
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, DC 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended December 31, 2009.

☐ **TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission file number 000-21898

ARROWHEAD RESEARCH CORPORATION

(Exact name of registrant as specified in its charter)

Delaware
(State of incorporation)

46-0408024
(I.R.S. Employer Identification No.)

**201 S. Lake Avenue, Suite 703
Pasadena, California 91101
(626) 304-3400**
(Address and telephone number of principal executive offices)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act 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 has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☐ No ☐

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

Large accelerated ☐

Accelerated filer ☐

Non-accelerated filer ☐ (Do not check if a smaller reporting company)

Smaller reporting company ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The number of shares outstanding of the issuer’s classes of common equity, as of the latest practicable date is 62,788,380 shares of common stock as of February 8, 2010.

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

Arrowhead Research Corporation and Subsidiaries (A Development Stage Company) Consolidated Balance Sheets

	(unaudited) December 31, 2009	September 30, 2009
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 3,809,596	\$ 2,020,224
Trade receivable, net of allowance for doubtful accounts of \$30,789 at December 31, 2009 and September 30, 2009	129,772	144,148
Other receivables	3,109	3,109
Other prepaid expenses	205,918	316,074
TOTAL CURRENT ASSETS	4,148,395	2,483,555
PROPERTY AND EQUIPMENT		
Computers, office equipment and furniture	374,991	374,991
Research equipment	932,683	932,683
Software	150,445	150,445
Leasehold improvements	94,317	94,317
	1,552,436	1,552,436
Less: Accumulated depreciation and amortization	(1,120,790)	(1,025,392)
NET PROPERTY AND EQUIPMENT	431,646	527,044
INTANGIBLE AND OTHER ASSETS		
Rent deposit	94,840	109,648
Patents	2,283,554	2,362,460
Investment in Nanotope Inc., equity basis	1,983,829	2,032,467
Investment in Leonardo Biosystems Inc., at cost	187,000	187,000
TOTAL OTHER ASSETS	4,549,223	4,691,575
TOTAL ASSETS	\$ 9,129,264	\$ 7,702,174
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	\$ 891,677	\$ 1,013,281
Accrued expenses	411,211	420,077
Accrued payroll and benefits	239,781	160,846
Accrued severance	23,500	23,500
Capital lease obligation—short term	513,620	726,534
Notes payable	500,000	—
TOTAL CURRENT LIABILITIES	2,579,789	2,344,238
LONG-TERM LIABILITIES		
Notes payable	—	500,000
TOTAL LONG-TERM LIABILITIES	—	500,000
Commitments and contingencies		
STOCKHOLDERS' EQUITY		
Arrowhead Research Corporation shareholders' equity:		
Preferred stock, \$0.001 par value; 5,000,000 shares authorized; no shares issued or outstanding	—	—
Common stock, \$0.001 par value; 145,000,000 shares authorized; 62,788,380 and 56,411,774 shares issued and outstanding as of December 31, 2009 and September 30, 2009, respectively	61,511	56,428
Additional paid-in capital	113,440,515	110,070,327
Subscription receivable	(317,000)	(300,000)
Accumulated deficit during the development stage	(106,513,746)	(104,968,819)
Total Arrowhead Research Corporation stockholders' equity	6,671,280	4,857,936
Noncontrolling interest	(121,805)	—
TOTAL STOCKHOLDERS' EQUITY	6,549,475	4,857,936
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 9,129,264	\$ 7,702,174

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

Arrowhead Research Corporation and Subsidiaries
(A Development Stage Company)
Consolidated Statements of Operations
(unaudited)

	Three Months Ended December 31, 2009	Three Months Ended December 31, 2008	May 7, 2003 (Inception) to December 31, 2009
REVENUE	\$ 148,068	\$ 701,723	\$ 7,655,707
OPERATING EXPENSES			
Salaries	1,104,103	3,126,664	41,138,641
Consulting	101,239	588,757	7,933,396
General and administrative expenses	746,250	1,584,752	23,811,076
Research and development	277,788	3,888,304	53,897,946
Patent amortization	78,906	89,530	1,865,372
TOTAL OPERATING EXPENSES	2,308,286	9,278,007	128,646,431
OPERATING LOSS	(2,160,218)	(8,576,284)	(120,990,724)
OTHER INCOME (EXPENSES)			
Loss on equity of investments—Nanotope	(48,639)	(69,382)	(389,172)
Gain on sale of stock in subsidiary	—	—	2,292,800
Gain on sale of equity of investments—Ensysce	—	700,000	700,000
Loss on sale of fixed assets, net	—	—	(77,374)
Realized and unrealized gain in marketable securities	—	—	382,264
Interest income (expense), net	(22,025)	8,870	2,787,929
Other income	220	—	178,110
TOTAL OTHER INCOME	(70,444)	639,488	5,874,557
LOSS FROM CONTINUING OPERATIONS	(2,230,662)	(7,936,796)	(115,116,167)
Loss from discontinued operations	(15,767)	(93,732)	(7,147,462)
Gain/Loss on disposal of discontinued operations	430,000	—	354,603
INCOME (LOSS) FROM DISCONTINUED OPERATIONS	414,233	(93,732)	(6,792,859)
Provision for income taxes	—	—	—
NET LOSS	(1,816,429)	(8,030,528)	(121,909,026)
Less: Net loss attributable to noncontrolling interests	271,502	60	15,559,240
NET LOSS ATTRIBUTABLE TO ARROWHEAD	\$ (1,544,927)	\$ (8,030,468)	\$ (106,349,786)
Earnings per share-basic and diluted:			
Income (loss) from continuing operations attributable to Arrowhead common shareholders	\$ (0.04)	\$ (0.19)	
Income (loss) from discontinued operations attributable to Arrowhead common shareholders	0.01	(0.00)	
Net income (loss) attributable to Arrowhead shareholders	<u>\$ (0.03)</u>	<u>\$ (0.19)</u>	
Weighted average shares outstanding, basic and diluted	58,649,086	42,934,517	

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

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Arrowhead Research Corporation and Subsidiaries
(A Development Stage Company)
Consolidated Statement of Stockholders' Equity
from inception through December 31, 2009
(Unaudited)

	Common Stock		Additional Paid-in- Capital	Subscription Receivable	Accumulated Deficit during the Development Stage	Noncontrolling interest	Totals
	Shares	Amount					
Initial Issuance of Stock:							
Common stock & warrants issued for cash @ \$0.001 per unit	3,000,000	\$ 3,000	\$ —	\$ —	\$ —	\$ —	\$ 3,000
Common stock & warrants issued for cash @ \$1.00 per unit	1,680,000	1,680	1,678,320	—	—	—	1,680,000
Stock issuance cost charged to additional paid-in capital	—	—	(168,000)	—	—	—	(168,000)
Net loss for period from inception to September 30, 2003	—	—	—	—	(95,238)	—	(95,238)
Balance at September 30, 2003	4,680,000	4,680	1,510,320	—	(95,238)	—	1,419,762
Exercise of stock options	75,000	75	14,925	—	—	—	15,000
Common stock & warrants issued for cash @ \$1.00 per unit	475,000	475	474,525	—	—	—	475,000
Common stock & warrants issued for marketable securities @ \$1.00 per unit	500,000	500	499,500	—	—	—	500,000
Stock issuance cost charged to additional paid-in capital	—	—	(96,500)	—	—	—	(96,500)
Common stock and warrants issued for cash @ \$1.50 per unit	6,608,788	6,609	9,906,573	—	—	—	9,913,182
Common stock issued in reverse acquisition	705,529	706	(151,175)	—	—	—	(150,469)
Common stock issued as a gift for \$1.09 per share	150,000	163	162,587	—	—	—	162,750
Common stock and warrants issued as stock issuance cost @ \$1.50 per unit	356,229	356	533,988	—	—	—	534,344
Stock issuance cost charged to additional paid-in capital	—	—	(991,318)	—	—	—	(991,318)
Exercise of stock option @ \$0.20 per share	75,000	75	14,925	—	—	—	15,000
Exercise of stock options @ \$1.00 per share	6,000	6	5,994	—	—	—	6,000
Stock-based compensation	—	—	175,653	—	—	—	175,653
Net loss for the year ended September 30, 2004	—	—	—	—	(2,528,954)	1,777,699	(751,255)
Balance at September 30, 2004	13,631,546	13,645	12,059,997	—	(2,624,192)	1,777,699	11,227,149
Exercise of warrants @ \$1.50 per share	13,812,888	13,813	20,705,522	—	—	—	20,719,335
Exercise of stock options @ \$1.00 per share	25,000	25	24,975	—	—	—	25,000
Common stock issued to purchase Insert Therapeutics share @ \$3.98 per share	502,260	502	1,999,498	—	—	—	2,000,000
Common stock issued for services	12,500	12	49,988	—	—	—	50,000
Stock-based compensation	—	—	508,513	—	—	—	508,513
Change in percentage of ownership in subsidiary	—	—	230,087	—	—	—	230,087
Net loss for the year ended September 30, 2005	—	—	—	—	(6,854,918)	121,491	(6,733,427)
Balance at September 30, 2005	27,984,194	27,997	35,578,580	—	(9,479,110)	1,899,190	28,026,657
Exercise of stock options	115,794	116	341,421	—	—	—	341,537
Common stock issued @ \$4.88 per share	204,854	205	999,795	—	—	—	1,000,000
Common stock issued @ \$3.84 per share	15,000	15	57,585	—	—	—	57,600
Common stock issued @ \$3.50 per share	5,590,000	5,590	19,539,410	—	—	—	19,545,000
Common stock issued @ \$5.91 per share	25,364	25	149,975	—	—	—	150,000
Common stock issued to purchase Calando Pharmaceuticals, Inc. @ \$5.17 per share	208,382	208	1,077,125	—	—	—	1,077,333
Stock-based compensation	—	—	1,369,478	—	—	—	1,369,478
Net loss for the year ended September 30, 2006	—	—	—	—	(18,997,209)	(964,752)	(19,961,961)
Balance at September 30, 2006	34,143,588	34,156	59,113,369	—	(28,476,319)	934,438	31,605,644
Exercise of stock options	186,164	186	434,541	—	—	—	434,727
Common stock issued @ \$5.78 per share, net Arrowhead's increase in proportionate share of Insert Therapeutics' equity	2,849,446	2,849	15,149,366	—	—	—	15,152,215
Common stock issued for purchase of Carbon Nanotechnologies, Inc. @ \$3.77 per share	1,431,222	1,431	5,398,569	—	—	—	5,400,000
Stock-based compensation	—	—	2,175,544	—	—	—	2,175,544
Net loss for the year ended September 30, 2007	—	—	—	—	(29,931,118)	(781,829)	(30,712,947)
Balance at September 30, 2007	38,610,420	38,622	84,672,783	—	(58,407,437)	152,609	26,456,577
Exercise of stock options	105,357	106	289,921	—	—	—	290,027
Common stock issued at approximately \$1.80 per share, net Arrowhead's increase in proportionate share of Unidym's equity	3,863,989	3,867	6,956,718	—	—	—	6,960,585
Common stock issued @ \$2.72 per share to Rice University	50,000	50	135,950	—	—	—	136,000
Common stock issued @ \$2.83 per share to purchase shares of Unidym, Inc.	70,547	71	199,929	—	—	—	200,000
Common stock issued @ \$2.95 per share to purchase MASA Energy, LLC	105,049	105	309,895	—	—	—	310,000
Common stock issued @ \$2.19 per share to Unidym for the acquisition of Nanoconduction	114,155	114	249,886	—	—	—	250,000
Common stock issued @ \$2.18 per share	15,000	15	32,685	—	—	—	32,700
Stock-based compensation	—	—	3,187,397	—	—	—	3,187,397
Net loss for the year ended September 30, 2008	—	—	—	—	(27,089,030)	(152,609)	(27,241,639)
Balance at September 30, 2008	42,934,517	42,950	97,756,126	—	(85,496,467)	—	12,302,609
Common Stock issued @ \$0.55 per share to Unidym stockholder in exchange for Unidym's shares	2,058,393	2,059	1,131,617	—	—	—	1,133,676
Common Stock issued @ \$0.52 per share to TEL Ventures in exchange for Unidym's shares	2,222,222	2,222	1,156,111	—	—	—	1,158,333
Reclassification of former Unidym mezzanine debt to equity	—	—	2,000,000	—	—	—	2,000,000
Arrowhead's increase in proportionate share of Calando's equity	—	—	2,120,250	—	—	—	2,120,250
Common stock issued @ \$0.30 per share	9,196,642	9,197	2,749,796	—	—	—	2,758,993
Change in percentage of ownership in subsidiary	—	—	16,297	—	—	—	16,297
Stock-based compensation	—	—	2,676,170	—	—	—	2,676,170
Issuance of Series D Preferred Stock for Subscription in Unidym	—	—	300,000	(300,000)	—	—	—
Amortization of discount on Unidym Series D Preferred Stock	—	—	163,960	—	(163,960)	—	—
Net loss for the year ended September 30, 2009	—	—	—	—	(19,308,392)	—	(19,308,392)
Balance at September 30, 2009	56,411,774	56,428	110,070,327	(300,000)	(104,968,819)	—	4,857,936
Issuance of Series D Preferred Stock for Subscription in Unidym	—	—	—	300,000	—	—	300,000
Common stock issued @ \$0.63 per share	5,083,430	5,083	3,217,813	(317,000)	—	—	2,905,896
Common Stock issued to Calando stockholders in exchange for Calando's shares	1,140,000	—	(148,415)	—	—	148,415	—
Common Stock issued to Unidym stockholders in exchange for Unidym's shares	153,176	—	(1,282)	—	—	1,282	—
Stock-based compensation	—	—	302,072	—	—	—	302,072
Net loss for period ended December 31, 2009	—	—	—	—	(1,544,927)	(271,502)	(1,816,429)
Balance at December 31, 2009	62,788,380	61,511	113,440,515	(317,000)	(106,513,746)	(121,805)	6,549,475

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

Arrowhead Research Corporation and Subsidiaries
(A Development Stage Company)
Consolidated Statements of Cash Flows
(unaudited)

	Three Months Ended December 31, 2009	Three Months Ended December 31, 2008	May 7, 2003 (Date of inception) to December 31, 2009
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net Loss	\$ (1,816,429)	\$ (8,030,468)	\$ (121,909,026)
Plus: Net loss attributable to noncontrolling interests	271,502	60	15,559,240
Net loss attributable to Arrowhead	(1,544,927)	(8,030,408)	(106,349,786)
Income from discontinued operation	(414,233)	—	(414,233)
Realized and unrealized (gain) loss on investment	—	(700,000)	(1,082,263)
Gain from sale of subsidiary	—	—	(306,344)
Loss on sale/donation of fixed assets	—	—	77,374
Stock issued as gift to Caltech	—	—	162,750
Stock issued as gift to Rice University	—	—	136,000
Stock issued for professional services	—	—	232,700
Stock issued for in-process research and development	—	—	13,166,347
Change in percentage of ownership in subsidiary	—	—	16,297
Purchased in-process research and development—Nanoconduction	—	—	2,685,208
Stock-based compensation	302,072	727,934	10,394,827
Depreciation and amortization	174,304	287,365	4,911,949
Gain on sale of stock in subsidiary	—	—	(2,292,800)
Non-cash loss from equity investment	48,638	69,382	389,171
Noncontrolling interest	(271,502)	(60)	(16,559,428)
Gain on renegotiation of accrued severance	—	—	(726,500)
(Increase) decrease of cash flow from:			
Receivables	14,376	(172,550)	(133,721)
Prepaid research expense	—	(9,319)	(1)
Other prepaid expenses	110,156	15,317	(208,395)
Deposits	14,808	(3,520)	(96,900)
Accounts payable	(121,604)	569,489	259,408
Accrued expenses	(8,866)	542,312	21,675
Accrued severance and other liabilities	78,935	5,544	1,006,970
NET CASH USED IN OPERATING ACTIVITIES OF CONTINUING OPERATIONS	(1,617,843)	(6,698,514)	(94,709,695)
CASH FLOWS FROM INVESTING ACTIVITIES OF CONTINUING OPERATIONS:			
Purchase of marketable securities—US Treasury Bills	—	—	(18,575,915)
Purchase of property and equipment	—	(28,100)	(3,550,518)
Purchase of MASA Energy, LLC	—	—	(250,000)
Minority equity investment	—	—	(2,000,000)
Cash paid for interest in Nanotechnica	—	—	(4,000,000)
Cash paid for interest in Aonex	—	—	(5,000,000)
Cash paid for interest in Insert	—	—	(10,150,000)
Cash paid for interest in Calando	—	—	(8,800,000)
Cash paid for interest in Unidym	—	—	(14,138,003)
Cash paid/obtained for interest in Tego	—	1,700,000	(801,000)
Cash obtained from interest in Nanotechnica	—	—	4,000,000
Cash obtained from interest in Aonex	—	—	5,001,250
Cash obtained from interest in Insert	—	—	10,529,594
Cash obtained from interest in Calando	—	—	8,800,000
Cash obtained from interest in Unidym	—	—	14,138,003
Cash paid/obtained from interest in Tego	—	(1,700,000)	801,000
Proceeds from sale of marketable securities—US Treasury Bills	—	—	18,888,265
Proceeds from sale of investments	—	700,000	1,269,913
Proceeds from sale of subsidiary (net)	—	—	359,375
Proceeds from sale of fixed assets	—	—	79,375
Payment for patents	—	—	(303,440)
Restricted cash	—	—	50,773
NET CASH PROVIDED BY (USED) IN INVESTING ACTIVITIES OF CONTINUING OPERATIONS	—	671,900	(3,651,328)
CASH FLOWS FROM FINANCING ACTIVITIES OF CONTINUING OPERATIONS:			
Payments of capital leases	(212,914)	(196,596)	(1,163,380)
Proceeds from issuance of Calando debt	—	2,516,467	2,516,467
Proceeds from sale of stock in subsidiary	—	1,250,000	18,575,168
Proceeds from issuance of common stock and warrants, net	3,205,896	—	81,828,131
NET CASH PROVIDED BY FINANCING ACTIVITIES OF CONTINUING OPERATIONS	2,992,982	3,569,871	101,756,386
Cash flows from discontinued operations:			
Operating cash flows	(15,767)	—	(15,767)
Investing cash flows	430,000	—	430,000
Net cash provided by discontinued operations:	414,233	—	414,233
NET INCREASE (DECREASE) IN CASH	1,789,372	(2,456,743)	3,809,596
CASH AT BEGINNING OF PERIOD	2,020,224	10,093,585	—
CASH AT END OF PERIOD	<u>\$ 3,809,596</u>	<u>\$ 7,636,842</u>	<u>\$ 3,809,596</u>
Supplementary disclosures:			
Interest paid	\$ 13,118	\$ 28,124	\$ 98,514

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

SUPPLEMENTAL NON-CASH TRANSACTIONS

On March 23, 2005, Arrowhead Research Corporation (“Arrowhead”) purchased 7,375,000 shares of Insert Therapeutics, Inc. (“Insert”) Common Stock from two minority stockholders of Insert for 502,260 newly issued shares of Arrowhead Common Stock valued at \$2,000,000 based on the closing market price of Arrowhead Common Stock on NASDAQ on the date of the closing.

On March 31, 2006, Arrowhead purchased 964,000 shares of Calando Pharmaceuticals, Inc. (“Calando”) Common Stock from minority stockholders of Calando for \$1,928,000 consisting of 208,382 newly issued shares of Arrowhead Common Stock valued at \$1,077,333 plus \$850,667 in cash. The 208,382 shares of Arrowhead Common Stock were valued based on the average closing price of Arrowhead’s Common Stock on NASDAQ the ten trading days immediately prior to the date of the closing.

On April 20, 2007, Arrowhead purchased the Series E Preferred Stock of Carbon Nanotechnologies, Inc. in exchange for 1,431,222 shares of Arrowhead Common Stock with an estimated fair market value of \$5,400,000 based on the average closing price of Arrowhead’s Common Stock on NASDAQ the ten trading days immediately prior to March 24, 2007, as set forth in the Agreement and Plan of Merger among Unidym, Inc. (“Unidym”), Carbon Nanotechnologies, Inc., Arrowhead and others.

On April 23, 2008, Arrowhead purchased 200,000 shares of the Common Stock of Unidym in exchange for 70,547 shares of Arrowhead Common Stock with an estimated fair market value of \$200,000 based on the average closing price of Arrowhead’s Common Stock on NASDAQ the ten trading days immediately prior to the date of the closing.

On April 29, 2008, Arrowhead purchased all of the membership units of MASA Energy, LLC for \$560,000. The purchase price consisted of 105,049 shares of Arrowhead Common Stock with an estimated fair market value of \$310,000 based on the average closing price of Arrowhead’s Common Stock on NASDAQ the ten trading days immediately prior to the date of the closing, plus \$250,000 in cash.

On August 8, 2008, Unidym acquired all of the outstanding stock of Nanoconduction, Inc. in exchange for 114,115 shares of Arrowhead Common Stock with an estimated fair market value of \$250,000.

On June 11, 2009, Arrowhead issued 1,324,625 shares of Common Stock with an estimated fair market value of \$688,802 in exchange for an equal number of Series A Preferred Stock of Unidym, with minority stockholders of Unidym.

On June 25, 2009, Arrowhead issued 1,944,444 shares of Common Stock with an estimated fair market value of \$972,222 in exchange for an equal number of Series C Preferred Stock of Unidym, with a minority stockholder of Unidym.

On September 22, 2009, Arrowhead issued 91,495 shares of Common Stock with an estimated fair market value of \$46,662 in exchange for an equal number of Series A Preferred Stock of Unidym with a minority stockholder of Unidym.

On September 28, 2009, Arrowhead issued 642,273 shares of Common Stock with an estimated fair market value of \$398,209 in exchange for 5,574 shares of Series A Preferred Stock and 636,699 shares of Series C Preferred Stock of Unidym, with several minority stockholders of Unidym.

On September 30, 2009, Arrowhead issued 277,778 shares of Common Stock with an estimated fair market value of \$186,111 in exchange for an equal number of shares of Series C-1 Preferred Stock of Unidym, with a minority stockholder of Unidym.

In October and November 2009, Arrowhead issued 153,176 shares of Common Stock with an estimated fair market value of \$47,485 in exchange for an equal number of shares of Series C Preferred Stock of Unidym, with several minority stockholders of Unidym.

In October and November 2009, Arrowhead issued 1,140,000 shares of Common Stock with an estimated fair market value of \$706,800 in exchange for 2,850,000 shares of Calando common stock, with several minority stockholders of Calando. In conjunction with this exchange, Arrowhead also issued 240,000 warrants to purchase Arrowhead common stock in exchange for 600,000 warrants to purchase Calando common stock.

Arrowhead Research Corporation
Notes to Consolidated Financial Statements
(Unaudited)

Unless otherwise noted, (1) the term “Arrowhead” refers to Arrowhead Research Corporation, a Delaware corporation formerly known as InterActive Group, Inc., (2) the terms the “Company,” “we,” “us,” and “our” refer to the ongoing business operations of Arrowhead and its Subsidiaries, whether conducted through Arrowhead or a subsidiary of Arrowhead, (3) the term “ARC” refers to Arrowhead Research Corporation, a privately-held California corporation with which Arrowhead consummated a stock exchange transaction in January 2004, (4) the term “Subsidiaries” refers collectively to Calando Pharmaceuticals, Inc. (“Calando”), Unidym, Inc. (“Unidym”), Agonn Systems, Inc. (“Agonn”), Tego Biosciences Corporation (“Tego”) and Masa Energy LLC (“Masa”) and (5) the term “Common Stock” refers to Arrowhead’s Common Stock, \$0.001 par value per share, and the term “stockholder(s)” refers to the holders of Common Stock or securities exercisable for Common Stock.

NOTE 1. ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES

Nature of Business and Going Concern

Arrowhead Research Corporation is a development stage nanotechnology holding company that forms, acquires and operates subsidiaries commercializing innovative nanotechnologies. By working closely with leading scientists and universities, Arrowhead identifies advances in nanotechnology and matches them with product development opportunities in high-growth markets. The Company is currently focused on the electronics and biotech industries. Arrowhead owns two majority-owned subsidiaries, Unidym and Calando, and has minority investments in two early-stage nanotechnology companies, Nanotope, Inc. (“Nanotope”) and Leonardo Biosystems, Inc. (“Leonardo”).

Arrowhead is incorporated in Delaware and its principal executive offices are located in Pasadena, California.

The Company was originally incorporated in South Dakota in 1989, and was reincorporated in Delaware in 2000. The Company’s principal executive offices are located at 201 South Lake Avenue, Suite 703, Pasadena, California 91101, and its telephone number is (626) 304-3400. As of December 31, 2009, Arrowhead Research Corporation had 11 full-time employees at the corporate office and 10 full-time employees at its Subsidiary companies.

Financing and Liquidity

At December 31, 2009, the Company had approximately \$3.8 million in cash to fund operations. Since September 30, 2008, the Company raised \$10.8 million in capital, of which \$317,000 was receivable at December 31, 2009, on a consolidated basis, through equity financing at the Arrowhead level and sales of equity securities and convertible promissory notes by its Subsidiaries, including proceeds of \$3.2 million from a private placement closed on December 11, 2009. Even with this infusion of additional capital, however, the Company expects that it will need to obtain additional capital to meet its operating needs for the future.

The Company’s strategic plan includes focusing on near term revenue opportunities, conserving cash and seeking sources of new capital. To execute this plan, the Company will seek to accomplish one or more of the following on favorable terms: the out-license of technology, sale of a subsidiary, sale of non-core assets, scaling down development efforts, funded joint development or partnership arrangements and sale of securities. This strategy is intended to conserve cash while maintaining the opportunity to obtain value from their technologies.

Summary of Significant Accounting Policies

Principles of Consolidation—The consolidated financial statements of the Company include the accounts of Arrowhead and its wholly-owned and majority-owned Subsidiaries. Prior to April 2008, Arrowhead’s subsidiaries included Insert Therapeutics, Inc. (“Insert”), which was merged with Calando in April 2008. The merged entity is majority-owned by Arrowhead and continues to operate under the name of Calando. At December 31, 2009, other subsidiaries included Unidym, Tego, Agonn and Masa. On December 23, 2009, Tego completed a sale of its assets to Luna Innovations, Inc. and is included in the results as Loss from Discontinued Operations. Loss from Discontinued Operations also includes Aonex Technologies, Inc. (“Aonex”), sold in May 2008 and Nanotechnica, Inc. (“Nanotechnica”), dissolved in June 2005. All significant intercompany accounts and transactions are eliminated in consolidation, and noncontrolling interests are accounted for in the consolidated statements of operations and the balance sheets.

Basis of Presentation and Use of Estimates—The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the accompanying financial statements. Significant estimates made in preparing these financial statements include valuing of the stock of the Subsidiaries, assumptions to calculate stock-based compensation expense, allowance for doubtful accounts, deferred tax asset valuation allowance, derivative liabilities, minority-interest Common Stock and useful lives for depreciable and amortizable assets. Actual results could differ from those estimates. Additionally, certain reclassifications have been made to prior period financial statements to conform to the current period presentation. In the opinion of management, all adjustments, including normal recurring accruals, considered necessary for a fair presentation have been included.

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Cash and Cash Equivalents—The Company considers all liquid debt instruments purchased with a maturity of three months or less to be cash equivalents.

Credit Risk—The Company extends credit to its customers in the normal course of business and generally does not require collateral or other security. The Company performs ongoing credit evaluations of its customers' financial condition and historically has not incurred significant credit losses.

Concentration of Credit Risk—The Company maintains checking accounts for Arrowhead and separate accounts for each Subsidiary at any of three financial institutions. These accounts are insured by the Federal Deposit Insurance Corporation (FDIC) for up to \$250,000. The Company has two wealth management accounts at the same financial institutions that invest in higher yield money market accounts and in government securities. At December 31, 2009, the Company had uninsured cash deposits totaling \$3,356,117. The Company has not experienced any losses in such accounts.

Property and Equipment—Property and equipment are recorded at cost. Depreciation of property and equipment is recorded using the straight-line method over the respective useful lives of the assets ranging from 3 to 7 years. Leasehold improvements are amortized over the lesser of the expected useful life or the remaining lease term.

Intellectual Property—At December 31, 2009, intellectual property consisted of patents and patent applications licensed or purchased in the gross amount of \$4,093,624. The accumulated amortization of patents totaled \$1,810,070 at December 31, 2009. Patents are amortized over 3 years to 20 years. The weighted average original amortization period is 12 years. The weighted average remaining amortization period is 8 years. Amortization is expected to be \$236,718 for the remainder of fiscal 2010, \$315,624 in fiscal 2011, and \$241,808 for fiscal years 2012, 2013, and 2014. Long-lived assets, such as property, equipment and intangible assets subject to amortization, are reviewed for impairment whenever events or circumstances indicate that the carrying amount of these assets may not be recoverable. In reviewing for impairment, we compare the carrying value of such assets to the estimated undiscounted future cash flows expected from the use of the assets and their eventual disposition. When the estimated undiscounted future cash flows are less than their carrying amount, an impairment loss is recognized equal to the difference between the assets' fair value and their carrying value.

Equity Investments—Arrowhead has a non-controlling equity investment in Nanotope, a privately held biotechnology company, that is recorded in other assets. This investment is carried at cost less Arrowhead's proportionate share of Nanotope's operating loss for the period since investment because Arrowhead owns more than 20% of the voting equity and has the ability to exercise significant influence over this company. This investment is high-risk as the markets for technologies or products of Nanotope are still in the development stage and such markets may never be significant. Arrowhead could lose its entire investment in Nanotope. Arrowhead monitors this investment for impairment and makes appropriate reductions in carrying value when necessary.

Minority Equity Investments—The Company's minority equity investment in Leonardo, a privately held biotechnology company, is recorded in Other Assets. This investment is carried at historical cost because Arrowhead owns less than 20% of the voting equity and only has the ability to exercise nominal, not significant, influence over this company. This investment is high risk as the markets for technologies or products of Leonardo are still in the development stage and such markets may never be significant. Arrowhead could lose its entire investment in some or all of this company. Arrowhead monitors this investment for impairment and makes appropriate reductions in carrying value when necessary.

Noncontrolling Interests in Majority-Owned Subsidiaries—Operating losses applicable to majority-owned Calando and Unidym have periodically exceeded the noncontrolling interests in the equity capital of either subsidiary. Such excess losses applicable to the noncontrolling interests have been and are borne by the Company as there is no obligation of the noncontrolling interests to fund any losses in excess of their original investment. There is also no obligation or commitment on the part of the Company to fund operating losses of any subsidiary whether wholly-owned or majority-owned. The Company now allocates the noncontrolling interest's share of net loss in excess of the noncontrolling interest's initial investment in accordance with guidance issued by the FASB, which was effective for the Company on October 1, 2009.

When there is a change in the Company's proportionate share of a development-stage subsidiary resulting from additional equity raised by the subsidiary, the change is accounted for as an equity transaction in consolidation. To the extent that the increase in the calculated value of the Company's interest in the equity of the subsidiary exceeds the Company's investment in the offering, that increase in value is referred to as the Company's "increase in its proportionate share of the subsidiary's equity" and the amount is recorded as an increase in the Company's Additional Paid-in Capital.

When Insert raised \$10.1 million in October 2006, Arrowhead participated by investing \$5.0 million in the offering. In comparison, the value of Arrowhead's equity in Insert increased by \$7,401,394. Consistent with the guidance found in Staff Accounting Bulletin Topic 5H, the difference between the amount invested by Arrowhead and the increase in Arrowhead's equity

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value in the subsidiary, or \$2,401,394 was recorded as an “increase in Arrowhead’s proportionate share of the subsidiary’s equity” and is shown as an increase in the Company’s Additional Paid-in Capital. A similar calculation was made for the conversion of \$2,120,250 of third party Calando debt into Calando Series A Preferred Stock in June 2009. A similar calculation was made for the Unidym \$10.0 million offering in the fall of 2007. Arrowhead contributed \$3.0 million but the value of its interest in the equity of Unidym increased by \$4,720,962. The \$1,720,962 difference was recorded as an “increase in Arrowhead’s proportionate share of the subsidiary’s equity” and is shown as an increase in the Company’s Additional Paid-in Capital.

Revenue Recognition—Revenue from product sales are recorded when persuasive evidence of an arrangement exists, title has passed and delivery has occurred, a price is fixed and determinable, and collection is reasonably assured. We may generate revenue from product sales, technology licenses, collaborative research and development arrangements, and research grants. Revenue under technology licenses and collaborative agreements typically consists of nonrefundable and/or guaranteed technology license fees, collaborative research funding and various milestone and future product royalty or profit-sharing payments.

Revenue associated with research and development funding payments, under collaborative agreements, is recognized ratably over the relevant periods specified in the agreement, generally the research and development period. Revenue from up-front license fees and milestones and product royalties are recognized as earned based on the completion of the milestones and product sales, as defined in the respective agreements. Payments received in advance of recognition as revenue are recorded as deferred revenue.

Cost of Goods Sold—The production of nanotubes by Unidym has been primarily for research and development activities. Therefore, the nanotubes produced are not capitalized as inventory, nor is a cost of goods sold calculated, even though some nanotubes are eventually sold to third parties.

Allowance for Doubtful Accounts—The Company accrues an allowance for doubtful accounts based on estimates of uncollectible revenues by analyzing historical collections, accounts receivable aging and other factors. Accounts receivable are written off when all collection attempts have failed.

Research and Development—Costs and expenses that can be clearly identified as research and development are charged to expense as incurred in accordance with guidance by the Financial Accounting Standards Board (“FASB”).

Earnings (Loss) per Share—Basic earnings (loss) per share is computed using the weighted-average number of common shares outstanding during the period. Diluted earnings (loss) per share are computed using the weighted-average number of common shares and dilutive potential common shares outstanding during the period. Dilutive potential common shares primarily consist of stock options issued to employees and consultants and warrants of the Company. These items have been excluded from the loss per share because their effect is anti-dilutive.

Stock- Based Compensation—The Company accounts for share-based compensation arrangements in accordance with accounting standards issued by the FASB, which requires the measurement and recognition of compensation expense for all share-based payment awards to be based on estimated fair values. We use the Black-Scholes option valuation model to estimate the fair value of our stock options at the date of grant. The Black-Scholes option valuation model requires the input of subjective assumptions to calculate the value of stock options. We use historical data among other information to estimate the expected price volatility, the expected option life and the expected forfeiture rate.

Income Taxes—The Company accounts for income taxes under the liability method, which requires the recognition of deferred income tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns. Under this method, deferred income taxes are recognized for the tax consequences in future years of differences between the tax bases of assets and liabilities and their financial reporting amounts at each period end based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established, when necessary, to reduce deferred income tax assets to the amount expected to be realized. The provision for income taxes, if any, represents the tax payable for the period and the change in deferred income tax assets and liabilities during the period.

Recently Issued Accounting Standards

On July 1, 2009, the FASB issued the FASB Accounting Standards Codification (the Codification). The Codification became the single source of authoritative non-governmental U.S. generally accepted accounting principles (“GAAP”), superseding existing FASB, American Institute of Certified Public Accountants (“AICPA”), Emerging Issues Task Force (“EITF”) and related literature. The Codification eliminates the previous US GAAP hierarchy and establishes one level of authoritative GAAP. All other literature is considered non-authoritative. The Codification was effective for interim and annual periods ending after September 15, 2009. The Company adopted the Codification for the year ended September 30, 2009. There was no impact to the consolidated financial statements.

In May 2009, the FASB issued guidelines on subsequent event accounting which sets forth: 1) the period after the balance sheet date during which management of a reporting entity should evaluate events or transactions that may occur for potential recognition or

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disclosure in the financial statements; 2) the circumstances under which an entity should recognize events or transactions occurring after the balance sheet date in its financial statements; and 3) the disclosures that an entity should make about events or transactions that occurred after the balance sheet date. These guidelines were effective for interim and annual periods ending after June 15, 2009, and the Company adopted them in the quarter ended June 30, 2009. There was no impact to the consolidated financial statements.

In April 2009, the FASB issued guidance on determining fair value when the volume and level of activity for an asset or liability has significantly decreased, and in identifying transactions that are not orderly. Based on the guidance, if an entity determines that the level of activity for an asset or liability has significantly decreased and that a transaction is not orderly, further analysis of transactions or quoted prices is needed, and a significant adjustment to the transaction or quoted prices may be necessary to estimate fair value. The guidance was effective on a prospective basis for interim and annual periods ending after June 15, 2009. The Company adopted this guidance in the quarter ended June 30, 2009, and there was no material impact on the consolidated financial statements.

In April 2009, the FASB issued guidance on the recognition and presentation of other-than-temporary impairments on investments in debt securities. If an entity's management asserts that it does not have the intent to sell a debt security and it is more likely than not that it will not have to sell the security before recovery of its cost basis, then an entity may separate other-than-temporary impairments into two components: 1) the amount related to credit losses (recorded in earnings), and 2) all other amounts (recorded in other comprehensive income). This guidance was effective on a prospective basis for interim and annual periods ending after June 15, 2009. The Company adopted this guidance for the quarter ended June 30, 2009, and there was no material impact on the consolidated financial statements.

In April 2009, the FASB issued additional requirements regarding interim disclosures about the fair value of financial instruments which were previously only disclosed on an annual basis. Entities are now required to disclose the fair value of financial instruments which are not recorded at fair value in the financial statements in both their interim and annual financial statements. The new requirements were effective for interim and annual periods ending after June 15, 2009 on a prospective basis. The Company adopted these requirements in the quarter ended June 30, 2009. There was no impact on the consolidated financial statements as this relates only to additional disclosures.

In December 2007, the FASB issued new guidance regarding business combinations. The revised guidance requires that the acquisition method of accounting be applied to a broader set of business combinations, amends the definition of a business combination, provides a definition of a business, requires an acquirer to recognize an acquired business at its fair value at the acquisition date and requires the assets and liabilities assumed in a business combination to be measured and recognized at their fair values as of the acquisition date (with limited exceptions). This guidance applies prospectively to business combinations where the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. An entity may not apply it before that date. The new standard also converges financial reporting under U.S. GAAP with international accounting rules. The Company adopted this guidance on October 1, 2009. There was no impact upon adoption of this guidance.

In April 2009, the FASB issued an amendment to the revised business combination guidance regarding the accounting for assets acquired and liabilities assumed in a business combination that arise from contingencies. The requirements of this amended guidance carry forward without significant revision to the guidance on contingencies which existed previously. Assets acquired and liabilities assumed in a business combination that arise from contingencies are recognized at fair value if fair value can be reasonably estimated. If fair value cannot be reasonably estimated, the asset or liability would generally be recognized in accordance with the Accounting Standards Codification (ASC) Topic 450 on contingencies. The Company adopted this guidance on October 1, 2009. There was no impact upon adoption of this guidance.

In December 2008, the FASB issued new guidance regarding disclosure by public entities about transfers of financial assets and interests in variable interest entities. This guidance requires public companies to provide additional disclosures about transferor's continuing involvement with transferred financial assets. It also requires public companies to provide additional disclosures regarding their involvement with variable interest entities. This guidance was adopted for the quarter ended March 31, 2009. These new requirements do not impact the consolidated financial statements as they are only related to disclosures.

In April 2008, the FASB issued new requirements regarding the determination of the useful lives of intangible assets. In developing assumptions about renewal or extension options used to determine the useful life of an intangible asset, an entity needs to consider its own historical experience adjusted for entity-specific factors. In the absence of that experience, an entity shall consider the assumptions that market participants would use about renewal or extension options. The new guidance is effective for fiscal years beginning after December 15, 2008. Earlier adoption is not permitted. The Company adopted this guidance on October 1, 2009. There was no impact upon adoption of this guidance.

In December 2007, the FASB issued new guidance on non-controlling interests in consolidated financial statements. This guidance requires that the non-controlling interest in the equity of a subsidiary be accounted for and reported as equity, provides revised guidance on the treatment of net income and losses attributable to the non-controlling interest and changes in ownership interests in a subsidiary and requires additional disclosures that identify and distinguish between the interests of the controlling and

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non-controlling owners. The new guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2008. The Company has adopted the new requirements for the fiscal year beginning on October 1, 2009; there was no material impact on the consolidated financial statements.

Recent Accounting Guidance Not Yet Adopted

Management does not believe that any recently issued, but not yet effective, accounting standards, if currently adopted, would have a material effect on the accompanying financial statements.

In June 2009, the FASB issued amendments to the accounting rules for variable interest entities (VIEs) and for transfers of financial assets. The new guidance for VIEs eliminates the quantitative approach previously required for determining the primary beneficiary of a variable interest entity and requires ongoing qualitative reassessments of whether an enterprise is the primary beneficiary. In addition, qualifying special purpose entities ("QSPEs") are no longer exempt from consolidation under the amended guidance. The amendments also limit the circumstances in which a financial asset, or a portion of a financial asset, should be derecognized when the transferor has not transferred the entire original financial asset to an entity that is not consolidated with the transferor in the financial statements being presented, and/or when the transferor has continuing involvement with the transferred financial asset. This guidance is effective as of the beginning of a reporting entity's first annual reporting period that begins after November 15, 2009 and for interim periods within the first annual reporting period. The Company does not expect the adoption of these amendments to have a material impact on the consolidated financial statements.

In June 2009, the FASB issued revised guidance to improve the relevance, representational faithfulness, and comparability of the information that a reporting entity provides in its financial reports about a transfer of financial assets; the effects of a transfer on its financial position, financial performance, and cash flows; and a transferor's continuing involvement in transferred financial assets. This guidance will be effective for fiscal years beginning after November 15, 2009. The Company is currently evaluating the impact the adoption of these standards will have on its consolidated financial statements and related disclosures.

In June 2009, the FASB issued new guidance regarding accounting for own-share lending arrangements in contemplation of convertible debt issuance which changes the accounting for equity share lending arrangements on an entity's own shares when executed in contemplation of a convertible debt offering. This guidance requires the share lending arrangement to be measured at fair value and recognized as an issuance cost. These issuance costs should then be amortized as interest expense over the life of the financing arrangement. Shares loaned under these arrangements should be excluded from computation of earnings per share. This guidance is effective for fiscal years beginning after December 15, 2009 and requires retrospective application for all arrangements outstanding as of the beginning of the fiscal year. The Company does not expect the adoption of this guidance to have a material impact on its consolidated financial statements.

In October 2009, the FASB issued authoritative guidance on multiple-deliverable revenue arrangements. This new guidance amends the existing criteria for separating consideration received in multiple-deliverable arrangements and requires that arrangement consideration be allocated at the inception of the arrangement to all deliverables based on their relative selling price. The guidance establishes a hierarchy for determining the selling price of a deliverable which is based on vendor-specific objective evidence, third-party evidence, or management estimates. Expanded disclosures related to multiple-deliverable revenue arrangements are also required. This guidance is effective for the Company beginning fiscal year 2011, with early adoption permitted. Upon adoption, the guidance may be applied either prospectively from the beginning of the fiscal year for new or materially modified arrangements, or it may be applied retrospectively. The Company does not expect the adoption of this guidance to have a material impact on its consolidated financial statements.

NOTE 2. BASIS OF CONSOLIDATION

The consolidated financial statements for the years ended December 31, 2009 and 2008 respectively, include the accounts of Arrowhead and its Subsidiaries, Calando, Unidym, Tego, Masa and Agonn. All significant intercompany accounts and transactions are eliminated in consolidation and minority interests were accounted for in the consolidated financial statements.

NOTE 3. INVESTMENT IN SUBSIDIARIES

Unidym, Inc.

The company now known as Unidym, Inc. was founded by Arrowhead in 2005. Through the license of intellectual property and the acquisition of three development stage nanotechnology companies in 2006, 2007 and 2008, Unidym acquired the rights to key patents for the manufacture and application of carbon nanotubes, and is developing products with applications for the display industry. The consolidated financial statements include the results of the merged companies.

Prior to fiscal 2008, Arrowhead invested \$4,000,000 in Unidym and provided Arrowhead stock valued at \$5.65 million to facilitate two of the acquisitions.

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In fiscal 2008, Unidym raised a total of \$14.6 million through the sale of Series C Preferred Stock, of which \$5.25 million was invested by Arrowhead. In fiscal 2009, Unidym raised a total of \$4.7 million through the sale of Series C-1 Preferred Stock, of which \$2.7 million was invested by Arrowhead.

In September 2009, Arrowhead invested \$642,000 in exchange for 2,140,000 shares of Unidym Series D Preferred Stock and a warrant to purchase 3,146,208 shares of Unidym common stock at an exercise price of \$0.25 per share with an expiration date three years from the date of issuance. As a condition to this investment, each share of Series C-1 Preferred Stock was converted to six shares of Unidym Series D Preferred Stock. A minority shareholder of Unidym invested \$300,000 for 1,000,000 shares of Unidym Series D Preferred Stock and 1,000,000 warrants with similar terms.

In fiscal 2008 and fiscal 2009, Arrowhead increased its position in Unidym through a series of stock exchanges with minority holders of Unidym. In April 2008, Arrowhead acquired 550,000 shares of Unidym common stock from a director and minority holder of Unidym in exchange for \$350,000 in cash and restricted Arrowhead Common Stock valued at \$200,000. As part of the agreement, the director resigned from his seat on the Unidym board and the Chief Executive Officer of the Company was appointed to the Unidym board. In transactions in June and September 2009, Arrowhead acquired 1,421,694 shares of Unidym Series A Preferred Stock, 1,747,810 shares of Unidym Series C Preferred Stock and 1,111,111 shares of Unidym Series C-1 Preferred Stock for an equal number of shares of Arrowhead Common Stock. Each share of Unidym Series A Preferred Stock is convertible into 1.68 shares of Unidym common stock.

In October and November 2009, Arrowhead issued 153,176 shares of Common Stock with an estimated fair market value of \$47,485 in exchange for an equal number of shares of Series C Preferred Stock of Unidym, with several minority stockholders of Unidym.

As of December 31, 2009, Arrowhead owned 80% of the outstanding stock of Unidym and 59% on a fully diluted basis.

Calando Pharmaceuticals, Inc. (formerly known as Insert Therapeutics, Inc.)

On April 17, 2008, Calando merged with and into Insert, with Insert as the surviving company. Prior to the merger, Arrowhead invested an aggregate of \$23.2 million in Calando through purchase of equity and loans. As a condition of the merger, the preferred stock of each Calando and Insert were converted into common stock and loans were converted to equity. As a result of the merger, shares of Insert common stock was issued to the stockholders of the former Calando and Insert changed its name to Calando Pharmaceuticals, Inc.

On November 26, 2008, Calando entered into Unsecured Convertible Promissory Note Agreements (“Notes”) for \$2.5 million with accredited investors and Arrowhead which invested \$200,000 in the Notes offering. Arrowhead subsequently invested an additional \$600,000 in the same offering. The Notes mature on November 26, 2010 and bear 10% annual interest. The Notes are convertible into Calando common stock and can be redeemed for two times their face value plus interest in the event of a sale of Calando. To facilitate this investment in Calando, Arrowhead subordinated a series of 6% simple interest loans and advances totaling approximately \$5.3 million of principal plus interest.

Effective June 23, 2009, to facilitate licensing transactions with a third party, holders (including Arrowhead) of an aggregate of \$2.9 million of the Notes plus accrued but unpaid interest, converted the principal and accrued interest into newly authorized Calando Series A Preferred Stock. The non-voting Series A Preferred Stock has a liquidation preference of 2.5 times the Series A Original Issue Price of \$1,000 per share and is convertible into common stock at a conversion price of \$0.5759 per share. Arrowhead converted all of its Notes representing a principal balance of \$800,000 plus accrued but unpaid interest into approximately 830 shares of Series A Stock. One third party Note for \$500,000 plus interest remains outstanding.

As of December 31, 2009, Arrowhead had a series of 6% simple-interest working capital loans and advances outstanding to Calando totaling \$6,244,697 plus accrued interest of \$398,220, which are payable upon demand.

In October and November 2009, Arrowhead issued 1,140,000 shares of Common Stock with an estimated fair market value of \$706,800 in exchange for 2,850,000 shares of Calando common stock, with several minority stockholders of Calando. In conjunction with this exchange, Arrowhead also issued 240,000 warrants to purchase Arrowhead common stock in exchange for 600,000 warrants to purchase Calando common stock.

As of December 31, 2009, Arrowhead owned 70% of the outstanding shares of Calando and 61% on a fully diluted basis.

Agonn Systems, Inc.

Arrowhead founded Agonn in May 2008 to explore, develop and commercialize nanotechnology-based energy storage devices for electric vehicles and other large format applications. In line with Arrowhead’s strategy to conserve cash, Agonn has ceased its development efforts.

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Masa Energy LLC

In April 2008, Arrowhead acquired Masa, a Delaware limited liability company whose sole assets were an approximate 6% ownership interest in each of Nanotope and Leonardo. Subsequent to December 31, 2009, the stockholdings were transferred to Arrowhead and Masa was dissolved.

Nanotope, Inc.

Through the acquisition of Masa, the Company acquired a 5.78% minority position in Nanotope. Nanotope is developing advanced nanomaterials for the treatment of spinal cord injuries and wound healing. In July and September 2008, Arrowhead acquired 1,801,802 shares of Series B Preferred Stock of Nanotope for two payments of \$1 million each, increasing Arrowhead's ownership of Nanotope to approximately 23%. Since inception, Nanotope has not generated revenues. Operating expenses for the three months ended December 31, 2009 were approximately \$215,000, Nanotope's net loss for the three months ended December 31, 2009 was \$215,000 and Arrowhead's proportionate share of Nanotope's loss was \$48,639. Arrowhead accounts for its investment in Nanotope using the equity method of accounting.

Leonardo Biosystems, Inc.

Through the acquisition of Masa, Arrowhead acquired a 6.13% ownership interest in Leonardo. Leonardo is developing a drug-delivery platform technology based on novel methods of designing spheroid porous silicon microparticles that selectively accumulate in tumor vasculature. During the three months ended December 31, 2009, Arrowhead incurred \$17,312 of expenses related to Leonardo. It is expected that the expenses will be repaid or converted into equity. Arrowhead accounts for its investment in Leonardo using the cost method of accounting.

NOTE 4. DISCONTINUED OPERATIONS—TEGO BIOSCIENCES CORPORATION

On April 20, 2007, Tego, a wholly-owned subsidiary of Arrowhead, acquired the assets of C Sixty, Inc., a Texas-based company developing protective products based on the anti-oxidant properties of fullerenes for \$1,000. On July 3, 2007, Arrowhead capitalized Tego with a purchase of 5,000,000 shares of Tego Series A Preferred Stock for \$100,000. On October 25, 2007, Arrowhead purchased 15,000,000 shares of Tego Series A-2 Preferred Stock for \$2.4 million. In line with Tego's revised strategy to focus on the out-license of its technology and to reduce its internal development activities, on November 21, 2008, Tego repurchased from Arrowhead 5,000,000 shares of Tego Series A Preferred Stock for \$1.7 million. Arrowhead owns 100% of the outstanding stock of Tego and 75% on a fully diluted basis. As of December 31, 2009, the Company has incurred approximately \$1,003,000 of expenses related to Tego since its inception.

On December 23, 2009, Tego completed the sale of all of its non-cash intellectual property assets ("Tego IP") to Luna Innovations, Inc. ("Luna") under the terms of the Tego-Luna Asset Purchase Agreement dated November 13, 2009 ("APA"). The Tego IP includes a portfolio of Tego-owned foreign and domestic patents and patent applications. The Tego IP also includes patent licenses from Siemens AG and Washington University, St. Louis. Under the APA, Luna agreed to assume Tego's role as licensor under a license Tego granted under the Tego IP to The Bronx Project, Inc. ("TBP") to develop carboxyfullerenes in the field of neuronal injury (the "TBP License"). Luna also assumed Tego's role as Licensor under the exclusive license Tego granted to Arrowhead's affiliate Unidym, under the Tego IP in the field of industrial non-pharmaceutical fullerenes.

The APA set forth an upfront purchase price of \$350,000 and reimbursements of patent and license expenses of \$80,000. Further, under the terms of the APA, Luna will pay Tego 10% of any revenues it receives from its licensing or resale of the Tego IP. Tego shall also receive from Luna 50% of any net proceeds Luna receives from the TBP License. Tego shall receive royalties from Luna for any sales of fullerene products covered by the Tego IP, as well as clinical development milestones totaling \$4.25million for each fullerene product it develops that is covered by the Tego IP.

Due to the sale of substantially all of Tego's assets, the on-going operations of Tego will cease and the gain on the sale and the results of historical operations will be recorded as discontinued operation in the Company's Statements of Operations. Additionally, the cash flows from Tego are reflected separately as cash flows from discontinued operations. Potential future cash flows associated with the Luna APA, as discussed above, will be reflected as a part of cash flows from discontinued operations in the Company's Consolidated Statement of Cash Flows.

NOTE 5. NOTES PAYABLE

On November 26, 2008, Calando entered into Unsecured Convertible Promissory Note Agreements ("Notes") for \$2.5 million with accredited investors and Arrowhead, which invested \$200,000 in the Notes offering. Arrowhead subsequently invested an additional \$600,000 in the same offering. The Notes mature on November 26, 2010 and bear 10% annual interest. Unpaid principal of the Notes and accrued but unpaid interest thereon is convertible into common stock of Calando at a conversion price of \$0.576647 per share (subject to adjustment) at any time in the sole discretion of the holder. In the event Calando achieves a liquidation event as defined in the Notes, each note holder has the option to exchange the Notes for two times the then outstanding principal amount owed under the Notes plus accrued and unpaid interest thereon, or convert the outstanding principal and accrued and unpaid interest thereon into Calando common stock at the conversion price.

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Except for one Note in the principal amount of \$500,000, all Notes and accrued interest were converted into a total of 2,950 shares of Calando Series A Preferred Stock on June 23, 2009.

NOTE 6. STOCKHOLDERS' EQUITY

At December 31, 2009, the Company had a total of 150,000,000 shares of capital stock authorized for issuance, consisting of 145,000,000 shares of Common Stock, par value \$0.001, and 5,000,000 shares of Preferred Stock, par value \$0.001.

At December 31, 2009, 62,788,380 shares of Common Stock were outstanding. At December 31, 2009, 1,532,000 shares and 3,619,588 shares were reserved for issuance upon exercise of options granted under Arrowhead's 2000 Stock Option Plan and 2004 Equity Incentive Plan, respectively.

In September 2008, the Company completed a registered direct offering of 3,863,989 units, with each unit consisting of one share of Common Stock and a warrant to purchase one share of Common Stock. Of the 3,863,989 units sold in the offering, 3,683,660 units were sold to investors at a purchase price of \$1.80 per unit and 180,329 units were sold to three members of the Company's management at a purchase price of \$1.83 per unit. The last reported sale price of the Company's Common Stock on the NASDAQ Global Market on August 15, 2008, the day the offering was launched, was \$1.70. The warrants, which represent the right to acquire a total of 3,863,989 shares of Common Stock, have an exercise price of \$2.00 per share and have a five-year term. The gross offering proceeds were approximately \$6.9 million and the net offering proceeds to the Company were approximately \$6.2 million. The offering was made directly by the Company without an underwriter or placement agent. The Company paid finders' fees of 7.5% on a portion of the gross proceeds.

On July 17, 2009 and August 6, 2009, the Company sold an aggregate of 9,196,642 units in a private placement transaction with institutional and accredited investors. Each unit consisted of one share of Arrowhead Common Stock, \$0.001 par value per share, at a price of \$0.30 per share, and a warrant to purchase an additional share of Common Stock exercisable at \$0.50 per share. The warrants become exercisable on January 18, 2010 and February 6, 2010, and remain exercisable until June 30, 2014, unless redeemed earlier as permitted. The warrants may be redeemed for nominal consideration if the Company's Common Stock trades above \$1.20 for at least 30 trading days in any 60-trading day period. Gross proceeds of the offering totaled approximately \$2.76 million.

On December 11, 2009, the Company sold an aggregate of 5,083,430 units in a private placement transaction with accredited investors. Each unit consisted of one share of Arrowhead Common Stock, \$0.001 par value per share and a warrant to purchase an additional share of Common Stock exercisable at \$0.509 per share. The unit price was \$0.634, based upon the closing bid price on the Company's Common Stock on December 11, 2009 which was \$0.509 plus \$0.125 added for the purchase of the warrant. The warrants become exercisable on June 12, 2010 and remain exercisable until December 11, 2014, unless redeemed earlier as permitted. The warrants may be redeemed for nominal consideration if the Company's Common Stock trades above \$1.20 for at least 30 trading days in any 60-trading day period. Gross proceeds of the offering were approximately \$3.2 million.

The following table summarizes information about warrants outstanding at December 31, 2009:

<u>Exercise prices</u>	<u>Number of Warrants</u>	<u>Remaining Life in Years</u>
\$5.04	1,397,500	1.0
\$7.06	712,362	7.4
\$2.00	3,863,989	3.7
\$0.50	9,684,522	4.5
\$0.51	5,083,430	4.9

On September 15, 2009, the Company received a deficiency letter from the NASDAQ Stock Market indicating that based on the Company's closing bid price for the last 30 consecutive business days, the Company does not comply with the \$1.00 minimum bid price as set forth in NASDAQ Marketplace Rule 5550(a)(2). In accordance with NASDAQ Marketplace Rule 5810(c)(3)(A), the Company has been provided a grace period of 180 calendar days to regain compliance by maintaining a minimum closing bid price of \$1.00 per share for 10 consecutive business days, and we are eligible for an additional grace period under NASDAQ Rules. The NASDAQ deficiency notice has no effect on the listing of the Company's Common Stock at this time and the Company will seek to regain compliance within the grace period. If the Company does not meet the minimum bid requirement during the initial 180-day grace period, the Company may be eligible for an additional grace period if it meets the initial listing standards, with the exception of the bid price, for The NASDAQ Capital Market. If the Company meets the initial listing criteria, NASDAQ will notify the Company that it has been granted an additional 180 calendar day grace period. Alternatively, the Company will be notified by NASDAQ that its Common Stock will be subject to delisting.

NOTE 7. LEASES

As of December 31, 2009, the Company leased the following facilities:

	Lab/Office Space	Monthly Rent	Lease Commencement	Lease Term
Arrowhead(1)	7,388 sq ft	\$ 18,101	March 1, 2006	62 Months
Unidym	20,500 sq ft	\$ 26,650	October 1, 2008	60 Months

- (1) Arrowhead leases corporate office space in Pasadena, which it occupied beginning March 1, 2006. The lease agreement provides Arrowhead with two months' free rent which was recorded as a deferred liability and is being amortized over the life of the lease.

Facility and equipment rent expense for the three months ended December 31, 2009 and 2008 was \$154,510 and \$328,336, respectively. From inception to date, rent expense has totaled \$4,442,479.

NOTE 8. OBLIGATIONS UNDER CAPITALIZED LEASE

As part of the purchase of Nanoconduction, the Company assumed a capitalized lease for equipment valued at \$1,677,000. Research and development equipment under capitalized lease was allocated a cost of \$0 at the Nanoconduction acquisition by Unidym as the equipment has no alternative use.

At December 31, 2009, the future minimum commitments remaining under capitalized leases are as follows:

Capitalized lease payable in 7 monthly installments of \$75,343, due in July 2010, secured by equipment at Unidym	\$ 527,407
Less interest	(13,787)
Present value of future minimum payments	513,620
Less current portion	513,620
Long term portion	\$ —

NOTE 9. COMMITMENTS AND CONTINGENCIES—SPONSORED RESEARCH

Sponsored Research expense for the three months ended December 31, 2009 and 2008 was \$25,000 and \$110,681. As of December 31, 2009, there were no active sponsored research agreements at Arrowhead and Unidym had only one such agreement in place with Duke University. The agreement provides for support at an annual cost of \$100,000 and terminates on November 30, 2010. Since the beginning of the agreement on December 1, 2007, \$306,641 has been paid.

NOTE 10. STOCK BASED COMPENSATION

Stock-Based Compensation—Arrowhead has two plans that provide for equity-based compensation. Under the 2000 Stock Option Plan, 1,532,000 shares of Arrowhead's Common Stock are reserved for issuance upon exercise of non-qualified stock options. No further grants can be made under the 2000 Stock Option Plan. The 2004 Equity Incentive Plan reserves 5,738,310 shares for the grant of stock options, stock appreciation rights, restricted stock awards and performance unit/share awards by the Board of Directors to employees, consultants and others. As of December 31, 2009, there were options granted and outstanding to purchase 1,532,000 and 3,619,588 shares of common stock under the 2000 Stock Option Plan and the 2004 Equity Incentive Plan, respectively. During the quarter ended December 31, 2009, 2,250,000 options were granted under the 2004 Equity Incentive Plan.

In connection with a private offering in fiscal 2009, directors, officers and employees of the Company agreed to terminate options to purchase 4,005,000 shares of Common Stock with exercise prices ranging from \$2.52 to \$6.83. In consideration of the termination of the option agreements, other existing grants to purchase 450,000 shares were accelerated such that the awards are fully vested on the one year anniversary of the date of grant. The cancellation was effective July 17, 2009.

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The following tables summarize information about stock options:

	Number of Options Outstanding	Weighted- Average Exercise Price Per Share	Weighted- Average Remaining Contractual Term	Aggregate Intrinsic Value
Balance At September 30, 2008	8,007,632	\$ 3.24		
Granted	460,000	0.85		
Canceled	(5,566,044)	3.88		
Exercised	—	—		
Balance At September 30, 2009	2,901,588	1.73		
Granted	2,250,000	0.53		
Canceled	—	—		
Exercised	—	—		
Balance At December 31, 2009	5,151,588	\$ 1.21	7.7 years	\$ 45,595
Exercisable At December 31, 2009	2,725,700	\$ 1.61	6.0 years	\$ 5,195

Stock-based compensation expense for the three months ended December 31, 2009 and 2008 was \$302,072 and \$727,934, respectively, and is included in salary expense in the Company's consolidated statements of operations. There is no income tax benefit as the company is currently operating at a loss and an actual income tax benefit may not be realized in the three months ended December 31, 2009 and 2008, respectively. The result of the loss creates a timing difference, resulting in a deferred tax asset, which is fully reserved by a valuation allowance.

At December 31, 2009, there were 2,118,722 options available for future grants under Arrowhead's 2004 Equity Incentive Plan.

The fair value of the options granted by Arrowhead for the three months ended December 31, 2009 and 2008 is estimated at \$892,500 and \$188,376, respectively.

As of December 31, 2009, the pre-tax compensation expense for all unvested stock options at Arrowhead in the amount of approximately \$1,394,342 will be recognized in our results of operations over a weighted average period of 2.0 years. As of December 31, 2009, the pre-tax compensation expense for all unvested stock options at Unidym and Calando in the amount of approximately \$816,103 will be recognized in our results of operations over a weighted average period of 2.8 and 2.1 years, respectively.

No options were granted by Unidym, Calando and Tego during the three months ended December 31, 2009 and 2008.

The fair value of options is estimated at the date of grant using the Black-Scholes option-pricing model with the following weighted-average assumptions: dividend yield of 0%, expected volatility of 49% to 100% (0% to 81% for Subsidiaries), risk-free interest rate of 2.34% to 5.10% and expected life of five to six years. The weighted-average fair value of options granted by Arrowhead for the three months ended December 31, 2009 and 2008 is estimated at \$0.40 and \$0.78, respectively.

The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options, which do not have vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions, including the expected stock price volatility. Because the Company's employee stock options have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in management's opinion, the existing models do not necessarily provide a reliable single measure of the fair value of its employee stock options.

NOTE 11. FAIR VALUE MEASUREMENTS & DERIVATIVE INSTRUMENTS

The Company measures its financial assets and liabilities at fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (i.e., exit price) in an orderly transaction between market participants at the measurement date. Additionally, the Company is required to provide disclosure and categorize assets and liabilities measured at fair value into one of three different levels depending on the assumptions (i.e., inputs) used in the valuation. Level 1 provides the most reliable measure of fair value while Level 3 generally requires significant management judgment. Financial assets and liabilities are classified in their entirety based on the lowest level of input significant to the fair value measurement. The fair value hierarchy is defined as follows:

Level 1—Valuations are based on unadjusted quoted prices in active markets for identical assets or liabilities.

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Level 2—Valuations are based on quoted prices for similar assets or liabilities in active markets, or quoted prices in markets that are not active for which significant inputs are observable, either directly or indirectly.

Level 3—Valuations are based on prices or valuation techniques that require inputs that are both unobservable and significant to the overall fair value measurement. Inputs reflect management's best estimate of what market participants would use in valuing the asset or liability at the measurement date.

The following table summarizes fair value measurements at December 31, 2009 for assets and liabilities measured at fair value on a recurring basis:

	<u>Level I</u>	<u>Level II</u>	<u>Level III</u>	<u>Total</u>
Cash and cash equivalents	\$3,809,596	\$ —	\$ —	\$3,809,596
Derivative liabilities	\$ —	\$ —	\$ —	\$ —

During 2009, Arrowhead's subsidiary, Unidym, issued Series-D convertible preferred stock. The rights of the convertible preferred stock necessitates the presentation of the fair value of the conversion feature as a liability pursuant to FASB accounting rules. These rights include those that protect the holders from decline in the Company's stock price, which is considered outside the control of the Company. The derivative liabilities are marked-to-market each reporting period and changes in fair value are recorded as a non-operating gain or loss in the statement of operations, until they are completely settled. The fair value of the conversion feature is determined each reporting period using the Black-Scholes option pricing model, and is affected by changes in inputs to that model including our stock price, expected stock price volatility, interest rates and expected term. The assumptions used in valuing the derivative liability during 2010 were as follows:

Risk free interest rate	1%
Expected life	3 Years
Dividend yield	none
Volatility	30%

The following is a reconciliation of the derivative liability for fiscal year 2010:

Value at October 1, 2009	\$ 0
Modification of instruments	—
Decrease in value	—
Value at December 31, 2009	\$ 0

The carrying amounts of the Company's other financial instruments, which include accounts receivable and accounts payable, approximate their respective fair values due to the relatively short-term nature of these instruments. Based upon interest rates currently available to the Company for debt with similar terms, the carrying value of the Company's long-term debt is approximately equal to its fair value.

NOTE 12. RELATED PARTY TRANSACTIONS

During the three months ended December 31, 2009 and 2008, the Company's majority-owned subsidiary, Unidym, had product sales of \$0 and \$42,150, respectively, to one of its stockholders, Sumitomo Corporation ("Sumitomo"). On July 31, 2009, Unidym terminated its contract with Sumitomo as its major product distributor in Japan.

During the three months ended December 31, 2009 and 2008, the Company's majority-owned subsidiary, Calando, paid \$0 and \$40,000, respectively, in consulting fees to Dr. Mark Davis of the California Institute of Technology ("Caltech"), a former director and consultant of Calando.

In April 2008, the Company acquired Masa, a Delaware limited liability company, for \$560,000 in a combination of cash and Arrowhead common stock. Masa's only assets were a 5.78% minority position in Nanotope and a 6.13% minority position in Leonardo. Masa is unrelated to Arrowhead. However, both Nanotope and Leonardo were co-founded by the Company's President and Chief Executive Officer, Dr. Christopher Anzalone, through the Benet Group, a private investment entity solely owned and managed by Dr. Anzalone.

During the fourth quarter of fiscal year 2008, Arrowhead purchased 1,801,802 shares of Nanotope's Series B preferred stock at a price share of \$1.11 for an aggregate purchase price of \$2 million. In addition, Nanotope issued 9,548 shares of Nanotope Series B to another investor at a price of \$1.11 per share. Arrowhead's purchase of Nanotope Series B preferred Stock increased Arrowhead's ownership interest in Nanotope to approximately 23%.

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Through the Benet Group, Dr. Anzalone owns 1,395,900 shares of Nanotope common stock or approximately 14.2% (after giving effect to the sale of Nanotope Series B preferred stock) of Nanotope's outstanding voting securities. Dr. Anzalone does not hold options, warrants or any other rights to acquire securities of Nanotope directly or through the Benet Group. The Benet Group has the right to appoint a representative to the board of directors of Nanotope. Dr. Anzalone currently serves on the Nanotope board in a seat reserved for Nanotope's CEO and another individual holds the seat designated by the Benet Group. Dr. Anzalone has served as President and Chief Executive Officer of Nanotope since its formation and continues to serve in these capacities. Dr. Anzalone has not received any compensation for his work on behalf of Nanotope since joining the Company on December 1, 2007. Dr. Anzalone has also waived his right to any unpaid compensation accrued for work done on behalf of Nanotope before he joined the Company.

Dr. Anzalone did not participate on behalf of the Company in the negotiations of the terms of the Nanotope Series B preferred stock issued to the Company and did not negotiate on behalf of Nanotope after becoming the Chief Executive Officer and President of the Company. Dr. Anzalone did respond to questions asked of him by the Company's Board of Directors and management regarding Nanotope's business plan, operations and the terms of the Series B Stock Purchase Agreement and ancillary agreements.

During the 2008 fiscal year, the Company entered into subscription agreements with certain investors and with three members of the Company's management relating to the offering and sale of a total of 3,863,989 units, with each unit consisting of one share of common stock and a warrant to purchase one share of common stock. Of the units sold in the offering, 3,683,660 units were sold to Investors at a purchase price of \$1.80 per unit and 180,329 units were sold to three members of the Company's management at a purchase price of \$1.83 per unit. The last reported sale price of the Company's common stock on the NASDAQ Capital Market on August 15, 2008, the day the offering was launched, was \$1.70. The offering was made directly by the Company without an underwriter or placement agent.

During the year ended September 30, 2009, Calando raised \$2.5 million through the sale of senior unsecured convertible promissory notes ("New Notes"), to accredited investors, plus \$800,000 from Arrowhead. Dr. Anzalone, Arrowhead's President and CEO personally participated in the offering by buying \$100,000 of the New Notes.

As part of the private placement on December 11, 2009 (see Note 6. Stockholder's Equity), Dr. Anzalone, Arrowhead's President and CEO, personally invested \$100,000.

NOTE 13. SUBSEQUENT EVENTS

The Company has evaluated subsequent events through February 11, 2010, which is the date the consolidated financial statements were issued.

As described in Footnote 3 – Investment in Subsidiaries, Masa is a wholly owned subsidiary, the sole assets of which are Masa's ownership interest in Nanotope and Tego. Subsequent to December 31, 2009, the assets of Masa were transferred to Arrowhead and Masa was dissolved.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Quarterly Report on Form 10-Q contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, and we intend that such forward-looking statements be subject to the safe harbors created thereby. For this purpose, any statements contained in this Quarterly Report on Form 10-Q except for historical information may be deemed to be forward-looking statements. Without limiting the generality of the foregoing, words such as "may," "will," "expect," "believe," "anticipate," "intend," "could," "estimate," or "continue" or the negative or other variations thereof or comparable terminology are intended to identify forward-looking statements. In addition, any statements that refer to projections of our future financial performance, trends in our businesses, or other characterizations of future events or circumstances are forward-looking statements.

The forward-looking statements included herein are based on current expectations of our management based on available information and involve a number of risks and uncertainties, all of which are difficult or impossible to predict accurately and many of which are beyond our control. As such, our actual results may differ significantly from those expressed in any forward-looking statements. Readers should carefully review the factors identified in this report under the caption "Risk Factors" as well as the additional risks described in other documents we file from time to time with the Securities and Exchange Commission ("SEC"), including our most recent Annual Report on Form 10-K. In light of the significant risks and uncertainties inherent in the forward-looking information included herein, the inclusion of such information should not be regarded as a representation by us or any other person that such results will be achieved, and readers are cautioned not to place undue reliance on such forward-looking information. Except as may be required by law, we undertake no obligation to revise the forward-looking statements contained herein to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

Overview

Arrowhead Research Corporation is a development stage nanotechnology holding company that forms, acquires, and operates subsidiaries commercializing innovative nanotechnologies. By working closely with leading scientists and universities, the Company identifies advances in nanotechnology and matches them with product development opportunities in high-growth markets. The Company is currently focused on the electronics and biotech industries.

By providing strategic management, financing, and operational services to its subsidiaries, Arrowhead takes an active role in their development, allowing the business and technical development teams at the subsidiary companies to remain focused on near term revenue opportunities and capital efficiency. Arrowhead's ultimate goal is to monetize the value of its subsidiaries through an initial public offering of subsidiary stock or a sale of a subsidiary to another company. Alternatively, Arrowhead could retain ownership of subsidiary to capture its continuing cash flow and income.

Arrowhead's portfolio includes two majority-owned subsidiaries, Unidym and Calando, and minority investments in two early-stage nanotechnology companies, Nanotope and Leonardo. Arrowhead's business plan includes adding to its portfolio through selective acquisition and formation of new companies, as capital resources allow. The Company's Subsidiaries are seeking to commercialize or license the technology covering a variety of nanotechnology products and applications, including anti-cancer RNAi therapeutics, carbon-based electronics and fullerene based anti-oxidants. The Company's minority investments are focused on developing advanced nanomaterials for spinal cord injury and wound healing and drug delivery technology.

Arrowhead has been active in the operation of its subsidiaries, providing key management functions. During 2009, the Company continued its efforts to streamline the operations of Arrowhead and its Subsidiaries to increase efficiency and decrease costs while continuing to move the business plans of each entity forward. With the decision to move to a licensing model for Calando and the decision to reduce costs at Unidym, the amount of cash needed to fund both operations has been substantially reduced from historical levels.

Liquidity and Cash Resources

At December 31, 2009, the Company had approximately \$3.8 million in cash to fund operations. Arrowhead has historically financed its operations through the sale of securities of Arrowhead and its Subsidiaries. In fiscal 2009, the Company obtained \$7.3 million in cash through equity and debt financing, including \$2.5 million raised by Calando through the sale of senior unsecured convertible promissory notes, and \$2.0 million raised by Unidym through the sale of newly issued shares of Series C-1 Preferred Stock. The Company obtained an additional \$4.4 million from the sales of assets, products and license fees, including the sale by Unidym of its equity interest in Ensysce BioSciences Inc. for \$700,000.

Since inception in May 2003, the Company has incurred significant losses. Cash and cash equivalents increased during the quarter by \$1.8 million to \$3.8 million at December 31, 2009 from \$2.0 million at September 30, 2009. The Company invests available cash in certificates of deposit, U.S. government obligations and high grade commercial paper. The Company's investment objectives are primarily to preserve capital and liquidity and secondarily to obtain investment income.

On December 11, 2009, the Company executed definitive agreements for a private placement offering (the "Offering") with a selected group of accredited investors. Pursuant to the Offering, the Company sold an aggregate of approximately 5.2 million units (the "Units") consisting of one share of the Company's Common Stock and a warrant to purchase an additional share of Common Stock, exercisable at \$0.509 per share. The Unit price was \$0.634 per unit. The warrants become exercisable on June 12, 2010 and remain exercisable until December 11, 2014, unless redeemed earlier as permitted. The warrants may be redeemed for nominal consideration if the Company's Common Stock trades above \$1.20 for at least 30 trading days in any 60-trading day period after December 11, 2010. The Offering generated gross proceeds of approximately \$3.2 million before estimated expenses of \$25,000. The Company's strategic plan includes focusing on near term revenue opportunities, conserving cash and seeking sources of new capital. To execute this plan, the Company will seek to accomplish one or more of the following on favorable terms: the out-license of technology, sale of a subsidiary, sale of non-core assets, scaling down development efforts, funded joint development or partnership arrangements and sale of securities. The likelihood that any of these events will occur is uncertain, especially in light of the lack of liquidity in the current capital and credit markets. Until such time as one or more of these goals is accomplished, the Company has scaled back the activities at its Subsidiaries.

Majority-owned Subsidiaries

Unidym

Unidym is a leader in the commercialization of carbon nanotube-based transparent, conductive films (TCFs) for the electronics industry. TCFs are a critical component in devices such as touch panels, displays and thin-film solar cells. For example, both touch panels and LCDs typically employ two TCF layers per device. Unidym's TCFs offer substantial advantages over the incumbent

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technology, indium-based metal oxides, including: improved durability, lower processing costs, and lower overall cost structure. Unidym is working in close collaboration with customers, particularly in Asia where the bulk of display manufacturing is located. Unidym is initially focused on the touch panel market and expects modest revenue from sales of its films in the near term. During the first quarter of fiscal 2010, Unidym continued business and technical development for its films. Two of its joint development agreements with Samsung Electronics, Co., Ltd. were extended.

The development, production and sale of Unidym's products have required, and are expected to continue to require significant investment and time. There are a variety of technical, cost and marketing barriers that must be overcome. It is not possible at this time to predict the final cost of developing Unidym's transparent conductive film or other CNT products, the final cost of scaling up the production process, when or if Unidym will generate significant licensing revenue or when or if Unidym will become profitable. At December 31, 2009, Arrowhead's ownership interest in Unidym was 80% and 59% on a fully diluted basis.

[Calando](#)

Calando is a clinical stage oncology drug delivery company. Calando has developed proprietary technologies to create targeted siRNA-based therapeutics. Calando's innovative RONDEL™ nanoparticle system has been designed to solve the long-standing obstacle of safe and effective delivery and targeting for siRNA therapeutics. Calando's initial focus has been on the treatment of cancer. Calando's clinical stage drug candidate, CALAA-001, a therapeutic candidate based on siRNA and the RONDEL system, is currently undergoing a Phase I clinical study. The trial is utilizing a dose escalation protocol, which is nearing the highest dose in the protocol and yielding recent promising results with no serious side effects. Calando plans to complete the Phase I trial, as capital resources allow, and is seeking a partner for the further development of both the siRNA delivery platform and CALAA-01.

In June 2009, after completion of a Phase 1 clinical trial with a positive safety profile and indications of efficacy, Cycloset and its associated clinical candidate, IT-101, were licensed for further development to Cerulean Pharma, Inc., a Boston, Massachusetts based biotech company. Under the terms of the agreements, Cerulean will pay Calando future potential partnering, milestone and royalty payments as the development of Cycloset and IT-101 progresses.

We believe there is an opportunity to derive value from the further development of the Calando platform drug delivery systems, as they have been demonstrated to enhance and enable the delivery of diverse pharmaceutical entities, including peptides and small molecules as well as other RNA and DNA-based oligonucleotides. At December 31, 2009, Arrowhead's interest in Calando was 70% and 61% on a fully diluted basis.

The development of CALAA-01, IT-101 and other pipeline candidates are preliminary, and there is no assurance that they will be successful. There are numerous technical, regulatory and marketing challenges that must be overcome to successfully commercialize Calando's products, including, but not limited to the following:

- Advancing pipeline candidates requires extensive preclinical testing and approval by the U.S. Food and Drug Administration ("FDA") before clinical testing can commence.
- Advancing therapeutic candidates through preclinical and clinical testing is expensive, resource intensive and time consuming.
- Complications may arise that would cause the clinical testing to be interrupted or stopped. FDA approval is required before products can be sold.
- Even if FDA approval is eventually obtained, there is no assurance that it will be accepted by the medical community.

It is not possible at this time to accurately determine the final cost of the development projects, the completion dates, or when or if revenue will commence.

[Wholly-owned Subsidiaries](#)

[Tego](#)

Tego has been pursuing a licensing and partnering strategy. In line with this strategy, on July 1, 2009, Tego exclusively licensed to The Bronx Project, Inc. ("TBP"), a development stage pharmaceutical company, the rights to develop and commercialize carboxylated fullerenes, e.g., the fullerene "C3," in the fields of Parkinson's disease, amyotrophic lateral sclerosis (or "Lou Gehrig's disease"), multiple sclerosis, brain trauma and schizophrenia. The TBP License provided Tego with \$100,000 in upfront fees, \$2.35 million in potential milestone payments and royalties, as well as 5% of the proceeds of a sale of TBP itself to a third party.

Further, on December 23, 2009, Tego completed the sale of all of its non-cash intellectual property assets ("Tego IP") to Luna Innovations, Inc. ("Luna") under the terms of the Tego-Luna Asset Purchase Agreement dated November 13, 2009 ("APA"). The Tego IP includes a portfolio of Tego-owned foreign and domestic patents and patent applications. The Tego IP also includes patent licenses from Siemens AG and Washington University, St. Louis. Under the APA, Luna agreed to assume Tego's role as licensor under a license Tego granted under the Tego IP to The Bronx Project, Inc. Luna also assumed Tego's role as licensor under the exclusive license Tego granted to Arrowhead's affiliate Unidym, under the Tego IP in the field of industrial non-pharmaceutical fullerenes.

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As a result of the sale to Luna, the on-going operations of Tego will cease and the gain on the sale and the results of historical operations will be recorded as discontinued operation in the Company's Statements of Operations. Additionally, the cash flows from Tego are reflected separately as cash flows from discontinued operations. Potential future cash flows associated with the Luna APA will be reflected as a part of cash flows from discontinued operations in the Company's Consolidated Statement of Cash Flows.

Agonn

As part of Arrowhead's strategy to conserve cash, Agonn ceased its development efforts.

Masa Energy LLC

At December 31, 2009, Masa's only assets were a 5.78% minority position in Nanotope and a 6.13% minority position in Leonardo. Subsequent to December 31, 2009, Masa's assets were transferred to Arrowhead and Masa was dissolved.

Minority Investments

Nanotope, Inc.

Nanotope is an early stage nano-biotechnology company developing advanced materials for regeneration and wound healing. Arrowhead owns 23% of Nanotope and accounts for its investment in Nanotope using the equity method of accounting. Nanotope is positioned to enter into a commercialization corporate partnership in 2010 and expects to be able to start a first round of clinical trials in 2010. Nanotope's model is to partner product candidates prior to clinical trials and, therefore, assume no clinical costs.

Leonardo Biosystems, Inc.

Leonardo is a drug delivery company based on technology developed by Dr. Mauro Ferrari, one of the world's best-known nano-cancer scientists. Leonardo's research is focused on developing an advanced set of nanotechnology tools to deliver anti-cancer therapeutics. Arrowhead owns 5% of Leonardo and accounts for its investment using the cost method of accounting.

Factors Affecting Further R&D Expenses

Since early fiscal 2009, the Company has dramatically decreased its research and development expenses due to cash constraints. Research and development expenses are expected to fluctuate in the foreseeable future as the Company's product development efforts move through various phases of development and as capital resources allow. Each phase of development requires different resources. Also, the pace of development can affect the resources required. Over the past five years, the Company has increased and decreased subsidiaries and products in its pipeline, increased and decreased research and development personnel, engineers, business development and marketing personnel; expanded and contracted its pre-clinical research, begun and ended clinical trial activities, increased its regulatory compliance capabilities, and purchased capital equipment and laboratory supplies. The timing and amount of these fluctuations in expenses is difficult to predict due to the uncertainty inherent in the timing and extent of progress in the Company's research programs. As the Company's research efforts evolve, it will continue to review the direction of its research based on an assessment of the value of possible commercial applications emerging from these efforts.

In addition to these general factors, specific factors that will determine the eventual cost to complete the current projects at Arrowhead's nano-biotechnology Subsidiaries or their partners and potential partners include the following:

- the number, size and duration of clinical trials required to gain FDA approval;
- the costs of producing supplies of the drug candidates needed for clinical trials and regulatory submissions;
- the efficacy and safety profile of the drug candidate; and
- the costs and timing of, and the ability to secure, regulatory approvals.

It is possible that the completion of studies could be delayed for a variety of reasons, including difficulties in enrolling patients, delays in manufacturing, incomplete or inconsistent data from the pre-clinical or clinical trials, difficulties evaluating the trial results and lack of funding. Any delay in completion of a trial would increase the cost of that trial. Due to these uncertainties, the Company cannot reasonably estimate the amount or timing of cash inflows from Calando's current activities.

Critical Accounting Policies and Estimates

Management makes certain judgments and uses certain estimates and assumptions when applying accounting principles generally accepted in the United States in the preparation of our Consolidated Financial Statements. We evaluate our estimates and judgments on an ongoing basis and base our estimates on historical experience and on assumptions that we believe to be reasonable

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under the circumstances. Our experience and assumptions form the basis for our judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may vary from what we anticipate and different assumptions or estimates about the future could change our reported results. We believe the following accounting policies are the most critical to us, in that they are important to the portrayal of our consolidated financial statements and require our most difficult, subjective or complex judgments in the preparation of our consolidated financial statements. For further information, see *Note 1, Organization and Significant Accounting Policies*, to our Consolidated Financial Statements which outlines our application of significant accounting policies and new accounting standards.

Revenue Recognition

Revenue from product sales are recorded when persuasive evidence of an arrangement exists, title has passed and delivery has occurred, a price is fixed and determinable, and collection is reasonably assured.

We may generate revenue from product sales, technology licenses, collaborative research and development arrangements, and research grants. Revenue under technology licenses and collaborative agreements typically consists of nonrefundable and/or guaranteed technology license fees, collaborative research funding, and various milestone and future product royalty or profit-sharing payments.

Revenue associated with research and development funding payments, under collaborative agreements, is recognized ratably over the relevant periods specified in the agreement, generally the research and development period. Revenue from up-front license fees, milestones and product royalties are recognized as earned based on the completion of the milestones and product sales, as defined in the respective agreements. Payments received in advance of recognition as revenue are recorded as deferred revenue.

Research and Development Expenses

Research and development expenses include salaries and benefits, trial (including pre-clinical, clinical and other) and production costs, purchased in-process research expenses, contract and other outside service fees, and facilities and overhead costs related to research and development efforts. Research and development expenses also consist of costs incurred for proprietary and collaborative research and development. Research and development costs are expensed as incurred.

Impairment of Long-lived Assets

We review long-lived assets for impairment whenever events or changes in business circumstances indicate that the carrying amount of assets may not be fully recoverable or that our assumptions about the useful lives of these assets are no longer appropriate. If an impairment is indicated, the asset is written down to its estimated fair value based on quoted fair market values.

Intellectual Property

Intellectual property consists of patents and patent applications internally developed, licensed from universities or other third parties or obtained through acquisition. Patents and patent applications are reviewed for impairment whenever events or circumstances indicate that the carrying amount may not be recoverable, and appropriate adjustments recorded. Purchased or licensed patents are amortized over the remaining life of the patent, generally three to twenty years.

Recent Accounting Pronouncements

See Note 1 to the consolidated financial statements for information concerning the Company's implementation and impact of new accounting guidance.

Results of Operations

The Company had a consolidated loss of approximately \$1.5 million for the three months ended December 31, 2009, compared to a consolidated loss of \$8.0 million for the three months ended December 31, 2008.

The decrease in the fiscal 2009 quarterly loss over fiscal 2008 quarterly loss is the result of several factors. The number of management and staff employees at Arrowhead declined over fiscal 2009 and other cost savings measures were instituted, including the closure of Arrowhead's New York office and reduction in scientific advisory fees.

Unidym also reduced its expenses in fiscal 2009. In fiscal 2008, Unidym was pursuing a business plan based on building a vertically integrated company that would manufacture both carbon nanotubes and carbon nanotube films. With the dramatic changes in economic conditions in late 2008, Unidym decided to look to partners for manufacturing capability rather than expand its internal capabilities. In line with this strategy, Unidym closed its Texas operations in January 2009. This resulted in a reduction in workforce and other expenses related to the operation of the Texas plant and a reduction in lease expenses later in the year. Unidym consolidated its Northern California operations into one facility in 2009 and also decreased the number of management and technical staff in the

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early part of the year. Significant expense is expected to be incurred in the further development of Unidym's products. However, development costs at Unidym have been substantially reduced and the pace of development will depend on the cash resources and partnership opportunities available to Unidym.

Calando also reduced expenses in fiscal 2009 due to a change in business strategy. Rather than bear the significant expense of running multiple clinical trials, Calando decided to seek partners for further development of its technology. Beginning in fiscal 2008 and continuing into fiscal 2009, Calando reduced its management and technical staff culminating with the closure of its lab facility in Pasadena, California in June 2009 after a partnership for one of its drug delivery technologies and its associated clinical candidate was signed. Calando's outside lab and contract services expense decreased by approximately \$3.0 million in fiscal 2009 compared to fiscal 2008. Calando incurred major expenses during fiscal 2008 related to the IT-101 clinical trial and preparation for a phase 1 clinical trial for CALAA-01. With the initiation of the phase I trial for CALAA-01 in fiscal 2009, the need to incur outside labs and contract service expenses was reduced. In fiscal 2009, significant expense was incurred for manufacture of the components for CALAA-02, preparation for an investigational new drug ("IND") application for CALAA-02 and the continuation of Calando's clinical trials. Continued clinical and preclinical development of Calando's drug candidates will depend on the cash resources available to Calando.

During the quarter ended December 31, 2009, the Company experienced modest sequential reductions in its operating losses and cash burn as compared to the quarter ended September 30, 2009. The Company has primarily completed its cost reduction programs, and does not expect further significant reductions in its operating expenses or cash burn.

Revenues

The Company generated revenues of \$148,068, and \$701,723 during the three months ended December 31, 2009 and 2008, respectively. Revenue for the three months ended December 31, 2009 consists primarily of Unidym sales of CNTs and inks, and revenue for the three months ended December 31, 2008 consists of \$450,000 from license fees from Unidym technology, \$85,233 in grants to Unidym to fund research and \$166,490 from the sales and delivery of carbon nanotubes by Unidym. Revenues from sales of carbon nanotubes are expected to decline in 2010 as Unidym depletes its inventories and transfers its bulk carbon nanotube production to a third party in exchange for payments based on the third party sales. Unidym is anticipating modest revenue from film sales in fiscal 2010.

Operating Expenses

The analysis below details the operating expenses and discusses the expenditures of the Company within the major expense categories. For purposes of comparison, the amounts for the three months ended December 31, 2009 and 2008 are shown in the table below.

Salary & Wage Expenses – Three months ended December 31, 2009 compared to the three months ended December 31, 2008

Arrowhead employs management, administrative and technical staff at the Arrowhead corporate offices and the Subsidiaries. Salary and wage expense consists of salary, benefits, and non-cash charges related to equity-based compensation in the form of stock options. Salary and benefits are allocated to two major categories: general and administrative ("G&A") compensation related expense and research and development ("R&D") compensation related expense depending on the primary activities of each employee. The following table details salary and wage expenses for the three months ended December 31, 2009 as compared to the three months ended December 31, 2008.

(in thousands)

	Three Months Ended December 31, 2009	% of expense category	Three Months Ended December 31, 2008	% of expense category
G&A – compensation-related	\$ 554	50%	\$ 1,306	42%
Stock-based compensation	302	27%	728	23%
R&D – compensation-related	248	23%	1,093	35%
Total	<u>\$ 1,104</u>	<u>100%</u>	<u>\$ 3,127</u>	<u>100%</u>

During the three months ended December 31, 2009, G&A compensation expense decreased due to a reduction in the number of employees across all its entities during 2009.

Stock-based compensation is a non-cash charge related to the issuance and vesting of stock options. This expense is recorded pursuant to guidance by the FASB, which requires expensing of stock-based compensation based upon the estimated fair value of the awards issued. During fiscal 2009, the Company cancelled options to purchase approximately 5.6 million shares due to employee terminations and voluntary terminations of stock options to facilitate financing transactions in July and August 2009. These cancellations resulted in a reduction of stock-based compensation expense during the three months ended December 31, 2009, as compared to the three months ended December 31, 2008. The number of options outstanding and the option expense will vary from period to period depending on hiring, terminations and awards to new and existing employees.

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R&D compensation expense decreased by approximately \$845,000 during the three months ended December 31, 2009, as compared to the three months ended December 31, 2008. This reduction is primarily due to Unidym's reduction in research scientists and process engineers in conjunction with the closure of Unidym's Texas facility. Calando has also reduced laboratory personnel in connection with its decision in June 2009 to license its technology and close its laboratory facility. Two employees have been retained to complete the CALAA-01 clinical study and to facilitate partnership arrangements for Calando's technology.

General & Administrative Expenses – Three months ended December 31, 2009 compared to the three months ended December 31, 2008

The following table details our G&A expenses for the three months ended December 31, 2009 as compared to the three months ended December 31, 2008.

(in thousands)

	Three Months Ended December 31, 2009	% of expense category	Three Months Ended December 31, 2008	% of expense category
Professional/outside services	\$ 420	57%	\$ 649	42%
Recruiting	1	0%	24	2%
Facilities related	74	10%	70	4%
Patent expense	1	0%	292	18%
Travel expense	50	7%	208	13%
Business insurance	93	12%	115	7%
Depreciation-G&A	24	3%	37	2%
Communications and technology	30	4%	88	6%
Office expense	31	4%	64	4%
Other	22	3%	38	2%
Total	<u>\$ 746</u>	<u>100%</u>	<u>\$ 1,585</u>	<u>100%</u>

Professional/outside services include legal, accounting and other outside services retained by the Company and its subsidiaries. All periods include normally occurring legal and accounting expenses related to SEC compliance and other corporate matters. The decrease in professional fees primarily relates to a reduction in expenses at Arrowhead primarily related to lower legal, Sarbanes-Oxley Act compliance costs and investor relations consulting. Also, the Company incurred certain legal fees related to the establishment of subsidiaries which was not repeated in the current quarter.

Patent expense was \$1,000 during the three months ended December 31, 2009 as compared to \$292,000 during the three months ended December 31, 2008. Patent expense decreased significantly due to limited patenting activities in the current quarter. Patent expense during the three months ended December 31, 2008 primarily related to patent costs at Calando of \$162,000 prior to the license agreements to Cerulean, and \$130,000 at Unidym for patent costs related to Nanoconduction which were not repeated. The Company expects to continue to invest in patent protection as the Company extends and maintains protection for its current portfolios and files new patent applications as its product applications are improved. The cost will vary depending on the needs of the Company.

Travel expense includes recurring expenses related to travel by Company personnel to and from Company locations in Pasadena and Northern California. Travel expense is also incurred as the Company pursues business initiatives and collaborations throughout the world with other companies and for marketing, investor relations, fund raising and public relations purposes. During the three months ended December 31, 2009, travel expense was \$50,000, compared to \$208,000 during the three months ended December 31, 2008. The decrease of \$158,000 is primarily due to a reduction of travel expenses at Unidym. Travel expense fluctuates from year to year depending on current projects.

Business insurance expense was \$93,000 during the three months ended December 31, 2009, compared to \$115,000 during the three months ended December 31, 2008. This decrease is due to generally lower rates in insurance markets and a reduction in coverage for clinical trials with the termination of the Phase 2 clinical study for IT-101. This expense is expected to fluctuate but eventually decrease as a result of changes in the market and the status of clinical trials and the reduction in number of facilities at Unidym requiring insurance.

The decrease in office expense and communications and technology expense is primarily related to the closing of the Texas facility and to the reduction in employees.

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Research and Development Expenses – Three months ended December 31, 2009 compared to the three months ended December 31, 2008

R&D expenses are primarily related to activities within Arrowhead's Subsidiaries. The following table details R&D expenses for the three months ended December 31, 2009 as compared to the three months ended December 31, 2008.

(in thousands)

	Three Months Ended December 31, 2009	% of expense Category	Three Months Ended December 31, 2008	% of expense Category
Outside labs & contract services	\$ 49	17%	\$ 2,643	68%
License, royalty & milestones	3	1%	240	6%
Laboratory supplies & services	10	4%	186	5%
Facilities related	109	39%	347	9%
Sponsored research	25	9%	111	3%
Depreciation-R&D	71	26%	143	4%
Other research expenses	11	4%	218	5%
Total	<u>\$ 278</u>	<u>100%</u>	<u>\$ 3,888</u>	<u>100%</u>

For the three months ended December 31, 2009, outside lab and contract services expenses were \$49,000 as compared to \$2.6 million during the three months ended December 31, 2008. The decrease of \$2.6 million was primarily related to a reduction in outside lab services of \$1.9 million at Calando and a reduction of \$536,000 at Unidym. The reduction at Calando was a result of the advanced state of the IT-101 phase 1 clinical trial, the decision to close the IT-101 phase 2 clinical trials in connection with the agreement with Cerulean, completion of preparatory work for the CALAA-01 phase 1 clinical trial and the suspension of development efforts for CALAA-02. During fiscal 2009, process development and preclinical expenses for Calando's drug candidate CALAA-02, together with the clinical trial expenses for CALAA-01 (Phase I) and IT-101 (Phase I and II) totaled approximately \$2.9 million. However, the expenses were significantly reduced by June 30, 2009 when the Calando facility was closed.

Licensing fees, royalty and milestones expenses during the quarter ended December 31, 2009 consisted primarily of amounts paid by Unidym under the terms of its license agreement with Rice University and Calando's license fees for siRNA targets from Alnylam Pharmaceuticals. These costs were not repeatable in the current quarter, and the expenses have decreased significantly as compared to the three months ended December 31, 2008.

Laboratory supplies and services consist primarily of materials, supplies and services consumed in the laboratory. During the three months ended December 31, 2009 expenses for laboratory supplies and services was \$10,000 compared to \$186,000 during the three months ended December 31, 2008. The decrease is primarily due to the scale down of the Unidym operations and the closing of Calando's lab.

Facilities related expenses were \$109,000 during the three months ended December 31, 2009 as compared to expenses of \$347,000 during the three months ended December 31, 2008. The decrease in facilities related expenses primarily related to the closure of Unidym's Texas facilities and Menlo Park, California facility.

Sponsored research expense decreased during the three months ended December 31, 2009 as compared to the prior year, as projects were completed (University of Florida) or terminated (Caltech). No new research projects were added during fiscal 2009. The only sponsored research agreement currently in place is Unidym's agreement with Duke University.

Depreciation expense was \$71,000 during the three months ended December 31, 2009 as compared to \$143,000 during the three months ended December 31, 2008. The decrease in depreciation expense is primarily due to the disposal of laboratory equipment and leasehold improvements related to closure of Unidym's and Calando's laboratory facilities in fiscal 2009.

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The table below sets forth the approximate amount of Arrowhead's cash expenses for research and development projects at each Subsidiary for the periods described below.

<u>Name of Subsidiary / Project</u>	<u>Project expenses for three months ended December 31, 2009</u>	<u>Project expenses for three months ended December 31, 2008</u>	<u>Project expenses from inception of Project through December 31, 2009</u>
Calando Pharmaceuticals, Inc. / CALAA-01 & IT 101	\$ 0.1 Million	\$ 2.9 Million	\$40.2 Million
Unidym, Inc. / Thin Film Carbon Nanotubes	1.1 Million	2.4 Million	27.2 Million
Tego Biosciences Corp. / Fullerene Anti-oxidants	0.0 Million	0.0 Million	0.9 Million
Agonn Systems, Inc. / CNT based ultracapacitors	0.0 Million	0.2 Million	0.5 Million
Total of all listed Subsidiaries	\$ 1.2 Million	\$ 5.5 Million	\$68.8 Million

Consulting – Three months ended December 31, 2009 compared to the three months ended December 31, 2008

For the three months ended December 31, 2009, consulting fees and related travel were \$101,239, of which approximately \$45,199 and \$39,871 related to Calando and Unidym, respectively, compared to \$588,757 for the three months ended December 31, 2008, of which \$432,000 and \$94,000 related to Calando and Unidym, respectively.

Consulting fees during the three months ended December 31, 2009 were approximately \$488,000 lower than the three months ended December 31, 2008. This reduction is primarily related to a reduction in consulting fees at Calando. With the closure of the Phase 2 trial for IT 101 and its ultimate licensing to a third party for development, consulting for clinical studies has decreased significantly.

The use of consultants with diverse backgrounds enabled the Company to accomplish various objectives without having to add full time staff and is expected to continue in 2010.

Other income (expense) – Three months ended December 31, 2009 compared to the three months ended December 31, 2008

Other income (expense), net for the three months ended December 31, 2009 was expense of \$70,444 primarily related to Arrowhead's equity in the loss of Nanotope, as compared to income of \$639,488 during the three months ended December 31, 2008. The primary component of other income during the three months ended December 31, 2008 was the gain on the sale of equity investment in Ensysce.

Leveraged Technology and Revenue Strategy

Arrowhead continues to follow its strategy to leverage technology that is being or has been developed at universities. By doing so, Arrowhead benefits from work done at those universities and through majority-owned Subsidiaries, which can commercialize the most promising technologies developed from sponsored research and other sources. The Subsidiaries are likely to produce prototypes to advance their strategies. The Subsidiaries have three primary strategies to generate product sales revenue:

- License the products and processes to a third party for a royalty or other payment. By licensing, the Company would not be required to allocate resources to build a sales or a production infrastructure and could use those resources to develop additional products.
- Retain the rights to the products and processes, but contract with a third party for production. The Company would then market the finished products. This approach would require either the establishment of a sales and distribution network or collaboration with a supplier who has an established sales and distribution network, but would not require investment in production infrastructure.
- Build production capability in order to produce and market the end products. This last approach would likely require the most capital to build the production, sales and distribution infrastructure.

On a case-by-case basis, the Company and each Subsidiary will choose the strategy which, in the opinion of management, can be supported by available capital resources and is likely to generate the most favorable return. While the ultimate goal of the Company is to generate revenue through the sale of products and/or the licensing of technology, the Company does record revenue from grants and from development fees. Revenue from grants and development fees are considered to be reimbursements for efforts performed on behalf of third parties and not part of the Company's primary strategy to generate revenue.

Unidym generated revenues of \$148,068 during the three months ended December 31, 2009. With the expected transfer of carbon nanotube production and sales to a third party, revenues for carbon nanotube production are expected to decline in fiscal 2010.

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Calando had no revenue during the three months ended December 31, 2009.

Contractual Obligations and Commercial Commitments

Unidym incurred various contractual obligations and commercial commitments in connection with the acquisition of Nanoconduction. In addition, our Subsidiaries incurred contractual obligations and commercial commitments in the normal course of their businesses. They consist of the following:

Capital Lease Obligations

In connection with its acquisition of Nanoconduction, Unidym assumed an equipment lease of \$1,677,000, bearing interest at 8% with a remaining principal balance of \$513,620 as of December 31, 2009. The lease requires monthly payments of principal and interest of \$75,344 through July 1, 2010. The equipment lease is secured by research and development assets at Nanoconduction.

Patents and Licenses

Our Subsidiaries have entered into various licensing agreements requiring royalty payments of specified product sales. Some of these agreements contain provisions for the payment of guaranteed or minimum royalty amounts. Typically, the licensor can terminate our license if we fail to pay minimum annual royalties.

Purchase Commitments

In connection with conducting Phase Ia and Ib trials, in the normal course of business, Calando incurred purchase obligations with vendors and suppliers for materials and supplies or for manufacture of therapeutic agents, as well as other goods and services. These obligations are generally evidenced by purchase orders that contain the terms and conditions associated with the purchase arrangements. Calando is committed to accept delivery of such material pursuant to the purchase orders subject to various contract provisions which allow us to delay receipt of such orders or cancel orders beyond certain agreed upon lead times. Cancellations may result in cancellation costs payable by us.

Off-Balance Sheet Arrangements

We do not have and have not had any off-balance sheet arrangements or relationships.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Disclosure not required as a result of the Company's status as a smaller reporting company.

ITEM 4. DISCLOSURE CONTROLS AND PROCEDURES.

Our Chief Executive Officer and our Chief Financial Officer, after evaluating our "disclosure controls and procedures" (as defined in Rules 13a-15(e) and 15d-15(e)) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") as of the end of the period covered by this Quarterly Report on Form 10-Q (the "Evaluation Date") have concluded that as of the Evaluation Date, our disclosure controls and procedures are effective to ensure that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and to ensure that information required to be disclosed by us in such reports is accumulated and communicated to our management, including our chief executive officer and chief financial officer where appropriate, to allow timely decisions regarding required disclosure.

No change in the Company's internal controls over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) occurred during the Company's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS.

None.

ITEM 1A. RISK FACTORS

We are a development stage company and we have limited historical operations. We urge you to consider our likelihood of success and prospects in light of the risks, expenses and difficulties frequently encountered by entities at similar stages of development.

The following is a summary of certain risks we face. They are not the only risks we face. Additional risks of which we are not presently aware or that we currently believe are immaterial may also harm our business and results of operations. The trading price of our common stock could decline due to the occurrence of any of these risks, and investors could lose all or part of their investment. In assessing these risks, investors should also refer to the other information contained or incorporated by reference in our other filings with the SEC.

Risks Related to Our Financial Condition

We do not have sufficient cash reserves to fund our activities at their current pace beyond this year.

Our plan of operations is to provide substantial amounts of development funding and financial support for our majority-owned subsidiaries over an extended period of time. Our Board of Directors adopted a cash conservation strategy that scaled back our financial support for our majority-owned subsidiaries, Unidym and Calando. This has influenced Unidym's decision to engage partners for its capital-intensive bulk CNT manufacturing and concentrate its resources on its CNT inks and CNT-based film products and Calando's decision to curtail internal R&D efforts for its drug delivery platforms and clinical candidates and seek partners for future development of its drug candidates. Management has developed a plan based upon the latest financing (See Note 6 – Stockholder's Equity) which includes the December 2009 financing and several other transactions which are expected to close in the near term. The plan shows that the Company has enough cash to fund all operations through September 30, 2010. Should a shortfall occur in expected cash receipts, the plan has contingencies to reduce costs in order to operate through September 30, 2010 without additional financing.

We may need to obtain additional capital to support our projects, and we may plan to do so by out-licensing technology, selling one or more of our subsidiaries, securing funded partnerships, conducting one or more private placements of equity securities of the Company or our subsidiaries, selling additional securities in a registered public offering, or through a combination of one or more of such financing alternatives. However, there can be no assurance that we will be successful in any of these endeavors or, if we are successful, that such transactions will be accomplished on favorable terms. If we are unable to obtain additional capital, we will be required to implement additional cash saving measures by limiting further activities at Unidym, or at the Company, which could materially harm our business and our ability to achieve cash flow in the future, including delaying or reducing implementation of certain aspects of our plan of operations. Even if we are successful in obtaining additional capital, because we and each subsidiary are separate entities, it could be difficult or impossible to allocate funds in a way that meets the needs of all entities.

A substantial portion of Unidym's intellectual property is licensed from Rice University and the Rice license includes an insolvency provision.

Through its merger with Carbon Nanotechnologies, Inc. ("CNI"), Unidym acquired a license to certain intellectual property from Rice University. Under the license, Unidym must meet a solvency test in order to retain the rights to the licensed technology. Although Unidym is not insolvent at this time, if Unidym does not obtain additional capital, it is likely that it would become insolvent and the Rice license would be subject to potential termination. If the Rice license terminates, Unidym would lose exclusivity in the fields of use covered by the Rice license and its business would be materially and irrevocably harmed. In this case, the likelihood that the Company would realize any return on its investment in Unidym would be substantially diminished, if not eliminated entirely. This would likely materially and irrevocably harm the value of the Company.

The current financial market conditions may exacerbate certain risks affecting our business.

Neither the Company nor our subsidiaries generate substantial revenue, and, to date, our operations, research and development activities have been primarily funded through the sale of Company securities and securities of our subsidiaries. Current market conditions are likely to impair our ability to raise the capital we need. If we are unable to secure additional cash resources from the sale of securities or other sources, it could become necessary to further slow, interrupt or close down development efforts at Unidym. In addition, we may have to make additional cuts in expenses at the Company, which could impair our ability to manage our business and our subsidiaries. Even if investment capital is available to us, the terms may be onerous in light of the state of the current market. If investment capital is needed and available to Unidym and/or Calando and the Company does not have the funds to make a pro rata investment, our ownership interest could be significantly diluted. The sale of additional Company stock to fund operations could result in significant dilution to stockholders.

The strategy for eventual monetization of our subsidiaries will likely depend on our ability to exit our ownership position in each subsidiary in an orderly manner. Exit opportunities could include an initial public offering ("IPO") for the subsidiary or acquisition of the subsidiary by another company. Due to the current economic climate, companies are adopting conservative acquisition strategies and, even if there is interest, they may not be able to acquire our subsidiaries on terms that are attractive to us, if at all. These factors could reduce the realizable return on our investment if we are able to sell a subsidiary. Additionally, the market for IPOs is severely limited, which limits public exit opportunities for our subsidiaries.

Our business may be harmed if we cannot maintain our listing on the NASDAQ Capital Market.

To maintain our listing on the NASDAQ Capital Market we must satisfy certain minimum financial and other continued listing standards, including, among other requirements, (i) a \$1.00 minimum bid price requirement and (ii) a \$2.5 million minimum stockholders' equity requirement, \$500,000 minimum net income requirement or \$35 million minimum market value of listed securities requirement. As of February 5, 2010, the bid price of our Common Stock was \$0.60 per share and our market value for listed securities was approximately \$38 million. At December 31, 2009, our stockholders' equity was \$6.5 million and our net loss was \$1.5 million for the quarter ended December 31, 2009. However, it is possible going forward that NASDAQ may decide our stockholders' equity is insufficient for continued compliance. We may face deficiencies in our stockholders' equity in the future and, if we cannot resolve such deficiencies, our Common Stock could be delisted from the NASDAQ Capital Market.

On September 18, 2009, we received a deficiency letter from the NASDAQ Stock Market indicating that, based on our closing bid price for the last 30 consecutive business days, we did not comply with the \$1.00 minimum bid price as set forth in NASDAQ Marketplace Rule 5550(a)(2). In accordance with NASDAQ Marketplace Rule 5810(c)(3)(A), we have been provided a grace period of 180 calendar days to regain compliance by maintaining a minimum closing bid price of \$1.00 per share for 10 consecutive business days, and we may be eligible for an additional grace period under NASDAQ Rules. As of February 5, 2010, our Common Stock was trading at \$0.60, which is below the \$1.00 minimum bid price requirement. As a result, we may need to effect a reverse stock split to raise our stock price over \$1.00 to regain compliance with NASDAQ Listing Rules. At a special meeting of stockholders on October 6, 2009, a proposal was approved giving authority to our Board of Directors to effect a reverse stock split of our Common Stock in the range of 1:2 to 1:15, if deemed necessary. Despite the ability of the Board of Directors to effect a reverse stock split if necessary, there is no assurance that such a reverse stock split would in fact enable us to meet the \$1.00 minimum bid price requirement and stockholders may suffer a decline in value of their shares as many stocks do not trade at or above the implied post-split price.

In addition, because of cash constraints, we may have to "go dark" and stop filing reports with the SEC. If we stop filing reports with the SEC, that would negatively affect our stockholders' ability to sell their shares. In addition, we would be under breach of certain agreements if we stop filing reports with the SEC, which would expose us to potential legal action.

If our Common Stock is delisted by, or we voluntarily delist from NASDAQ, our Common Stock may be eligible to trade on the OTC Bulletin Board or the Pink OTC Markets. In such an event, it could become more difficult to dispose of, or obtain accurate quotations for the price of our Common Stock, and there would likely also be a reduction in profile in the investment community and the news media, which could cause the price of our Common Stock to decline further.

As a consequence, our inability to maintain our listing on NASDAQ could also adversely affect our ability to obtain financing for the continuation of our operations and could result in a loss of confidence by investors, suppliers and employees. In addition, our stockholders' ability to trade or obtain quotations on our shares could be severely limited because of lower trading volumes and transaction delays. These factors could contribute to lower prices and larger spreads in the bid and ask price for our Common Stock.

We have debt on our consolidated balance sheet, which could have consequences if we were unable to repay the principal or interest due.

Unidym. We have debt on our consolidated balance sheet, including a capital lease obligation acquired in connection with Unidym's acquisition of Nanoconduction, Inc. As of December 31, 2009, the capital lease obligation requires us to pay a total of \$513,620 in seven monthly payments of approximately \$75,000 each for capital equipment at Unidym's Sunnyvale, California location and the equipment itself serves as collateral for the debt. Unidym's ability to make payments on its indebtedness will depend on its ability to conserve the cash that it has on hand and to generate cash in the future. Neither Unidym nor the Company currently generates significant revenue. Because Unidym does not currently have a substantial amount of cash on hand, Unidym might be required to divert cash from development activities or to generate cash via debt or equity financing to be able to meet the monthly payment requirements under the capital lease obligation. This, to some extent, is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control. Also, given the current economic climate, financing options might be limited going forward, which could prevent Unidym from obtaining the necessary funds to pay its indebtedness when due. Because the equipment serves as collateral for the debt, if Unidym is unable to make the monthly payments when due, the lessor of the equipment, at its discretion, may seize the equipment and Unidym would not be able to use the equipment in its development activities.

Calando. Calando has a \$500,000 unsecured convertible promissory note outstanding. The note bears 10% interest accrued annually and has a two-year maturity. The note is also payable at two times face value in certain events, including, among other things, the license of Calando's siRNA delivery system. Following maturity, the note becomes payable on demand. If Calando is unable to meet its obligations to the bearer of the note after maturity, we may also not be in a position to lend Calando sufficient cash to pay such demand note. Unless other sources of financing become available, this could result in Calando's insolvency.

Our subsidiaries have entered into technology license agreements with third parties that require us to satisfy obligations to keep them effective, and if these agreements are terminated, our technology and our business would be seriously and adversely affected.

Through our subsidiaries, we have entered into exclusive, long-term license agreements with Rice University, California Institute of Technology, Alnylam Pharmaceuticals, Inc. and other entities to incorporate their proprietary technologies into our proposed products. These license agreements require us to pay royalties and satisfy other conditions, including conditions related to the commercialization of the licensed technology. We cannot give any assurance that we will successfully incorporate these technologies into marketable products or, if we do, whether sales will be sufficient to recover the amounts that we are obligated to pay to the licensors. Failure by us to satisfy our obligations under these agreements may result in the modification of the terms of the licenses, such as by rendering them non-exclusive, or may give our licensors the right to terminate their respective agreement with us, which would limit our ability to implement our current business plan and harm our business and financial condition.

Risks Related to Our Business Model and Company

We are a development stage company and our success is subject to the substantial risks inherent in the establishment of a new business venture.

The implementation of our business strategy is still in the development stage. We currently own majority interests in two subsidiary companies, investments in two early stage biotech companies and, through Unidym, one university research project at Duke University. Our business and operations should be considered to be in the development stage and subject to all of the risks inherent in the establishment of a new business venture. Accordingly, our intended business and operations may not prove to be successful in the near future, if at all. Any future success that we might enjoy will depend upon many factors, several of which may be beyond our control, or which cannot be predicted at this time, and which could have a material adverse effect upon our financial condition, business prospects and operations and the value of an investment in the company.

The costs to fund the operations of Unidym is difficult to predict, and our anticipated expenditures in support of Unidym may increase or decrease for a variety of reasons.

Development, manufacturing and sale of cost-effective electronic products incorporating carbon nanotubes may require significant additional investment and take a long time. It is possible that the development and scale up of Unidym's carbon nanotube manufacturing effort and its development and scale up of its transparent conductive film products could be delayed for a number of reasons, including unforeseen difficulties with the technology development and delays in adoption of the technology by customers. Any delay would result in additional unforeseen costs, which would harm our results of operations. Due to these uncertainties, we cannot reasonably estimate the size, nature or timing of the costs to complete the development of Unidym's products or net cash inflows from Unidym's current activities.

Calando may be unable to find additional partners to license its technologies.

As part of our cash conservation strategy that scales back our financial support for Calando at this time, Calando has closed its laboratory facilities, eliminated its technical employees and has shifted its focus to licensing its technologies to partners. Currently, Calando has one licensing partner, but there can be no assurance that Calando will be able to find additional partners to license its technologies upon terms favorable to Calando.

If Calando licenses its technologies, it will lose a considerable amount of control over its intellectual property and may not receive adequate licensing revenues in exchange.

The business model of our subsidiaries has historically been to develop new nanotechnologies and to exploit the intellectual property created through the research and development process to develop commercially successful products. Calando has licensed a portion of its technology to Cerulean Pharma, Inc. and intends to pursue further licensing arrangements with other companies. As Calando licenses its technology to other companies, it will lose control over certain of the technologies it licenses and will be unable to significantly direct the commercialization of its technologies. In addition, Calando's licensees may not be successful in the further commercialization of Calando's technologies and anticipated revenues from such license agreements may be less than expected or may not be paid at all.

There are substantial inherent risks in attempting to commercialize new technological applications, and, as a result, we may not be able to successfully develop nanotechnology for commercial use.

The Company finances research and development of nanotechnology, which is a new and unproven field. Our scientists and engineers are working on developing technology in various stages. However, such technology's commercial feasibility and acceptance is unknown. Scientific research and development requires significant amounts of capital and takes an extremely long time to reach commercial viability, if at all. To date, our research and development projects have not produced commercially viable applications, and may never do so. During the research and development process, we may experience technological barriers that we may be unable to overcome. For example, our scientists must determine how to design and develop nanotechnology applications for potential products designed by third parties for use in cost-effective manufacturing processes. Because of these uncertainties, it is possible that none of our potential applications will be successfully developed. If we are unable to successfully develop nanotechnology applications for commercial use, we will be unable to generate revenue or build a sustainable or profitable business.

Because we have not generated significant revenues to cover our operating expenses, we are dependent on raising additional capital from investors or lenders.

To date, we have only generated a small amount of revenue as a result of our current plan of operations. Given our strategy of financing new and unproven technology research, there is no assurance we would ever generate significant revenues. Our revenue-producing opportunities depend on liquidity events within our subsidiaries, such as a sale of the subsidiary, licensing transaction or initial public offering. We cannot be certain that we will be able to create a liquidity event for any of our subsidiaries and, even if we are able to, we cannot be certain of the timing or the potential proceeds to Arrowhead as a stockholder. Accordingly, our revenue prospects are uncertain and we must plan to finance our operations through the sales of equity securities or debt financing. If we are unable to continue raising operating capital from these sources, we may be forced to curtail or cease our operations.

We will need to achieve commercial acceptance of our applications to generate revenues and achieve profitability.

Even if our research and development yields technologically feasible applications, we may not successfully develop commercial products, and even if we do, we may not do so on a timely basis. If our research efforts are successful on the technology side, it could take at least several years before this technology will be commercially viable. During this period, superior competitive technologies may be introduced or customer needs may change, which will diminish or extinguish the commercial uses for our applications. Because nanotechnology is an emerging field, the degree to which potential consumers will adopt nanotechnology-enabled products is uncertain. We cannot predict when significant commercial market acceptance for nanotechnology-enabled products will develop, if at all, and we cannot reliably estimate the projected size of any such potential market. If markets fail to accept nanotechnology-enabled products, we may not be able to generate revenues from the commercial application of our technologies. Our revenue growth and achievement of profitability will depend substantially on our ability to introduce new technological applications to manufacturers for products accepted by customers. If we are unable to cost-effectively achieve acceptance of our technology among original equipment manufacturers and customers, or if the associated products do not achieve wide market acceptance, our business will be materially and adversely affected.

We will need to establish additional relationships with strategic and development partners to fully develop and market our products.

We do not possess all of the resources necessary to develop and commercialize products that may result from our technologies on a mass scale. Unless we expand our product development capacity and enhance our internal marketing, we will need to make appropriate arrangements with strategic partners to develop and commercialize current and future products. If we do not find appropriate partners, or if our existing arrangements or future agreements are not successful, our ability to develop and commercialize products could be adversely affected. Even if we are able to find collaborative partners, the overall success of the development and commercialization of product candidates in those programs will depend largely on the efforts of other parties and is beyond our control. In addition, in the event we pursue our commercialization strategy through collaboration, there are a variety of attendant technical, business and legal risks, including:

- a development partner would likely gain access to our proprietary information, potentially enabling the partner to develop products without us or design around our intellectual property;
- we may not be able to control the amount and timing of resources that our collaborators may be willing or able to devote to the development or commercialization of our product candidates or to their marketing and distribution; and
- disputes may arise between us and our collaborators that result in the delay or termination of the research, development or commercialization of our product candidates or that result in costly litigation or arbitration that diverts our management's resources.

The occurrence of any of the above risks could impair our ability to generate revenues and harm our business and financial condition.

We need to retain a controlling interest, by ownership, contract or otherwise, in Unidym and Calando in order to avoid potentially being deemed an investment company under the Investment Company Act of 1940.

Companies that have more than 100 U.S. stockholders or are publicly traded in the U.S. or are, or hold themselves out as being, engaged primarily in the business of investing, reinvesting or trading in securities are subject to regulation under the Investment Company Act of 1940. Unless a substantial part of our assets consists of, and a substantial part of our income is derived from, interests in majority-owned subsidiaries and companies that we primarily control, whether by contract or otherwise, we may be required to register and become subject to regulation under the Investment Company Act. Because Investment Company Act regulation is, for the most part, inconsistent with our strategy of actively managing and operating our portfolio companies, a requirement to operate our business as a registered investment company would restrict our operations and require additional resources for compliance.

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If we are deemed to be, and are required to register as, an investment company, we will be forced to comply with substantive requirements under the Investment Company Act, including:

- limitations on our ability to borrow;
- limitations on our capital structure;
- restrictions on acquisitions of interests in associated companies;
- prohibitions on transactions with our affiliates;
- restrictions on specific investments; and
- compliance with reporting, record keeping, voting, proxy disclosure and other rules and regulations.

In order to avoid regulation under the Investment Company Act, we may choose to make additional pro rata investments in Unidym and Calando to maintain a controlling interest.

Nanotechnology-enabled products are new and may be viewed as being harmful to human health or the environment.

There is public concern regarding the human health, environmental and ethical implications of nanotechnology that could impede market acceptance of products developed through these means. Nanotechnology-enabled products could be composed of materials such as carbon, silicon, silicon carbide, germanium, gallium arsenide, gallium nitride, cadmium selenide or indium phosphide, which may prove to be unsafe or harmful to human health or to the environment because of the size, shape or composition of the nanostructures. For this reason, these nanostructures may prove to present risks to human health or the environment that are different from and greater than the better understood risks that may be presented by the constituent materials in non-nanoscale forms. Because of the potential, but at this point unknown, risks associated with certain nanomaterials, government authorities in the U.S. or individual states, and foreign government authorities could, for social or other purposes, prohibit or regulate the use of some or all nanotechnologies. The U.S. Environmental Protection Agency has in that regard recently taken steps towards regulation of the manufacture and use of certain nanotechnology-enabled materials, including those containing carbon nanotubes or nanosilver. Further, the U.S. National Academy of Sciences/National Research Council concluded that the U.S. government needs to develop a more robust and coordinated plan for addressing the potential environmental, health, and safety risks of nanomaterials. The regulation and limitation of the kinds of materials used in or used to develop nanotechnology-enabled products, or the regulation of the products themselves, could halt or delay the commercialization of nanotechnology-enabled products or substantially increase the cost, which will impair our ability to achieve revenue from the license of nanotechnology applications.

We may not be able to effectively secure first-tier research and development projects when competing against other ventures.

We compete with a substantial number of other companies that fund early-stage, scientific research at universities to secure rights to promising technologies. In addition, many venture capital firms and other institutional investors invest in companies seeking to commercialize various types of emerging technologies. Many of these companies have greater resources than we do. Therefore, we may not be able to secure the opportunity to finance first-tier research and commercialization projects. Furthermore, should any commercial undertaking by us prove to be successful, there can be no assurance competitors with greater financial resources will not offer competitive products and/or technologies.

We rely on outside sources for various components and processes for our products.

We rely on third parties for various components and processes for our products. While we try to have at least two sources for each component and process, we may not be able to achieve multiple sourcing because there may be no acceptable second source, other companies may choose not to work with us, or the component or process sought may be so new that a second source does not exist, or does not exist on acceptable terms. In addition, due to the recent tightening of global credit and the disruption in the financial markets, there may be a disruption or delay in the performance of our third-party contractors, suppliers or collaborators. If such third parties are unable to satisfy their commitments to us, our business would be adversely affected. Therefore, it is possible that our business plans will have to be slowed down or stopped completely at times due to our inability to obtain required raw materials, components and outsourced processes at an acceptable cost, if at all, or to get a timely response from vendors.

We must overcome the many obstacles associated with integrating and operating varying business ventures to succeed.

Our model to integrate and oversee the strategic direction of various subsidiaries and research and development projects presents many risks, including:

- the difficulty of integrating operations and personnel; and
- the diversion of our management's attention as a result of evaluating, negotiating and integrating acquisitions or new business ventures.

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If we are unable to timely and efficiently design and integrate administrative and operational support for our subsidiaries, we may be unable to manage projects effectively, which could adversely affect our ability to meet our business objectives and the value of an investment in the Company could decline.

In addition, consummating acquisitions and taking advantage of strategic relationships could adversely impact our cash position, and dilute stockholder interests, for many reasons, including:

- changes to our income to reflect the amortization of acquired intangible assets, including goodwill;
- interest costs and debt service requirements for any debt incurred to fund our growth strategy; and
- any issuance of securities to fund our operations or growth, which dilutes or lessens the rights of current stockholders.

Our success depends on the attraction and retention of senior management and scientists with relevant expertise.

Our future success will depend to a significant extent on the continued services of our key employees. In addition, we rely on several key executives to manage each of our subsidiaries. We do not maintain key man life insurance for any of our executives. Our ability to execute our strategy also will depend on our ability to continue to attract and retain qualified scientists, sales, marketing and additional managerial personnel. If we are unable to find, hire and retain qualified individuals, we could have difficulty implementing our business plan in a timely manner, or at all. Given the Company's current financial constraints, we may need to terminate additional employees, including senior management and technical employees, or such employees may seek other employment. With these and past reductions, it is possible that valuable know-how will be lost and that development efforts could be negatively affected.

Members of our senior management team and Board may have a conflict of interest in also serving as officers and/or directors of our subsidiaries.

While we expect that our officers and directors who also serve as officers and/or directors of our subsidiaries will comply with their fiduciary duties owed to our stockholders, they may have conflicting fiduciary obligations to our stockholders and the minority stockholders of our subsidiaries. Specifically, Dr. Anzalone, our CEO and President, is the founder, CEO and a board member of each of Nanotope, a regenerative medicine company that is separately financed in which the Company owns a 23% interest, and Leonardo, a drug delivery company that is separately financed in which the Company owns a 6% interest. Dr. Anzalone owns a minority interest in the stock of each of Nanotope and Leonardo. To the extent that any of our directors choose to recuse themselves from particular Board actions to avoid a conflict of interest, the other members of our Board of Directors will have a greater influence on such decisions.

Our efforts pertaining to the pharmaceutical industry are subject to additional risks.

Our subsidiary, Calando, as well as minority investments Nanotope and Leonardo, are focused on technology related to new and improved pharmaceutical candidates. Drug development is time consuming, expensive and risky. Even product candidates that appear promising in the early phases of development, such as in early animal and human clinical trials, often fail to reach the market for a number of reasons, such as:

- clinical trial results are not acceptable, even though preclinical trial results were promising;
- inefficacy and/or harmful side effects in humans or animals;
- the necessary regulatory bodies, such as the U.S. Food and Drug Administration, did not approve our potential product for the intended use; and
- manufacturing and distribution is uneconomical.

Clinical trial results are frequently susceptible to varying interpretations by scientists, medical personnel, regulatory personnel, statisticians and others, which often delays, limits, or prevents further clinical development or regulatory approvals of potential products. If the subsidiaries' technology is not cost effective or if the associated drug products do not achieve wide market acceptance, the value of a subsidiary would be materially and adversely affected.

Any drugs developed by our subsidiaries may become subject to unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives, thereby harming our business.

Increasing expenditures for healthcare have been the subject of considerable public attention in the U.S. Both private and government entities are seeking ways to reduce or contain healthcare costs. Numerous proposals that would affect changes in the U.S. healthcare system have been introduced or proposed in Congress and in some state legislatures, including reductions in the cost of prescription products and changes in the levels at which consumers and healthcare providers are reimbursed for purchases of pharmaceutical products.

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The ability of Calando and our minority investments Nanotope and Leonardo to market products successfully (either on their own or in partnership with other companies) will depend in part on the extent to which third-party payers are willing to reimburse patients for the costs of their products and related treatments. These third-party payers include government authorities, private health insurers and other organizations, such as health maintenance organizations. Third party payers are increasingly challenging the prices charged for medical products and services. In addition, the trend toward managed healthcare and government insurance programs could result in lower prices and reduced demand for the products of these companies. Cost containment measures instituted by healthcare providers and any general healthcare reform could affect their ability to sell products and may have a material adverse effect on them, thereby diminishing the value of the Company's interest in these subsidiaries or any anticipated milestone or royalty payments. We cannot predict the effect of future legislation or regulation concerning the healthcare industry and third party coverage and reimbursement on our business.

There may be a difference in the investment valuations that we used when making initial and subsequent investments in our subsidiaries and minority investments and actual market values.

Our investments in our subsidiaries and minority interests were the result of negotiation with subsidiary management and equity holders, and the investment valuations were not independently verified. Traditional methods used by independent valuation analysts include a discounted cash flow analysis and a comparable company analysis. We have not generated a positive cash flow to date and do not expect to generate significant cash flow in the near future. Additionally, we believe that there exist comparable public companies to provide a meaningful valuation comparison. Accordingly, we have not sought independent valuation analysis in connection with our investments and may have invested in our various holdings at higher or lower valuations than an independent source would have recommended. There may be no correlation between the investment valuations that we used over the years for our investments and the actual market values. If we should eventually sell all or a part of any of our consolidated business or that of a subsidiary, the ultimate sale price may be for a value substantially lower or higher than previously determined by us, which could materially and adversely impair the value of our Common Stock.

Risks Related to Our Intellectual Property

If Unidym is unable to raise additional cash or pay its debts, Unidym may lose rights to critical intellectual property.

Unidym is required to meet certain financial covenants pursuant to the Rice University license agreement Unidym acquired upon its acquisition of CNI. When Unidym acquired CNI, CNI possessed intellectual property rights concerning carbon nanotubes that it had licensed from Rice University. The Rice license includes financial covenants tested quarterly for compliance. If Unidym fails to meet the financial covenants, the Rice license automatically terminates. If this should happen, the value of Unidym's intellectual property portfolio would be significantly and adversely affected and Unidym would likely lose patent protection for its products and licensing opportunities for the majority of its CNT intellectual portfolio.

Our ability to protect our patents and other proprietary rights is uncertain, exposing us to the possible loss of competitive advantage.

Our subsidiaries have licensed rights to pending patents and have filed and will continue to file patent applications. The researchers sponsored by us may also file patent applications that we choose to license. If a particular patent is not granted, the value of the invention described in the patent would be diminished. Further, even if these patents are granted, they may be difficult to enforce. Even if successful, efforts to enforce our patent rights could be expensive, distracting for management, cause our patents to be invalidated, and frustrate commercialization of products. Additionally, even if patents are issued and are enforceable, others may independently develop similar, superior or parallel technologies to any technology developed by us, or our technology may prove to infringe upon patents or rights owned by others. Thus, the patents held by or licensed to us may not afford us any meaningful competitive advantage. If we are unable to derive value from our licensed or owned intellectual property, the value of your investment may decline.

Our ability to develop and commercialize products will depend on our ability to enforce our intellectual property rights and operate without infringing the proprietary rights of third parties.

Our ability and the ability of our subsidiaries to develop and commercialize products based on their respective patent portfolios, will depend, in part, on our ability and the ability of our subsidiaries to enforce those patents and operate without infringing the proprietary rights of third parties. There can be no assurance that any patents that may issue from patent applications owned or licensed by us or any of our subsidiaries will provide sufficient protection to conduct our respective businesses as presently conducted or as proposed to be conducted, or that we or our subsidiaries will remain free from infringement claims by third parties.

We may be subject to patent infringement claims, which could result in substantial costs and liability and prevent us from commercializing our potential products.

Because the nanotechnology intellectual property landscape is rapidly evolving and interdisciplinary, it is difficult to conclusively assess our freedom to operate without infringing on third party rights. However, we are currently aware of certain patent rights held by third parties that, if found to be valid and enforceable, could be alleged to render one or more of our business lines infringing. If a claim should be brought and is successful, we may be required to pay substantial damages, be forced to abandon any affected business lines and/or seek a license from the patent holder. In addition, any patent infringement claims brought against us or our subsidiaries, whether or not successful, may cause us to incur significant expenses and divert the attention of our management and key personnel from other business concerns. These could negatively affect our results of operations and prospects. There can also be no assurance that patents owned or licensed by us or our subsidiaries will not be challenged by others.

In addition, if our potential products infringe the intellectual property rights of third parties, these third parties may assert infringement claims against our customers, and we may be required to indemnify our customers for any damages they suffer as a result of these claims. The claims may require us to initiate or defend protracted and costly litigation on behalf of customers, regardless of the merits of these claims. If any of these claims succeed, we may be forced to pay damages on behalf of our customers or may be required to obtain licenses for the products they use. If we cannot obtain all necessary licenses on commercially reasonable terms, we may be unable to continue selling such products.

The technology licensed by our subsidiaries from various third parties may be subject to government rights and retained rights of the originating research institutions.

We license technology from Caltech, Rice University, and other universities and companies. Our licensors may have obligations to government agencies or universities. Under their agreements, a government agency or university may obtain certain rights over the technology that we have developed and licensed, including the right to require that a compulsory license be granted to one or more third parties selected by the government agency.

In addition, our collaborators often retain certain rights under their agreements with us, including the right to use the underlying technology for noncommercial academic and research use, to publish general scientific findings from research related to the technology, and to make customary scientific and scholarly disclosures of information relating to the technology. It is difficult to monitor whether our collaborators limit their use of the technology to these uses, and we could incur substantial expenses to enforce our rights to our licensed technology in the event of misuse.

Risks Related to Regulation of Our Products

Our corporate compliance program cannot guarantee that we are in compliance with all applicable federal and state regulations.

Our operations, including our research and development and our commercialization efforts, such as clinical trials, manufacturing and distribution, are subject to extensive federal and state regulation. While we have developed and instituted a corporate compliance program, we cannot assure you that the Company or our employees are or will be in compliance with all potentially applicable federal and state regulations or laws. If we fail to comply with any of these regulations or laws, a range of actions could result, including, but not limited to, the termination of clinical trials, the failure to approve a commercialized product, significant fines, sanctions, or litigation, any of which could harm our business and financial condition.

If export controls affecting our products are expanded, our business will be adversely affected.

The federal government regulates the sale and shipment of numerous technologies by U.S. companies to foreign countries. Our subsidiaries may develop products that might be useful for military and antiterrorism activities. Accordingly, federal government export regulations could restrict sales of these products in other countries. If the federal government places burdensome export controls on our technology or products, our business would be materially and adversely affected. If the federal government determines that we have not complied with the applicable export regulations, we may face penalties in the form of fines or other punishment.

Risks Related to our Stock

Stockholder equity interest may be substantially diluted in any additional financing.

Our certificate of incorporation authorizes the issuance of 145,000,000 shares of Common Stock and 5,000,000 shares of preferred stock, on such terms and at such prices as our Board of Directors may determine. As of February 5, 2010, 62,788,380 shares of Common Stock and no shares of preferred stock were issued and outstanding. As of December 31, 2009, 1,532,000 shares and 5,738,310 shares were reserved for issuance upon exercise of options granted under our 2000 Stock Option Plan, and 2004 Equity Incentive Plan, respectively. As of December 31, 2009, we had warrants outstanding to purchase 20,741,803 shares of Common Stock. All of the warrants are callable by us under certain market conditions. The issuance of additional securities in financing transactions by us or through the exercise of options or warrants will dilute the equity interests of our existing stockholders, perhaps substantially, and might result in dilution in the tangible net book value of a share of our Common Stock, depending upon the price and other terms on which the additional shares are issued.

Our Common Stock price has fluctuated significantly over the last several years and may continue to do so in the future, without regard to our results of operations and prospects.

Because we are a development stage company, there are few objective metrics by which our progress may be measured. Consequently, we expect that the market price of our Common Stock will likely continue to fluctuate significantly. We do not expect to generate substantial revenue from the license or sale of our nanotechnology for several years, if at all. In the absence of product revenue as a measure of our operating performance, we anticipate that investors and market analysts will assess our performance by considering factors such as:

- announcements of developments related to our business;
- developments in our strategic relationships with scientists within the nanotechnology field;
- our ability to enter into or extend investigation phase, development phase, commercialization phase and other agreements with new and/or existing partners;
- announcements regarding the status of any or all of our collaborations or products;
- market perception and/or investor sentiment regarding nanotechnology as the next technological wave;
- announcements regarding developments in the nanotechnology field in general;
- the issuance of competitive patents or disallowance or loss of our patent rights; and
- quarterly variations in our operating results.

We will not have control over many of these factors but expect that they may influence our stock price. As a result, our stock price may be volatile and any extreme fluctuations in the market price of our Common Stock could result in the loss of all or part of your investment.

The market for purchases and sales of our Common Stock may be very limited, and the sale of a limited number of shares could cause the price to fall sharply.

Although our Common Stock is listed for trading on the NASDAQ Capital Market, our securities are currently relatively thinly traded. Our current solvency concerns could serve to exacerbate the thin trading of our securities. For example, mandatory sales of our Common Stock by institutional holders could be triggered if an investment in our Common Stock no longer satisfies their investment standards and guidelines as a result of the solvency concerns. Accordingly, it may be difficult to sell shares of Common Stock quickly without significantly depressing the value of the stock. Unless we are successful in developing continued investor interest in our stock, sales of our stock could continue to result in major fluctuations in the price of the stock. Moreover, our stock price has generally been declining for the last 24 months.

If securities or industry analysts do not publish research reports about our business or if they make adverse recommendations regarding an investment in our stock, our stock price and trading volume may decline.

The trading market for our Common Stock will be influenced by the research and reports that industry or securities analysts publish about our business. We do not currently have and may never obtain research coverage by industry or securities analysts. Investors have many investment opportunities and may limit their investments to companies that receive coverage from analysts. If no industry or securities analysts commence coverage of the Company, the trading price of our stock could be negatively impacted. In the event we obtain industry or security analyst coverage, if one or more of the analysts downgrade our stock or comment negatively on our prospects, our stock price would likely decline. If one or more of these analysts cease to cover our industry or us or fails to publish reports about the Company regularly, our Common Stock could lose visibility in the financial markets, which could also cause our stock price or trading volume to decline.

The market price of our Common Stock may be adversely affected by the sale of shares by our management or founding stockholders.

Sales of our Common Stock by our officers, directors and founding stockholders could adversely and unpredictably affect the price of those securities. Additionally, the price of our Common Stock could be affected even by the potential for sales by these persons. We cannot predict the effect that any future sales of our Common Stock, or the potential for those sales, will have on our share price. Furthermore, due to relatively low trading volume of our stock, should one or more large stockholders seek to sell a significant portion of its stock in a short period of time, the price of our stock may decline.

We may be the target of securities class action litigation due to future stock price volatility.

In the past, when the market price of a stock has been volatile, holders of that stock have often initiated securities class action litigation against the company that issued the stock. If any of our stockholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit. The lawsuit could also divert the time and attention of our management.

We do not intend to declare cash dividends on our Common Stock.

We will not distribute cash to our stockholders unless and until we can develop sufficient funds from operations to meet our ongoing needs and implement our business plan. The time frame for that is inherently unpredictable, and you should not plan on it occurring in the near future, if at all.

Our Board of Directors has the authority to issue shares of “blank check” preferred stock, which may make an acquisition of the Company by another company more difficult.

We have adopted and may in the future adopt certain measures that may have the effect of delaying, deferring or preventing a takeover or other change in control of the Company that a holder of our Common Stock might consider in its best interest. Specifically, our Board of Directors, without further action by our stockholders, currently has the authority to issue up to 5,000,000 shares of preferred stock and to fix the rights (including voting rights), preferences and privileges of these shares (“blank check” preferred). Such preferred stock may have rights, including economic rights, senior to our Common Stock. Additionally, because we are effectively out of authorized by unissued common stock, we may be forced to issue preferred stock in future capital raising transactions. As a result, the issuance of the preferred stock could have a material adverse effect on the price of our Common Stock and could make it more difficult for a third party to acquire a majority of our outstanding Common Stock.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS.

All information under this Item has been previously reported on our Current Reports on Form 8-K.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES.

None.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS.

The Company held a special meeting of stockholders on October 6, 2009. The following matters were submitted to a vote of the stockholders of record as of August 12, 2009 through a solicitation of proxies and the results are shown below:

1. Proposal to grant the Board of Directors the authority to effect a reverse split of our Common Stock at a specific ratio within a range from 1-for-2 to 1-for-15.

For: 32,663,073

Against: 7,017,247

Abstentions: 553,025

2. Proposal to amend our Certificate of Incorporation to increase the number of authorized shares of Common Stock by 75 million shares.

For: 31,126,369

Against: 8,845,430

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Abstentions: 261,546

3. Proposal to authorize the issuance of up to 2 million equity grants to directors, officers and employees of the Company under our 2004 Equity Incentive Plan.

For: 15,209,574

Against: 6,802,657

Abstentions: 161,387

Broker Non-Votes: 18,059,727

ITEM 5. OTHER INFORMATION.

None

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ITEM 6. EXHIBITS.

Exhibit Number	Document Description
10.1	Asset Purchase Agreement between Tego BioSciences, Inc. and Luna Innovations, Inc. dated November 13, 2009*
10.2	Form of Exchange Agreement between Arrowhead Research Corporation and several investors dated September 28, 2009*
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002*
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002*
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*

* Filed herewith

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Issuer has caused this Quarterly Report on Form 10-Q to be signed on its behalf by the undersigned, thereunto duly authorized.

Dated: February 11, 2010

ARROWHEAD RESEARCH CORPORATION

By: /s/ KENNETH A. MYSZKOWSKI
Kenneth A. Myszkowski
Chief Financial Officer

ASSET PURCHASE AGREEMENT

This Asset Purchase Agreement (this “**Agreement**”) is entered into as of November 13, 2009, by and between Tego Biosciences, Inc., a Delaware corporation with offices at 201 S. Lake Avenue, Suite 703, Pasadena, CA 91101 (“**Tego**”), and Luna Innovations Incorporated, a Delaware corporation and Debtor and Debtor in Possession (“**Luna**”) under Case No. 09-71811 (the “**Case**”) in the United States Bankruptcy Court for the Western District of Virginia (the “**Bankruptcy Court**”), with offices at 1 Riverside Circle, Suite 400, Roanoke, VA 24016; and with reference to the following facts:

WHEREAS, Tego desires to sell all of its non-cash intellectual property assets, and Luna desires to purchase those assets on the terms set forth herein; and

WHEREAS, the Bankruptcy Court will need to approve the contemplated purchase and sale before it can be effective, as described in Section 8.16 below.

NOW, THEREFORE, the parties agree as follows (certain definitions of capitalized terms are set forth in Exhibit A, attached hereto):

1. **Agreement to Purchase and Sell.** Subject to the terms and conditions of this Agreement (including without limitation those conditions precedent set forth in Section 6 and 7 below) and effective only upon the Closing Date (as defined in Section 5 below):

1.1 **Asset Purchase and Sale.** Effective as of the Closing Date, Tego hereby irrevocably sells, assigns, conveys and transfers to Luna and Luna hereby purchases from Tego, the Acquired Assets (For ease of reference, Exhibit B-1 lists known “Patent Assets” and Exhibit B-2 lists known “Proprietary Information”). For the avoidance of doubt, after the Closing Date, Tego shall retain no rights to any intellectual property rights it owns as of the Closing Date. To the extent it becomes aware of any intellectual property in which it has an ownership interest prior to the Closing Date, it shall assign such rights to Luna pursuant to this Section 1.1. A Short Form Assignment Agreement to be filed by Luna with the relevant patent offices’ evidencing the assignment of the Patent Assets to Luna is attached as Exhibit C and shall be executed and delivered to Luna on the Closing Date.

1.2 **Assumption of Contracts.** As of the Closing Date, Tego hereby assigns to Luna and Luna hereby assumes and agrees to pay, perform and discharge the Assumed Contracts (as set forth in Exhibit D) in accordance with their terms. Luna does not assume nor will it be liable for any obligations or liabilities under or related to the Assumed Contracts (i) incurred or accrued prior to the Closing Date or (ii) arising out of a breach of an Assumed Contract by Tego prior to the Closing Date. Luna consents to the provision of a copy of this Agreement to Siemens AG and Washington University, St. Louis, to satisfy their respective requirements that Luna as the assignee of the Assumed Contracts assumes and agrees to pay, perform and discharge the Assumed Contracts in accordance with their terms.

1.2.1 Notwithstanding the foregoing, on the Closing Date, Luna shall reimburse Tego (i) for the patent prosecution costs related to the Patents for which it receives an invoice on or after January 1, 2009 per the attached amounts set forth on Exhibit E (up to \$25,000), and (ii) \$55,000 for the 2009 minimum royalty it has paid Siemens AG.

1.2.2 Except as expressly and specifically provided in this Agreement, Luna shall not assume any other liability or obligation of Tego of any kind whatsoever, fixed or contingent, disclosed or undisclosed.

1.2.3 Notwithstanding the foregoing, Luna acknowledges that certain rights under the Acquired Assets have been licensed to Tego's affiliate, Unidym, Inc. ("Unidym") by way of the License Agreement between C Sixty Acquisition Corporation and Unidym, Inc., dated May 13, 2007, twice amended (the "Unidym License"). Unidym is actively sublicensing the Unidym License. In the event the Unidym ceases to exist or the Unidym License ceases to exist, Luna hereby agrees in advance to enter into a sublicense with any Third Party sublicensee to which Unidym has granted a sublicense under the Unidym License on substantially the same terms as such sublicense granted by Unidym to the Third Party. Luna hereby constitutes and appoints the President of Unidym with the full power of substitution, the true and lawful attorney-in-fact and agent of Luna to execute, acknowledge, verify, swear, deliver, record, and file in Luna or its assignee's name, place and stead all instruments necessary, documents, and certificates which may from time to time be required to by the laws of the governmental authority to sublicense, maintain and enforce Unidym's rights under the Unidym License. The power of attorney granted herein will be deemed to be coupled with an interest, will survive and will not be affected by the dissolution, bankruptcy or legal disability of Luna and will extend to its successors and assigns. If required, Luna shall execute and deliver to Unidym within (5) days after the receipt of a request therefor, such further designations, powers of attorney or other instruments as Unidym will reasonably deem necessary for the purposes described in this Section 1.2.3. Unidym is expressly acknowledged as a third party beneficiary under this section 1.2.3.

1.3 **Purchase Price.**

1.3.1 **Upfront Payment.** In consideration for the Acquired Assets, Luna shall pay Tego a one-time, non-refundable fee of \$350,000 ("**Upfront Payment**") payable via wire transfer of immediately available funds to an account designated by Tego.

1.3.2 **Licensing Income.** With respect to Products developed and sold by a Licensee, Luna shall pay to Tego ten percent (10%) of all License Income. Notwithstanding the foregoing, Luna shall pay Tego fifty percent (50%) of the License Income it or its Affiliates receive under the TBP License.

1.3.3 **Asset Sale Income.** Luna shall pay Tego ten percent (10%) of all proceeds of any income derived from a sale or assignment (including future payments from royalties, milestones, etc.) of any portion of the Acquired Assets to a Third Party unless the acquirer thereof assumes Luna's applicable obligations under this Section 1.3 with respect thereto in a writing reasonably acceptable to Tego.

1.3.4 Royalties and Records. For each Product sold by Luna or an Affiliate of Luna (unless an Affiliate Licensee), Luna shall pay to Tego five percent (5%) royalties on aggregate worldwide Net Sales. Luna shall keep, and shall require its Affiliates and Licensees to keep, true and accurate books of accounts and other records containing all information and data which may be necessary to ascertain and verify the royalties and other amounts payable by Luna under this Agreement. Tego shall have the right from time to time (not to exceed once during each calendar year) (a) to have an independent certified public accountant inspect such books and records of Luna and its Affiliates or (b) to require that Luna, at Tego's expense, subject to the below, have an independent certified public accountant inspect such books and records of the Licensees. Any such independent certified public accountant shall be reasonably acceptable to Luna, shall execute a standard form of confidentiality agreement with Luna, shall be permitted to share with Luna its findings, and shall be permitted to share with Tego solely its findings with respect to the accuracy of the amounts reported as payable under this Agreement. If such audit determines that the royalties paid to Tego pursuant to Section 1.3 for any such audited period were understated, then Luna shall, within ten (10) days of receipt of the audit report, pay to Tego the entirety of such understated amount, plus 6% interest. If such audit determines that the royalties paid to Tego pursuant to Section 1.3 for any such audited period were understated by an amount in excess of the greater of (a) \$50,000 or (b) than five percent (5%) of what was owed, then Luna shall reimburse Tego for any reasonable out-of-pocket costs of such audit paid by Tego.

1.3.5 Milestone Payments. For each Product developed by Luna or an Affiliate of Luna (unless an Affiliate Licensee) that reaches the following development milestones, Luna shall pay the applicable non-refundable milestone payment set forth below, within thirty (30) days of the occurrence of such event to Tego via wire transfer of immediately available funds to an account designated by Tego:

<u>Milestone Event:</u>	<u>Milestone Payment:</u>
The initiation of GLP-compliant pre-clinical animal safety study	\$ 50,000
The filing of an IND or equivalent filing	\$ 200,000
The initiation of the first Phase I Clinical Trial	\$ 200,000
The completion of enrollment of the first Phase I Clinical Trial	\$ 200,000
The initiation of the first Phase II Clinical Trial	\$ 300,000
The completion of enrollment of the first Phase II Clinical Trial	\$ 300,000
The initiation of the first Phase III Clinical Trial	\$ 1,000,000
The filing of an NDA or equivalent filing	\$ 2,000,000

1.3.6 **Allocation.** The Purchase Price for the Acquired Assets will be allocated by categories and in individual amounts to be determined and set by Luna as reviewed by and agreed to by Tego. Such allocation shall be binding on the parties for all purposes and all income tax or other information returns, including IRS form 8594 (“Asset Acquisition Statement under Section 1060”), shall be filed in a manner consistent with such allocations. A Form 8594 shall be timely filed by each Tego and Luna.

2. **Representations and Warranties of Tego.** Tego represents and warrants to Luna, that each of the following statements is true and correct in all materials aspects:

2.1 **Authority; Agreement Binding.** Tego has the corporate power and adequate authority to own its properties, to carry on the Business as now conducted, to execute and deliver this Agreement, to consummate the transactions contemplated by this Agreement and to perform its obligations under this Agreement. This Agreement has been duly executed and delivered by Tego and constitutes the legal, valid and binding agreement of Tego, enforceable against Tego in accordance with its terms, subject to applicable bankruptcy, insolvency and other similar laws affecting the enforceability of creditors’ rights generally and general equitable principles. Other than Siemens’ consent, no additional consents are required for the transfer of the Acquired Assets or the assignment of the Assumed Contracts.

2.2 **Title to Assets.** Tego is the lawful owner or licensee, with good and marketable title, of the Acquired Assets free and clear of any Lien.

2.4 **No Proceedings** As of the Closing Date, no actions or proceedings that question the validity or legality of the transactions contemplated hereby shall have been instituted by a third party and not settled or otherwise terminated, and to Tego’s knowledge, there shall not exist on the Closing Date any condition or fact that would have a material adverse effect on the Acquired Assets.

2.4 **Disclaimer of Warranties.** Except for representations and warranties set forth in this Section 2 hereof, no warranties or representations of any nature whatsoever, either express or implied, are made with respect to Tego, the Business or any of the Acquired Assets or with respect to the title, condition, design, fitness or marketability of any of the Acquired Assets, and there is expressly negated (i) any implied warranty or merchantability, (ii) any implied warranty of fitness for a particular purpose, and (iii) any implied warranty of conformity to models or samples of materials with respect to any of the Acquired Assets, it being the express intention of Tego and Luna that except as provided in Section 2 hereof the Acquired Assets shall be conveyed and transferred to the company in their present condition and state of repair, “as is” and “where is”, with all faults, if any.

2.5 **No Broker Fees.** All negotiations relative to this Agreement and the transactions contemplated hereby have been carried on by Tego and representatives of Tego without the intervention of any other person in such manner as to give rise to any valid claim against the parties hereto or their employees, affiliates or agents for a finders’ fee, brokerage commission, advisory fee or other similar payment.

2.6 **Assumed Contracts.** There have been no advances, prepayments or deposits thereon; there have been no assignment by Tego of any portion of the Assumed Contracts; there have been no arrangement whereby amounts due Tego under the Assumed Contracts can be offset against any liability of Tego; there exists no notice of outstanding defaults or disputes thereunder, there exists no event of default or event, occurrence, condition or act that, with the giving of notice, the lapse of time or the happening of any other event or condition, would become a default thereunder; and all Assumed Contracts will continue to be binding in accordance with their terms upon assignment pursuant hereto. Tego has provided Luna with true and complete copies of all the written Assumed Contracts, together with all amendments, waivers or other changes thereto.

2.7 **Intellectual Property.** As of the Closing Date, Tego has taken all actions, made all filings and paid all fees to maintain registration for all issued patents listed on Exhibit B-1 unless such patents are indicated to be abandoned, expired, lapsed or the like. To its knowledge, Tego has the exclusive right to file, prosecute and maintain all applications and registrations with respect to any pending patent rights listed under No. 1 on Exhibit B-1. Tego has not received any notice of any claim of infringement, misappropriation or violation of the intellectual property or other proprietary rights of any person and no person has asserted or, to the knowledge of Tego, threatened to assert any challenge with respect to any of the Acquired Assets. To the knowledge of Tego, no third party has asserted ownership rights in any of the pending Acquired Assets (except to the extent that patents are co-owned by a Third Party as indicated under No. 2 of Exhibit B-1).

3. **Representations and Warranties of Luna.** Luna represents and warrants to Tego that Luna has the corporate power and adequate authority to own its properties, to carry on its business as now conducted and to execute and deliver this Agreement and, subject to Bankruptcy Court approval of this Agreement, to consummate the transactions contemplated by this Agreement and to perform its obligations under this Agreement. This Agreement has been duly executed and delivered by Luna and, subject to Bankruptcy Court approval of this Agreement, constitutes the legal, valid and binding agreement of Luna, enforceable against Luna in accordance with its terms, subject to applicable bankruptcy, insolvency and other similar laws affecting the enforceability of creditors' rights generally and general equitable principles.

4. **Other Covenants.**

4.1 **Sales and Use Tax.** Each Party shall pay any value added tax, sales, use, transfer taxes, stamp duties, registrations taxes and fees, and all other taxes, duties, fees and levies equivalent in nature or effect, whether imposed by federal, state, local or foreign taxing authorities imposed on or incurred by such Party in connection with the sale of the Acquired Assets hereunder. Luna and Tego shall use commercially reasonable efforts to cooperate in filing sales and use tax returns relating to this Agreement.

4.2 **Further Assurances.** Each party shall execute such further documents and writings and take such further actions as may be or become necessary or desirable to carry out the provisions of this Agreement and the transactions contemplated by this Agreement.

4.3 **Confidentiality.** Tego shall not, and shall cause its Affiliates, officers, directors, employees, shareholders, representatives and agents not to, disclose or use any confidential information about the Acquired Assets without the prior written consent of Luna. The restrictions on use and obligations of confidentiality contained in this Section 4.3 will not apply to any information (i) to the extent Tego is required to disclose such information under an Order or (ii) then in the public domain or readily available from public sources by acts not attributable to Tego, provided in each case that Luna is provided a reasonable prior opportunity to object to any use or disclosure. As of the Closing Date, Luna is hereby released from its obligations under Mutual Confidential Disclosure agreement with Tego in Exhibit F.

5. **Closing Date.** The closing of the transactions contemplated herein (“**Closing**”) shall be held on the second (2nd) business day following the satisfaction of the last of the conditions set forth in Sections 6 and 7 below (the “**Closing Date**”), but, unless otherwise mutually agreed in writing by Luna and Tego, not later than January 1, 2010 (the “**Outside Date**”). In the event the conditions to Closing have not been satisfied or waived by the Outside Date, then any party who is not in default hereunder may terminate this Agreement. Alternatively, the parties hereto may mutually agree to extend the Outside Date.

6. **Conditions to Tego’s Obligations.** Tego’s obligation to make the deliveries required of Tego at the Closing Date and otherwise consummate the transaction contemplated herein shall be subject to the satisfaction or waiver by Tego of each of the following conditions:

6.1 The representations and warranties of Luna contained herein shall continue to be true and correct at the Closing in all material respects.

6.2 Luna shall have delivered, or shall be prepared to deliver to Tego at the Closing, all cash and other documents required of Luna to be delivered at the Closing.

6.3 No action, suit or other proceedings shall be pending before any court, tribunal or governmental authority seeking or threatening to restrain or prohibit the consummation of the transactions contemplated by this Agreement, or seeking to obtain substantial damages in respect thereof, or involving a claim that consummation thereof would result in the violation of any law, decree or regulation of any governmental authority having appropriate jurisdiction.

6.4 Luna shall have substantially performed or tendered performance of each and every material covenant on Luna’s part to be performed that, by its terms, is required to be performed at or before the Closing.

6.5 The Bankruptcy Court shall have entered the Approval Order in accordance with Section 8.16 below and the Approval Order has not been stayed as of the Closing Date.

7. **Conditions to Luna’s Obligations.** Luna’s obligation to make the deliveries required of Luna at the Closing, and to otherwise close the transaction contemplated herein, shall be subject to the satisfaction or waiver by Luna of each of the following conditions:

7.1 Tego shall have substantially performed or tendered performance of each and every covenant on Tego’s part to be performed that, by its terms, is capable of performance before the Closing.

7.2 All representations and warranties of Tego contained herein shall continue to be true and correct at the Closing in all material respects.

7.3 Tego shall have delivered, or shall be prepared to deliver to Luna at the Closing, all documents required of Tego to be delivered at the Closing.

7.4 No action, suit or other proceedings shall be pending before any court, tribunal or governmental authority seeking or threatening to restrain or prohibit the consummation of the transactions contemplated by this Agreement, or seeking to obtain substantial damages in respect thereof, or involving a claim that consummation thereof would result in the violation of any law, decree or regulation of any governmental authority having appropriate jurisdiction.

7.5 The Bankruptcy Court shall have entered the Approval Order in accordance with Section 8.16 below and the Approval Order has not been stayed as of the Closing Date.

8. **Miscellaneous.**

8.1 **Notices.** All notices and other communications under this Agreement shall be in writing and shall be deemed given if properly addressed: (i) if delivered personally, by commercial delivery service or by facsimile (with acknowledgment of a complete transmission), on the day of delivery; or (ii) if delivered by registered or certified mail (return receipt requested), three Business Days after mailing; or (iii) if delivered by first class mail, three Business Days after mailing. Notices shall be deemed to be properly addressed to any party hereto if addressed to the following addresses (or at such other address for a party as shall be specified by like notice):

(a) if to Luna, to:

Scott Graeff
Luna Innovations, Incorporated
1 Riverside Circle
Suite 400 Roanoke, VA 24016
Phone: (540) 769-8400
Fax: (540) 950-0760

With a copy to:

Fourd Kemper
Luna Innovations, Incorporated
1 Riverside Circle
Suite 400 Roanoke, VA 24016
Phone: (540) 769-8407

Fax: (540) 950-0760

and

Pachulski Stang Ziehl & Jones LLP
919 North Market Street, 17th Floor
Wilmington, DE 19899-8705
Attn: Laura Davis Jones
Phone: (302) 652-4100
Fax: (302) 652-4400

(b) if to Tego, to:

Christopher Anzalone, Ph.D.
Tego Biosciences, Inc.
201 South Lake Avenue, Suite 703
Pasadena, CA 91101
Phone: (626) 304-3400
Fax: (626) 304-3401
Email: canzalone@arrowres.com

(c) if to Siemens, to:

Siemens Aktiengesellschaft
Licensing & Transactions
Attn: Erich Walz
P.O. Box 221634
D-80506 Munich, Germany
Tel.: (49) 89-0636-82880
Fax: (49) 89-636-81855
Email: erich.walz@siemens.com

8.2 **Entire Agreement.** This Agreement, the Exhibits hereto, and the documents and instruments and other agreements among the parties hereto referenced herein constitute the entire agreement among the parties with respect to the subject matter hereof and supersede all prior written and oral agreements and understandings, and all contemporaneous oral agreements and understandings, among the parties with respect to the subject matter hereof.

8.3 **Severability.** In the event that any provision of this Agreement or the application thereof becomes or is declared by a court of competent jurisdiction to be illegal, void or unenforceable, the remainder of this Agreement will continue in full force and effect and the application of such provision to other Persons or circumstances will be interpreted so as reasonably to effect the intent of the parties hereto. The parties further agree to replace such void or unenforceable provision of this Agreement with a valid and enforceable provision that will achieve, to the greatest extent possible, the economic, business and other purposes of such void or unenforceable provision.

8.4 **Specific Performance.** The parties hereto agree that irreparable damage would occur in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms or were otherwise breached. It is accordingly agreed that the parties shall be entitled to an injunction or injunctions to prevent breaches of this Agreement and to enforce specifically the terms and provisions hereof in any court of the United States or any state having jurisdiction, this being in addition to any other remedy to which they are entitled at law or in equity.

8.5 **No Assignment.** This Agreement is not assignable by either party absent prior written consent of the other party; provided, however, (i) Tego may assign this Agreement and all rights, privilege, duties and liabilities hereunder to an Affiliate, and (ii) Luna may assign this Agreement and/or its rights in the TBP License in connection with the sale or transfer of its nanotechnology division only if the potential acquirer under such a transaction agrees to the assumption of any duties and obligations due Tego hereunder, e.g., with respect to the TBP License, it being expressly agreed that upon any such sale, transfer or assignment and assumption of this Agreement and/or TBP License, Luna shall be released, relieved and discharged of and from liability thereafter accruing under or in connection with this Agreement and/or the TBP License to the extent the same are so sold or transferred. This Agreement shall be binding upon and inure to the benefit of the parties, their respective successors and permitted assigns. There are no third party beneficiaries to this Agreement and nothing in this Agreement will be construed to increase or alter the rights of any Third Party.

8.6 **Waiver.** No failure on the part of any Person to exercise any power, right, privilege or remedy under this Agreement, and no delay on the part of any Person in exercising any power, right, privilege or remedy under this Agreement, shall operate as a waiver of such power, right, privilege or remedy; and no single or partial exercise of any such power, right privilege or remedy shall preclude any other or further exercise thereof or of any other power, right, privilege or remedy.

8.7 **Governing Law; Venue.** This Agreement shall be construed in accordance with, and governed in all respects by, the internal laws of the State of Delaware, without regard to the principles of conflict laws. Any action, claim, suit or proceeding relating to this Agreement or the enforcement of any provision of this Agreement shall be brought or otherwise commenced in any state or federal court located in the State of Delaware (each, a "Court"). Each party hereto (i) expressly and irrevocably consents and submits to the exclusive jurisdiction of each Court, and each appellate court located in the State of Delaware, in connection with any such proceeding; (ii) agrees that each Court shall be deemed to be a convenient forum; (iii) agrees that service of process in any such proceeding may be made by giving notice pursuant to Section 8.1; and (iv) agrees not to assert, by way or motion, as a defense or otherwise, in any such proceeding commenced in any Court, any claim that such party is not subject personally to the jurisdiction of such Court, that such proceeding has been brought in an inconvenient forum, that the venue of such proceeding is improper or that this Agreement or the subject matter of this Agreement may not be enforced in or by such Court. The party victorious with respect to any claim, action or preceding shall be entitled to recover reasonable attorney's fees from the other party for the prosecution of or defense against such claim, action or preceding. **NOTWITHSTANDING THE FOREGOING, THE PARTIES HERETO AGREE THAT, SO LONG AS THE CASE IS PENDING AND LUNA REMAINS OBLIGATED HEREUNDER, (I) IF ANY**

DISPUTE ARISES OUT OF OR IN CONNECTION WITH THIS AGREEMENT OR ANY DOCUMENTS EXECUTED HEREUNDER OR IN CONNECTION HERewith, THE BANKRUPTCY COURT SHALL HAVE EXCLUSIVE PERSONAL AND SUBJECT MATTER JURISDICTION AND SHALL BE THE EXCLUSIVE VENUE TO RESOLVE ANY AND ALL DISPUTES RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY, AND (II) THE BANKRUPTCY COURT SHALL HAVE SOLE JURISDICTION OVER SUCH MATTERS AND THE PARTIES AFFECTED THEREBY AND LUNA AND TEGO EACH HEREBY CONSENT AND SUBMIT TO SUCH JURISDICTION.

8.8 **Waiver of Jury Trial.** EACH PARTY ACKNOWLEDGES AND AGREES THAT ANY CONTROVERSY THAT MAY ARISE UNDER THIS AGREEMENT IS LIKELY TO INVOLVE COMPLICATED AND DIFFICULT ISSUES, AND THEREFORE IT HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THE TRANSACTION AGREEMENTS OR THE TRANSACTIONS CONTEMPLATED THEREBY.

8.9 **Limitation of Liability.** IN NO EVENT SHALL TEGO OR ITS OFFICERS, DIRECTORS, EMPLOYEES, TRUSTEES OR AFFILIATES BE LIABLE TO LUNA, ITS OFFICERS, DIRECTORS OR ITS RESPECTIVE SUCCESSORS OR PERMITTED ASSIGNS, OR ANY THIRD PARTY WITH RESPECT TO ANY CLAIM MADE AFTER THE CLOSING DATE (I) ARISING FROM LUNA'S USE OF THE ACQUIRED ASSETS, (II) ARISING FROM LUNA'S MANUFACTURE, USE, IMPORT, OR SALE OR OFFER FOR SALE, LEASE OR OTHER TRANSFER OF PRODUCTS ARISING FROM THE ACQUIRED ASSETS, OR (III) FOR LUNA'S LOSS OF PROFITS, LOSS OR INTERRUPTION OF BUSINESS. IN NO EVENT SHALL LUNA OR ITS OFFICERS, DIRECTORS, EMPLOYEES, TRUSTEES OR AFFILIATES BE LIABLE TO TEGO, ITS OFFICERS, DIRECTORS OR ITS RESPECTIVE SUCCESSORS OR PERMITTED ASSIGNS, OR ANY THIRD PARTY WITH RESPECT TO ANY CLAIM (I) ARISING FROM TEGO'S USE OF THE ACQUIRED ASSETS, (II) ARISING FROM TEGO'S MANUFACTURE, USE, IMPORT, OR SALE OR OFFER FOR SALE, LEASE OR OTHER TRANSFER OF PRODUCTS ARISING FROM THE ACQUIRED ASSETS, OR (III) FOR TEGO'S LOSS OF PROFITS, LOSS OR INTERRUPTION OF BUSINESS. IN NO EVENT SHALL EITHER PARTY BE LIABLE TO THE OTHER FOR LOST PROFITS, INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, EXEMPLARY OR PUNITIVE DAMAGES OF ANY KIND.

8.10 **Tego's Indemnification.** LUNA SHALL INDEMNIFY, DEFEND, AND HOLD HARMLESS TEGO ITS AFFILIATES, TRUSTEES, OFFICERS, DIRECTORS, EMPLOYEES (INDIVIDUALLY, AN "TEGO INDEMNIFIED PARTY", AND COLLECTIVELY, THE "TEGO INDEMNIFIED PARTIES"), FOR, FROM AND AGAINST ANY AND ALL LIABILITY, LOSS, DAMAGE, ACTION, CLAIM OR EXPENSE SUFFERED OR INCURRED BY THE TEGO INDEMNIFIED PARTIES (INCLUDING, BUT NOT LIMITED TO, ATTORNEYS' FEES AND OTHER COSTS AND EXPENSES OF LITIGATION)

ARISING AFTER THE CLOSING DATE TO THE EXTENT BASED ON ACTIONS, FACTS AND/OR CIRCUMSTANCES OCCURRING AFTER THE CLOSING DATE (INDIVIDUALLY, A “FUTURE LIABILITY”, AND COLLECTIVELY, THE “FUTURE LIABILITIES”) BASED UPON OR OTHERWISE RELATING TO THE ACQUIRED ASSETS UNDERLYING THIS AGREEMENT, INCLUDING WITHOUT LIMITATION ANY FUTURE LIABILITY RELATING TO OR CONCERNING ANY BREACH OF THIS AGREEMENT BY LUNA, USE OF THE ACQUIRED ASSETS; PROVIDED, HOWEVER, BY WAY OF CLARIFICATION AND NOT OF LIMITATION, THAT LUNA SHALL HAVE NO LIABILITY FOR ANY BREACHES OF THE ASSUMED CONTRACTS OCCURRING PRIOR TO THE CLOSING DATE.

8.10.1 The Tego Indemnified Party shall promptly notify Luna of any claim or action giving rise to Future Liabilities. Luna shall have the right to defend any such claim or action, at its cost and expense with attorneys satisfactory to the Tego Indemnified Party. Luna shall not settle or compromise any such claim or action in a manner that imposes any restrictions or obligations on the Tego Indemnified Party without the Tego Indemnified Party’s prior written consent. If Luna fails or declines to assume the defense of any such claim or action within thirty (30) days after notice thereof, or if representation of such Tego Indemnified Party by the counsel retained by Luna would be inappropriate because of actual or potential differences in the interests of such Tego Indemnified Party and any other party represented by such counsel, the Tego Indemnified Party may assume the defense of such claim or action for the account of and at the risk of Luna.

8.11 **Luna’s Indemnification** TEGO SHALL INDEMNIFY, DEFEND, AND HOLD HARMLESS LUNA ITS AFFILIATES, TRUSTEES, OFFICERS, DIRECTORS, EMPLOYEES (INDIVIDUALLY, AN “LUNA INDEMNIFIED PARTY”, AND COLLECTIVELY, THE “LUNA INDEMNIFIED PARTIES”), FOR, FROM AND AGAINST ANY AND ALL LIABILITY, LOSS, DAMAGE, ACTION, CLAIM OR EXPENSE SUFFERED OR INCURRED BY THE LUNA INDEMNIFIED PARTIES (INCLUDING, BUT NOT LIMITED TO, ATTORNEYS’ FEES AND OTHER COSTS AND EXPENSES OF LITIGATION (I) ARISING OUT OF TEGO’S BREACH OF THIS AGREEMENT OR (II) ARISING BEFORE THE CLOSING DATE OR TO THE EXTENT BASED ON ACTIONS, FACTS AND/OR CIRCUMSTANCES OCCURRING PRIOR TO THE CLOSING DATE (INDIVIDUALLY, A “PAST LIABILITY”, AND COLLECTIVELY, THE “PAST LIABILITIES”) BASED UPON OR OTHERWISE RELATING TO THE ACQUIRED ASSETS UNDERLYING THIS AGREEMENT, INCLUDING WITHOUT LIMITATION ANY PAST LIABILITY RELATING TO OR CONCERNING USE OF THE ACQUIRED ASSETS.

8.11.1 The Luna Indemnified Party shall promptly notify Tego of any claim or action giving rise to Past Liabilities. Tego shall have the right to defend any such claim or action, at its cost and expense with attorneys satisfactory to the Luna Indemnified Party. Tego shall not settle or compromise any such claim or action in a manner that imposes any restrictions or obligations on the Luna Indemnified Party without the Luna Indemnified Party’s prior written consent. If Tego fails or declines to assume the defense of any such claim or action within thirty (30) days after notice thereof, or if representation of such Luna Indemnified Party by the counsel retained by Tego would be inappropriate because of actual or potential differences in the interests of such Luna Indemnified Party and any other party represented by such counsel, the Luna Indemnified Party may assume the defense of such claim or action for the account of and at the risk of Tego.

8.11.2 Luna shall have a right to offset the amount of its good-faith claims under this Section 8.11 against amounts otherwise due from Luna to Tego pursuant to Section 1.3 above.

8.12 **Acknowledgement** LUNA HEREBY ACKNOWLEDGES THAT IT HAS EXPERIENCE IN THE OPERATION OF PHARMACEUTICAL DEVELOPMENT, MANUFACTURING, DISTRIBUTION AND SALES, HAS INDEPENDENTLY EVALUATED AND CONDUCTED DUE DILIGENCE WITH RESPECT TO THE ACQUIRED ASSETS, THE PROSPECTS OF THEIR COMMERCIAL DEVELOPMENT, AND HAS BEEN REPRESENTED BY, AND HAD THE ASSISTANCE OF COUNSEL, INCLUDING INTELLECTUAL PROPERTY COUNSEL, IN THE CONDUCT OF SUCH DUE DILIGENCE, THE PREPARATION AND NEGOTIATION OF THIS AGREEMENT, AND THE CONSUMMATION OF THE TRANSACTIONS CONTEMPLATED HEREBY. THE FOREGOING ACKNOWLEDGEMENTS SHALL NOT AFFECT OR DIMINISH IN ANY WAY ANY OF THE REPRESENTATIONS, WARRANTIES, COVENANTS, INDEMNIFICATIONS OR AGREEMENTS OF TEGO OR LUNA CONTAINED IN THIS AGREEMENT.

8.13 **Other Remedies.** Except as otherwise expressly provided herein, any and all remedies herein expressly conferred upon a party will be deemed cumulative with and not exclusive of any other remedy conferred hereby, or by law or equity upon such party, and the exercise by a party of any one remedy will not preclude the exercise of any other remedy. The foregoing, however, is not intended to mean that a party may obtain both injunctive relief and monetary damages that would otherwise be mutually exclusive under applicable law.

8.14 **Counterparts; Facsimile Delivery.** This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Any signature page delivered by facsimile or electronic image transmission shall be binding to the same extent as an original signature page. Any party that delivers a signature page by facsimile or electronic image transmission shall deliver an original counterpart to any other party that requests such original counterpart.

8.15 **Time of the Essence.** Time is of the essence of this Agreement.

8.16 **Bankruptcy Court Approval; Termination.** Promptly following execution hereof, Luna shall make a motion (the “**Approval Motion**”) for an order (the “**Approval Order**”) from the Bankruptcy Court that approves Luna’s purchase of the Acquired Assets on the terms and conditions set forth in this Agreement and authorizes Luna to proceed with this transaction. Following the filing of the Approval Motion, Luna shall use reasonable efforts to obtain the Approval Order. For purpose of clarification, each party’s obligation to consummate the transaction contemplated herein is conditioned upon the entry of the Approval Order.

8.17 **Release.** Effective upon the Closing, Tego and Siemens AG, on behalf of themselves and their respective affiliates, and Tego's, Siemens AG's and such affiliates' respective officers, directors, employees, agents, successors, assigns, representatives, and attorneys (collectively, the "Releasors"), hereby irrevocably release, acquit and forever discharge Luna and its affiliates and Luna's and such affiliates' respective past and present officers, directors, employees (including but not limited to Dr. Robert Lenk, Dr. Kenneth Walker, and Dr. Stephen Wilson), agents, successors, assigns, representatives, and attorneys (collectively, the "Releasees") of and from any and all past and future claims or liabilities of any kind and nature whatsoever, whether at law, in equity, or otherwise, known and unknown, suspected and unsuspected, disclosed and undisclosed, to the extent relating in any way to (i) the Acquired Assets (including but not limited to U.S. Patent No. 5,739,376), and/or (ii) the Proofs of Claim filed in the Bankruptcy Case on or about September 30, 2009, by Tego and Siemens AG, respectively. In furtherance of (and without limiting) the foregoing, concurrently with the Closing, Tego and Siemens AG shall each withdraw, with prejudice, its Proof of Claim filed in the Bankruptcy Case on or about September 30, 2009 and each hereby acknowledges and agrees that it has no further claims against Luna and/or any of the other Releasees arising from or related to the claims described in, or the subject matter of, its respective Proof of Claim filed in the Case. Those parties comprising Releasees who are not signatories of this Agreement are intended third party beneficiaries of the foregoing releases.

8.18 **Consent to Assignment.** Effective upon the Closing, Siemens' hereby consents to Tego's assignment to Luna of Tego's right, title and interest (the "Retained Interest") in and to the agreement described in Item 1 of Exhibit D hereto as contemplated by Section 1.2 of this Agreement and to the further assignment of the Retained Interest by Luna to any (i) reorganized entity or other successor entity to Luna in or as a result of the Case, including as a result of an effective plan of reorganization in the Case, or (ii) third party to whom Luna may assign the Retained Interest in the Case, or (iii) to the extent not incorporated in (i) or (ii) above, to a successor entity resulting from any other change of control of Luna consisting of a merger, consolidation or acquisition of all or substantially all of the stock or the assets of Luna. For the avoidance of doubt, the foregoing consent shall be deemed to satisfy all requirements for consent, if any, under Bankruptcy Code section 365 to assignment or assumption and assignment of the Retained Interest in connection with any of (i), (ii) or (iii) in the preceding sentence

8.19 **Joinder by Siemens AG.** Siemens AG is executing this Agreement where indicating below for the sole and exclusive purpose of agreeing to the provisions of Sections 8.17 and 8.18 above and Siemens' release in favor of the Releasees and Siemens' other obligations thereunder.

[Remainder of Page Intentionally Left Blank]

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

TEGO BIOSCIENCES INCORPORATED

By: /s/ Christopher Anzalone
Name: Christopher Anzalone, Ph.D.
Its: Chairman of the Board of Directors
CEO & President

LUNA INNOVATIONS INCORPORATED

By: /s/ Kent Murphy
Name: Kent Murphy, Ph.D.
Its: CEO

SIEMENS AG

By: /s/ Walter Höchtl
Name: Walter Höchtl
Its: Head of IT Licensing &
Transaction

/s/ Bernhard Bertsche
Bernhard Bertsche
Head of Business
Administration

Date: November 9, 2009

EXHIBIT A

Definitions

“Acquired Assets” means all of Tego’s non-cash intellectual property assets, including without limitation “Proprietary Information,” “Patent Assets” and “Assumed Contracts.”

“Affiliate” means any Person controlling, controlled by or under common control with the a Party, where “control” means the possession, directly or indirectly, of the power to direct the management and policies of such Person whether through the ownership of voting securities, contract or otherwise, and if such Person is a partnership, then each general partner and limited partner of such partnership shall also be deemed an “Affiliate.”

“Affiliate Licensee” shall mean only those Affiliates who are Licensees whereby the terms of the relevant license reflect Fair Market Value. There is presumption rebuttable by clear and convincing evidence that licenses granted between Affiliates are NOT made at Fair Market Value. In the event that the license terms are agreed to PRIOR to the time the parties become Affiliates, then there will be a presumption rebuttable by clear and convincing evidence that such terms granted between Affiliates WAS made at Fair Market Value.

“Assumed Contracts” means those certain agreements, contracts, commitments, or other binding arrangements of Tego which are set forth in Exhibit D.

“Business” means the research, development and commercialization of fullerene-based therapeutics.

“Business Day” shall mean any weekday of the year on which national banking institutions in the state of Delaware are open to the public for conducting business.

“Covered” means that a commercial product or its manufacture, use, sale, offer for sale, or importation would directly or indirectly infringe: 1) an issued patent claim of a patent of the Patent Assets; 2) a patent claim in the Patent Assets that exists as of the Closing Date; or 3) a patent claim filed in the future in an application in the Patent Assets; in each case under U.S. statutory and judicially-created patent law; provided, however, that such claim is fully supported by the disclosure of an application in the Patent Assets and has not since (i) expired, (ii) been rejected by the U.S. Patent and Trademark Office or (iii) invalidated or determined to be unenforceable in a legal proceeding (without being reversed on appeal).

“Fair Market Value” means the cash consideration which one would realize from an unaffiliated, unrelated buyer in an arm’s length sale of an identical item sold in the same quantity, under the same terms, and at the same time and place.

“Good Laboratory Practice” or “GLP” refers to a stage of research that begins before clinical trials can begin, and during which feasibility, iterative testing and safety data is collected to determine whether a drug is effective and safe for use in a particular indication in a manner necessary to obtain approval to market a drug.

“IND” or “Investigational New Drug Application” shall have the meaning as set forth in 21 CFR Part 312; the term also encompasses the functionally equivalent international counterpart applications in Europe, Canada, Japan, and Australia as specified by their respective Regulatory Authorities.

“Licensee” means an exclusive or nonexclusive licensee of any of the Acquired Assets.

“License Income” means all amounts received by Luna or any of its Affiliates, from a Licensee including upfront payments, annual maintenance fees, milestone payments (including for development, performance and sales milestones but excluding any amounts intended to compensate Luna for documented and fully burdened development work done, i.e, research and development revenues) and earned royalties as well as sublicensing fees. If License Income is in the form of equity or debt then the License Income will be deemed to be the Fair Market Value of such equity or debt. “License Income” shall be calculated net of any amounts or fees due to licensors under any of the Assumed Contracts (*i.e.*, sublicensing fees due to Washington University or Siemens AG).

“Lien” means any security interest, claim, lien, charge, mortgage, deed, assignment, pledge, hypothecation, encumbrance, easement, restriction of any kind or nature except for Liens for taxes not yet due or except for such imperfections of title and encumbrances, if any, which are not material in character, amount or extent, and which do not materially detract from the value, or materially interfere with the present use of the property subject thereto or affected thereby.

“NDA” shall mean a New Drug Application together with any amendments or supplements thereto or data associated therewith, filed in accordance with applicable regulations and statutes e.g., 21 U.S.C. § 505(b)(1), 21 U.S.C. § 505(b)(2) or 42 U.S.C. § 262, and their functional international equivalents.

“Net Sales” means, with respect to a Product, the gross amount received by Luna or its Affiliates on sales or other dispositions of such Products less the sum of (a) commercially reasonable trade, cash and quantity discounts, (b) credit or allowances given or made for recall, rejection or return of previously sold Products, (c) commercially reasonable rebates, chargebacks or retroactive price reductions, (d) out-of-pocket charges for insurance, postage, handling, freight and other transportation costs which are invoiced by Luna or its Affiliates, (e) government-mandated rebates and (f) customs, duties, surcharges, sales, transfer and other excise taxes levied on the sale, transportation, delivery or use of such Product, including any tax such as a value added or similar tax or government charge, borne by the seller thereof, other than franchise or income tax of any kind whatsoever

“Order” means any decree, order, injunction, rule, judgment, consent, of or by any agency or court of competent jurisdiction.

“Patents” means Patent Assets as well those patents and applications including those licensed under the Assumed Contracts (see Exhibit D) and the foreign and domestic patents issuing from such pending applications, and any future continuations, continuations-in-part, divisionals, reissues, reexams, supplemental protection certificates or extensions of any of the foregoing patents and applications.

“Patent Assets” shall mean Tego’s patents and applications, including without limitation those listed in Exhibit B-1 and the foreign and domestic patents issuing from such pending applications, and any future continuations, continuations-in-part, divisionals, reissues, reexams, supplemental protection certificates or extensions of any of the foregoing patents and applications.

“Phase I Clinical Trial” means a study in humans the purpose of which includes the determination of safety and/or pharmacokinetic and pharmacodynamic profile of a drug in healthy individuals or patients.

“Phase II Clinical Trial” means a study of dose range and efficacy of a drug in patients that is intended to generate sufficient data to commence Phase III Clinical Trials.

“Phase III Clinical Trial” means a controlled study of the efficacy and safety of a drug in patients that is prospectively designed to demonstrate statistically significant efficacy and safety.

“Product” any Covered commercial product, *e.g.*, a Covered product containing a functionalized fullerene.

“Proprietary Information” shall mean all know how, information, data, records, reports and results from studies, tests and experiments owned by Tego related to the Business and in existence or contemplated as of the Closing Date, including without limitation the information described in Exhibit B-2.

“Person” means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization, and a governmental entity or any department, agency, or political subdivision thereof.

“Regulatory Authority” for the purposes of the Agreement shall mean agencies that enforce the regulatory requirements that are part of the process of drug approval. Regulatory requirements describe what is necessary for a new drug to be approved for marketing in any particular country. The FDA, EMEA or the Japanese Pharmaceuticals and Medical Devices Agency (PDMA) are the Regulatory Authorities for the U.S., EU, and Japan, respectively

“Sale of the Company” means (A) a transaction or series of related transactions in which any Person, or a group of related Persons, acquires from stockholders of Luna shares representing fifty percent (50%) or more of the outstanding voting power of Luna, (B) a merger or consolidation in which (a) Luna is a constituent party or (b) a subsidiary of Luna is a constituent party and Luna issues shares of its capital stock pursuant to such merger or consolidation, except any such merger or consolidation involving Luna or a subsidiary in which the shares of capital stock of Luna outstanding immediately prior to such merger or consolidation continue to represent, or are converted or exchanged for shares of capital stock which represent, immediately following such merger or consolidation at least a majority, by voting power, of the capital stock of (1) the surviving or resulting corporation or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation; (C) the sale, lease, exclusive license, transfer or other disposition, in a single transaction or series of related transactions, by Luna or any subsidiary of Luna of all or substantially all the

assets of Luna and its subsidiaries taken as a whole except where such sale, lease, transfer or other disposition is to a wholly owned subsidiary of Luna; or (D) the liquidation, dissolution or winding up of the business and affairs of Luna; provided, however, that a “Sale of the Company” shall not be deemed to have occurred if Luna completes any of the foregoing transactions with any Affiliate of Luna.

“TBP License” means the License Agreement between The Bronx Project and Tego dated July 1, 2009.

“Third Party” means any person other than the Parties and their Affiliates.

FORM OF EXCHANGE AGREEMENT

THIS EXCHANGE AGREEMENT (this "Agreement") is dated as of September 28, 2009, by and between Arrowhead Research Corporation, a Delaware corporation (the "Corporation"), and the individuals listed Exhibit A (each, a "Holder" and collectively, the "Holders"). The Corporation and each Holder are referred to as a "Party" and collectively as the "Parties".

WITNESSETH:

WHEREAS, the Corporation and each of the Holders are shareholders and warrant holders of Calando Pharmaceuticals, Inc., a Delaware corporation ("Calando");

WHEREAS, the Holders own shares of common stock, \$0.0001 par value per share, ("Calando Shares") and warrants to purchase common stock of Calando ("Calando Warrants") (together, the "Calando Securities") in the amounts set forth on Exhibit A, attached hereto;

WHEREAS, the Holders each desire to exchange all their Calando Securities for common stock of the Corporation, \$0.0001 par value per share ("Arrowhead Shares") and warrants to purchase common stock of the Corporation ("Arrowhead Warrants") (together the "Arrowhead Securities"); and

WHEREAS, the Corporation desires to exchange (the "Exchange") one newly issued and unregistered Arrowhead Share for each 2.5 Calando Shares and warrants to purchase one newly issued Arrowhead Shares at the same per share ratio for the Calando Warrants with a strike price equal to \$0.50 per share (the Arrowhead Securities received in the Exchange, referred to in this Agreement as the "Exchanged Securities").

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Exchange.

(a) Exchange Ratio. The Corporation and each Holder hereby agree to exchange at the Closing the Calando Securities in the amounts set forth on Exhibit A, attached hereto, for Arrowhead Shares in the following ratio: 2.5 Calando Shares for one Arrowhead Share (2.5:1) and warrants to purchase 2.5 Calando Shares for warrants to purchase one Arrowhead Share with a strike price equal to \$0.50 per share.

(b) Exchange. To effect this exchange, each Holder will deliver to the Corporation the stock certificate or certificates representing the pro-rata number of Calando Shares together with duly executed stock powers related thereto and the Corporation will deliver to each Holder a stock certificate or certificates representing the pro-rata number of Exchanged Securities promptly after the closing of the transaction.

2. Contingency. The Exchange and Closing shall be contingent upon the Corporation having received stockholder approval for its proposal to increase the number of Arrowhead Shares authorized for issuance as set forth in its Definitive Proxy Statement filed with the Securities and Exchange Commission on September 4, 2009 (the "Proxy Approval").

3. The Closing.

(a) Closing Date. The closing of the transactions contemplated by this Agreement (the "Closing") shall take place at the offices of Arrowhead Research Corporation, 201 South Lake Street, Suite 703, Pasadena, CA 91101 at 10:00 a.m., Pacific time, on October 6, 2009 ("Closing Date"), or at such other place, date or time as the parties may mutually agree in writing.

(b) Conditions to Closing of Holders. The obligation of Holders to consummate the transactions on the Closing Date as contemplated by this Agreement shall be subject to the satisfaction or waiver on or prior to the Closing Date of the following conditions:

(i) the Corporation shall have performed and complied in all material respects with all obligations and agreements required to be performed and complied with by the Corporation hereunder on or prior to the Closing Date;

(ii) the representations and warranties of the Corporation contained in this Agreement shall be true and correct in all material respects as of the Closing Date as if made as of such date;

(iii) the Corporation shall have received all third party consents and all authorizations, consents and approvals of any Governmental Authority necessary to consummate the transactions contemplated hereby.

(c) Conditions to Closing of Corporation. The obligation of the Corporation to consummate the transactions on the Closing Date shall be subject to the satisfaction or waiver on or prior to the Closing Date of the following conditions;

(i) Each Holder shall have each performed and complied in all material respects with all obligations and agreements required to be performed and complied with by each Holder hereunder on or prior to the Closing Date;

(ii) the representations and warranties of each Holder contained in this Agreement shall be true and correct in all material respects as of the Closing Date as if made as of such date;

(iii) Holders shall have delivered to the Corporation a certificate or the certificates representing all the Calando Shares and warrant agreements representing all the Warrants owned by Holder to be exchanged on such date and related executed stock powers; and

(iv) Holders shall have received all third party consents and all authorizations, consents and approvals of any Governmental Authority necessary to consummate the transactions contemplated hereby.

4. Representations and Warranties of the Corporation. The Corporation represents and warrants to Holder as follows:

(a) Corporate Status. The Corporation is a corporation incorporated, validly existing and in good standing under the laws of the State of Delaware with full right, power and authority to execute, deliver and perform this Agreement.

(b) Authorization/Enforceability. This Agreement has been duly authorized, executed and delivered by the Corporation and constitutes the valid and legally binding obligation of the Corporation, enforceable in accordance with its terms and conditions. The Corporation need not give any notice to, make any filing with, or obtain any authorization, consent, or approval of any Governmental Authority in order to consummate the transactions contemplated by this Agreement.

(c) Non-Contravention. Neither the execution and the delivery of this Agreement, nor the consummation of the transactions contemplated hereby, will (i) violate any constitution, statute, regulation, rule, injunction, judgment, order, decree, ruling, charge, or other restriction of any Governmental Authority to which the Corporation is subject, or (ii) conflict with, result in a breach of, constitute a default under, result in the acceleration of, create in any party the right to accelerate, terminate, modify, or cancel, or require any notice under the certificate of incorporation or bylaws of the Corporation, or any agreement, contract, lease, license, instrument, or other arrangement to which the Corporation is a party or by which it is bound or to which any of its assets is subject.

(d) Consents/Approvals. Other than the Proxy Approval, no consent, approval, authorization, order, registration or qualification of or with any Governmental Authority or other Person or entity is required for the issuance and sale of the Exchanged Securities by the Corporation to Holder or the consummation by the Corporation of the transactions contemplated by this Agreement.

(e) Exchanged Securities Authorization. The Exchanged Securities have been duly authorized and, when issued and delivered, will be duly and validly issued and fully paid and nonassessable. Upon consummation of the transactions contemplated hereby, good and valid title to the Exchanged Securities, free and clear of all Claims, will be transferred by the Corporation to Holder.

5. Representations and Warranties of Holder. Each Holder represents and warrants to the Corporation as follows:

(a) Legal Capacity. Each Holder has full legal right, power and capacity to execute and deliver this Agreement and to perform his, her or its obligations hereunder. This Agreement constitutes the valid and legally binding obligation of Holder,

enforceable in accordance with its terms and conditions. Holder need not give any notice to, make any filing with, or obtain any authorization, consent, or approval of any third party or Governmental Authority in order to consummate the transactions contemplated by this Agreement. Except as set forth on attached Schedule 4(a), no Person has any community property rights by virtue of marriage or otherwise in any of the Calando Securities owned by such Holder. Any such Person with community property rights has duly executed and delivered to the Corporation at or prior to the Closing a copy of the consent attached hereto as Exhibit B. If such Holder is not a natural person, it has been duly organized, and is validly existing and in good standing, under the laws of its jurisdiction of formation, and it has properly taken all corporate, limited liability, partnership or other action required to be taken by such Holder with respect to the execution and delivery of this Agreement and consummate the transactions contemplated by this Agreement.

(b) Title to Calando Securities. Holder is the lawful record and beneficial owner of the Calando Securities that will be transferred pursuant to Section 1 of this Agreement with good and marketable title thereto, and the Holder has the right to sell, assign, convey, transfer and deliver the Calando Securities and any and all rights and benefits incident to the ownership thereof (including, without limitation, any registration or other rights pertaining to the Calando Securities and the shares of common stock underlying such securities), all of which rights and benefits are transferable by the Holder to the Corporation pursuant to this Agreement, free and clear of all Claims. The exchange of the securities as contemplated herein will (i) pass good and marketable title to all the Calando Securities transferred pursuant to Section 1 of this Agreement to the Corporation, free and clear of all Claims, and (ii) convey, free and clear of all Claims, any and all rights and benefits incident to the ownership of such securities (including, without limitation, any registration or other rights pertaining to the securities and the shares of common stock underlying such securities).

(c) Non-Contravention. Neither the execution and the delivery of this Agreement, nor the consummation of the transactions contemplated hereby, will (i) violate any constitution, statute, regulation, rule, injunction, judgment, order, decree, ruling, charge, or other restriction of any Governmental Authority to which Holder is subject, or (ii) conflict with, result in a breach of, constitute a default under, result in the acceleration of, create in any party the right to accelerate, terminate, modify, or cancel, or require any notice under any agreement, organizational document, bylaws, partnership agreement, trust agreement, agreement any trust is bound by, contract, lease, license, instrument, or other arrangement to which Holder, as applicable, is a party or by which it is bound or to which any of its assets is subject.

(d) Consents/Approvals. No consent, approval, authorization, order, registration or qualification of or with any Governmental Authority or other entity or Person is required for the Exchange or the consummation by Holder of the transactions contemplated by this Agreement.

(e) Investment Representations.

(i) Holder qualifies as an “accredited investor” (as defined in Rule 501(a) of Regulation D under the Securities Act of 1933, as amended (the “Securities Act”)) and is acquiring the Exchanged Securities hereunder for its own account and with

no intention of distributing or selling the Exchanged Securities except pursuant to a registration or an available exemption under applicable law. Holder understands that the Exchanged Securities have not been (and are not being) registered under the Securities Act by reason of their contemplated issuance in transaction(s) exempt from the registration and prospectus delivery requirements of the Securities Act pursuant to Section 4(2) thereof (including the rules and regulations promulgated thereunder), and that the reliance of the Corporation on such exemption from registration is predicated in part on the representations and warranties of Holder hereunder.

(ii) Holder agrees that it will not sell or otherwise dispose of any of the Exchanged Securities unless such sale or other disposition has been registered or is exempt from registration under the Securities Act and has been registered or qualified or is exempt from registration or qualification under applicable securities laws of any State.

(iii) Holder understands that a restrictive legend consistent with the foregoing set forth in Section 10(a) of this Agreement has been or will be placed on the certificates evidencing the Exchanged Securities to be issued to it hereunder, and related stop transfer instructions will be noted in the transfer records of the Corporation and/or its transfer agent for the Exchanged Securities during the Prohibited Period.

(iv) Each Holder represents that it is not an Affiliate (as defined herein) of the Corporation and will covenant and agree that if it becomes an Affiliate, it will promptly provide notice to the Corporation of such status and comply with insider trading laws and policies and the applicable "control securities" provisions of Rule 144 in addition to any other obligations set forth in this Agreement.

(v) Each Holder has such knowledge and experience in financial and business matters so as to be capable of evaluating the merits and risk of an investment in the Exchanged Securities. Each Holder acknowledges that it has had access to all information concerning the Corporation and Calando and their respective businesses, assets, liabilities, financial statements, and obligations which have been requested and has been provided the opportunity to ask questions of and receive answers from the Corporation and/or Calando to fully and effectively evaluate the Exchange and the transactions contemplated herein. Each Holder understands that a new holding period for purposes of Rule 144 under the Securities Act will be triggered with respect to the Exchanged Securities, and such Holder is able to bear the economic risk of loss of the investment in such Exchanged Securities and is able to afford a complete loss of such investment.

6. Termination. In the event the Closing Date does not occur on or before December 31, 2009, this Agreement may be terminated in writing after such date (i) by the Corporation or (ii) by any Holder as to itself only (but not with respect to the other Holders) and withdraw all of such Holder's portion of Calando Securities from the Exchange, upon two (2) days prior written notice to the Corporation.

7. Indemnification.

(a) Each Holder understands and acknowledges that the Corporation is relying on representations, warranties, covenants and agreements made by such Holder to the Corporation in this Agreement. Each Holder, as applicable, hereby agrees to indemnify, defend and hold harmless the Corporation, its Affiliates and their directors, officers, shareholders, principals, representatives, agents and employees (each, a “Corporation Indemnified Party”), against any and all loss, damage, liability or expense (including, but not limited to, expenses related to the investigation and enforcement of any provisions of this Agreement and/or any reasonable attorneys’ fees) (collectively, “Losses”) which any Corporation Indemnified Party may suffer, sustain or incur by reason of or in connection with or arising under (i) any inaccuracy or breach of representation or warranty of such Holder contained in this Agreement; (ii) the breach of this Agreement or any covenant or agreement made by such Holder in this Agreement; or (iii) the sale or distribution by such Holder of the Exchanged Securities in violation of this Agreement and/or the Securities Act or any other applicable law. This right to indemnification is in addition to any other remedy available to the Corporation under this Agreement.

(b) The Corporation understands and acknowledges that each Holder is relying on representations, warranties, covenants and agreements made by the Corporation to such Holder in this Agreement. The Corporation hereby agrees to indemnify, defend and hold harmless each Holder and its officers, principals, Affiliates, trustees, agents and representatives, as applicable, (each, a “Holder Indemnified Party”), against any and all Losses which any Holder Indemnified Party may suffer, sustain or incur by reason of or in connection with or arising under (i) any inaccuracy or breach of representation or warranty of the Corporation contained in this Agreement; or (ii) the breach of this Agreement or any covenant or agreement made by the Corporation in this Agreement. This right to indemnification is in addition to any other remedy available to each Holder under this Agreement.

8. Certain Definitions.

(a) “Affiliate” (and, with a correlative meaning, “affiliated”) means, with respect to any Person, any direct or indirect subsidiary of such Person, and any other Person that directly, or through one or more intermediaries, Controls or is Controlled by or is under common Control with such first Person. As used in this definition, “Control” (and, with correlative meanings, “Controlled by” and “under common Control with”) means the possession, directly or indirectly, of the power to direct the management or policies of a Person (whether through ownership of securities or partnership or other ownership interests, by contract or otherwise).

(b) “Claims” shall mean the following of any nature whatsoever: security interests, liens, deeds of trust, hypothecations, pledges, claims (pending or threatened), charges, escrows, encumbrances, lock-up arrangements, options, rights of first offer or refusal, community property rights, mortgages, indentures, security agreements or other agreements, arrangements, contracts, commitments, understandings or obligations, whether written or oral and whether or not relating in any way to credit or the borrowing of money.

(c) “Governmental Authority” means any entity exercising executive, legislative, judicial, regulatory or administrative functions of or pertaining to government, including any governmental authority, independent or autonomous official authority, agency, department, board, commission or instrumentality of the United States or any other country, or any political subdivision thereof, whether federal, state or local, and any tribunal, court or arbitrator(s) of competent jurisdiction.

(d) “Person(s)” means and includes any natural persons, sole proprietorships, corporations, limited partnerships, limited liability companies, general partnerships, joint stock companies, joint ventures, associations, companies, trusts, banks, trust companies, land trusts, business trusts or other organizations, whether or not legal entities, all Governmental Authorities and all other entities.

(e) “Transfer Agent” shall mean Computershare Limited, 350 Indiana St., Suite 800, Golden, CO 80401, in its capacity as transfer agent to the Corporation, or any successor transfer agent to the Corporation.

9. Miscellaneous.

(a) Legend Requirement. Each certificate representing Exchanged Securities held or acquired by a Holder will contain legends acknowledging that the shares represented by such certificate are restricted securities and are subject to this Agreement, as follows:

THE SECURITIES REPRESENTED BY THIS INSTRUMENT HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), OR ANY STATE SECURITIES LAWS, AND NO SALE, ASSIGNMENT, PLEDGE, HYPOTHECATION, GIFT, TRANSFER OR OTHER DISPOSITION OR OFFER TO DO ANY OF THE FOREGOING MAY BE MADE UNLESS A REGISTRATION STATEMENT UNDER THE SECURITIES ACT AND OTHER APPLICABLE SECURITIES LAWS WITH RESPECT TO SUCH SECURITIES IS THEN IN EFFECT, OR IN THE OPINION OF COUNSEL ACCEPTABLE TO THE ISSUER, SUCH REGISTRATION UNDER THE SECURITIES ACT AND OTHER APPLICABLE SECURITIES LAWS IS NOT REQUIRED.

The Transfer Agent and any applicable broker shall each be instructed not to recognize any transfer by a Holder that does not comply with this Agreement.

(b) Assistance. By executing this Agreement, each of the Holders hereby requests that the Corporation endeavor to assist Holders (without warranty of any kind) in their compliance with the right of first refusal and co-sale mechanics and requirements set forth in the ROFR and Co-Sale Agreement. Each such Holder agrees to fully and promptly cooperate with the Corporation and, upon request, each such Holder shall reimburse the Corporation for such Holder’s pro rata amount of any expenses incurred by the Corporation in so complying up to a maximum aggregate amount of \$2,000.

(c) Equitable Remedy. Each Party shall agree that in addition to any other remedy that may be available to such Party hereunder, the Party shall be entitled to specific performance. Notwithstanding anything to the contrary in this Agreement, each Party shall be responsible for paying its own expenses, including legal fees, incurred in enforcing this Agreement.

(d) **Notices.** All notices, claims, demands and other communications hereunder shall be in writing and shall be deemed given upon (i) confirmation of receipt of a facsimile transmission, (ii) confirmation of delivery when delivered by a standard overnight carrier or (iii) the expiration of five (5) business days after the day when mailed by registered or certified mail (postage prepaid, return receipt requested), addressed to the respective Parties at the following addresses (or such other address for a Party as shall be specified by like notice):

If to the Corporation, to: Arrowhead Research Corporation
201 South Lake Avenue, Suite 703
Pasadena, CA 91101

Attention: Dr. Christopher Anzalone
Telephone: (626) 304-3400
Fax: (626) 304-3401

If to any Holder, to: At the Holder's address, phone or
fax number appearing on Exhibit A,
attached hereto.

(e) **No Third-Party Beneficiaries.** Unless otherwise specifically set forth herein, this Agreement shall not confer any rights or remedies upon any Person other than the Parties hereto and their respective successors and assigns.

(f) **Entire Agreement.** This Agreement (including the documents referred to herein) constitutes the entire agreement among the parties hereto and supersedes any prior understandings, agreements, or representations by or among the parties, written or oral, to the extent they relate in any way to the subject matter hereof.

(g) **Counterparts.** This Agreement may be executed in one or more counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument.

(h) **Headings.** The section headings contained in this Agreement are inserted for convenience only and shall not affect in any way the meaning or interpretation of this Agreement.

(i) **Governing Law.** This Agreement shall be governed by and construed in accordance with the domestic laws of the State of Delaware without giving effect to any choice or conflict of law provision or rule (whether of the State of Delaware or any other jurisdiction) that would cause the application of the laws of any jurisdiction other than the State of Delaware.

(j) Amendments and Waivers. No amendment of any provision of this Agreement shall be valid unless the same shall be in writing and signed by the Corporation and each Holder.

(k) Gender. All pronouns and any variation thereof shall be deemed to refer to the masculine, feminine, neuter, singular, or plural as the identity of the person or entity or the context may require.

(l) Severability. Any term or provision of this Agreement that is invalid or unenforceable in any situation in any jurisdiction shall not affect the validity or enforceability of the remaining terms and provisions hereof or the validity or enforceability of the offending term or provision in any other situation or in any other jurisdiction.

(m) No Presumption Against Drafter. Each of the Parties has jointly participated in the negotiation and drafting of this Agreement. In the event of any ambiguity or a question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by each of the Parties and no presumptions or burdens of proof shall arise favoring any Party by virtue of the authorship of any of the provisions of this Agreement.

(n) Successors and Assigns. Except as otherwise specifically provided herein, this Agreement shall be binding upon, and inure to the benefit of, the Parties hereto and their respective successors and permitted assigns.

(o) Survival. All covenants, agreements, representations and warranties made herein shall survive the Closing and the consummation of the Exchange of the Calando Securities.

IN WITNESS WHEREOF, this Exchange Agreement has been duly executed by or on behalf of each of the parties hereto on the date first above written.

ARROWHEAD RESEARCH CORPORATION,
a Delaware corporation

By: _____
Name: _____
Title: _____

HOLDERS:

Name: _____

Name: _____

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO RULE 13a-14(a) OR RULE 15d-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934**

I, Christopher Anzalone, Chief Executive Officer of Arrowhead Research Corporation, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Arrowhead Research Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 11, 2010

/s/ CHRISTOPHER ANZALONE

Christopher Anzalone
Chief Executive Officer

**CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO RULE 13a-14(a) OR RULE 15d-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934**

I, Kenneth A. Myszkowski, Chief Financial Officer of Arrowhead Research Corporation, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Arrowhead Research Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 11, 2010

/s/ KENNETH A. MYSZKOWSKI

Kenneth A. Myszkowski,
Chief Financial Officer

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO RULE 13a-14(b) OR RULE 15d-14(b)
OF THE SECURITIES EXCHANGE ACT OF 1934
AND 18 U.S.C. SECTION 1350**

I, Christopher Anzalone, Chief Executive Officer of Arrowhead Research Corporation (the “Company”), certify, pursuant to Rule 13(a)-14(b) or Rule 15(d)-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, that (i) the Quarterly Report on Form 10-Q of the Company for the quarterly period ended December 31, 2009, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and (ii) the information contained in such Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of the Company.

Date: February 11, 2010

/s/ CHRISTOPHER ANZALONE

Christopher Anzalone
Chief Executive Officer

A signed original of these written statements required by 18 U.S.C. Section 1350 has been provided to Arrowhead Research Corporation and will be retained by Arrowhead Research Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

**CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO RULE 13a-14(b) OR RULE 15d-14(b)
OF THE SECURITIES EXCHANGE ACT OF 1934
AND 18 U.S.C. SECTION 1350**

I, Kenneth A. Myszkowski, Chief Financial Officer of Arrowhead Research Corporation (the “Company”), certify, pursuant to Rule 13(a)-14(b) or Rule 15(d)-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, that (i) the Quarterly Report on Form 10-Q of the Company for the quarterly period ended December 31, 2009, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and (ii) the information contained in such Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of the Company.

Date: February 11, 2010

/s/ KENNETH A. MYSZKOWSKI

**Kenneth A. Myszkowski,
Chief Financial Officer**

A signed original of these written statements required by 18 U.S.C. Section 1350 has been provided to Arrowhead Research Corporation and will be retained by Arrowhead Research Corporation and furnished to the Securities and Exchange Commission or its staff upon request.