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

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**FORM 10-Q**

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

For the quarterly period ended December 31, 2011

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

Commission file number 000-21898

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**ARROWHEAD RESEARCH CORPORATION**

(Exact name of registrant as specified in its charter)

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Delaware  
(State of incorporation)

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

225 S. Lake Avenue, Suite 300  
Pasadena, California 91101  
(626) 304-3400  
(Address and telephone number of principal executive offices)

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Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant 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.

Large accelerated filer  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 of the registrant's common stock outstanding as of February 1, 2012 was 10,530,524.

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**PART I. FINANCIAL INFORMATION**

**ITEM 1. FINANCIAL STATEMENTS**

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

	<u>December 31, 2011</u>	<u>September 30, 2011</u>
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 6,773,126	\$ 7,507,389
Other receivables	2,027,620	1,608,382
Prepaid expenses and other current assets	301,334	110,818
Marketable securities	<u>71,828</u>	<u>634,585</u>
<b>TOTAL CURRENT ASSETS</b>	<b>9,173,908</b>	<b>9,861,174</b>
<b>PROPERTY AND EQUIPMENT</b>		
Computers, office equipment and furniture	502,508	285,266
Research equipment	4,450,087	3,515
Software	105,916	77,020
Leasehold improvements	<u>2,591,919</u>	<u>—</u>
	7,650,430	365,801
Less: Accumulated depreciation and amortization	<u>(723,190)</u>	<u>(340,364)</u>
<b>PROPERTY AND EQUIPMENT, NET</b>	<b>6,927,240</b>	<b>25,437</b>
<b>OTHER ASSETS</b>		
Rent deposit	6,264	—
Patents and other intangible assets	2,749,593	1,731,211
Note Receivable, net	2,314,994	2,272,868
Derivative asset	160,125	161,125
Investment in Nanotope Inc., equity basis	1,543,220	1,649,748
Investment in Leonardo Biosystems Inc., at cost	<u>187,000</u>	<u>187,000</u>
<b>TOTAL OTHER ASSETS</b>	<b>6,961,196</b>	<b>6,001,952</b>
<b>TOTAL ASSETS</b>	<b><u>\$ 23,062,344</u></b>	<b><u>\$ 15,888,563</u></b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable	\$ 714,057	\$ 576,809
Accrued expenses	2,386,796	864,511
Accrued payroll and benefits	637,691	195,649
Deferred revenue	101,042	—
Derivative liabilities	1,010,883	944,980
Capital lease obligation	<u>209,555</u>	<u>—</u>
<b>TOTAL CURRENT LIABILITIES</b>	<b><u>5,060,024</u></b>	<b><u>2,581,949</u></b>
<b>LONG-TERM LIABILITIES</b>		
Note payable, net of current portion	702,695	606,786
Capital lease obligation, net of current portion	1,444,370	—
Other non-current liabilities	<u>106,345</u>	<u>135,660</u>
<b>TOTAL LONG-TERM LIABILITIES</b>	<b><u>2,253,410</u></b>	<b><u>742,446</u></b>
Commitments and contingencies		
<b>STOCKHOLDERS' EQUITY</b>		
Arrowhead Research Corporation stockholders' equity:		
Preferred stock, \$0.001 par value; 5,000,000 shares authorized; 1,015 shares issued and outstanding	1	—
Common stock, \$0.01 par value; 145,000,000 shares authorized; 10,530,524 and 8,642,286 shares issued and outstanding as of December 31, 2011 and September 30, 2011, respectively	105,306	86,423
Additional paid-in capital	136,318,592	127,476,435
Subscription receivable	(3,897,500)	(900,000)
Accumulated deficit during the development stage	<u>(116,357,257)</u>	<u>(113,871,752)</u>
<b>Total Arrowhead Research Corporation stockholders' equity</b>	<b>16,169,142</b>	<b>12,791,106</b>
Noncontrolling interest	<u>(420,232)</u>	<u>(226,938)</u>
<b>TOTAL STOCKHOLDERS' EQUITY</b>	<b><u>15,748,910</u></b>	<b><u>12,564,168</u></b>
<b>TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY</b>	<b><u>\$ 23,062,344</u></b>	<b><u>\$ 15,888,563</u></b>

*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, 2011	Three Months Ended December 31, 2010	May 7, 2003 (Inception) to December 31, 2011
<b>REVENUE</b>	<b>\$ 23,958</b>	<b>\$ 296,139</b>	<b>\$ 4,015,917</b>
<b>OPERATING EXPENSES</b>			
Salaries	1,320,693	307,890	21,297,902
General and administrative expenses	1,277,904	631,561	26,868,719
Research and development	1,140,904	2,261,855	41,569,633
Stock-based compensation	251,878	370,148	12,591,942
Amortization of intangible assets	71,618	60,452	1,853,562
<b>TOTAL OPERATING EXPENSES</b>	<b>4,062,997</b>	<b>3,631,906</b>	<b>104,181,758</b>
<b>OPERATING LOSS</b>	<b>(4,039,039)</b>	<b>(3,335,767)</b>	<b>(100,165,841)</b>
<b>OTHER INCOME (EXPENSE)</b>			
Equity in income (loss) of unconsolidated affiliates	(106,527)	48,826	(829,780)
Gain on sale of stock in subsidiary	—	—	2,292,800
Gain on purchase of Roche Madison	1,576,107	—	1,576,107
Gain (loss) on sale of fixed assets, net	—	—	(127,088)
Realized and unrealized gain (loss) in marketable securities	(58,091)	—	62,954
Interest income (expense), net	7,875	15,247	2,722,353
Change in value of derivatives	(66,904)	465,270	2,827,609
Other income	—	—	250,000
<b>TOTAL OTHER INCOME</b>	<b>1,352,461</b>	<b>529,343</b>	<b>8,774,955</b>
<b>LOSS FROM CONTINUING OPERATIONS BEFORE INCOME TAXES</b>	<b>(2,686,579)</b>	<b>(2,806,424)</b>	<b>(91,390,887)</b>
Provision for income taxes	—	—	—
<b>LOSS FROM CONTINUING OPERATIONS</b>	<b>(2,686,579)</b>	<b>(2,806,424)</b>	<b>(91,390,887)</b>
Income (loss) from discontinued operations	(220)	1,574,994	(47,546,782)
Gain on disposal of discontinued operations	—	—	4,708,588
<b>NET INCOME (LOSS) FROM DISCONTINUED OPERATIONS</b>	<b>(220)</b>	<b>1,574,994</b>	<b>(42,838,194)</b>
<b>NET LOSS</b>	<b>(2,686,799)</b>	<b>(1,231,430)</b>	<b>(134,229,081)</b>
Net (income) loss attributable to noncontrolling interests	201,294	(206,252)	18,035,784
<b>NET LOSS ATTRIBUTABLE TO ARROWHEAD</b>	<b>\$ (2,485,505)</b>	<b>\$ (1,437,682)</b>	<b>\$ (116,193,297)</b>
<b>Earnings per share—basic and diluted:</b>			
Loss from continuing operations attributable to Arrowhead common shareholders	\$ (0.25)	\$ (0.42)	
Income from discontinued operations attributable to Arrowhead common shareholders	—	0.22	
Net loss attributable to Arrowhead shareholders	\$ (0.25)	\$ (0.20)	
Weighted average shares outstanding—basic and diluted	10,121,069	7,177,941	

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

**Arrowhead Research Corporation and Subsidiaries**  
**(A Development Stage Company)**  
**Consolidated Statement of Stockholders' Equity**  
**from inception through December 31, 2011**  
**(unaudited)**

	Common Stock		Preferred Stock		Additional Paid-in Capital	Subscription Receivable	Accumulated Deficit during the Development Stage	Noncontrolling interest	Totals
	Shares	Amount	Shares	Amount					
<b>Initial Issuance of Stock:</b>									
Common stock & warrants issued for cash @ \$0.01 per unit	300,000	\$ 3,000	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 3,000
Common stock & warrants issued for cash @ \$10.00 per unit	168,000	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)
<b>Balance at September 30, 2003</b>	<b>468,000</b>	<b>4,680</b>	<b>—</b>	<b>—</b>	<b>1,510,320</b>	<b>—</b>	<b>(95,238)</b>	<b>—</b>	<b>1,419,762</b>
Exercise of stock options	7,500	75	—	—	14,925	—	—	—	15,000
Common stock & warrants issued for cash @ \$10.00 per unit	47,500	475	—	—	474,525	—	—	—	475,000
Common stock & warrants issued for marketable securities @ \$10.00 per unit	50,000	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 @ \$15.00 per unit	660,879	6,609	—	—	9,906,573	—	—	—	9,913,182
Common stock issued in reverse acquisition	70,553	706	—	—	(151,175)	—	—	—	(150,469)
Common stock issued as a gift for \$10.90 per share	15,000	163	—	—	162,587	—	—	—	162,750
Common stock and warrants issued as stock issuance cost @ \$15.00 per unit	35,623	356	—	—	533,988	—	—	—	534,344
Stock issuance cost charged to additional paid-in capital	—	—	—	—	(991,318)	—	—	—	(991,318)
Exercise of stock option @ \$2.00 per share	7,500	75	—	—	14,925	—	—	—	15,000
Exercise of stock options @ \$10.00 per share	600	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)
<b>Balance at September 30, 2004</b>	<b>1,363,155</b>	<b>13,645</b>	<b>—</b>	<b>—</b>	<b>12,059,997</b>	<b>—</b>	<b>(2,624,192)</b>	<b>1,777,699</b>	<b>11,227,149</b>
Exercise of warrants @ \$15.00 per share	1,381,289	13,813	—	—	20,705,522	—	—	—	20,719,335
Exercise of stock options @ \$10.00 per share	2,500	25	—	—	24,975	—	—	—	25,000
Common stock issued to purchase Insert Therapeutics share @ \$39.80 per share	50,226	502	—	—	1,999,498	—	—	—	2,000,000
Common stock issued for services	1,250	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)
<b>Balance at September 30, 2005</b>	<b>2,798,419</b>	<b>27,997</b>	<b>—</b>	<b>—</b>	<b>35,578,580</b>	<b>—</b>	<b>(9,479,110)</b>	<b>1,899,190</b>	<b>28,026,657</b>
Exercise of stock options	11,579	116	—	—	341,421	—	—	—	341,537
Common stock issued @ \$48.80 per share	20,485	205	—	—	999,795	—	—	—	1,000,000
Common stock issued @ \$38.40 per share	1,500	15	—	—	57,585	—	—	—	57,600
Common stock issued @ \$35.00 per share	559,000	5,590	—	—	19,539,410	—	—	—	19,545,000
Common stock issued @ \$59.10 per share	2,536	25	—	—	149,975	—	—	—	150,000
Common stock issued to purchase Calando Pharmaceuticals, Inc. @ \$51.70 per share	20,838	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)
<b>Balance at September 30, 2006</b>	<b>3,414,359</b>	<b>34,156</b>	<b>—</b>	<b>—</b>	<b>59,113,369</b>	<b>—</b>	<b>(28,476,319)</b>	<b>934,438</b>	<b>31,605,644</b>
Exercise of stock options	18,616	186	—	—	434,541	—	—	—	434,727
Common stock issued @ \$57.80 per share, net	284,945	2,849	—	—	15,149,366	—	—	—	15,152,215
Arrowhead's increase in proportionate share of Insert Therapeutics' equity	—	—	—	—	2,401,394	—	—	—	2,401,394
Common stock issued for purchase of Carbon Nanotechnologies, Inc. @ \$37.70 per share	143,122	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)
<b>Balance at September 30, 2007</b>	<b>3,861,042</b>	<b>38,622</b>	<b>—</b>	<b>—</b>	<b>84,672,783</b>	<b>—</b>	<b>(58,407,437)</b>	<b>152,609</b>	<b>26,456,577</b>
Exercise of stock options	10,536	106	—	—	289,921	—	—	—	290,027
Common stock issued at approximately \$18.00 per share, net	386,399	3,867	—	—	6,956,718	—	—	—	6,960,585
Arrowhead's increase in proportionate share of Unidym's equity	—	—	—	—	1,720,962	—	—	—	1,720,962
Common stock issued @ \$27.20 per share to Rice University	5,000	50	—	—	135,950	—	—	—	136,000
Common stock issued @ \$28.30 per share to purchase shares of Unidym, Inc.	7,055	71	—	—	199,929	—	—	—	200,000
Common stock issued @ \$29.50 per share to purchase MASA Energy, LLC	10,505	105	—	—	309,895	—	—	—	310,000
Common stock issued @ \$21.90 per share to Unidym for the acquisition of Nanoconduction	11,416	114	—	—	249,886	—	—	—	250,000
Common stock issued @ \$21.80 per share	1,500	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)
<b>Balance at September 30, 2008</b>	<b>4,293,452</b>	<b>42,950</b>	<b>—</b>	<b>—</b>	<b>97,756,126</b>	<b>—</b>	<b>(85,496,467)</b>	<b>—</b>	<b>12,302,609</b>
Common Stock issued @ \$5.50 per share to Unidym stockholder in exchange for Unidym's shares	205,839	2,059	—	—	1,131,617	—	—	—	1,133,676
Common Stock issued @ \$5.20 per share to TEL Ventures in exchange for Unidym's shares	222,222	2,222	—	—	1,156,111	—	—	—	1,158,333
Reclassification of former Unidym	—	—	—	—	2,000,000	—	—	—	2,000,000

mezzanine debt to equity									
Arrowhead's increase in proportionate share of Calando's equity					2,120,250				2,120,250
Common stock issued @ \$3.00 per share	919,664	9,197			2,749,796				2,758,993
Change in percentage ownership in subsidiary					16,297				16,297
Stock-based compensation					2,676,170				2,676,170
Issuance of 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)
<b>Balance at September 30, 2009</b>	<b>5,641,177</b>	<b>56,428</b>			<b>110,070,327</b>	<b>(300,000)</b>	<b>(104,968,819)</b>		<b>4,857,936</b>
Exercise of stock options	688	7			7,624				7,631
Issuance of Preferred Stock for Subscription in Unidym						300,000			300,000
Issuance of Unidym's common stock to minority shareholders					245,345			54,655	300,000
Common stock issued @ \$6.30 per share	508,343	5,083			3,217,813				3,222,896
Common stock issued @ \$13.12 per share	659,299	6,593			3,692,078				3,698,671
Common Stock issued to Calando stockholders in exchange for Calando's shares	122,000	1,220			(160,667)			159,447	
Common Stock issued to Unidym stockholders in exchange for Unidym's shares	15,318	153			(1,435)			1,282	
Stock-based compensation					1,582,149				1,582,149
Exercise of warrants	225,189	2,251			1,063,600			200	1,066,051
Net loss for the year ended September 30, 2010							(5,774,048)	(1,182,990)	(6,957,038)
<b>Balance at September 30, 2010</b>	<b>7,172,014</b>	<b>71,735</b>			<b>119,716,834</b>		<b>(110,742,867)</b>	<b>(967,406)</b>	<b>8,078,296</b>
Exercise of warrants	8,656	87			43,192				43,279
Exercise of stock options	2,700	27			13,857				13,884
Divestiture of Unidym								254,275	254,275
Issuance of preferred stock in subsidiary					1,618,509				1,618,509
Change in percentage of ownership in subsidiary					(849,707)			849,707	
Stock-based compensation					1,404,640				1,404,640
Common stock issued @ \$3.80 per share	1,458,917	14,574			4,629,110				4,643,684
Issuance of Common Stock for Subscription					900,000	(900,000)			
Net loss for the year ended September 30, 2011							(3,128,885)	(363,514)	(3,492,399)
<b>Balance at September 30, 2011</b>	<b>8,642,286</b>	<b>\$ 86,423</b>		<b>\$ —</b>	<b>\$127,476,435</b>	<b>\$ (900,000)</b>	<b>\$ (113,871,752)</b>	<b>\$ (226,938)</b>	<b>12,564,168</b>
Exercise of stock options	4,583	45			23,788				23,833
Stock-based compensation					251,878				251,878
Common stock issued @ \$3.80 per share	138,158	1,382			523,618				525,000
Common stock issued @ \$3.70 per share	675,000	6,750			2,490,750	(2,497,500)			
Common stock issued @ \$4.00 per share	100,000	1,000			399,000				400,000
Common stock issued under Committed Capital Agreement	68,926	689			(689)				
Common stock issued in acquisition	901,702	9,017			4,138,813				4,147,830
Fractional shares redeemed in reverse stock split	(131)								
Preferred stock issued @ \$1,000 per share			1,015	1	1,014,999	(500,000)			515,000
Exercise of Calando stock options								8,000	8,000
Net loss for the three months ended December 31, 2011							(2,485,505)	(201,294)	(2,686,799)
<b>Balance at December 31, 2011</b>	<b>10,530,524</b>	<b>\$105,306</b>	<b>1,015</b>	<b>\$ 1</b>	<b>\$136,318,592</b>	<b>\$ (3,897,500)</b>	<b>\$ (116,357,257)</b>	<b>\$ (420,232)</b>	<b>15,748,910</b>

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, 2011	Three Months Ended December 31, 2010	May 7, 2003 (Date of inception) to December 31, 2011
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>			
Net income (loss)	\$ (2,686,799)	\$ (1,231,430)	\$ (134,229,081)
Net (income) loss attributable to noncontrolling interests	201,294	(206,252)	18,035,784
Net loss attributable to Arrowhead	(2,485,505)	(1,437,682)	(116,193,297)
(Income) loss from discontinued operations	220	(1,574,994)	42,838,194
Realized and unrealized (gain) loss on investments	58,091	—	(762,954)
(Gain) loss from sale of subsidiary	—	—	(306,344)
(Gain) loss on purchase of Roche Madison	(1,576,107)	—	(1,576,107)
Loss on sale/donation of fixed assets	—	—	127,088
Stock issued as gift	—	—	298,750
Stock issued for professional services	—	—	442,882
Stock issued for in-process research and development	—	—	13,166,347
Change in value of derivatives	66,904	(465,270)	(2,827,609)
Purchased in-process research and development—Nanoconduction	—	—	2,685,208
Stock-based compensation	251,878	370,148	12,591,942
Depreciation and amortization	454,444	68,761	6,114,755
Amortization (accretion) of note discounts, net	3,783	—	(4,155)
Gain on sale of stock in subsidiary	—	—	(2,292,800)
Equity in income (loss) of unconsolidated affiliates	106,527	(48,826)	829,780
Noncontrolling interest	(201,294)	206,252	(18,035,784)
Gain on renegotiation of accrued severance	—	—	(726,500)
Changes in operating assets and liabilities:			
Receivables	172,230	—	109,415
Other receivables	(419,238)	86,419	(2,024,201)
Prepaid expenses	(30,070)	4,080	(172,638)
Other current assets	(1)	96,363	(96,361)
Deposits	—	—	(36,795)
Accounts payable	137,448	1,852,324	343,882
Accrued expenses	408,783	(20,865)	943,323
Accrued severance and other liabilities	346,551	(16,012)	1,320,916
<b>NET CASH USED IN OPERATING ACTIVITIES OF CONTINUING OPERATIONS</b>	<b>(2,705,356)</b>	<b>(879,302)</b>	<b>(63,243,063)</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES OF CONTINUING OPERATIONS:</b>			
Purchase of marketable securities—US Treasury Bills	—	—	(18,575,915)
Purchase of property and equipment	(69,424)	—	(3,635,023)
Purchase of MASA Energy, LLC	—	—	(250,000)
Minority equity investment	—	—	(2,000,000)
Cash paid for interest in Insert	—	—	(10,150,000)
Cash obtained from interest in Insert	—	—	10,529,594
Proceeds from sale of marketable securities—US Treasury Bills	—	—	18,888,265
Proceeds from sale of investments	509,009	—	3,313,609
Proceeds from sale of subsidiaries	—	—	359,375
Proceeds from sale of fixed assets	—	—	142,375
Payment for patents	—	—	(303,440)
Restricted cash	—	—	50,773
Cash transferred in acquisition/divestitures	100,035	—	(1,600,363)
<b>NET CASH PROVIDED BY (USED IN) INVESTING ACTIVITIES OF CONTINUING OPERATIONS</b>	<b>539,620</b>	<b>—</b>	<b>(3,230,750)</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES OF CONTINUING OPERATIONS:</b>			
Principal payments on capital leases	(39,940)	—	(39,940)
Proceeds from issuance of Calando debt	—	—	2,516,467
Proceeds from sale of stock in subsidiary	8,000	—	20,902,100
Proceeds from issuance of common stock and warrants, net	1,463,833	43,279	96,758,613
<b>NET CASH PROVIDED BY FINANCING ACTIVITIES OF CONTINUING OPERATIONS</b>	<b>1,431,893</b>	<b>43,279</b>	<b>120,137,240</b>
<b>Cash flows from discontinued operations:</b>			
Operating cash flows	(420)	(544,335)	(46,003,927)
Investing cash flows	—	—	790,625
Financing cash flows	—	—	(1,677,000)
<b>Net cash provided by (used in) discontinued operations:</b>	<b>(420)</b>	<b>(544,335)</b>	<b>(46,890,302)</b>
<b>NET INCREASE (DECREASE) IN CASH</b>	<b>(734,263)</b>	<b>(1,380,358)</b>	<b>6,773,126</b>
<b>CASH AT BEGINNING OF PERIOD</b>	<b>7,507,389</b>	<b>6,847,162</b>	<b>—</b>

CASH AT END OF PERIOD	<u>\$ 6,773,126</u>	<u>\$ 5,466,804</u>	<u>\$ 6,773,126</u>
Supplementary disclosures:			
Interest paid	\$ 10,300	\$ —	\$ 240,719
Taxes paid	\$ —	\$ —	\$ 742,500

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



## SUPPLEMENTAL NON-CASH TRANSACTIONS

All Arrowhead share amounts have been adjusted to reflect the 1 for 10 reverse stock split effected on November 17, 2011.

On March 23, 2005, Arrowhead purchased 7,375,000 shares of Insert Therapeutics, Inc. common stock from two minority stockholders of Insert for 50,226 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. common stock from minority stockholders of Calando for \$1,928,000 consisting of 20,838 newly issued shares of Arrowhead Common Stock valued at \$1,077,333 plus \$850,667 in cash. The 20,838 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 143,122 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, Carbon Nanotechnologies, Inc., Arrowhead, and others.

On April 23, 2008, Arrowhead purchased 200,000 shares of the Common Stock of Unidym Inc., in exchange for 7,054 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 10,504 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 11,411 shares of Arrowhead stock with an estimated fair market value of \$250,000.

On June 11, 2009, Arrowhead issued 132,462 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 194,444 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 9,149 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 64,227 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 27,777 shares of Common Stock with an estimated fair market value of \$186,111 in exchange for an equal number of Series C-1 Preferred Stock of Unidym, with a minority stockholder of Unidym.

In October and November 2009, Arrowhead issued 15,317 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 114,000 shares of Common Stock with an estimated fair market value of \$706,800 in exchange for 2,850,000 shares of Calando's common stock, with several minority stockholders of Calando. In conjunction with the exchange, Arrowhead also issued 24,000 Warrants to purchase Arrowhead Common Stock in exchange for 600,000 Warrants to purchase Calando common stock.

In February 2010, Arrowhead issued 8,000 shares of Common Stock and 2,400 warrants to purchase Arrowhead Common Stock, at an exercise price of \$5.00, to several Calando shareholders, in exchange for 200,000 shares of Calando common stock and 60,000 warrants to purchase Calando common stock.

In March 2010, a warrant holder exercised 24,788 warrants to purchase Arrowhead Common Stock, in a cashless exercise, whereby Arrowhead issued to the warrant holder 12,870 shares of Arrowhead Common Stock.

In September 2010, Arrowhead issued warrants to purchase 390,625 shares of Arrowhead Common Stock, at an exercise price of \$5.00, to two Calando shareholders, in exchange for 1,562.5 shares of Series A Preferred Stock of Calando Pharmaceuticals, Inc.

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

**Arrowhead Research Corporation**  
**Notes to Consolidated Financial Statements**  
**(unaudited)**

Unless otherwise noted, (1) the term “Arrowhead” refers to Arrowhead Research Corporation, a Delaware corporation, (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 “Subsidiaries” refers collectively to Arrowhead Madison Inc. (“Madison”), Calando Pharmaceuticals, Inc. (“Calando”), Ablaris Therapeutics, Inc. (“Ablaris”), Agonn Systems, Inc. (“Agonn”), and Tego Biosciences Corporation (“Tego”) as well as our former subsidiary, Unidym, Inc. (“Unidym”), which was divested in January 2011, (4) the term “Minority Investments” refers collectively to Nanotope, Inc. (“Nanotope”) and Leonardo Biosystems, Inc. (“Leonardo”) in which the company holds a less than majority ownership position, and (5) the term “Common Stock” refers to Arrowhead’s Common Stock and the term “stockholder(s)” refers to the holders of Arrowhead Common Stock.

**NOTE 1. ORGANIZATION AND BASIS OF PRESENTAION**

*Nature of Business and Going Concern*

Arrowhead Research Corporation is a nanomedicine company developing innovative therapies at the interface of biology and nanoengineering to cure disease and improve human health. Arrowhead has one of the most advanced and broadest technology platforms for therapeutics based on RNA interference (RNAi), including access to five different RNAi delivery systems and the three primary small interfering RNA (siRNA) structures in commercial development for RNAi therapeutics. This broad technology platform enables optimization of siRNA therapeutic candidates for delivery based on siRNA chemistry, tissue type, disease state, target gene and siRNA type and chemistry on a target-by-target basis. Arrowhead is leveraging its in house R&D expertise and capabilities, as well as a broad intellectual property portfolio for RNAi therapeutics, to attract development partnerships with other pharmaceutical and biotech companies committed to bringing RNAi therapeutics to market, as well as continuing the preclinical and clinical development of its own clinical candidates. Arrowhead’s non-RNAi development programs include a unique therapeutic candidate that shows promise for the treatment of obesity and advanced bioactive materials for the regeneration of injured tissues.

Arrowhead operates a wholly-owned subsidiary, Arrowhead Madison, which is focused on the development of RNAi therapeutics, two majority owned subsidiaries, Calando, a leader in delivering small interfering RNAs for gene silencing, and Ablaris, an anti-obesity therapeutics company, and has minority investments in Nanotope, a regenerative medicine company and Leonardo, a multistage drug delivery company.

*Liquidity*

Arrowhead has historically financed its operations through the sale of securities of Arrowhead and its Subsidiaries. Development activities have required significant capital investment since the Company’s inception and we expect our current portfolio companies to continue to require cash investment in fiscal 2012 and beyond to continue development.

At December 31, 2011, the Company had \$6.8 million in cash to fund operations. During the quarter ended December 31, 2011, the Company’s cash position decreased by \$0.7 million. The Company received cash from the issuance of equity of \$1.5 million, cash from the sale of its remaining holdings of stock in Wisepower Co. Ltd of \$0.5 million, and cash collections from revenue of \$0.2 million. The company had cash outflow of \$2.9 million related to its continuing operating activities.

As a result of the sale of Unidym in January 2011, the Company received \$2.5 million in stock of the acquirer, Wisepower Co. Ltd. (“Wisepower”) and a \$2.5 million convertible bond from Wisepower, of which approximately \$200,000 is owed to a third party, who was a minority investor in Unidym. During the quarter ended December 31, 2011, the Company sold its remaining stock in Wisepower. The convertible bond with a face value of \$2.5 million, is convertible into Wisepower common stock as of January 17, 2012 at a price of \$2.00 per share, and can be redeemed on January 17, 2013, and at which time would represent an additional source of liquidity for the company. Based on financings in September and October 2011, the Company has subscriptions receivable of \$3.9 million, which is expected to be collected over the next several months. In September 2011, the Company entered into an equity line facility whereby it has the ability to draw capital up to \$15 million, and expects to draw upon the facility in fiscal 2012, depending on cash needs and market conditions.

On October 21, 2011, Arrowhead completed the acquisition of certain RNAi assets from Hoffmann-La Roche Inc. and F Hoffmann-La Roche Ltd., including intellectual property and a research and development facility based in Madison, Wisconsin. At the time of the acquisition, the facility had 41 employees. Due to the costs associated with the facility, including personnel costs, rent, research and development expenses, and other costs, it is expected that cash expenses will increase significantly in 2012 and beyond as the Company accelerates its preclinical and clinical development efforts.

Based upon the Company's cash on hand, other sources of liquidity, as described above, and based upon the Company's operating plan, the Company's management anticipates that the Company will be able to satisfy the cash requirements of its operations through at least the next twelve months. The Company anticipates that further equity financings, and/or asset sales and license agreements will be necessary to continue to fund operations in the future.

#### *Basis of Presentation and Principles of Consolidation*

The accompanying unaudited consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States ("GAAP") for interim financial information and in accordance with the instructions to Form 10-Q and Article 8 of Regulation S-X. Accordingly, the financial statements do not include all of the information and notes required by GAAP for complete financial statements. In the opinion of management, all adjustments, including normal recurring accruals, considered necessary for a fair presentation have been included. Interim results are not necessarily indicative of results for a full year. The September 30, 2011 balance sheet was derived from audited financial statements, but does not include all disclosures required by GAAP. This financial information should be read in conjunction with the consolidated financial statements and notes included in the Company's Annual Report on Form 10-K for the year ended September 30, 2011.

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. Arrowhead sold its interests in Unidym and Tego in 2011 and 2009, respectively. Unidym and Tego results are included in the Income (Loss) from Discontinued Operations. Income (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 Company's financial statements. Certain reclassifications have been made to prior period financial statements to conform to the current period presentation.

#### *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. Actual results could differ from those estimates.

#### **Recently Issued Accounting Standards**

In June 2010, the FASB issued ASU No. 2010-17, *Revenue Recognition—Milestone Method (Topic 605): Milestone Method of Revenue Recognition*. This ASU codifies the consensus reached in EITF Issue No. 08-9, "Milestone Method of Revenue Recognition." The amendments to the Codification provide guidance on defining a milestone and determining when it may be appropriate to apply the milestone method of revenue recognition for research or development transactions. Consideration that is contingent on achievement of a milestone in its entirety may be recognized as revenue in the period in which the milestone is achieved only if the milestone is judged to meet certain criteria to be considered substantive. Milestones should be considered substantive in their entirety and may not be bifurcated. An arrangement may contain both substantive and nonsubstantive milestones, and each milestone should be evaluated individually to determine if it is substantive. This guidance was adopted effective October 1, 2010. The adoption of this guidance did not have a material impact on our consolidated financial statements.

In January 2010, the FASB issued Accounting Standards Update ASU No. 2010-06, "Fair Value Measurements and Disclosures (Topic 820) – Improving Disclosures about Fair Value Measurements". This guidance requires new disclosures related to recurring and nonrecurring fair value measurements. The guidance requires disclosure of transfers of assets and liabilities between Level 1 and Level 2 of the fair value measurement hierarchy, including the reasons and the timing of the transfers and information on purchases, sales, issuance, and settlements on a gross basis in the reconciliation of the assets and liabilities measured under Level 3 of the fair value measurement hierarchy. The adoption of this guidance is effective for interim and annual reporting periods beginning after December 15, 2009. We have adopted this guidance in the financial statements presented herein, which did not have a material impact on our consolidated financial position or results of operations.

In October 2009, the FASB issued ASU 2009-13, which amends ASC Topic 605, *Revenue Recognition*. This new accounting guidance relates to the revenue recognition of multiple element arrangements. The new guidance states that, if vendor specific objective evidence or third party evidence for deliverables in an arrangement cannot be determined, companies will be required to develop a best estimate of the selling price for separate deliverables and allocate arrangement consideration using the relative selling price method. We adopted this guidance as of January 1, 2010 on a prospective basis. The adoption of this guidance did not have a material impact on our consolidated financial statements.

In October 2009, the FASB issued authoritative guidance on multiple-deliverable revenue arrangements, ASC 605-25. This 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 in fiscal year 2011. We have adopted this guidance in the financial statements presented herein, which did not impact our consolidated financial position or results of operations.

## NOTE 2. ACQUISITION

On October 21, 2011, the Company entered into a Stock and Asset Purchase Agreement (the "RNAi Purchase Agreement") with Hoffmann-La Roche Inc. and F Hoffmann-La Roche Ltd (collectively, "Roche"), pursuant to which the Company purchased from Roche (i) all of the outstanding common stock of Roche Madison Inc. ("Roche Madison") and (ii) the intellectual property rights then held by Roche related to its RNAi business and identified in the RNAi Purchase Agreement (the "Transaction"). In consideration for the purchase of Roche Madison and the Roche RNAi assets, the Company issued to Roche a promissory note with a principal value of \$50,000 and 901,702 shares of Common Stock (as adjusted for a subsequent reverse stock split). Additionally, the Company agreed that, subject to stockholder approval under the NASDAQ Marketplace Rules, the Company would issue an additional 146,562 (as adjusted for a subsequent reverse stock split) shares of Common Stock, plus a number of additional shares equal to 9.9% of the shares of Common Stock (or common stock equivalents) sold by the Company in capital raising transactions within one year from the closing, but only with respect to the first \$3,118,615 of gross offering proceeds (the "Top-up Shares"). If the Company is prohibited from issuing the Top-up Shares due to NASDAQ Marketplace Rules, then the Company must instead pay the cash value of the Top-up Shares, based on the then-current fair value of such shares.

Pursuant to the RNAi Purchase Agreement, Roche has a right of first negotiation on certain product candidates developed by the Company and its affiliates relating to the purchased assets. If the Company proposes to out-license, or enters into substantive negotiations to out-license, any Clinical Candidate or Existing Candidate (as such terms are defined in the RNAi Purchase Agreement), the Company must give notice of the Candidate it proposes to out-license and negotiate exclusively and in good faith with Roche for a period of time regarding the applicable out-license. This right of first negotiation applies to all Existing Candidates and the first five Clinical Candidates for which the Company delivers notice to Roche and subsequently enters into an out-license.

In addition to the consideration paid by the Company at the closing of the Transaction, the Company is obligated to make certain royalty and milestone payments to Roche upon the occurrence of certain events. For certain product candidates that are developed by the Company or its affiliates and that are covered by a valid claim by the patent rights transferred in the Transaction for which the Company and Roche do not enter into a licensing arrangement, the Company will be obligated to pay a 3% royalty on Net Sales (as defined in the RNAi Purchase Agreement), provided that the royalty rate may be reduced or offset in certain circumstances. The obligation to pay royalties on such candidates will last until the later of (i) the expiration of the last to expire patent right related to such product candidate that was transferred in the Transaction and (ii) ten years after the first commercial sale of such product candidate.

The Company will also be obligated to make cash payments to Roche upon the achievement of various milestones, including the first regulatory approval of an Existing Candidate in certain jurisdictions and upon certain annual sales milestones for Existing Candidates that may receive regulatory approval. The potential payments range from \$2,500,000 to \$6,000,000 per milestone.

The following table summarizes the estimated fair values at the date of acquisition:

Current assets	\$ 432,709
Property and equipment	7,215,206
Intangible assets	1,090,000
Other noncurrent assets	6,264
Current liabilities	(414,122)
Noncurrent liabilities	(1,570,072)
Gain on purchase	(1,576,106)
Total purchase consideration	<u>\$ 5,183,879</u>

The purchase consideration was composed of the following:

Promissory note due Roche	\$ 50,000
Shares issued to Roche	4,147,830
Shares to be issued to Roche	674,188
Top-up shares	311,861
Total purchase consideration	<u>\$ 5,183,879</u>

### ***In-Process Research & Development (IPR&D)***

Intangible assets include IPR&D, which represents the estimated fair value assigned to research and development projects acquired in a purchased business combination, which at the time of acquisition have not reached technological feasibility and had no alternative future use. IPR&D assets acquired in a business combination are capitalized as indefinite-lived intangible assets. These assets remain indefinite-lived until the completion or abandonment of the associated research and development efforts.

### ***Impairment of Indefinite-Lived IPR&D***

We review amounts capitalized as in-process research and development for impairment at least annually in the fourth quarter, and whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. In the event the carrying value of the assets are not expected to be recovered, the assets are written down to their estimated fair values. We continue to test our indefinite-lived IPR&D assets for potential impairment until the projects are completed or abandoned.

**NOTE 3. INVESTMENT IN SUBSIDIARIES***Calando Pharmaceuticals, Inc. (formerly known as Insert Therapeutics, Inc. "Insert")*

Calando is a clinical stage RNAi delivery company. 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 equity and debt financings. As a condition of the merger, the Preferred Stock of each of Calando and Insert was converted into common stock and the loans were converted to equity. As a result of the merger, shares of Insert common stock were 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. 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. The remaining Note is due November 26, 2013; see Note 4 for further information.

In fiscal 2010, Arrowhead issued 122,000 shares of its Common Stock in exchange for shares of Calando common stock, with several minority stockholders of Calando. In conjunction with this exchange, Arrowhead also issued 26,400 warrants to purchase Arrowhead Common Stock in exchange for warrants to purchase Calando common stock.

In January 2011, Arrowhead invested \$9.1 million, through a cash investment of \$1.0 million and the conversion of \$8.1 million intercompany debt, acquiring newly issued Calando Series B and Series C preferred stock.

As of December 31, 2011, Calando owed to Arrowhead \$1,252,796 under a series of 10% simple interest notes and advances. It is expected that these loans will either be repaid or converted to equity in the future. The balance of the notes and advances is eliminated in consolidation.

As of December 31, 2011, Arrowhead owned 79% of the outstanding shares of Calando and 74% on a fully diluted basis.

*Ablaris Therapeutics, Inc.*

Ablaris was formed and began operations in the first quarter of fiscal 2011 based on the license of certain anti-obesity technology developed at the MD Anderson Cancer Center at the University of Texas. During the year ended September 30, 2011, Ablaris raised \$2.9 million in cash, of which \$1.3 million was invested by Arrowhead and \$1.6 million was invested by outside investors, through the issuance of Series A Preferred stock.

As of December 31, 2011, Arrowhead owned 64% of the outstanding shares of Ablaris and 64% on a fully diluted basis.

*Nanotope, Inc.*

Nanotope is developing advanced nanomaterials for the treatment of spinal cord injuries, cartilage regeneration and wound healing. As of December 31, 2011, Arrowhead owned 23% of the outstanding shares of Nanotope, and 19% on a fully diluted basis. Arrowhead accounts for its investment in Nanotope using the equity method of accounting. As of December 31, 2011, Nanotope owed to Arrowhead \$1.6 million, which Arrowhead has included in other receivables. It is expected that this indebtedness will be repaid or converted to equity.

Summarized financial information for Nanotope, Inc. is as follows:

	<u>December 31, 2011</u>	<u>September 30, 2011</u>
Current assets	\$ 63,000	\$ 21,000
Non-current assets	74,000	85,000
Liabilities	1,749,000	1,255,000
Equity	(1,612,000)	(1,149,000)
	<u>For the three months ended December 31, 2011</u>	<u>For the three months ended December 31, 2010</u>
Revenue	\$ —	\$ 495,000
Operating expenses	438,000	275,000
Net Income (Loss)	(463,000)	212,000

	For the three months ended December 31, 2011	For the three months ended December 31, 2010
Cash flows provided by (used in) operating activities	\$ (318,000)	\$ 294,000
Cash flows used in investing activities	(5,000)	(15,000)
Cash flows provided by financing activities	358,000	—

*Leonardo Biosystems, Inc.*

Leonardo is developing a drug-delivery platform technology based on novel methods of designing porous silicon microparticles that selectively accumulate in tumor vasculature. Arrowhead accounts for its investment in Leonardo using the cost method of accounting. As of December 31, 2011, Leonardo owed to Arrowhead \$456,000, included in other receivables, which is expected to be repaid or converted to equity. As of December 31, 2011, Arrowhead's ownership interest in Leonardo was 5%.

**NOTE 4. DISCONTINUED OPERATIONS**

*Unidym, Inc.*

Founded by Arrowhead in 2005, Unidym is developing electronic applications of carbon nanotubes. In line with the Company's strategy to focus on nanomedicine, Arrowhead sold its ownership interest in Unidym to Wisepower in January 2011. The consideration included \$5.0 million in Wisepower stock and bonds, a percentage of certain revenue streams, as well as contingent payments up to \$140 million based on revenue milestones over a ten-year period.

In conjunction with the disposition of Unidym, the gain on the sale and the results of historical operations are recorded as discontinued operations in the Company's Statements of Operations. Additionally, the cash flows from Unidym are reflected separately as cash flows from discontinued operations in the Company's Consolidated Statement of Cash Flows. Potential future cash flows as discussed above will also be reflected as a part of cash flows from discontinued operations.

*Tego Biosciences, Inc.*

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.

In December 2009, Tego completed the sale of all of its intellectual property assets to Luna Innovations, Inc. The consideration included an upfront purchase price of \$350,000 and reimbursements of patent and license expenses of \$80,000, as well as contingent payments based on milestones and royalties for each fullerene product developed by Luna and covered by Tego intellectual property. Due to the sale of substantially all of Tego's assets, the operations of Tego ceased and the gain on the sale and the results of historical operations are 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 as discussed above will be reflected as a part of cash flows from discontinued operations in the Company's Consolidated Statements 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. 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. The remaining Note had a 10% interest rate, matured on November 26, 2010, and was renegotiated and extended until November 26, 2013. The terms of the new note include a 10% interest rate and require two times principal payment upon certain events as defined in the note and at maturity.

**NOTE 6. STOCKHOLDERS' EQUITY**

At December 31, 2011, 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 \$0.01, and 5,000,000 shares of Preferred Stock, par value \$0.001. On November 17, 2011, the Company effected a reverse stock split in the ratio of 1 for 10, all share and per share data herein reflects an adjustment for the reverse stock split.

At December 31, 2011, 10,530,524 shares of Common Stock were outstanding, and 1,015 shares of Preferred Stock were outstanding. At December 31, 2011, 153,200 shares and 965,860 shares were reserved for issuance upon exercise of options granted under Arrowhead's 2000 Stock Option Plan and 2004 Equity Incentive Plan, respectively.

On September 30, 2011, the Company sold 1,458,917 shares of Common Stock at a price of \$3.80 per share. Cash proceeds received in fiscal 2011 were \$4.6 million, cash proceeds in the first three months of fiscal 2012 were \$1.4 million, and the balance is expected to be received in 2012. On October 4, 2011, the Company completed a second closing to the private placement stock issuance of September 30, 2011, upon which the Company sold 138,158 shares of Common Stock at a price of \$3.80 per share. Cash proceeds were \$525,000.

On October 20, 2011, the Company and Lincoln Park Capital Fund, LLC, an Illinois limited liability company (“LPC”) entered into a \$15 million purchase agreement (the “Purchase Agreement”), together with a registration rights agreement, whereby LPC agreed to purchase up to \$15 million of Common Stock, subject to certain limitations, from time to time during the three-year term of the Purchase Agreement. Additionally, the Company agreed to file a registration statement with the U.S. Securities & Exchange Commission covering the resale of the shares that may be issued to LPC under the Purchase Agreement. After the SEC declares effective the registration statement related to the resale of such shares, the Company will have the right, in its sole discretion, over a 36-month period to sell up to \$15 million of Common Stock (subject to certain limitations) to LPC, depending on certain conditions as set forth in the Purchase Agreement.

On October 21, 2011 and October 24, 2011, the Company entered into Subscription Agreements with certain accredited investors (the “Series A Purchasers”), pursuant to which the Company agreed to issue and sell an aggregate of 1,015 shares of Series A Preferred Convertible Stock, \$0.001 par value per share, at a purchase price of \$1,000 per share. The aggregate purchase price paid by the Series A Purchasers for the shares of Series A Preferred is \$1,015,000. Upon receipt of stockholder approval, each share of Series A Preferred will automatically convert into 263,158 shares of Common Stock, subject to a 19.99% beneficial ownership conversion limit. The Company intends to seek stockholder approval for the conversion of the Series A Preferred Stock at the 2012 Annual Meeting.

Set forth below is a summary of the respective rights, preferences, and privileges of and the restrictions on the Series A Shares.

*Summary of Rights, Preferences, and Privileges of Series A Shares*

*Ranking.* The Series A Shares will, with respect to rights upon liquidation, dissolution, or winding up of the Company, rank senior to the Company’s common stock and any class or series of Company capital stock hereafter created which does not provide that such shares of capital stock rank on parity with or senior to the Series A Shares as to rights on liquidation, winding-up and dissolution of the Company.

*Conversion Rights.* Each Series A Share will be convertible, at the option of the holders thereof, into an a number of shares of the Company’s common stock equal to \$1,000 divided by \$3.80.

Holders may not convert any Series A Shares into shares of the Company’s common stock if, after giving effect to such conversion, such holder would beneficially own in excess of 19.99% of the number of shares of the Company’s common stock outstanding immediately after giving effect to such conversion.

*Dividends.* Holders of Series A Shares shall be entitled to receive a cumulative dividend of 10% of the face amount of the Series A Shares per annum, which will accrue semi-annually, from the date of issue through the date the shares are eligible for conversion pursuant to the Series A Subscription Agreement, and will be paid on June 30 and December 31 of each year in preference to any dividends to be paid on the Common Stock or any junior securities.

*Liquidation Preference.* In the event of any liquidation, dissolution or winding up of the Company, the holders of Series A Shares shall be entitled to receive, prior and in preference to any distribution of any of the assets or surplus funds of the Company to the holders of the Common Stock by reason of their ownership thereof, an amount equal to \$1,000 per each Series A Share then held by holders of Series A Shares. If upon the occurrence of such event, the assets and funds distributed among the holders of the Series A Shares shall be insufficient to permit the payment of the full preferential amount, then the entire assets and funds of the Company legally available for distribution shall be distributed ratably among the holders of the Series A Shares in proportion to the preferential amount each such holder is otherwise entitled to receive.

*Voting Rights.* The Series A Shares do not have any voting rights, except with respect to the protective provisions discussed below.

*Protective Provisions.* So long as any shares of Series A Shares are outstanding, in addition to any other vote or approval required under the Company’s Certificate of Incorporation or By-laws, as amended, the Company will not, without the consent of the holders of a majority of the outstanding shares of Series A shares, either directly or by amendment, merger, consolidation, or otherwise: (i) amend, alter, or repeal any provision of the Certificate of Incorporation or Bylaws in a manner adverse to the Series A Shares or (ii) increase the authorized number of shares of Series A Shares or issue additional shares of Series A Shares, except as may be necessary to pay dividends on the outstanding shares of Series A Shares.

On October 21, 2011, the Company entered into a Subscription Agreement with a single accredited investor, pursuant to which the Company agreed to issue and sell an aggregate of 675,000 shares of Common Stock, \$0.01 par value per share, at a purchase price of \$3.70 per share. The aggregate purchase price to be paid by the purchaser for the shares of Common Stock was \$2,497,500, and is expected to be received in 2012.

As of November 17, 2011, the Company effected a 1 for 10 reverse stock split. As a result of the reverse stock split, each ten shares of the Company's Common Stock issued and outstanding immediately prior to the reverse split was combined into one share of Common Stock. Also, as a result of the Reverse Stock Split, the per share exercise price of, and the number of shares of Common Stock underlying Company stock options, warrants, Series A Preferred and any Common Stock based equity grants outstanding immediately prior to the reverse stock split was proportionally adjusted, based on the one-for-ten split ratio, in accordance with the terms of such options, warrants or other Common Stock based equity grants as the case may be. No fractional shares of Common Stock were issued in connection with the reverse split. Stockholders received a cash payment in lieu of any fractional shares. All share and per share amounts in these financial statements have been retrospectively adjusted to reflect the reverse stock split.

The following table summarizes information about warrants outstanding at December 31, 2011:

Exercise prices	Number of Warrants	Remaining Life in Years
\$70.60	94,897	5.4
\$20.00	386,400	1.6
\$5.00	1,163,033	2.9
\$5.10	461,024	2.9
\$3.70	329,650	4.0
Total warrants outstanding	<u>2,435,004</u>	

#### NOTE 7. LEASES

In April 2011, the Company's corporate headquarters lease expired, and the Company did not exercise its renewal option. The company is currently leasing temporary offices. The temporary offices are expected to be utilized for several months at a rental rate of approximately \$8,000 per month. The current rental agreement is on a month-to-month basis and there were no long-term commitments at December 31, 2011. On October 21, 2011, Arrowhead acquired the RNAi operations from Roche, including its research facility in Madison, Wisconsin. Its lease expires on February 28, 2019; monthly rental expense is approximately \$20,000, and monthly payments under a capitalized lease are approximately \$21,000. Other monthly rental expenses include common area maintenance, real estate taxes and utilities, which increase total monthly expenditures to approximately \$72,000.

Facility and equipment rent expense for the three months ended December 31, 2011 and 2010 was \$90,000 and \$41,000, respectively. From inception to date, rent expense was \$3,735,485. Rent expense related to Unidym, until its disposal in January 2011, is included as a part of income/loss from discontinued operations.

As of December 31, 2011, future minimum lease payments under capitalized leases are as follows:

2012	\$ 256,846
2013	256,846
2014	256,846
2015	256,846
2016	256,846
2017 and thereafter	556,499
Less interest	(186,804)
Principal	1,653,925
Less current portion	209,555
Noncurrent portion	<u>\$1,444,370</u>

As of December 31, 2011, future minimum lease payments under operating leases are as follows:

2012	\$225,954
2013	231,581
2014	237,242
2015	243,252
2016	249,333
2017 and thereafter	561,077
Total	<u>\$1,738,439</u>



**NOTE 8. STOCK-BASED COMPENSATION**

Arrowhead has two plans that provide for equity-based compensation. Under the 2000 Stock Option Plan, 153,200 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 965,860 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, 2011, there were options granted and outstanding to purchase 153,200 and 936,813 shares of Common Stock under the 2000 Stock Option Plan and the 2004 Equity Incentive Plan, respectively. During the three months ended December 31, 2011, 370,500 options were granted under the 2004 Equity Incentive Plan. All share and per share data in this footnote has been adjusted to reflect the 1 for 10 reverse stock split effected on November 17, 2011.

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, 2010	812,334	\$ 10.62		
Granted	20,000	5.86		
Cancelled	(100,539)	21.32		
Exercised	(2,699)	5.10		
Balance At September 30, 2011	729,096	9.03		
Granted	370,500	4.67		
Cancelled	(5,000)	29.10		
Exercised	(4,583)	5.20		
Balance At December 31, 2011	1,090,013	\$ 7.46	7.8 years	\$ —
Exercisable At December 31, 2011	608,400	\$ 8.80	6.5 years	\$ —

Stock-based compensation expense for the three months ended December 31, 2011 and 2010 was \$251,878 and \$397,667, respectively. For the three months ended December 31, 2011 and 2010, \$0 and \$27,519, respectively, of this expense is included in discontinued 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. The result of the loss creates a timing difference, resulting in a deferred tax asset, which is fully reserved by a valuation allowance.

The fair value of the options granted by Arrowhead for the three months ended December 31, 2011 is estimated at \$1,289,000. The aggregate fair value of options granted by Calando during the three months ended December 31, 2011 is estimated at \$33,690. No Arrowhead or Calando options were issued during the three months ended December 31, 2010.

The intrinsic value of the options exercised during the three months ended December 31, 2011 was \$0; no options were exercised during the three months ended December 31, 2010.

As of December 31, 2011, the pre-tax compensation expense for all unvested stock options at Arrowhead in the amount of approximately \$2,071,985 will be recognized in our results of operations over a weighted average period of 3.3 years. As of December 31, 2011, the pre-tax compensation expense for all unvested stock options at Calando in the amount of approximately \$92,625 will be recognized in our results of operations over a weighted average period of 3.0 years.

The fair value of each stock option award is estimated on the date of grant using the Black-Scholes option pricing model. 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. The determination of the fair value of each stock option is affected by our stock price on the date of grant, as well as assumptions regarding a number of highly complex and subjective variables. 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. The assumptions used to value stock options are as follows:

	Three Months Ended December 31,	
	2011	2010
Dividend yield	—	—
Risk-free interest rate	0.9% to 1.7%	N/A
Volatility	100%	N/A
Expected life (in years)	6.25	N/A
Weighted average grant date fair value per share of options granted	\$3.68	N/A

The dividend yield is zero as the Company currently does not pay a dividend.

The risk-free interest rate is based on the U.S. Treasury bond.

Volatility is estimated based on volatility average of the Company's Common Stock price.

#### NOTE 9. 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.

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, 2011 and September 30, 2011 for assets and liabilities measured at fair value on a recurring basis:

December 31, 2011:

	Level I	Level II	Level III	Total
Cash and cash equivalents	\$6,773,126	\$ —	\$ —	\$6,773,126
Marketable securities	\$ 71,828	\$ —	\$ —	\$ 71,828
Derivative assets	\$ —	\$ —	\$ 160,125	\$ 160,125
Derivative liabilities	\$ —	\$ —	\$1,010,883	\$1,010,883

September 30, 2011:

	Level I	Level II	Level III	Total
Cash and cash equivalents	\$7,507,389	\$ —	\$ —	\$7,507,389
Marketable securities	\$ 634,585	\$ —	\$ —	\$ 634,585
Derivative assets	\$ —	\$ —	\$ 161,125	\$ 161,125
Derivative liabilities	\$ —	\$ —	\$ 944,980	\$ 944,980

As part of the sale of Unidym in January 2011, Arrowhead received a bond from Wisepower in the face amount of \$2.5 million. The bond is convertible to Wisepower common stock as of January 17, 2012 at a price of \$2.00 per share. The conversion feature is subject to derivative accounting as prescribed under ASC 815. Accordingly, the fair value of the conversion feature on the date of issuance was estimated using an option pricing model and recorded on the Company's consolidated balance sheet as a derivative asset. The fair value of the conversion feature is estimated at the end of each reporting period and the change in the fair value of the conversion feature is recorded as a nonoperating gain/loss as change in value of derivatives in Company's Consolidated Statement of Operations. A portion of the bond is owed to a third party, as such the company records a derivative asset for the entire conversion feature and records a derivative liability for the portion related to the third party. The original fair value of the derivative relating to the third party was \$26,310; the fair value at September 30, 2011 was \$6,854, and the fair value at December 31, 2011 was \$6,811. The loss from the change in value of the derivative asset, net of the derivative liability, for the three months ended December 31, 2011 was \$957, and is reflected in the change in value of derivatives in the Company's consolidated statement of operations.

During the three months ended December 31, 2011, the Company recorded a loss from the change in fair value of the derivative asset, net of \$957. The assumptions used in valuing the derivative asset as of December 31, 2011 were as follows:

Risk free interest rate	0.25%
Expected life	2.0 Years
Dividend yield	none
Volatility	72%

The following is a reconciliation of the derivative asset for the three months ended December 31, 2011:

Value at October 1, 2011	\$ 161,125
Receipt of instruments	—
Decrease in value	(1,000)
Net settlements	—
Value at December 31, 2011	<u>\$ 160,125</u>

As part of the equity financing on June 17, 2010, Arrowhead issued warrants to acquire up to 329,649 shares of Common Stock (the “Warrants”) which contain a mechanism to adjust the strike price. Under certain provisions of the Warrants, if, during the term of the Warrants, the Company issues Common Stock at a price lower than the exercise price of the Warrants, the exercise price of the Warrants would be reduced to the amount equal to the issuance price of the Common Stock. Because the Warrants have this feature, the Warrants are subject to derivative accounting as prescribed under ASC 815. Accordingly, the fair value of the Warrants on the date of issuance was estimated using an option pricing model and recorded on the Company’s consolidated balance sheet as a derivative liability. The fair value of the Warrants is estimated at the end of each reporting period and the change in the fair value of the Warrants is recorded as a nonoperating gain or loss in the Company’s consolidated statement of operations. During the three months ended December 31, 2011, the Company recorded a loss from the change in fair value of the derivative liability of \$67,836. The assumptions used in valuing the derivative liability as of December 31, 2011 were as follows:

Risk free interest rate	0.8%
Expected life	4.0 Years
Dividend yield	none
Volatility	100%

The following is a reconciliation of the derivative liability related to these warrants through December 31, 2011:

Value at September 30, 2011	\$ 907,233
Receipt of instruments	—
Change in value	67,836
Net settlements	—
Value at September 30, 2011	<u>\$ 975,069</u>

In conjunction with the financing of Ablaris during the year ended September 30, 2011, Arrowhead sold exchange rights to certain investors whereby the investors have the right to exchange their shares of Ablaris for a prescribed number of Arrowhead shares based upon a predefined ratio. The exchange rights have a seven-year term. During the first year, the exchange right allows the holder to exchange one Ablaris share for 0.06 Arrowhead shares (as adjusted for a subsequent reverse stock split). This ratio declines to 0.04 in the second year, 0.03 in the third year and 0.02 in the fourth year. In the fifth year and beyond the exchange ratio is 0.01. Exchange rights for 675,000 Ablaris shares were sold during the year ended September 30, 2011, and remain outstanding at December 31, 2011. The exchange rights are subject to derivative accounting as prescribed under ASC 815. Accordingly, the fair value of the exchange rights on the date of issuance was estimated using an option pricing model and recorded on the Company’s consolidated balance sheet as a derivative liability. The fair value of the exchange rights is estimated at the end of each reporting period and the change in the fair value of the exchange rights is recorded as a nonoperating gain or loss in the Company’s Consolidated Statement of Operations. During the three months ended December 31, 2011, the Company recorded a gain from the change in fair value of the derivative liability of \$29,875. The assumptions used in valuing the derivative liability as of December 31, 2011 were as follows:

Risk free interest rate	0.8%
Expected life	6.0 Years
Dividend yield	none
Volatility	100%

The following is a reconciliation of the derivative liability related to these exchange rights through December 31, 2011:

Value at September 30, 2011	\$ 30,892
Receipt of instruments	—
Change in value	(1,889)
Net settlements	—
Value at December 31, 2011	<u>\$ 29,003</u>

The carrying amounts of the Company's other financial instruments, which include accounts receivable, accounts payable, and accrued expenses approximate their respective fair values due to the relatively short-term nature of these instruments.

#### **NOTE 10. RELATED PARTY TRANSACTIONS**

Dr. Anzalone owns 1,395,900 shares of Nanotope, Inc. common stock or approximately 14.2% of Nanotope's outstanding voting securities. Dr. Anzalone does not hold options, warrants or any other rights to acquire securities of Nanotope. Dr. Anzalone 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 Dr. Anzalone. 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.

As part of a private placement equity offering on December 11, 2009, Dr. Anzalone, Arrowhead's President and CEO, personally invested \$100,000.

In August 2010, the Company retained Mr. Vincent Anzalone, the brother of Arrowhead's Chief Executive Officer, as a consultant for the Company, focusing on business development and market analysis, with a monthly remuneration of \$10,000 per month. Mr. Vincent Anzalone was paid \$20,000 during the fiscal year ended September 30, 2010, \$120,000 during the fiscal year ended September 30, 2011, and \$30,000 during the three months ended December 31, 2011.

#### **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 disclaim any intent 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 nanomedicine company developing innovative therapies at the interface of biology and nanoengineering to cure disease and improve human health. Arrowhead has one of the most advanced and broadest technology platforms for therapeutics based on RNA interference (RNAi), including access to five different RNAi delivery systems and the three primary small interfering RNA (siRNA) structures in commercial development for RNAi therapeutics. This broad technology platform enables optimization of siRNA therapeutic candidates for delivery based on siRNA chemistry, tissue type, disease state, target gene and siRNA type and chemistry on a target-by-target basis. Arrowhead is leveraging its in house R&D expertise and capabilities, as

well as a broad intellectual property portfolio for RNAi therapeutics, to attract development partnerships with other pharmaceutical and biotech companies committed to bringing RNAi therapeutics to market, as well as continuing the preclinical and clinical development of its own clinical candidates. Arrowhead's non-RNAi development programs include a unique therapeutic candidate that shows promise for the treatment of obesity and advanced bioactive materials for the regeneration of injured tissues.

Arrowhead was originally incorporated in South Dakota in 1989, and was reincorporated in Delaware in 2000. The Company's principal executive offices are located at 225 South Lake Avenue, Suite 300, Pasadena, California 91101, and its telephone number is (626) 304-3400.

### **Liquidity and Capital Resources**

As a development stage company, Arrowhead has historically financed its operations through the sale of securities of Arrowhead and its Subsidiaries. Research and development activities have required significant capital investment since the Company's inception, and are expected to continue to require significant cash investment in 2012.

At December 31, 2011, the Company had cash on hand of approximately \$6.8 million. Cash and cash equivalents decreased during the first three months of fiscal 2012 by \$734,000 from \$7.5 million at September 30, 2011.

Cash used in operating activities was \$2.7 million, which represents the on-going expenses for research and development activities, business development, and corporate overhead. Cash outlays related to research and development activities were \$1.7 million, and cash outlays for general and administrative purposes were \$1.4 million. Cash expenses were partially offset by cash received from revenues of \$0.2 million.

Cash provided by investing activities was \$0.5 million, primarily related to cash received from the sale of investments.

Cash provided by financing activities of \$1.4 million was primarily related to cash received from equity investments from the sale of Common Stock.

On October 21, 2011, Arrowhead completed the acquisition of certain RNAi assets from Hoffmann-La Roche Inc. and F Hoffmann-La Roche Ltd., including intellectual property and a research and development facility based in Madison, Wisconsin. At the time of the acquisition, the facility had 41 employees. Due to the costs associated with the facility, including personnel costs, rent, research and development expenses, and other costs, expenses during the three months ended December 31, 2011 increased, and it is expected that increased cash expenses will continue in 2012 and beyond as the Company accelerates its preclinical and clinical development efforts.

### **Recent Financing Activity:**

On September 30, 2011, the Company entered into Subscription Agreements with certain accredited investors pursuant to which the Company agreed to issue and sell an aggregate of 1,458,917 shares of Common Stock, \$0.01 par value per share, at a purchase price of \$3.80 per share. The aggregate purchase price paid by the Purchasers for the shares of Common Stock was \$5,543,885, which includes \$193,885 of fees paid in stock. The closing of the sale of the shares occurred on September 30, 2011. Additionally, on October 5, 2011, a second closing under the same terms occurred resulting in the issuance of 138,157 additional shares of Common Stock for proceeds of \$525,000.

On October 20, 2011, the Company and Lincoln Park Capital Fund, LLC, an Illinois limited liability company ("LPC") entered into a \$15 million purchase agreement (the "Purchase Agreement"), together with a registration rights agreement, whereby LPC agreed to purchase up to \$15 million of Common Stock, subject to certain limitations, from time to time during the three-year term of the Purchase Agreement. Additionally, the Company agreed to file a registration statement with the U.S. Securities & Exchange Commission ("SEC") covering the resale of the shares that have been or may be issued to LPC under the Purchase Agreement. Upon the receipt of stockholder approval of the issuance of shares pursuant to the Purchase Agreement, the Company will have the right, in its sole discretion, over a 36-month period to sell up to \$15 million of Common Stock (subject to certain limitations) to LPC, depending on certain conditions as set forth in the Purchase Agreement.

On October 21, 2011 and October 24, 2011, the Company entered into Subscription Agreements with certain accredited investors, pursuant to which the Company agreed to issue and sell an aggregate of 1,015 shares of Series A Preferred Convertible Stock, \$0.001 par value per share, at a purchase price of \$1,000 per share. The aggregate purchase price paid by the Series A Purchasers for the shares of Series A Preferred is \$1,015,000. Upon receipt of stockholder approval, each share of Series A Preferred will automatically convert into 263.158 shares of Common Stock, subject to a 19.99% beneficial ownership conversion limit. The Company intends to seek stockholder approval for the conversion of the Series A Preferred Stock at the 2012 Annual Meeting.

On October 21, 2011, the Company entered into a Subscription Agreement with a single accredited investor, pursuant to which the Company agreed to issue and sell an aggregate of 675,000 shares of Common Stock, \$0.01 par value per share, at a purchase price of \$3.70 per share. The aggregate purchase price for the shares of Common Stock was \$2,497,500.

Based upon the Company's cash on hand and operating plan at December 31, 2011, collections from financings during the three months ended December 31, 2011 and other sources of liquidity, as described above, the Company's management anticipates that the Company will be able to satisfy the cash requirements of its operations through at least the next twelve months. However, the Company anticipates that further equity financings, and/or asset sales and license agreements will be necessary to continue to fund operations in the future.

### ***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 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.

#### *Stock Compensation Expense*

We recognize stock-based compensation expense based on the grant date fair value using the Black-Scholes options pricing model, which requires us to make assumptions regarding certain variables including the risk-free interest rate, expected stock price volatility, and the expected life of the award. The assumptions used in calculating stock-based compensation expense represent management's best estimates, but these estimates involve inherent uncertainties, and if factors change or the Company used different assumptions, its stock-based compensation expense could be materially different in the future.

#### *Derivative Financial Instruments*

During the normal course of business, and associated with certain equity financings, the Company may issue warrants or become party to other agreements which require the use of derivative accounting treatment under GAAP. The company does not enter into derivative contracts for speculative purposes. We account for derivatives under the provisions of ASC Topic 815, which generally requires that derivative assets and liabilities be measured at fair value each reporting period with changes in fair value reflected as a current period income or loss, unless the derivatives qualify for hedge accounting treatment. The valuation of such derivatives are made using option pricing models which require various assumptions, some of which may be subjective, including but not limited to the Company's stock price, the expected life of the instrument, a risk-free interest rate, and expected stock price volatility. Subjective assumptions are estimated by management, but other reasonable assumptions could provide differing results.

#### *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 technology licenses, collaborative research and development arrangements, research grants and product sales. 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.

### **Overview for the three months ended December 31, 2011**

During the three months ended December 31, 2011, the Company acquired Roche Madison, Inc. and other intangible assets from Roche. The acquisition included a laboratory research facility in Madison, Wisconsin comprising over 21,000 square feet. Roche Madison, Inc. employed 41 employees at the time of the acquisition. Due to the significant new costs associated with the facility, its people and research programs, salary costs, general and administrative costs and research and development costs increased significantly during the quarter ended December 31, 2011. During future quarters in fiscal 2012, we expect even greater increases in costs, as compared to prior years, as research and development efforts are accelerated. Because the acquisition closed on October 21, 2011, the current quarter includes approximately nine weeks of activity and expenses related to the Madison, Wisconsin facility.

## Results of Operations

The Company had consolidated loss attributable to Arrowhead of \$2,485,505 for the three months ended December 31, 2011, compared to a consolidated loss attributable to Arrowhead of \$1,437,682 for the three months ended December 31, 2010. Details of the results of operations are presented below.

### Revenue

The Company recorded revenue of \$23,958 during the three months ended December 31, 2011, as compared to \$296,139 during the quarter ended December 31, 2010. The revenue in 2011 was related to two license agreements acquired in conjunction with the acquisition of Roche Madison, Inc. The revenue in 2010 was related to grants received in the quarter. Revenue for the quarter ended December 31, 2010 associated with Unidym prior to its disposition is presented as a part of discontinued operations.

### Operating Expenses

The analysis below details the operating expenses and discusses the expenditures of the Company within the major expense categories. The following tables provide details of operating expenses for the three months ended December 31, 2011 and 2010.

#### Salaries – Three months ended December 31, 2011 compared to the three months ended December 31, 2010

The Company employs management, administrative, and scientific and technical staff at its corporate offices and its research facility. Salaries expense consists of salary and related benefits. Salary and benefits include two major categories: general and administrative compensation expense, and research and development compensation expense, depending on the primary activities of each employee. Arrowhead also manages certain general and administrative functions for Nanotope and Leonardo and charges fees for those services. The following tables provide detail of salary and wage expenses for the three months ended December 31, 2011 as compared to the three months ended December 31, 2010.

(in thousands)

	Three Months	% of	Three Months	% of	Increase (Decrease)	
	Ended December 31, 2011	Expense Category	Ended December 31, 2010	Expense Category	\$	%
G&A - compensation-related	\$ 593	45%	\$ 248	81%	\$ 345	139%
R&D - compensation-related	728	55%	60	19%	668	1113%
Total	\$ 1,321	100%	\$ 308	100%	\$ 1,013	329%

During the three months ended December 31, 2011, G&A compensation expense increased from \$248,000 to \$593,000. The Company added two senior executive positions in October 2011, a Chief Operating Officer and a Chief Business Officer. Additionally, four of the employees hired in conjunction with the acquisition of Roche Madison, Inc. were general and administrative employees. R&D compensation related costs increased from \$60,000 to \$728,000 due to the employees hired in conjunction with the acquisition of Roche Madison Inc.

**General & Administrative Expenses – Three months ended December 31, 2011 compared to the three months ended December 31, 2010**

The following tables provide detail of G&A expenses for the three months ended December 31, 2011 as compared to the three months ended December 31, 2010.

(in thousands)

	Three Months Ended	% of	Three Months Ended	% of	Increase (Decrease)	
	December 31, 2011	Expense Category	December 31, 2010	Expense Category	\$	%
Professional/outside services	\$ 803	62%	\$ 286	46%	\$ 517	181%
Patent expense	221	17%	139	22%	82	59%
Facilities and related	26	2%	43	7%	(17)	-40%
Travel	63	5%	43	7%	20	47%
Business insurance	50	4%	53	8%	(3)	-6%
Depreciation	16	1%	8	1%	8	100%
Communication and technology	46	4%	28	4%	18	64%
Office expenses	32	3%	12	2%	20	167%
Other	21	2%	20	3%	1	5%
Total	<u>\$ 1,278</u>	<u>100%</u>	<u>\$ 632</u>	<u>100%</u>	<u>\$ 646</u>	<u>102%</u>

Professional/outside services include legal, accounting, consulting and other outside services retained by the Company. All periods include normally recurring legal and audit expenses related to SEC compliance and other corporate matters. Professional/outside services expense was \$803,000 during the three months ended December 31, 2011, compared to \$286,000 in the comparable prior period. The increase in professional fees during the quarter was primarily due to a one-time finder's fee of \$250,000 related to financing secured during the quarter, higher legal fees primarily due to services associated with the acquisition of Roche Madison, Inc. and higher audit fees, related to historical audits required of Roche Madison, Inc.

Patent expense was \$221,000 during the three months ended December 31, 2011, compared to \$139,000 in the comparable prior period. Patent expense increased due to nonrecurring legal costs associated with the due diligence services on the patent portfolio of Roche Madison, Inc. in association with its acquisition. Other patent costs relate to fees from services from attorneys related to the Company's intellectual property portfolio. 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.

Facilities-related expense was \$26,000 during the three months ended December 31, 2011, compared to \$43,000 in the comparable prior period. Facilities expense decreased due to a reduction in the Company's rental expense for its corporate offices, as it is currently occupying smaller and less expensive office space temporarily.

Travel expense was \$63,000 during the three months ended December 31, 2011, compared to \$43,000 in the comparable prior period. Travel expense increased due to travel associated with the acquisition of Roche Madison, Inc., as well as additional travel costs related to Madison employees during the three months ended December 31, 2011. Travel costs are expected to increase in the future due to increased travel between the Madison and Pasadena locations. Travel expense includes expenses related to travel by Company personnel for operational business meetings at other company locations, and for other business initiatives and collaborations throughout the world with other companies, and for marketing, investor relations, fund raising and public relations purposes. Travel expenses can fluctuate from quarter to quarter and from year to year depending on current projects and activities.

Business insurance expense was \$50,000 during the three months ended December 31, 2011, compared to \$53,000 in the comparable prior period, essentially unchanged. The company experienced favorable rate decreases in its Directors and Officers insurance coverage, which was mostly offset by additional insurance costs associated with Madison.

Communication and technology expense was \$46,000 during the three months ended December 31, 2011 compared to \$28,000 in the comparable prior period. The increase was related to software maintenance costs at Madison, primarily end-user software and software maintenance on laboratory computer software.

Office expense was \$32,000 during the three months ended December 31, 2011 compared to \$12,000 in the comparable prior period. The increase was related to costs incurred at Madison.

**Research and Development Expenses – Three months ended December 31, 2011 compared to the three months ended December 31, 2010**

R&D expenses are related to the Company's on-going research and development efforts, primarily related to its laboratory research facility in Madison, Wisconsin, and also include outsourced R&D services. The following tables provide detail of research and development expenses for the three months ended December 31, 2011, as compared to the three months ended June 30, 2010.



(in thousands)

	Three Months Ended	% of Expense	Three Months Ended	% of Expense	Increase (Decrease)	
	December 31, 2011	Category	December 31, 2010	Category	\$	%
Outside labs & contract services	\$ 366	32%	\$ 89	4%	\$ 277	311%
Consulting	125	11%	169	7%	\$ (44)	-26%
License, royalty & milestones	15	1%	2,000	89%	(1,985)	-99%
Laboratory supplies & services	83	7%	2	0%	81	NM
Facilities and related	132	12%	2	0%	130	NM
Sponsored research	45	4%	—	0%	45	NM
Depreciation—R&D-related	372	33%	—	0%	372	NM
Other research expenses	3	0%	—	0%	3	NM
Total	<u>\$ 1,141</u>	<u>100%</u>	<u>\$ 2,262</u>	<u>100%</u>	<u>\$(1,121)</u>	<u>-50%</u>

NM = Not Meaningful

Outside labs and contract services expense was \$366,000 during the three months ended December 31, 2011, compared to \$89,000 in the comparable prior period. The majority of the increase was related to outside manufacturing costs for raw materials, specifically, polymer components for RONDEL. The company is utilizing outside manufactures to produce these components for the Company, and these costs will continue until the manufacturing is completed in 2012. Outside lab services and contract services were also higher due to services utilized for programs at our Madison facility.

Consulting expense was \$125,000 during the three months ended December 31, 2011, compared to \$169,000 in the comparable prior period. The primary reason for the decrease in consulting expense was due to nonrepeating prior year expense for technical consulting costs associated with Ablaris.

Licensing fees, royalty and milestones expense was \$15,000 during the three months ended December 31, 2011, compared to \$2,000,000 in the comparable prior period. Licensing fees, royalty and milestones expenses during the three months ended December 31, 2010 were due to \$2 million in licensing fees owed to the University of Texas MD Anderson Cancer Center related to a Patent and Technology License Agreement entered into in December 2010.

Laboratory supplies and services expense was \$83,000 during the three months ended December 31, 2011, compared to \$2,000 in the comparable prior period. The primary reason for the increase was costs incurred in the Company's new facility in Madison.

Facilities expense was \$132,000 during the three months ended December 31, 2011, compared to \$2,000 in the comparable prior period. The primary reason for the increase was costs incurred in the Company's new facility in Madison.

Sponsored research expense was \$45,000 during the three months ended December 31, 2011, compared to \$0 in the comparable prior period. The increase was related to a research agreement with the University of Cincinnati related to Ablaris.

#### **Other income (expense) – Three months ended December 31, 2011 compared to the three months ended December 31, 2010**

Other income was \$1,352,000 during the three months ended December 31, 2011, compared to other income of \$529,000 in the comparable prior period. The primary component of other income in the three months ended December 31, 2011 was a noncash gain recorded upon the acquisition of Roche Madison, Inc. This gain was somewhat offset by a noncash loss from the equity investment in Nanotope of \$107,000, the change in the value of derivatives, and realized and unrealized gains of marketable securities. During the three months ended December 31, 2010, the primary component in other income was a gain from the change in value of a derivative liability of \$465,000. The change in the value of derivatives can vary significantly from quarter to quarter based upon the input factors. See Note 8 to the Consolidated Financial Statements for further discussion.

#### **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**

Not applicable

#### **ITEM 4. 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

From time to time, we may be involved in routine legal proceedings, as well as demands, claims and threatened litigation, which arise in the normal course of our business. We believe there is no litigation pending that could, individually or in the aggregate, have a material adverse effect on our results of operations or financial condition.

### 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 Securities and Exchange Commission.*

#### Risks Related to Our Financial Condition

***We have a history of net losses, and we expect to continue to incur net losses and may not achieve or maintain profitability.***

We have incurred net losses since our inception, including net losses of \$2.7 million for the three months ended December 31, 2011 and a cumulative net loss since inception of approximately \$134.2 million. We expect that our operating losses will continue as we fund our drug development and discovery efforts. To achieve profitability, we must, either directly or through licensing and/or partnering relationships, successfully develop and obtain regulatory approval for a drug candidate and effectively manufacture, market and sell any drugs we successfully develop. Even if we successfully commercialize drug candidates that receive regulatory approval, we may not be able to realize revenues at a level that would allow us to achieve or sustain profitability. Accordingly, we may never generate significant revenue and, even if we do generate significant revenue, we may never achieve profitability.

#### ***We have limited cash resources.***

Our plan of operations is to provide substantial amounts of development funding and financial support to our subsidiaries over an extended period of time. With the recent acquisition of Roche's RNAi business, including a research facility in Madison, Wisconsin and new employees, our use of cash is expected to substantially increase compared to recent historical periods. We will need to obtain additional capital to further our development efforts, and we intend to seek additional capital by out-licensing technology, securing funded partnerships, conducting one or more private or public offerings of equity securities of the Company or our subsidiaries, 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 need to curtail our operations in order to preserve working capital, 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. Although we anticipate that the Company will be able to satisfy the cash requirements of its operations through at least the next twelve months with current cash resources, we may be unable to obtain long-term funding and our near-term expenses could be greater than projected.

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

We do not yet generate substantial revenue, and our operations and research and development activities have been primarily funded to date through the sale of Company securities and securities of our Subsidiaries. The global financial markets are volatile and those market conditions, as well as possible concerns over the value of the U.S. dollar denominated investments, may impair our ability to raise the capital we require. If we are unable to secure additional cash resources from the sale of securities or other sources, it could become necessary to slow or suspend development efforts. In addition, we may have to reduce expenses, which could impair our ability to manage our business. Even if investment capital is available to us, the terms may be onerous. If outside capital is invested directly into a subsidiary and Arrowhead does not have the funds to make a pro rata investment, our ownership interest could be diluted. The sale of additional Arrowhead stock could result in significant dilution to stockholders.

The potential monetization of our Subsidiaries through an ownership position might not occur in an orderly manner. Exit opportunities could include an initial public offering ("IPO") for the subsidiary or acquisition of the subsidiary by another company. During the recent economic recession, companies have been adopting conservative acquisition strategies and, even if there is interest, we may not be able to sell our Subsidiaries on terms that are attractive to us. These factors could reduce the realizable return on our investment if we are able to sell a subsidiary. Additionally, the market for IPOs continues to be unpredictable, which limits public exit opportunities for our Subsidiaries.

***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. Given our strategy of financing new and unproven technology research, there can be no assurance we will ever generate significant revenue. 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 efforts yield technologically feasible applications, we may not successfully develop commercial products which would take years to study in human clinical trials prior to regulatory approval, and, even if successfully developed, we may not do so on a timely basis. During this development period, superior competitive technologies may be introduced which could diminish or extinguish the potential commercial uses for our drug candidates. Additionally, the degree to which patients and consumers will adopt any product we develop is uncertain. We cannot predict whether significant commercial market acceptance for our products, if approved, will ever develop, and we cannot reliably estimate the projected size of any such potential market. 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 the medical establishment and patients, or if the associated products do not achieve wide market acceptance, our business will be materially and adversely affected.

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

Calando has a \$500,000 unsecured convertible promissory note outstanding. The note bears 10% interest accrued annually, and matures in November 2013. The note is payable at two times face value at maturity and upon the occurrence of certain events, including, the license of Calando's siRNA delivery system. If Calando is unable to meet its obligations to the bearer of the note, Arrowhead may 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 are party 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 are party into exclusive, long-term license agreements with 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 in some cases related to the commercialization of the licensed technology. We may not be able to 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 Company

### ***Drug development is time consuming, expensive and risky.***

We are focused on technology related to new and improved pharmaceutical candidates. 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 may be unacceptable, 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, may not approve our potential product for the intended use; and
- Manufacturing and distribution may be uneconomical.

For example, the positive pre-clinical results studying Adipotide in animals may not be replicated in human clinical studies or that this drug candidate may be found to be unsafe in humans. Additionally, 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. Clinical trials can take years to complete, including the process of study design, clinical site selection and the enrollment of patients. As a result, we can experience significant delays in completing clinical studies, which can increase the cost of developing a drug candidate. If our drug candidates are not successful in human clinical trials, we may be forced to curtail or abandon certain development programs and if we experience significant delays in commencing or completing our clinical studies, we could suffer from significant cost overruns, which could negatively affect our capital resources and our ability to complete these studies.

### ***We may be unable to attract revenue-generating collaborations with other pharmaceutical and biotech companies to advance our drug candidates.***

Our business strategy includes collaborations with other pharmaceutical and biotech companies to provide funding and therapeutic siRNA candidates to which we can apply our various siRNA delivery technologies. We may not be able to attract such partners, and even if we are able to enter into such partnerships, the terms may be less favorable than anticipated. Further, entering into partnership agreements may limit our commercialization options and/or require us to share revenues and profits with our partners.

### ***We may lose a considerable amount of control over our intellectual property and may not receive anticipated revenues in strategic transactions involving our Subsidiaries, particularly where the consideration is contingent on the achievement of development or sales milestones.***

Our business model has been to develop new technologies 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 we intend to pursue licensing arrangements with other companies. A significant portion of the potential value from these licenses is tied to the achievement of the development and sales milestones, which we cannot control. Similarly, the majority of the consideration, up to \$140 million, potentially payable by Wisepower in connection with our sale of Unidym is tied to the achievement of commercialization milestones, over which we cannot exercise control. Although Wisepower and Cerulean are required to use certain minimum efforts to achieve the post-closing milestones, we cannot control whether they actually achieve these milestones. If the acquirers fail to achieve performance milestones, we may not receive a significant portion of the total value of any sale, license or other strategic transaction.

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

Much of the Company research and development efforts involve nanotechnology and RNAi, which are largely unproven technologies. Our scientists and engineers are working on developing technology in various stages. However, such technology's commercial feasibility and acceptance are unknown. Scientific research and development requires significant amounts of capital and takes a 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. 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.

***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 capability, 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 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 events or other related events not foreseen by us could impair our ability to generate revenues and harm our business and financial condition.

***We may not be able to effectively secure first-tier technologies when competing against other investors.***

Our success may require that we acquire new or complimentary technologies. However, we compete with a substantial number of other companies that may also compete for technologies we desire. In addition, many venture capital firms and other institutional investors, as well as other pharmaceutical and biotech companies, invest in companies seeking to commercialize various types of emerging technologies. Many of these companies have greater financial, scientific and commercial resources than us. Therefore, we may not be able to secure the technologies we desire. 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 continued tightening of global credit 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.

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, including Dr. Anzalone, our President and Chief Executive Officer, Kenneth Myszkowski, our Chief Financial Officer and Bruce Given, our Chief Operating Officer. 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 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. We may need to terminate additional employees, including senior management and technical employees, or such employees may seek other employment which may result in the loss of valuable know-how and 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 President and CEO, is the founder, CEO and a board member of Nanotope, a regenerative medicine company in which the Company owns a 23% interest. Further, Dr. Anzalone as well as Dr. Mauro Ferrari, an Arrowhead board member, are board members of Leonardo, a drug delivery company in which Arrowhead owns a 5% interest. Dr. Anzalone owns a noncontrolling interest in the stock of Nanotope. Drs. Anzalone and Ferrari own a noncontrolling interest in Leonardo. Douglass Given, a member of our board of directors, is the brother of Bruce Given. 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.

***We face uncertainty related to healthcare reform, pricing and reimbursement, which could reduce our revenue.***

In the United States, President Obama signed in March 2010 the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act (collectively, "PPACA"), which is expected to substantially change the way health care is financed by both governmental and private payers. PPACA provides for changes to extend medical benefits to those who currently lack insurance coverage, encourages improvements in the quality of health care items and services, and significantly impacts the U.S. pharmaceutical industry in a number of ways, further listed below. By extending coverage to a larger population, PPACA may substantially change the structure of the health insurance system and the methodology for reimbursing medical services, drugs and devices. These structural changes, as well as other changes that may be made as part of deficit and debt reduction efforts in Congress, could entail modifications to the existing system of private payers and government programs, such as Medicare, Medicaid and State Children's Health Insurance Program, as well as the creation of a government-sponsored healthcare insurance source, or some combination of both. Such restructuring of the coverage of medical care in the United States could impact the extent of reimbursement for prescribed drugs, including our product candidates, biopharmaceuticals, and medical devices. Some of the specific PPACA provisions, among other things:

- Establish annual, non-deductible fees on any entity that manufactures or imports certain branded prescription drugs and biologics, beginning in 2011;
- Increase minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program;
- Extend manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- Establish a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in and conduct comparative clinical effectiveness research;
- Require manufacturers to participate in a coverage gap discount program, under which they must agree to offer 50 percent point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D, beginning in 2011; and
- Increase the number of entities eligible for discounts under the Public Health Service pharmaceutical pricing program, effective January 2010.

If future reimbursement for approved product candidates, if any, is substantially less than we project, or rebate obligations associated with them are substantially increased, our business could be materially and adversely impacted.

Sales of any approved drug candidate will depend in part on the availability of coverage and reimbursement from third-party payers such as government insurance programs, including Medicare and Medicaid, private health insurers, health maintenance organizations and other health care related organizations. Accordingly, coverage and reimbursement may be uncertain. Adoption of any drug candidate by the medical community may be limited if third-party payers will not offer coverage. Cost control initiatives may decrease coverage and payment levels for any new drug and, in turn, the price that we will be able to charge. We are unable to predict all changes to the coverage or reimbursement methodologies that will be applied by private or government payers. Any denial of private or government payer coverage or inadequate reimbursement could harm our business and reduce our revenue.

In addition, both the federal and state governments in the United States and foreign governments continue to propose and pass new legislation affecting coverage and reimbursement policies, which are designed to contain or reduce the cost of health care, as well as hold public hearings on these matters, which has resulted in certain private companies dropping the prices of their drugs. Further federal and state proposals and healthcare reforms are likely, which could limit the prices that can be charged for the product candidates that we develop and may further limit our commercial opportunity. There may be future changes that result in reductions in current coverage and reimbursement levels for our product candidates, if approved and commercialized, and we cannot predict the scope of any future changes or the impact that those changes would have on our operations.

***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 noncontrolling interests were the result of negotiation with subsidiary management and equity holders, and the investment valuations may not always have been 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 few comparable public companies exist to provide meaningful valuation comparisons. Accordingly, we have not always 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 different than previously determined by us, which could materially and adversely impair the value of our Common Stock.

### **Risks Related to Our Intellectual Property**

***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 to develop and commercialize products based on our patent portfolios will depend, in part, on our ability to enforce those patents and operate without infringing the proprietary rights of third parties. We cannot be certain that any patents that may issue from patent applications owned or licensed by us will provide sufficient protection to conduct our respective businesses as presently conducted or as proposed to be conducted, or that we will remain free from infringement claims by third parties. In particular, there can be no assurance that we will be successful enforcing our rights in the intellectual property that we acquired in the Roche RNAi acquisition.

***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, 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. We cannot be certain 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.

***Our technology licensed from various third parties may be subject to government rights and retained rights of the originating research institutions.***

We license technology from Caltech, 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 be assured 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.

### **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. Adjusted for the 1 for 10 reverse stock split that was implemented on November 17, 2011, as of December 31, 2011, we had 10,530,524 shares of Common Stock issued and outstanding, and 1,015 shares of Preferred Stock issued and outstanding. 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 may not generate substantial revenue from the license or sale of our technology 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;
- 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 our technology;
- Announcements regarding developments in the nanotechnology field in general;
- Market perception and/or announcements regarding the field of siRNA (small interfering, RNAs);
- The issuance of competitive patents or disallowance or loss of our patent rights; and
- 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 could result in the loss of all or part of your investment. Additionally, 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.

***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, historically our securities have been relatively thinly traded. Investor trading patterns could serve to exacerbate the volatility of the price of the stock. 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. Accordingly, it may be difficult to sell shares of our 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.

***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 can 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 may 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 their stock in a short period of time, the price of our stock may decline.

***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 unpredictable and investors should not expect dividends 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.

## **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.

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**ITEM 4. MINE SAFETY DISCLOSURES**

Not Applicable.

**ITEM 5. OTHER INFORMATION**

None.

**ITEM 6. EXHIBITS**

<u>Exhibit Number</u>	<u>Document Description</u>
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*
101	The following materials from Registrant's Quarterly Report on Form 10-Q for the quarter ended December 31, 2011, formatted in XBRL (Extensible Business Reporting Language): (1) Consolidated Balance Sheets, (2) Consolidated Statements of Operations, (3) Consolidated Statement of Stockholders' Equity, (4) Consolidated Statements of Cash Flows, and (5) Notes to Consolidated Financial Statements, tagged as blocks of text. **

\* Filed herewith

\*\* Furnished herewith

**SIGNATURE**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this Quarterly Report on Form 10-Q to be signed on its behalf by the undersigned, thereunto duly authorized.

Dated: February 9, 2012

ARROWHEAD RESEARCH CORPORATION

By: /s/ Kenneth A. Myszkowski

Kenneth A. Myszkowski  
Chief Financial Officer

**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 9, 2012

/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 9, 2012

/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, 2011, 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 9, 2012

/s/ CHRISTOPHER ANZALONE

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**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, 2011, 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 9, 2012

/s/ Kenneth A. Myszkowski

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**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.