant's reasonable control and which renders the Leased Premises, or any appurtenance thereto, inoperable or unfit for occupancy or use, in whole or in part, for Tenant's purposes.

17. **Default.**

If default shall at any time be made by Tenant in the payment of rent when due to Landlord as herein provided, and if said default shall continue for fifteen (15) days after written notice thereof shall have been given to Tenant by Landlord, or if default shall be made in any of the other covenants or conditions to be kept, observed and performed by Tenant, and such default shall continue for thirty (30) days after notice thereof in writing to Tenant by Landlord without correction thereof then having been commenced and thereafter diligently prosecuted, Landlord may declare the term of this Lease ended and terminated by giving Tenant written notice of such intention, and if possession of the Leased Premises is not surrendered, Landlord may reenter said premises. Landlord shall have, in addition to the remedy above provided, any other right or remedy available to Landlord on account of any Tenant default, either in law or equity. Landlord shall use reasonable efforts to mitigate its damages.

18. **Quiet Possession.**

Landlord covenants and warrants that upon performance by Tenant of its obligations hereunder, Landlord will keep and maintain Tenant in exclusive, quiet, peaceable and undisturbed and uninterrupted possession of the Leased Premises during the term of this Lease.

19. **Condemnation.**

If any legally constituted authority condemns the Building or such part thereof which shall make the Leased Premises unsuitable for leasing, this Lease shall cease when the public authority takes possession, and Landlord and Tenant shall account for rental as of that date. Such termination shall be without prejudice to the rights of either party to recover compensation from the condemning authority for any loss or damage caused by the condemnation. Neither party shall have any rights in or to any award made to the other by the condemning authority.

20. Subordination.

Tenant accepts this Lease subject and subordinate to any mortgage, deed of trust or other lien presently existing or hereafter arising upon the Leased Premises, or upon the Building and to any renewals, refinancing and extensions thereof, but Tenant agrees that any such mortgagee shall have the right at any time to subordinate such mortgage, deed of trust or other lien to this Lease on such terms and subject to such conditions as such mortgagee may deem appropriate in its discretion. Landlord is hereby irrevocably vested with full power and authority to subordinate this Lease to any mortgage, deed of trust or other lien now existing or hereafter placed upon the Leased Premises of the Building, and Tenant agrees upon demand to execute such further instruments subordinating this Lease or attorning to the holder of any such liens as Landlord may request. In the event that Tenant should fail to execute any instrument of subordination herein required to be executed by Tenant promptly as requested, Tenant hereby irrevocably constitutes Landlord as its attorney-in-fact to execute such instrument in Tenant's name, place and stead, it being agreed that such power is one coupled with an interest. Tenant agrees that it will from time to time upon request by Landlord execute and deliver to such persons as Landlord shall request a statement in recordable form certifying that this Lease is unmodified and in full force and effect (or if there have been modifications, that the same is in full force and effect as so modified), stating the dates to which rent and other charges payable under this Lease have been paid, stating that Landlord is not in default hereunder (or if Tenant alleges a default stating the nature of such alleged default) and further stating such other matters as Landlord shall reasonably require.

21. Security Deposit.

The Security Deposit shall be held by Landlord without liability for interest and as security for the performance by Tenant of Tenant's covenants and obligations under this Lease, it being expressly understood that the Security Deposit shall not be considered an advance payment of rental or a measure of Landlord's damages in case of default by Tenant. Unless otherwise provided by mandatory non-waivable law or regulation, Landlord may commingle the Security Deposit with Landlord's other funds. Landlord may, from time to time, without prejudice to any other remedy, use the Security Deposit to the extent necessary to make good any arrearages of rent or to satisfy any other covenant or obligation of Tenant hereunder. Following any such application of the Security Deposit, Tenant shall pay to Landlord on demand the amount so applied in order to restore the Security Deposit to its original amount. If Tenant is not in default at the termination of this Lease, the balance of the Security Deposit remaining after any such application shall be returned by Landlord to Tenant within thirty days after termination of the Lease Agreement. If Landlord transfers its interest in the Premises during the term of this Lease, Landlord may assign the Security Deposit to the transferee and thereafter shall have no further liability for the return of such Security Deposit.

22. **Notice.**

Any notice required or permitted under this Lease shall be deemed sufficiently given or served if sent by United States certified mail, return receipt requested, addressed as follows:

If to Landlord to:

Valfern Holdings, Inc.

501 Eastowne Drive, Ste. 145

Chapel Hill, NC 27514

If to Tenant to:

Adherex Technologies, Inc.

C/O Robert Andrade

501 Eastowne Drive, Ste. 140

Chapel Hill, NC 27514

Landlord and Tenant shall each have the right from time to time to change the place notice is to be given under this paragraph by written notice thereof to the other party.

23. **Brokers.**

Tenant warrants that it has had no dealings with any broker or agent in connection with this Lease, other than Mike Lewis of Morris Commercial Inc. and J. Daniel Allen of Insight Property Group whose commission will be paid by Landlord in terms of a separate existing Agreement between the Landlord and Insight Property Group and Tenant covenants to pay, hold harmless and indemnify Landlord from and against, any and all cost, expense or liability for any compensation, commissions and charges claimed by any other broker or agent with respect to this Lease or the negotiation thereof arising out of Tenant's actions.

24. **Waiver.**

No waiver of any default of Landlord or Tenant hereunder shall be implied from any omission to take any action on account of such default if such default persists or is repeated, and no express waiver shall affect any default other than the default specified in the express waiver and that only for the time and to the extent therein stated. One or more waivers by Landlord or Tenant shall not be construed as a waiver of a subsequent breach of the same covenant, term or condition.

25. **Memorandum of Lease.**

The parties hereto contemplate that this Lease should not and shall not be filed for record, but in lieu thereof, at the request of either party, Landlord and Tenant shall execute a Memorandum of Lease to be recorded for the purpose of giving record notice of the appropriate provisions of this Lease.

26. **Headings.**

The headings used in this Lease are for convenience of the parties only and shall not be considered in interpreting the meaning of any provision of this Lease.

27. **Successors.**

The provisions of this Lease shall extend to and be binding upon Landlord and Tenant and their respective legal representatives, successors and assigns.

28. **Consent.**

Landlord shall not unreasonably withhold or delay its consent with respect to any matter for which Landlord's consent is required or desirable under this Lease.

29. **Performance.**

If there is a default with respect to any of Landlord's covenants, warranties or representations under this Lease, and if the default continues more than fifteen (15) days after notice in writing from Tenant to Landlord specifying the default, Tenant may, at its option and without affecting any other remedy hereunder, cure such default and deduct the cost thereof from the next accruing installment or installments of rent payable hereunder until Tenant shall have been fully reimbursed for such expenditures, together with interest thereon at a rate equal to the lesser of twelve percent (12%) per annum or the then highest lawful rate. If this Lease terminates prior to Tenant's receiving full reimbursement, Landlord shall pay the unreimbursed balance plus accrued interest to Tenant on demand.

30. **Compliance with Law.**

Tenant shall comply with all laws, orders, ordinances and other public requirements now or hereafter pertaining to Tenant's use of the Leased Premises. Landlord shall comply with all laws, orders, ordinances and other public requirements now or hereafter affecting the Leased Premises.

31. **Final Agreement.**

This Agreement terminates and supersedes all prior understandings or agreements on the subject matter hereof. This Agreement may be modified only by a further writing that is duly executed by both parties.

32. **Governing Law.**

This Agreement shall be governed, construed and interpreted by, through and under the Laws of the State of North Carolina.

IN WITNESS WHEREOF, the parties have executed this Lease as of the day and year first above written.

VALFERN HOLDINGS, INC.

Joy Valentine, President

ADHEREX TECHNOLOGIES, INC.

Robert Andrade, CFO

Annexure B

List of Furniture

Reception area:

One Loveseat, one coffee table, one reception desk and one work chair

Work space:

3 cubicles with work surfaces and 3 work chairs, inbuilt cabinets in work area near the server closet

Conference Room:

One conference table and 4 chairs, inbuilt cabinet

Private office:

One desk with return and credenza, one work chair,



May 3, 2010

Dear Rostislav Raykov (“Employee”):

On behalf of the Board of Directors of Adherex Technologies, Inc. (“Adherex” or the “Company”), I am pleased to make you an executable offer to join the Company as its Chief Executive Officer. The purpose of this agreement is to clarify the terms of Employee’s employment with the Company, including Employee’s compensation level and benefit entitlements.

1. **Employment and Duties.**

A. The Company hereby agrees to employ Employee as Chief Executive Officer (“CEO”) as of May 3, 2010 (the “Effective Date”). In that position, Employee will report directly to the Company’s Board of Directors, and Employee hereby agrees to accept such employment upon the terms and conditions hereinafter set forth.

B. Employee will perform the duties inherent in Employee’s position in good faith and in a reasonable and appropriate manner. Employee is entitled to continue his ongoing investment activities. In return, the Employee agrees to keep these activities at a reduced level and ensure that any such activities do not interfere with or conflict with the Employee’s duties to the Company.

2. **Compensation.**

A. Employee’s initial base salary will be at the rate of \$140,000 per year. Employee has agreed to this low salary with the good faith understanding that it will be made more equitable as the Company improves its financial condition. In addition, Employee’s base salary will be subject to adjustment by the Company’s Board of Directors on an annual basis.

B. Employee shall be entitled to receive an annual bonus based upon the Company’s and Employee’s performance during the applicable year (the “Annual Bonus”). The Annual Bonus shall be determined and paid by the Company’s Board of Directors by no later than the close of the first quarter of the calendar year.

C. Employee's base salary will be paid at periodic intervals in accordance with the Company's payroll practices for salaried employees. The Company will deduct and withhold, from the base salary and bonuses payable to Employee hereunder, any and all applicable Federal, state and local income and employment withholding taxes and any other amounts required to be deducted or withheld by the Company under applicable statute or regulation.

3. **Employee Stock Options.**

A. Upon execution of this Agreement and conditioned upon the approval of Adherex's shareholders, as required by applicable law and regulations, and upon satisfaction of any other regulatory requirements, Adherex will grant Employee an option (the "Equity Grant") to purchase that number of Adherex common shares that equals 5.00% of Adherex's common estimated by the Company to be outstanding (the "Company's estimated shares outstanding") upon completion of the proposed rights offering announced by the Company on April 20, 2010 (the "Rights Offering"). These options will be immediately vested and shall otherwise be subject to the terms and conditions of Adherex's stock option plan, as amended. For the avoidance of doubt, the Company's estimated shares outstanding shall be the same amount used in to calculate the proposed option grants to directors' Breen, Bussandri and Porter.

B. At the discretion of the Company's Board of Directors, Employee may be granted stock option awards in addition to the Equity Grant described in 3(A).

4. **Expense Reimbursement.** Employee will be entitled to reimbursement from the Company for all customary, ordinary and necessary business expenses incurred by Employee in the performance of Employee's duties hereunder, provided Employee furnish the Company with vouchers, receipts and other details of such expenses within ninety(90) days after they are incurred.

5. **Fringe Benefits.** Employee will be eligible to participate in any group life insurance plan, group medical and/or dental insurance plan, accidental death and dismemberment plan, short-term disability program and other employee benefit plans, including the Section 401(k) plan and the Employee Stock Purchase Plan, which are made available to executive officers of the Company and for which Employee otherwise qualify.

6. **Vacation.** Employee will accrue paid vacation benefits in accordance with Company policy in effect for executive officers.

7. **Proprietary Information.** Upon the commencement of Employee's services as CEO, Employee will sign and deliver to the Company the standard-form Proprietary Information and Inventions Agreement required of all key employees of the Company.

8. **Termination of Employment.**

A. Employee's employment shall commence as of the Effective Date and shall continue for a period of one (1) year unless terminated by either party, provided, however that the term of this Agreement shall be extended automatically for additional one-year periods (the "Renewal Term").

B. The Company may terminate Employee's employment under this agreement at any time for any reason by providing Employee with at least thirty (30) days prior written notice. However, such notice requirement is not required if Employee's employment is terminated for cause as described in subparagraph 8(D) below.

C. If Employee's employment is terminated by the Company other than for cause pursuant to Subsection 8(B) or the Company's breach of this employment agreement, and such termination is not for any of the reasons set out in Subsections 8(D), then, following such termination, Employee shall be entitled to continue to receive the following as severance (the "Severance Benefits"): (i) an amount equal to Employee's Base Salary, minus any federal, state and local payroll taxes and other withholdings legally required or properly requested by Employee, for a period of one (1) year, payable in full within five (5) days of termination; (ii) a pro rata share of any Annual Bonus earned by Employee for the year in which the termination takes place, minus any federal, state and local payroll taxes and other withholdings legally required or properly requested by Employee; and (iii) acceleration of vesting of stock options as a result of such termination; provided, however, Employee shall receive no Severance Benefits under this Paragraph 8(C) unless Employee executes and delivers to the Company, in a form acceptable to the Company and its counsel, a general release of claims against the Company (the "Release"), which Release is not revoked within any time period allowed for revocation under applicable law.

D. The Company may at any time, upon written notice, terminate Employee's employment hereunder for cause as described in i and ii below. Such termination will be effective immediately upon such notice.

For purposes of this agreement, Employee's employment with the Company will be deemed to have been involuntarily terminated for cause if Employee's services are terminated by the Company for one or more of the following reasons:

- i. acts of fraud or embezzlement or other intentional misconduct which adversely affects the Company's business, or
- ii. misappropriation or unauthorized disclosure or use of the Company's proprietary information.

E. Employee's employment shall automatically terminate in the event of Employee's death on the date of his death. However, all the "Severance Benefits" described in Section 8(C) shall be extended to Employee's beneficiaries for a period of 12 months.

F. Employee may terminate employment under this agreement at any time for any reason upon thirty (30) days prior written notice to the Company. ... If the employee terminates his employment for "good reason", the employee is entitled to receive the "Severance Benefits" described in Section 8(C) and acceleration of vesting of stock options as a result of such termination. "Good reason" means: a material decrease in the employee's title, duties, responsibilities, and/or compensation and benefits; the Company's material breach of the employment agreement; or a change in control of the development of eniluracil.

9. **Governing Law.** This agreement shall be governed by and construed according to the laws of the State of North Carolina, without reference to the choice of law or conflict of law provisions of such laws.

10. **Entire Agreement.** This agreement (inclusive of the Confidentiality and Intellectual Property Agreement incorporated herein) contains the entire agreement and understanding by and between the Company and Employee with respect to the terms described herein, and any representations, promises, agreements or understandings, written or oral, not herein contained shall be of no force or effect. No change or modification hereof shall be valid or binding unless the same is in writing and signed by the parties hereto.

Please indicate your acceptance of the foregoing provisions of this employment agreement by signing the enclosed copy of this agreement and returning it to the Company.

Very truly yours,

Adherex Technologies, Inc.

By /s/ Robert W. Butts

Title: Chairman of the Board

ACCEPTED BY AND AGREED TO

Signature: /s/ Rostislav Raykov

Dated: May 3, 2010

Raykov Employment Contract

Page 4 of 4



May 3, 2010

Dear Robert Andrade ("Employee"):

On behalf of the Board of Directors of Adherex Technologies, Inc. ("Adherex" or the "Company"), I am pleased to make you an executable offer to join the Company as its Chief Financial Officer. The purpose of this agreement is to clarify the terms of Employee's employment with the Company, including Employee's compensation level and benefit entitlements.

1. **Employment and Duties.**

A. The Company hereby agrees to employ Employee as Chief Financial Officer ("CFO") as of May 3, 2010 (the "Effective Date"). In that position, Employee will report directly to the Company's Chief Executive Officer, and Employee hereby agrees to accept such employment upon the terms and conditions hereinafter set forth.

B. Employee will perform the duties inherent in Employee's position in good faith and in a reasonable and appropriate manner. Employee is entitled to continue his ongoing investment activities. In return, the Employee agrees to keep these activities at a reduced level and ensure that any such activities do not interfere with or conflict with the Employee's duties to the Company.

2. **Compensation.**

A. Employee's initial base salary will be at the rate of \$140,000 per year. Employee has agreed to this low salary with the good faith understanding that it will be made more equitable as the Company improves its financial condition. In addition, Employee's base salary will be subject to adjustment by the Company's Board of Directors on an annual basis.

B. Employee shall be entitled to receive an annual bonus based upon the Company's and Employee's performance during the applicable year (the "Annual Bonus"). The Annual Bonus shall be determined and paid by the Company's Board of Directors by no later than the close of the first quarter of the calendar year.

C. Employee's base salary will be paid at periodic intervals in accordance with the Company's payroll practices for salaried employees. The Company will deduct and withhold, from the base salary and bonuses payable to Employee hereunder, any and all applicable Federal, state and local income and employment withholding taxes and any other amounts required to be deducted or withheld by the Company under applicable statute or regulation.

3. **Employee Stock Options.**

A. Upon execution of this Agreement and conditioned upon the approval of Adherex's shareholders, as required by applicable law and regulations, and upon satisfaction of any other regulatory requirements, Adherex will grant Employee an option (the "Equity Grant") to purchase that number of Adherex common shares that equals 5.00% of Adherex's common shares estimated by the Company to be outstanding (the "Company's estimated shares outstanding") upon completion of the proposed rights offering announced by the Company on April 20, 2010 (the "Rights Offering"). These options will be immediately vested and shall otherwise be subject to the terms and conditions of Adherex's stock option plan, as amended. For the avoidance of doubt, the Company's estimated shares outstanding shall be the same amount used in to calculate the proposed option grants to directors' Breen, Bussandri and Porter.

B. At the discretion of the Company's Board of Directors, Employee may be granted stock option awards in addition to the Equity Grant described in 3(A).

4. **Expense Reimbursement.** Employee will be entitled to reimbursement from the Company for all customary, ordinary and necessary business expenses incurred by Employee in the performance of Employee's duties hereunder, provided Employee furnish the Company with vouchers, receipts and other details of such expenses within ninety(90) days after they are incurred.

5. **Fringe Benefits.** Employee will be eligible to participate in any group life insurance plan, group medical and/or dental insurance plan, accidental death and dismemberment plan, short-term disability program and other employee benefit plans, including the Section 401(k) plan and the Employee Stock Purchase Plan, which are made available to executive officers of the Company and for which Employee otherwise qualify.

6. **Vacation.** Employee will accrue paid vacation benefits in accordance with Company policy in effect for executive officers.

7. **Proprietary Information.** Upon the commencement of Employee's services as CFO, Employee will sign and deliver to the Company the standard-form Proprietary Information and Inventions Agreement required of all key employees of the Company.

8. **Termination of Employment.**

A. Employee's employment shall commence as of the Effective Date and shall continue for a period of one (1) year unless terminated by either party, provided, however that the term of this Agreement shall be extended automatically for additional one-year periods (the "Renewal Term").

B. The Company may terminate Employee's employment under this agreement at any time for any reason by providing Employee with at least thirty (30) days prior written notice. However, such notice requirement is not required if Employee's employment is terminated for cause as described in subparagraph 8(D) below.

C. If Employee's employment is terminated by the Company other than for cause pursuant to Subsection 8(B) or the Company's breach of this employment agreement, and such termination is not for any of the reasons set out in Subsections 8(D), then, following such termination, Employee shall be entitled to continue to receive the following as severance (the "Severance Benefits"): (i) an amount equal to Employee's Base Salary, minus any federal, state and local payroll taxes and other withholdings legally required or properly requested by Employee, for a period of one (1) year, payable in full within five (5) days of termination; (ii) a pro rata share of any Annual Bonus earned by Employee for the year in which the termination takes place, minus any federal, state and local payroll taxes and other withholdings legally required or properly requested by Employee; and (iii) acceleration of vesting of stock options as a result of such termination; provided, however, Employee shall receive no Severance Benefits under this Paragraph 8(C) unless Employee executes and delivers to the Company, in a form acceptable to the Company and its counsel, a general release of claims against the Company (the "Release"), which Release is not revoked within any time period allowed for revocation under applicable law.

D. The Company may at any time, upon written notice, terminate Employee's employment hereunder for cause as described in i and ii below. Such termination will be effective immediately upon such notice.

For purposes of this agreement, Employee's employment with the Company will be deemed to have been involuntarily terminated for cause if Employee's services are terminated by the Company for one or more of the following reasons:

- i. acts of fraud or embezzlement or other intentional misconduct which adversely affects the Company's business, or
- ii. misappropriation or unauthorized disclosure or use of the Company's proprietary information.

E. Employee's employment shall automatically terminate in the event of Employee's death on the date of his death. However, all the "Severance Benefits" described in Section 8(C) shall be extended to Employee's beneficiaries for a period of 12 months.

F. Employee may terminate employment under this agreement at any time for any reason upon thirty (30) days prior written notice to the Company. ... If the employee terminates his employment for "good reason", the employee is entitled to receive the "Severance Benefits" described in Section 8(C) and acceleration of vesting of stock options as a result of such termination. "Good reason" means: a material decrease in the employee's title, duties, responsibilities, and/or compensation and benefits; the Company's material breach of the employment agreement.

9. **Governing Law.** This agreement shall be governed by and construed according to the laws of the State of North Carolina, without reference to the choice of law or conflict of law provisions of such laws.

10. **Entire Agreement.** This agreement (inclusive of the Confidentiality and Intellectual Property Agreement incorporated herein) contains the entire agreement and understanding by and between the Company and Employee with respect to the terms described herein, and any representations, promises, agreements or understandings, written or oral, not herein contained shall be of no force or effect. No change or modification hereof shall be valid or binding unless the same is in writing and signed by the parties hereto.

Please indicate your acceptance of the foregoing provisions of this employment agreement by signing the enclosed copy of this agreement and returning it to the Company.

Very truly yours,

Adherex Technologies, Inc.

By /s/ Rostislav Raykov

Title: Chief Executive Officer

ACCEPTED BY AND AGREED TO

Signature: /s/ Robert Andrade

Dated: May 3, 2010

Andrade Employment Contract

Page 4 of 4



May 3, 2010

Dear Dr. Thomas Spector ("Employee"):

On behalf of the Board of Directors of Adherex Technologies, Inc. ("Adherex" or the "Company"), I am pleased to make you an executable offer to join the Company as its Chief Scientific Officer. The purpose of this agreement is to clarify the terms of Employee's employment with the Company, including Employee's compensation level and benefit entitlements.

1. **Employment and Duties.**

A. The Company hereby agrees to employ Employee as Chief Scientific Officer ("CSO") as of May 3, 2010 (the "Effective Date"). In that position, Employee will report directly to the Chief Executive Officer ("CEO"), and Employee hereby agrees to accept such employment upon the terms and conditions hereinafter set forth.

B. Employee will perform the duties inherent in Employee's position in good faith and in a reasonable and appropriate manner. Employee is entitled to continue his ongoing Spector Consulting Services and his activities as a professional meditation teacher. In return, the Employee agrees to keep these activities at a reduced level, ensure that any such activities do not interfere with or conflict with the Employee's duties to the Company and not to accept any major new contracts.

2. **Compensation.**

A. Employee's initial base salary will be at the rate of \$150,000 per year. Employee has agreed to this low salary with the good faith understanding that it will be made more equitable as the Company improves its financial condition. In addition, Employee's base salary will be subject to adjustment by the Company's Board of Directors on an annual basis.

B. Employee shall be entitled to receive an annual bonus based upon the Company's and Employee's performance during the applicable year (the "Annual Bonus"). The Annual Bonus shall be determined and paid by the Company's Board of Directors by no later than the close of the first quarter of the calendar year.

C. Employee's base salary will be paid at periodic intervals in accordance with the Company's payroll practices for salaried employees. The Company will deduct and withhold, from the base salary and bonuses payable to Employee hereunder, any and all applicable Federal, state and local income and employment withholding taxes and any other amounts required to be deducted or withheld by the Company under applicable statute or regulation.

3. **Employee Stock Options.**

A. Upon execution of this Agreement and conditioned upon the approval of Adherex's shareholders, as required by applicable law and regulations, and upon satisfaction of any other regulatory requirements, Adherex will grant Employee an option (the "Equity Grant") to purchase that number of Adherex common shares that equals 5.00% of Adherex's common shares estimated by the Company to be outstanding (the "Company's estimated shares outstanding") upon completion of the proposed rights offering announced by the Company on April 20, 2010 (the "Rights Offering"). These options will be immediately vested and shall otherwise be subject to the terms and conditions of Adherex's stock option plan, as amended. For the avoidance of doubt, the Company's estimated shares outstanding shall be the same amount used in to calculate the proposed option grants to directors' Breen, Bussandri and Porter.

B. At the discretion of the Company's Board of Directors, Employee may be granted stock option awards in addition to the Equity Grant described in 3(A).

4. **Expense Reimbursement.** Employee will be entitled to reimbursement from the Company for all customary, ordinary and necessary business expenses incurred by Employee in the performance of Employee's duties hereunder, provided Employee furnish the Company with vouchers, receipts and other details of such expenses within ninety(90) days after they are incurred.

5. **Fringe Benefits.** Employee will be eligible to participate in any group life insurance plan, group medical and/or dental insurance plan, accidental death and dismemberment plan, short-term disability program and other employee benefit plans, including the Section 401(k) plan and the Employee Stock Purchase Plan, which are made available to executive officers of the Company and for which Employee otherwise qualify.

6. **Vacation.** Employee will accrue paid vacation benefits in accordance with Company policy in effect for executive officers.

7. **Proprietary Information.** Prior to the commencement of Employee's services as CSO, Employee will sign and deliver to the Company the standard-form Proprietary Information and Inventions Agreement required of all key employees of the Company.

8. **Termination of Employment.**

A. Employee's employment shall commence as of the Effective Date and shall continue for a period of one (1) year unless terminated by either party, provided, however that the term of this Agreement shall be extended automatically for additional one-year periods (the "Renewal Term").

B. The Company may terminate Employee's employment under this agreement at any time for any reason by providing Employee with at least thirty (30) days prior written notice. However, such notice requirement is not required if Employee's employment is terminated for cause as described in subparagraph 8(D) below.

C. If Employee's employment is terminated by the Company other than for cause pursuant to Subsection 8(B) or the Company's breach of this employment agreement, and such termination is not for any of the reasons set out in Subsections 8(D), then, following such termination, Employee shall be entitled to continue to receive the following as severance (the "Severance Benefits"): (i) an amount equal to Employee's Base Salary, minus any federal, state and local payroll taxes and other withholdings legally required or properly requested by Employee, for a period of one (1) year, payable in full within five (5) days of termination; (ii) a pro rata share of any Annual Bonus earned by Employee for the year in which the termination takes place, minus any federal, state and local payroll taxes and other withholdings legally required or properly requested by Employee; and (iii) acceleration of vesting of stock options as a result of such termination; provided, however, Employee shall receive no Severance Benefits under this Paragraph 8(C) unless Employee executes and delivers to the Company, in a form acceptable to the Company and its counsel, a general release of claims against the Company (the "Release"), which Release is not revoked within any time period allowed for revocation under applicable law.

D. The Company may at any time, upon written notice, terminate Employee's employment hereunder for cause as described in i and ii below. Such termination will be effective immediately upon such notice.

For purposes of this agreement, Employee's employment with the Company will be deemed to have been involuntarily terminated for cause if Employee's services are terminated by the Company for one or more of the following reasons:

- i. acts of fraud or embezzlement or other intentional misconduct which adversely affects the Company's business, or
- ii. misappropriation or unauthorized disclosure or use of the Company's proprietary information.

E. Employee's employment shall automatically terminate in the event of Employee's death on the date of his death. However, all the "Severance Benefits" described in Section 8(C) shall be extended to Employee's beneficiaries for a period of 12 months.

F. Employee may terminate employment under this agreement at any time for any reason upon thirty (30) days prior written notice to the Company. ... If the employee terminates his employment for "good reason", the employee is entitled to receive the "Severance Benefits" described in Section 8(C) and acceleration of vesting of stock options as a result of such termination. "Good reason" means: a material decrease in the employee's title, duties, responsibilities, and/or compensation and benefits; a requirement to relocate to a facility or office location that is not within twenty (20) miles of his residence as at the date of this Agreement; the Company's material breach of the employment agreement; or a change in control of the development of eniluracil.

9. **Governing Law.** This agreement shall be governed by and construed according to the laws of the State of North Carolina, without reference to the choice of law or conflict of law provisions of such laws.

10. **Entire Agreement.** This agreement (inclusive of the Confidentiality and Intellectual Property Agreement incorporated herein) contains the entire agreement and understanding by and between the Company and Employee with respect to the terms described herein, and any representations, promises, agreements or understandings, written or oral, not herein contained shall be of no force or effect. No change or modification hereof shall be valid or binding unless the same is in writing and signed by the parties hereto.

Please indicate your acceptance of the foregoing provisions of this employment agreement by signing the enclosed copy of this agreement and returning it to the Company.

Very truly yours,

Adherex Technologies, Inc.

By /s/ Rostislav Raykov

Title: Chief Executive Officer

ACCEPTED BY AND AGREED TO

Signature: /s/ Thomas Spector

Dated: May 3, 2010

Spector Employment Contract

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ADHEREX TECHNOLOGIES INC.
INDEPENDENT DIRECTOR AGREEMENT

This Agreement is entered into as of May 3, 2010, by and between Adherex Technologies Inc. (the “Company”) and _____ (“Director”). The parties agree as follows:

1. **Services.** Director agrees to act as a member of the Company’s Board of Directors in accordance with the *Canada Business Corporations Act* and the other terms and conditions set forth herein (the “Services”).

2. **Compensation.** Upon execution of this Agreement and conditioned upon the approval of Adherex’s shareholders, as required by applicable law and regulations, and upon satisfaction of any other regulatory requirements, Adherex will grant Director an option (the “Equity Grant”) to purchase that number of Adherex common shares that equals 1.33% of Adherex’s common estimated by the Company to be outstanding (the “Company’s estimated shares outstanding”) upon completion of the proposed rights offering announced by the Company on April 20, 2010 (the “Rights Offering”). These options will be immediately vested and shall otherwise be subject to the terms and conditions of Adherex’s stock option plan, as amended. Director shall be entitled to receive further stock options as may be determined by the board in its discretion. For the avoidance of doubt, the Company’s estimated shares outstanding shall be the same amount used in to calculate the proposed option grants to employees’ Andrade, Raykov and Spector. Director shall not be paid any cash consideration for the Services performed hereunder.

3. **Expenses.** Company shall reimburse Director for reasonable travel and related expenses incurred in the course of attending board meetings. Company will make payments for such reasonable expenses within thirty (30) days after receipt of Director’s invoice therefor.

4. **Confidentiality.** Director shall maintain in confidence and not publish or otherwise disclose to third parties or use for any purpose other than providing the Services hereunder any confidential information of Company, unless otherwise approved in writing by Company. Director agrees not to improperly disclose to or use on behalf of Company any proprietary information or trade secret of any third party to whom Director has a duty to keep such information in confidence and not bring onto the premises of Company any unpublished document or proprietary information belonging to such third party.

5. **No Conflict.** Director represents that Director’s compliance with the terms of this Agreement and provision of Services hereunder will not violate any duty which Director may have to any other person or entity (such as a present or former employer), including obligations concerning providing services to others, confidentiality of proprietary information and assignment of invention and assignment of inventions, ideas, patents or copyrights, and Director agrees that Director will not do anything in the performance of Services hereunder that would violate any such duty.

6. **Legal Relationship.** Director shall not be an employee of Company or any of its affiliates, or entitled to participate in any employee benefit plan of Company or receive any benefit available to employees of Company, including insurance, worker's compensation, retirement and vacation benefits. Director shall not have any authority to and shall not make any representation or promise to enter into any agreement on behalf of Company, unless authorized to do so by the board of directors.

7. **Term and Termination.** The term of this Agreement shall be until the next annual meeting of the shareholders' of the Company and may renew on an annual basis upon the shareholders' re-election of the Director as a director of the Company. The provisions of Sections 4, 5, 6, 7 and 8 shall survive expiration or termination of this Agreement for any reason.

8. **Indemnification.** As a member of the Company's Board of Directors, you will be entitled to indemnification from lawsuits in accordance with the Company's bylaws and you will have coverage under the existing directors & officers insurance policy on the same terms as other Directors.

9. **Miscellaneous.** This Agreement shall be governed by the laws of the Province of Ontario, without reference to its conflicts of laws provisions. This Agreement may be amended or modified only in writing signed by both parties. If any provision of this Agreement shall be found by a court to be void, invalid or unenforceable, the same shall be reformed to comply with applicable law or stricken if not so conformable, so as not to affect the validity or enforceability of the remainder of this Agreement. Each of the parties hereto from time to time at the request and expense of any other party hereto and without further consideration, shall execute and deliver such other instruments of transfer, conveyance and assignment and take such further action as the other party may require to more effectively complete any matter provided for herein. Any party's failure to enforce any provision or provisions of this Agreement shall not in any way be construed as a waiver of any such provision or provisions, nor prevent that party thereafter from enforcing each and every other provision of this Agreement. The rights granted to the parties herein are cumulative and shall not constitute a waiver of either party's right to assert all other legal remedies available to it under the circumstances. The rights and benefits of the Company under this Agreement and all covenants and agreements hereunder shall inure to the benefit of, and be enforceable by the Company's successors and assigns but shall not otherwise be transferable by the Company to any one or more other persons. The rights and obligations of the Director under this Agreement shall not be assigned. This Agreement may be executed in counterparts, each of which shall be deemed an original, but both of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

DIRECTOR:

ADHEREX TECHNOLOGIES INC.

Print Name:
Address:

By: _____
Name:
Title:

**ADHEREX TECHNOLOGIES INC
CERTIFICATION**

I, Rostislav Raykov, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Adherex Technologies 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 quarterly 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 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 have:
 - (a) Designed such disclosure controls and procedures or caused such disclosure controls and procedures to be designed under 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;
 - (c) 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 discovered 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 registrants most recent fiscal quarter (the registrant's third 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.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation, 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 that are reasonable 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: May 13, 2010

By: /s/Rostislav Raykov
Rostislav Raykov
Chief Executive Officer

ADHEREX TECHNOLOGIES INC.
CERTIFICATION

I, Robert Andrade, certify that:

1. I have reviewed this report on Form 10-Q of Adherex Technologies 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 quarterly 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 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 we have:
 - (a) Designed such disclosure controls and procedures or caused such disclosure controls and procedures to be designed under 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;
 - (c) 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 discovered 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 third 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.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation, 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 that are reasonable 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: May 13, 2010

By: /s/ Robert Andrade
Robert Andrade
Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. §1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of Adherex Technologies Inc. (the "Company") on Form 10-Q for the period ended March 31, 2010 (the "Report"), each of the undersigned, Rostislav Raykov, Chief Executive Officer of the Company, and Robert Andrade, Chief Financial Officer of the Company, hereby certifies pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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: May 13, 2010

By: /s/ Rostislav Raykov
Rostislav Raykov
Chief Executive Officer

Date: May 13, 2010

By: /s/ Robert Andrade
Robert Andrade
Chief Financial Officer
