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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 June 30, 2013

**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 1050  
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	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input checked="" type="checkbox"/>

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 August 5, 2013 was 31,539,199.

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## PART I. FINANCIAL INFORMATION

## ITEM 1. FINANCIAL STATEMENTS

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

	(unaudited) June 30, 2013	September 30, 2012
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 29,025,930	\$ 3,377,288
Trade receivable	—	9,375
Other receivables	267,560	9,930
Prepaid expenses and other current assets	1,059,503	618,130
Short term investments	4,058,003	106,500
Note receivable, net	—	2,446,113
<b>TOTAL CURRENT ASSETS</b>	<b>34,410,996</b>	<b>6,567,336</b>
<b>PROPERTY AND EQUIPMENT</b>		
Computers, office equipment and furniture	323,376	323,376
Research equipment	3,346,789	3,319,027
Software	69,623	69,623
Leasehold improvements	2,749,409	2,749,409
	6,489,197	6,461,435
Less: Accumulated depreciation and amortization	(2,695,886)	(1,565,783)
<b>PROPERTY AND EQUIPMENT, NET</b>	<b>3,793,311</b>	<b>4,895,652</b>
<b>OTHER ASSETS</b>		
Patents and other intangible assets, net	3,254,177	4,784,569
Derivative asset and other non-current assets	30,011	280,261
<b>TOTAL OTHER ASSETS</b>	<b>3,284,188</b>	<b>5,064,830</b>
<b>TOTAL ASSETS</b>	<b>\$ 41,488,495</b>	<b>\$ 16,527,818</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable	\$ 1,061,944	\$ 877,986
Accrued expenses	706,092	730,775
Accrued payroll and benefits	811,046	1,127,219
Deferred revenue	71,875	37,500
Derivative liabilities	2,335,163	647,213
Capital lease obligation	219,690	214,801
Notes payable	925,649	100,000
Other current liabilities	546,407	1,592,394
<b>TOTAL CURRENT LIABILITIES</b>	<b>6,677,866</b>	<b>5,327,888</b>
<b>LONG-TERM LIABILITIES</b>		
Notes payable, net of current portion	50,000	839,421
Capital lease obligation, net of current portion	1,117,074	1,282,458
Other non-current liabilities	337,587	269,142
<b>TOTAL LONG-TERM LIABILITIES</b>	<b>1,504,661</b>	<b>2,391,021</b>
Commitments and contingencies		
<b>STOCKHOLDERS' EQUITY</b>		
Arrowhead Research Corporation stockholders' equity:		
Preferred stock, \$0.001 par value; 5,000,000 shares authorized; 9,900 shares issued and outstanding	10	—
Common stock, \$0.001 par value; 145,000,000 shares authorized; 31,306,318 and 13,579,185 shares issued and outstanding as of June 30, 2013 and September 30, 2012, respectively	123,676	108,354
Additional paid-in capital	187,282,068	145,917,968
Subscription receivable	—	(1,016,000)
Accumulated deficit during the development stage	(152,448,785)	(134,997,680)
<b>Total Arrowhead Research Corporation stockholders' equity</b>	<b>34,956,969</b>	<b>10,012,642</b>
Noncontrolling interest	(1,651,001)	(1,203,733)
<b>TOTAL STOCKHOLDERS' EQUITY</b>	<b>33,305,968</b>	<b>8,808,909</b>
<b>TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY</b>	<b>\$ 41,488,495</b>	<b>\$ 16,527,818</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 June 30, 2013	Three Months Ended June 30, 2012	Nine Months Ended June 30, 2013	Nine Months Ended June 30, 2012	May 7, 2003 (Inception) to June 30, 2013
<b>REVENUE</b>	<b>\$ 43,750</b>	<b>\$ 47,917</b>	<b>\$ 246,516</b>	<b>\$ 103,125</b>	<b>\$ 4,385,350</b>
<b>OPERATING EXPENSES</b>					
Salaries and payroll-related costs	1,651,729	1,654,915	5,006,328	4,992,671	31,398,458
General and administrative expenses	899,633	3,137,368	2,597,279	5,335,191	33,950,494
Research and development	1,756,527	1,219,236	5,458,212	3,347,002	48,076,960
Stock-based compensation	363,593	415,920	1,114,375	837,188	14,695,843
Depreciation and amortization	454,086	423,414	1,352,448	1,301,806	8,761,734
Impairment expense	1,308,047	—	1,308,047	—	1,308,047
<b>TOTAL OPERATING EXPENSES</b>	<b>6,433,615</b>	<b>6,850,853</b>	<b>16,836,689</b>	<b>15,813,858</b>	<b>138,191,536</b>
<b>OPERATING LOSS</b>	<b>(6,389,865)</b>	<b>(6,802,936)</b>	<b>(16,590,173)</b>	<b>(15,710,733)</b>	<b>(133,806,186)</b>
<b>OTHER INCOME (EXPENSE)</b>					
Equity in income (loss) of unconsolidated affiliates	(159,530)	(34,573)	(380,699)	(205,361)	(1,344,106)
Impairment of investment in unconsolidated affiliates	—	(1,455,775)	—	(1,455,775)	(1,642,775)
Gain on purchase of Roche Madison	—	—	—	1,576,107	1,576,107
Gain (loss) on sale of fixed assets, net	(39,949)	(876,277)	(76,388)	(909,761)	(1,282,853)
Realized and unrealized gain (loss) investments	—	—	—	(58,091)	62,954
Interest income (expense), net	(48,252)	14,436	(68,403)	27,326	2,682,041
Change in value of derivatives	200,747	915,387	215,620	226,339	3,497,024
Gain on sale of stock in subsidiary	—	—	—	—	2,292,800
Other income (expense)	259,221	—	(997,976)	—	(747,976)
<b>TOTAL OTHER INCOME (EXPENSE)</b>	<b>212,237</b>	<b>(1,436,802)</b>	<b>(1,307,846)</b>	<b>(799,216)</b>	<b>5,093,216</b>
<b>LOSS FROM CONTINUING OPERATIONS BEFORE INCOME TAXES</b>	<b>(6,177,628)</b>	<b>(8,239,738)</b>	<b>(17,898,019)</b>	<b>(16,509,949)</b>	<b>(128,712,970)</b>
Provision for income taxes	—	—	—	—	—
<b>LOSS FROM CONTINUING OPERATIONS</b>	<b>(6,177,628)</b>	<b>(8,239,738)</b>	<b>(17,898,019)</b>	<b>(16,509,949)</b>	<b>(128,712,970)</b>
Income (loss) from discontinued operations	—	677	(354)	(25)	(47,546,996)
Gain on disposal of discontinued operations	—	—	—	—	4,708,588
<b>NET INCOME (LOSS) FROM DISCONTINUED OPERATIONS</b>	<b>—</b>	<b>677</b>	<b>(354)</b>	<b>(25)</b>	<b>(42,838,408)</b>
<b>NET LOSS</b>	<b>(6,177,628)</b>	<b>(8,239,061)</b>	<b>(17,898,373)</b>	<b>(16,509,974)</b>	<b>(171,551,378)</b>
Net (income) loss attributable to noncontrolling interests	98,618	247,551	447,268	697,727	19,266,553
<b>NET LOSS ATTRIBUTABLE TO ARROWHEAD</b>	<b>\$ (6,079,010)</b>	<b>\$ (7,991,510)</b>	<b>\$ (17,451,105)</b>	<b>\$ (15,812,247)</b>	<b>\$ (152,284,825)</b>
<b>NET LOSS PER SHARE ATTRIBUTABLE TO ARROWHEAD SHAREHOLDERS</b>					
—BASIC AND DILUTED:	<b>\$ (0.23)</b>	<b>\$ (0.71)</b>	<b>\$ (0.92)</b>	<b>\$ (1.48)</b>	
Weighted average shares outstanding—basic and diluted	26,134,183	11,238,291	18,893,197	10,672,390	

*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 June 30, 2013**  
**(unaudited)**

	<u>Common Stock</u>		<u>Preferred Stock</u>		<u>Additional Paid-in Capital</u>	<u>Subscription Receivable</u>	<u>Accumulated Deficit during the Development Stage</u>	<u>Noncontrolling interest</u>	<u>Totals</u>
	<u>Shares</u>	<u>Amount</u>	<u>Shares</u>	<u>Amount</u>					
<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>

	Common Stock		Preferred Stock		Additional Paid-in Capital	Subscription Receivable	Accumulated Deficit during the Development Stage	Noncontrolling interest	Totals
	Shares	Amount	Shares	Amount					
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 and warrants issued @ \$35.00 per unit	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 and warrants issued @ \$57.80 per unit	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>

	Common Stock		Preferred Stock		Additional Paid-in Capital	Subscription Receivable	Accumulated Deficit during the Development Stage	Noncontrolling interest	Totals
	Shares	Amount	Shares	Amount					
Exercise of stock options	10,536	\$ 106	—	\$ —	\$ 289,921	\$ —	\$ —	\$ —	\$ 290,027
Common stock and warrants issued at approximately \$18.00 per unit	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 mezzanine debt to equity	—	—	—	—	2,000,000	—	—	—	2,000,000
Arrowhead's increase in proportionate share of Calando's equity	—	—	—	—	2,120,250	—	—	—	2,120,250
Common stock and warrants issued @ \$3.00 per unit	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>—</b>	<b>\$ —</b>	<b>\$ 110,070,327</b>	<b>\$ (300,000)</b>	<b>\$ (104,968,819)</b>	<b>\$ —</b>	<b>\$ 4,857,936</b>

	Common Stock		Preferred Stock		Additional Paid-in Capital	Subscription Receivable	Accumulated Deficit during the Development Stage	Noncontrolling interest	Totals
	Shares	Amount	Shares	Amount					
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 and warrants issued @ \$6.34 per unit	508,343	5,083	—	—	3,217,813	—	—	—	3,222,896
Common stock and warrants issued @ \$13.12 per unit	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	2,250	—	—	1,063,600	—	—	200	1,066,050
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>\$ 71,734</b>	<b>—</b>	<b>\$ —</b>	<b>\$ 119,716,834</b>	<b>\$ —</b>	<b>\$ (110,742,867)</b>	<b>\$ (967,406)</b>	<b>\$ 8,078,295</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>\$ 86,422</b>	<b>—</b>	<b>\$ —</b>	<b>\$ 127,476,435</b>	<b>\$ (900,000)</b>	<b>\$ (113,871,752)</b>	<b>\$ (226,938)</b>	<b>\$ 12,564,167</b>

	Common Stock		Preferred Stock		Additional Paid-in Capital	Subscription Receivable	Accumulated Deficit during the Development Stage	Noncontrolling interest	Totals
	Shares	Amount	Shares	Amount					
Exercise of stock options	4,583	\$ 45	—	\$ —	\$ 23,788	\$ —	\$ —	\$ —	\$ 23,833
Stock-based compensation	—	—	—	—	1,241,404	—	—	—	1,241,404
Common stock issued @ \$3.80 per share	138,158	1,382	—	—	523,618	(100,000)	—	—	425,000
Common stock issued @ \$3.70 per share	675,000	6,750	—	—	2,241,000	—	—	—	2,247,750
Common stock issued @ \$4.00 per share	100,000	1,000	—	—	399,000	—	—	—	400,000
Common stock issued @ \$6.23 per share	83,211	83	—	—	499,918	—	—	—	500,001
Common stock issued @ \$5.11 per share	97,831	98	—	—	499,904	—	—	—	500,002
Common stock and warrants issued @ \$2.76 per unit	2,260,869	2,261	—	—	5,809,979	(16,000)	—	—	5,796,240
Common stock issued under Committed Capital Agreement	68,926	689	—	—	(689)	—	—	—	—
Common stock issued in acquisitions	1,217,159	9,332	—	—	6,138,498	—	—	—	6,147,830
Fractional shares redeemed in reverse stock split	(131)	—	—	—	—	—	—	—	—
Preferred stock issued @ \$1,000 per share	—	—	1,015	1	1,014,999	—	—	—	1,015,000
Preferred stock converted to common stock	275,782	276	(1,015)	(1)	(275)	—	—	—	—
Exercise of Calando stock options	—	—	—	—	—	—	—	8,000	8,000
Exercise of warrants	15,511	16	—	—	50,390	—	—	—	50,406
Net loss for the year ended September 30, 2012	—	—	—	—	—	—	(21,125,928)	(984,795)	(22,110,723)
<b>Balance at September 30, 2012</b>	<b>13,579,185</b>	<b>\$ 108,354</b>	<b>—</b>	<b>\$ —</b>	<b>\$ 145,917,968</b>	<b>\$ (1,016,000)</b>	<b>\$ (134,997,680)</b>	<b>\$ (1,203,733)</b>	<b>\$ 8,808,909</b>
Stock-based compensation	—	—	—	—	1,114,375	—	—	—	1,114,375
Subscription payment	—	—	—	—	—	16,000	—	—	16,000
Subscription reversal	(267,444)	(2,674)	—	—	(997,326)	1,000,000	—	—	—
Common stock and warrants issued @ \$ 2.26 per unit, net	1,825,079	1,826	—	—	2,676,747	—	—	—	2,678,573
Common stock and warrants issued @ \$ 2.12 per unit, net	1,667,051	1,667	—	—	2,239,269	—	—	—	2,240,936
Common stock issued @ \$ 4.49 per share to Roche	239,894	240	—	—	985,809	—	—	—	986,049
Common stock @ \$ 1.83 per unit,	14,262,553	14,263	—	—	25,445,236	—	—	—	25,459,499

net									
Preferred stock issued @ \$ 1,000 per share	—	—	9,900	10	9,899,990	—	—	—	9,900,000
Net loss for the nine months ended June 30, 2013	—	—	—	—	—	—	(17,451,105)	(447,268)	(17,898,373)
<b>Balance at June 30, 2013</b>	<b><u>31,306,318</u></b>	<b><u>\$ 123,676</u></b>	<b><u>9,900</u></b>	<b><u>\$ 10</u></b>	<b><u>\$ 187,282,068</u></b>	<b><u>\$ —</u></b>	<b><u>\$ (152,448,785)</u></b>	<b><u>\$ (1,651,001)</u></b>	<b><u>\$ 33,305,968</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 Cash Flows**  
**(unaudited)**

	Nine Months Ended June 30, 2013	Nine Months Ended June 30, 2012	May 7, 2003 (Date of inception) to June 30, 2013
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>			
Net income (loss)	\$ (17,898,373)	(16,509,974)	\$ (171,551,378)
Net (income) loss attributable to noncontrolling interests	447,268	697,727	19,266,553
Net income (loss) attributable to Arrowhead	(17,451,105)	(15,812,247)	(152,284,825)
(Income) loss from discontinued operations	354	25	42,838,408
Realized and unrealized (gain) loss on investments	—	58,091	(762,954)
Charge for bad debt allowance	—	—	2,497,300
(Gain) loss from sale of subsidiary	—	—	(306,344)
(Gain) loss on purchase of Roche Madison	—	(1,576,107)	(1,576,107)
(Gain) loss on disposal of fixed assets	76,388	909,761	1,282,853
Stock issued for professional services	—	—	741,632
Change in value of derivatives	(215,620)	(226,339)	(3,497,024)
Purchased in-process research and development	—	—	15,851,555
Stock-based compensation	1,114,375	837,188	14,695,843
Depreciation and amortization	1,352,448	1,301,806	8,761,734
Amortization (accretion) of note discounts, net	82,341	(20,633)	83,793
Gain on sale of stock in subsidiary	—	—	(2,292,800)
Noncash impairment expense	2,315,721	1,455,775	3,958,496
Equity in income (loss) of unconsolidated affiliates	—	205,361	963,407
Noncontrolling interest	(447,268)	(697,727)	(19,266,553)
<b>Changes in operating assets and liabilities:</b>			
Receivables	9,375	169,150	109,415
Other receivables	1,080	1,173,523	(2,542,062)
Prepaid expenses	(441,373)	(152,782)	(922,472)
Other current assets	(1,813)	(30,286)	(165,568)
Accounts payable	183,959	408,263	682,269
Accrued expenses	95,132	514,117	816,041
Other liabilities	(313,354)	730,771	816,807
<b>NET CASH USED IN OPERATING ACTIVITIES OF CONTINUING OPERATIONS</b>	<b>(13,639,360)</b>	<b>(10,752,290)</b>	<b>(89,517,156)</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES OF CONTINUING OPERATIONS:</b>			
Purchase of property and equipment	(191,656)	(392,799)	(4,236,965)
Proceeds from sale of investments	—	509,009	3,313,609
Proceeds from sale of fixed assets	(89,505)	25,037	522,192
Purchase of marketable securities	(4,058,003)	—	(22,633,918)
Proceeds from sale of marketable securities	1,160,181	—	20,048,446
Cash transferred in acquisitions/divestitures	—	121,033	(1,579,365)
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 subsidiaries	—	—	359,375
Payment for patents	—	—	(303,440)
Restricted cash	—	—	50,773
<b>NET CASH PROVIDED BY (USED IN) INVESTING ACTIVITIES OF CONTINUING OPERATIONS</b>	<b>(2,999,973)</b>	<b>262,280</b>	<b>(6,329,699)</b>

	Nine Months Ended June 30, 2013	Nine Months Ended June 30, 2012	May 7, 2003 (Date of inception) to June 30, 2013
<b>CASH FLOWS FROM FINANCING ACTIVITIES OF CONTINUING OPERATIONS:</b>			
Principal payments on capital leases	(160,495)	(143,905)	(357,101)
Proceeds from issuance of common stock and warrants, net	42,448,824	5,401,392	148,701,835
Proceeds from issuance of Calando debt	—	—	2,516,467
Proceeds from sale of stock in subsidiary	—	8,000	20,902,100
<b>NET CASH PROVIDED BY FINANCING ACTIVITIES OF CONTINUING OPERATIONS</b>	<b>42,288,329</b>	<b>5,265,487</b>	<b>171,763,301</b>
<b>Cash flows from discontinued operations:</b>			
Operating cash flows	(354)	(225)	(46,004,141)
Investing cash flows	—	—	790,625
Financing cash flows	—	—	(1,677,000)
<b>Net cash provided by (used in) discontinued operations:</b>	<b>(354)</b>	<b>(225)</b>	<b>(46,890,516)</b>
<b>NET INCREASE (DECREASE) IN CASH</b>	<b>25,648,642</b>	<b>(5,224,748)</b>	<b>29,025,930</b>
<b>CASH AT BEGINNING OF PERIOD</b>	<b>3,377,288</b>	<b>7,507,389</b>	<b>—</b>
<b>CASH AT END OF PERIOD</b>	<b>\$ 29,025,930</b>	<b>\$ 2,282,641</b>	<b>\$ 29,025,930</b>
<b>Supplementary disclosures:</b>			
Interest paid	\$ 32,139	\$ 34,758	\$ 312,827
Taxes paid	\$ —	\$ —	\$ 742,500

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

## SUPPLEMENTAL NON-CASH TRANSACTIONS

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 shares of 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.

On October 21, 2011, Arrowhead entered into a Stock and Asset Purchase Agreement whereby it acquired all of the outstanding common stock of Roche Madison Inc. and certain intellectual property rights in exchange for 1,288,158 shares of Arrowhead Common Stock, a promissory note of \$50,000, and potential contingent consideration based on the achievement of certain regulatory milestones, and sales milestones and royalty payments after drug approval.

On April 5, 2012, Arrowhead entered into a Stock Purchase Agreement whereby it acquired all of the outstanding common stock of Alvos Therapeutics, Inc. for 315,457 shares of Arrowhead Common Stock and potential contingent consideration based on the achievement of certain clinical, regulatory and sales milestones.

*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”), Alvos Therapeutics, Inc. (“Alvos”), Calando Pharmaceuticals, Inc. (“Calando”), Ablaris Therapeutics, Inc. (“Ablaris”), Agonn Systems, Inc. (“Agonn”), and Tego Biosciences Corporation (“Tego”) as well as, where applicable, our former subsidiary, Unidym, Inc. (“Unidym”), which was divested in January 2011, (4) the term “Minority Investment” refers to 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 PRESENTATION**

*Nature of Business*

Arrowhead Research Corporation is a biopharmaceutical company developing targeted RNAi therapeutics. The Company is leveraging its proprietary drug delivery technologies to develop targeted drugs based on the RNA interference (RNAi) mechanism that efficiently and specifically silence target genes. Arrowhead technologies also enable partners to create peptide-drug conjugates (PDCs) that specifically home to cell types of interest while sparing off-target tissues. Arrowhead’s pipeline includes programs in chronic hepatitis B virus, obesity, and cancer.

*Financing and Liquidity*

The Company has historically financed its operations through the sale of equity securities of Arrowhead or its Subsidiaries. Development activities have required significant capital investment since the Company’s inception and we expect our current operations to continue to require cash investment to continue development.

At June 30, 2013, the Company had \$33.1 million in cash, including cash invested in short term investments, to fund operations. During the nine months ended June 30, 2013, the Company’s cash position increased \$25.6 million. During the nine months ended June 30, 2013, the Company received \$42.4 million from the issuance of equity, net of fees. Other cash collections were \$1.6 million. The Company had cash outflow of \$14.0 million related to its continuing operating activities.

In September 2011, the Company entered into an equity line facility whereby it has the ability to draw capital up to \$15 million, subject to certain provisions, including maintaining a minimum stock price of \$2.00 per share. During fiscal 2012, the Company drew \$1 million from this facility. During fiscal 2013, the Company has not made any draws on this facility.

In December 2012, the Company sold 1.8 million units at a price of \$2.26 per unit in a public offering. Each unit consisted of one share of Common Stock and a warrant to purchase 0.5 share of Common Stock. The exercise price of these warrants was \$1.83 as of June 30, 2013. Proceeds net of expenses from the offering were \$3.8 million.

In January 2013, the Company sold 1.7 million units at a price of \$2.12 per unit in a public offering. Each unit consisted of one share of Common Stock and a warrant to purchase 0.5 share of Common Stock. The exercise price of these warrants was \$1.83 as of June 30, 2013. Proceeds net of expenses from the offering were \$3.3 million.

In May 2013, the Company sold 14.3 million shares of Arrowhead common stock at a price of \$1.83 per share, and 9,900 shares of Arrowhead series B convertible preferred stock at a price of \$1,000 per share. The series B preferred stock is convertible into common stock at a conversion price of \$1.83. Proceeds, net of expenses from the offering, were \$35.4 million.

*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, 2012 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, 2012.

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 2008 and Nanotechnica, Inc. ("Nanotechnica"), dissolved in 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.

#### *Cash and Cash Equivalents*

The Company considers cash and all highly liquid investments with an original maturity of three months or less at the date of purchase to be cash equivalents. Cash equivalents consist primarily of money market instruments that are maintained by a third party investment management firm.

#### *Investments*

The Company invests excess cash balances in short-term and long-term marketable debt securities. Investments may consist of certificates of deposits, money market accounts, government-sponsored enterprise securities, corporate bonds and/or commercial paper. The Company accounts for its investment in marketable securities in accordance with FASB ASC 320, Investments – Debt and Equity Securities. This statement requires certain securities to be classified into three categories:

Held-to-maturity – Debt securities that the entity has the positive intent and ability to hold to maturity are reported at amortized cost.

Trading Securities – Debt and equity securities that are bought and held primarily for the purpose of selling in the near term are reported at fair value, with unrealized gains and losses included in earnings.

Available-for-Sale – Debt and equity securities not classified as either securities held-to-maturity or trading securities are reported at fair value with unrealized gains or losses excluded from earnings and reported as a separate component of shareholders' equity.

The Company classifies its investments in marketable debt securities based on the facts and circumstances present at the time of purchase of the securities. At June 30, 2013, the Company classified all of its investments as held-to-maturity.

Held-to-maturity investments are measured and recorded at amortized cost on the Company's Consolidated Balance Sheet. Discounts and premiums to par value of the debt securities are amortized to interest income/expense over the term of the security. No gains or losses on investment securities are realized until they are sold or a decline in fair value is determined to be other-than-temporary.

As of June 30, 2013, all short-term investments were comprised of corporate bonds with maturity dates of less than one year. The amortized cost of such bonds was \$4,058,003. Gross unrealized losses were \$17,208; there were no gross unrealized gains. The total fair value of the short-term investments was \$4,040,795.

As of September 30, 2012, short-term investments of \$106,500 were comprised of equity securities of Wisepower obtained as a result of our disposition of Unidym, such investment has been impaired and its carrying value has been reduced to zero.

See further information regarding fair market value of marketable debt securities in footnote 10 – Fair Value Measurements & Derivative Instruments, such fair market data is obtained from independent pricing services.

#### *Reverse Stock Split*

On 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 stock split were combined into one share of Common Stock. Also, as a result of the reverse stock split, the per share exercise price, and the number of shares of Common Stock underlying Company stock options, warrants, 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. Stockholders received a cash payment in lieu of any resulting fractional shares.

Unless otherwise noted, all share and per share amounts and other impacted information has been retroactively adjusted to reflect this reverse stock split.

## Recently Issued Accounting Standards

In July 2012, the FASB issued ASU 2012-02, *Testing Indefinite-Lived Intangible Assets for Impairment*, which amended the guidance in ASU 2011-08 to simplify the testing of indefinite-lived intangible assets other than goodwill for impairment. ASU 2012-02 becomes effective for annual and interim impairment tests performed for fiscal years beginning on or after September 15, 2012 and earlier adoption is permitted. We adopted this standard in the third quarter of fiscal year 2012. We believe adoption did not have a material effect on our financial statements.

In September 2011, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2011-08, Intangibles – Goodwill and Other (Topic 350) – Testing Goodwill for Impairment (ASU 2011-08), to allow entities to use a qualitative approach to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. If after performing the qualitative assessment an entity determines it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then performing the two-step goodwill impairment test is unnecessary. However, if an entity concludes otherwise, then it is required to perform the first step of the two-step goodwill impairment test. ASU 2011-08 is effective for us in fiscal 2013 and earlier adoption is permitted. The adoption of ASU 2011-08 is not anticipated to impact on our financial position, results of operations or cash flows.

In May 2011, the Financial Accounting Standards Board (“FASB”) issued ASU 2011-04, Fair Value Measurement (“ASU 2011-04”), which amended ASC 820, Fair Value Measurements (“ASC 820”), providing a consistent definition and measurement of fair value, as well as similar disclosure requirements between U.S. GAAP and International Financial Reporting Standards. ASU 2011-04 changes certain fair value measurement principles, clarifies the application of existing fair value measurement and expands the disclosure requirements. ASU 2011-04 was effective for us beginning January 1, 2012. The adoption of ASU 2011-04 did not have a material effect on our consolidated financial statements or disclosures.

## NOTE 2. NOTE RECEIVABLE

As part of the proceeds from the sale of Unidym in January 2011, Arrowhead received a Note Receivable from Wisepower, a Korean corporation, (the “Wisepower Note”) in the face amount of \$2.5 million. On January 24, 2013, the Company entered into an agreement to sell the Wisepower Note. As consideration for selling the Wisepower Note the Company received 1,570,000 shares of Wisepower stock, (the “First Tranche”). Per the terms of the agreement, the Company was entitled to receive additional consideration (the “Second Tranche”) based on the proceeds realized from the First Tranche, at which time the Company would deliver the Wisepower Note to the Purchaser.

As of June 30, 2013, the Company sold 1,170,000 shares of Wisepower from the First Tranche, and realized approximately \$1.2 million in proceeds prior to a trading suspension of Wisepower stock on March 22, 2013. On July 26, 2013, the trading of Wisepower stock resumed, and the company sold the remaining shares from the First Tranche, and realized approximately \$260,000. It is unclear when or if the Company will receive the Second Tranche. The Company recorded the \$1.2 million proceeds realized from the First Tranche, as of June 30, 2013, against the \$2.5 million value of the Wisepower Note, and has recorded a reserve for the uncollectible portion of the Wisepower Note. As of June 30, 2013, the receivable was recorded at \$260,000, which was collected in July 2013. The Company is pursuing its rights under the applicable agreements.

## NOTE 3. ACQUISITIONS

### *Roche Madison*

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 1,141,596 shares of Common Stock. The acquisition provided technology, particularly related to RNAi delivery, and a state-of-the-art lab facility.

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 90 days regarding the applicable out-license. This right of first negotiation applies to all Existing Candidates (as

defined in the RNAi Purchase Agreement) 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 as per the closing terms, 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. Based on the Company's estimate of future payments, a net present value of \$84,935 was calculated as contingent consideration, and is recorded as a part of other noncurrent liabilities.

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		1,174,935
Other noncurrent assets		6,264
Current liabilities		(414,122)
Noncurrent liabilities		(1,570,072)
Gain on purchase		(1,576,106)
Total purchase consideration	\$	<u>5,268,814</u>

The purchase consideration was composed of the following:

Promissory note due Roche	\$	50,000
Contingent consideration		84,935
Shares issued to Roche		5,133,879
Total purchase consideration	\$	<u>5,268,814</u>

We estimated the fair value of the assets and liabilities acquired through various valuation techniques including a market approach and an income approach. Because the net identifiable tangible and intangible assets and liabilities were in excess of the purchase price, a gain on the purchase of \$1.6 million was recorded. The most significant assets capitalized were research equipment and certain in-process research and development. We believe that we were able to acquire these assets at a reasonable purchase price and generate a gain on the transaction due in part from the seller's desire to exit the relatively early stage of the RNAi business, as compared to the seller's other business operations, as well as the seller's desire to dispose of certain on-going costs associated with the facility, primarily lease costs and personnel costs, which were synergistic to the Company's strategy to establish a research facility to advance development efforts for its drug product candidates.

### ***Alvos Therapeutics***

On April 5, 2012, the Company entered into a Stock Purchase Agreement to purchase all of the outstanding shares of Alvos Therapeutics, Inc., ("Alvos"), a privately held company that licensed a large platform of proprietary human-derived Homing Peptides, and the method for their discovery, from MD Anderson Cancer Center. In conjunction with the acquisition, Arrowhead hired one employee from Alvos, and retained one employee on a consulting basis. In exchange for all of the outstanding shares of Alvos, Arrowhead issued an upfront payment of 315,457 shares of Common Stock. The former Alvos stockholders are also eligible to receive additional issuances of stock valued at up to \$23.5 million at the time of issuance based on the future achievement of clinical, regulatory and sales milestones. Based on the Company's estimate of future payments, a net present value of \$88,686 was calculated as contingent consideration, and is recorded as a part of other noncurrent liabilities. The Alvos acquisition provided technology in targeted therapeutics.

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

Current assets	\$ 29,332
In-process R&D	2,172,387
Current liabilities	(113,033)
Total purchase consideration	<u>\$ 2,088,686</u>

The purchase consideration was comprised of shares of Arrowhead Common Stock issued to the former shareholders of Alvos Therapeutics, Inc.

Shares issued	315,457
Price per share	\$ 6.34
Share consideration	\$ 2,000,000
Contingent consideration	\$ 88,686
Total purchase consideration	<u>\$ 2,088,686</u>

#### NOTE 4. INTANGIBLE ASSETS

Intangible assets consist of in-process research and development (IPR&D) not subject to amortization, and patents and other intangible assets subject to amortization, which were capitalized as a part of a business combination.

IPR&D represents projects that have not yet received regulatory approval and are classified as indefinite assets until the successful completion or the abandonment of the associated R&D efforts. Accordingly, during the development period after the date of acquisition, these assets will not be amortized until approval is obtained in one or more jurisdictions which, individually or combined, are expected to generate a significant portion of the total revenue expected to be earned by an IPR&D project. At that time, we will determine the useful life of the asset, reclassify the asset out of IPR&D and begin amortization. If the associated R&D effort is abandoned the related IPR&D assets would be written off and we would record an impairment loss.

Intangible assets subject to amortization include license agreements and patents capitalized as part of a business combination.

The license agreements are being amortized over the estimated life remaining at the time of acquisition, which was four years. Patents were amortized over a period of three years to twenty years. The weighted average original amortization period is twelve years. Patents have been fully amortized or impaired. Amortization of license agreements is expected to be approximately \$14,000 for the balance of fiscal year 2013, and \$55,000 for fiscal years 2014 and 2015, \$13,000 in 2016, \$0 in 2017 and thereafter.

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 is 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. During the quarter ended June 30, 2013, the Company recorded an impairment charge relating to patents that were licensed from the California Institute of Technology (the "License"), and had been capitalized. The license agreement was terminated, and it was determined that the value of the capitalized patents had been impaired. Accordingly, the Company recorded an impairment of \$1.3 million during the quarter ended June 30, 2013, and is reflected in its operating expenses in its Statement of Operations.

The below table provides details of our intangible asset balances:

	Intangible assets not subject to amortization	Intangible assets subject to amortization	Total Intangible assets
Balance at September 30, 2011	\$ —	\$ 1,731,211	\$ 1,731,211
Additions – Madison acquisition	944,935	230,000	1,174,935
Additions – Alvos acquisition	2,172,387	—	2,172,387
Amortization	—	(293,964)	(293,964)
Balance at September 30, 2012	\$ 3,117,322	\$ 1,667,247	\$ 4,784,569
Amortization	0	(222,345)	(222,345)
Impairment	—	(1,308,047)	(1,308,047)
Balance at June 30, 2013	<u>\$ 3,117,322</u>	<u>\$ 136,855</u>	<u>\$ 3,254,177</u>

## **NOTE 5. INVESTMENT IN SUBSIDIARIES**

In addition to 100% ownership interest in Arrowhead Madison, Inc. and Alvos Therapeutics, Inc., Arrowhead also holds majority ownership in Calando Pharmaceuticals, Ablaris Therapeutics, Inc., and a minority investment in Leonardo Biosystems, Inc.

### *Calando Pharmaceuticals, Inc.*

Calando is a clinical stage RNAi therapeutics company. On April 17, 2008, Calando merged with and into Insert, with Insert as the surviving company. The surviving company operates under the name of Calando Pharmaceuticals, Inc.

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 June 30, 2013, Calando owed to Arrowhead \$3.9 million under a series of 8% simple interest notes and advances. The balance of the notes and advances is eliminated in consolidation.

As of June 30, 2013, Arrowhead owned 79% of the outstanding shares of Calando and 76% 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 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 Ablaris Series A Preferred stock. As of June 30, 2013, Ablaris owed to Arrowhead \$1.3 million from cash advances. It is expected that these advances will either be repaid or converted to equity in the future. The balance of the advances is eliminated in consolidation.

As of June 30, 2013, Arrowhead owned 64% of the outstanding shares of Ablaris and 64% on a fully diluted basis.

### *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 June 30, 2013, Leonardo owed to Arrowhead \$858,000, included in other receivables. The Company has provided a full reserve against the receivable from Leonardo. As of June 30, 2013, Arrowhead's ownership interest in Leonardo was 3%.

## **NOTE 6. NOTES PAYABLE**

In 2008 and 2009, Calando entered into Unsecured Convertible Promissory Note Agreements ("Notes") for \$2.5 million with accredited investors and Arrowhead, which invested \$800,000 in the Notes 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 in 2009. The remaining Note 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. At June 30, 2013, the Note is reflected on the balance sheet at the maturity amount of \$1,000,000 less a discount of \$74,351.

As part of the acquisition of Roche Madison, Inc. in October 2011, the Company recorded a note payable of \$50,000, which is due October 17, 2014 and is reflected in long-term liabilities on the Company's balance sheet.

## **NOTE 7. STOCKHOLDERS' EQUITY**

At June 30, 2013, the Company had a total of 150,000,000 shares of capital stock authorized for issuance, consisting of 145,000,000 shares of Common Stock, par value \$0.001, and 5,000,000 shares of Preferred Stock, par value \$0.001.

At June 30, 2013, 31,306,318 shares of Common Stock were outstanding, and 9,900 shares of Preferred Stock were outstanding. At June 30, 2013, 3,369,960 shares were reserved for issuance upon exercise of outstanding stock options. An additional 6,055,535 shares were reserved for the issuance of shares related to warrants outstanding at June 30, 2013.

On September 30, 2011, the Company sold 1,191,473 shares of Common Stock at a price of \$3.80 per share. Cash proceeds received in fiscal 2011 were \$4.5 million. On October 4, 2011, the Company completed a second closing of the offering in which the Company sold 138,158 shares of Common Stock at a price of \$3.80 per share. Cash proceeds were \$525,000.

In October 2011, the Company entered into Subscription Agreements with certain accredited investors (the "Series A Purchasers"), pursuant to which the Company issued and sold 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 for the shares of Series A Preferred was \$1,015,000. On February 16, 2012, upon approval by the Company's shareholders, 1,015 shares of Arrowhead Series A Preferred Convertible Stock, \$0.001 par value per share, were converted to 275,782 shares of Common Stock.

On October 21, 2011, the Company entered into a Subscription Agreement with an accredited investor, pursuant to which the Company issued and sold an aggregate of 675,000 shares of Common Stock, \$0.001 par value per share, at a purchase price of \$3.70 per share. The aggregate purchase price paid by the purchaser for the shares of Common Stock was \$2,497,500.

On August 10, 2012, the Company sold 2,260,869 units at a price of \$2.76 per unit. Each unit consisted of one share of common stock and a warrant to purchase 0.75 shares of common stock at an exercise price of \$3.25. Gross proceeds from the offering were \$6.2 million excluding offering fees and expenses.

In December 2012, the Company sold 1,825,079 units at a price of \$2.26 per unit. Each unit consisted of one share of common stock and a warrant to purchase 0.5 shares of common stock. Gross proceeds from the offering were \$4.1 million excluding offering fees and expenses. The exercise price of these warrants was \$1.83 as of June 30, 2013.

In January 2013, the Company sold 1,667,051 units at a price of \$2.12 per unit. Each unit consisted of one share of common stock and a warrant to purchase 0.5 shares of common stock. Gross proceeds from the offering were \$3.5 million excluding offering fees and expenses. The exercise price of these warrants was \$1.83 as of June 30, 2013.

In May 2013, the Company sold 14.3 million shares of Arrowhead common stock at a price of \$1.83 per share and 9,900 shares of Arrowhead series B convertible preferred stock at a price of \$1,000 per share. The series B preferred stock is convertible into common stock at a conversion price of \$1.83. Gross proceeds were \$36 million. No warrants were issued in the May 2013 financing.

The following table summarizes information about warrants outstanding at June 30, 2013:

<u>Exercise prices</u>	<u>Number of Warrants</u>	<u>Remaining Life in Years</u>
\$70.60	94,897	3.9
\$20.00	386,400	0.1
\$5.00	1,155,023	1.4
\$5.09	461,024	1.4
\$1.38	322,150	2.5
\$4.16	1,000	3.5
\$3.25	1,695,654	3.1
\$1.83	987,543	4.5
\$2.83	79,013	3.1
\$1.83	833,530	4.6
\$2.65	39,301	3.1
Total warrants outstanding	<u>6,055,535</u>	

#### **NOTE 8. LEASES**

The Company's research facility in Madison, Wisconsin is leased through February 28, 2019. Monthly rental expense is approximately \$22,000. Other monthly rental expenses include common area maintenance and real estate taxes totaling approximately \$13,000 per month. Utilities costs are approximately \$16,000 per month. Including monthly payments recorded under a capital lease of approximately \$21,000, total monthly costs are approximately \$72,000 per month. The Company's corporate headquarters are located in Pasadena, California. Rental expense is approximately \$13,000 per month.

Facility and equipment rent expense, related to continuing operations, for the nine months ended June 30, 2013 and 2012 was \$407,000 and \$345,000, respectively. From inception to date through June 30, 2013, rent expense was \$4,532,000.

As of June 30, 2013, future minimum lease payments due in fiscal years under capitalized leases are as follows:

2013	\$	64,211
2014		256,846
2015		256,846
2016		256,846
2017		256,846
2018		256,846
2019 and thereafter		107,020
Less interest		(118,697)
Principal		<u>1,336,764</u>
Less current portion		(219,690)
Noncurrent portion	\$	<u><u>1,117,074</u></u>

As of June 30, 2013, future minimum lease payments due in fiscal years under operating leases are as follows:

2013	\$	94,661
2014		434,229
2015		445,921
2016		457,961
2017		470,154
2018		359,370
2019 and thereafter		<u>125,415</u>
Total	\$	<u><u>2,387,711</u></u>

**NOTE 9. 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. Under the 2004 Equity Incentive Plan, 3,000,000 shares of Common Stock are authorized for issuance, of which 510,166 shares are available as of June 30, 2013 for the grant of stock options, stock appreciation rights, restricted stock awards and performance unit/share awards, by the Compensation Committee of the Board of Directors, to employees, consultants and others. 2,965,860 shares of Common Stock are reserved for the grant of stock options, stock appreciation rights, restricted stock awards and performance unit/share awards, by the Compensation Committee of the Board of Directors, to employees, consultants and others. As of June 30, 2013, there were options granted and outstanding to purchase 152,900 and 2,455,694 shares of Common Stock under the 2000 Stock Option Plan and the 2004 Equity Incentive Plan, respectively, and 251,200 options outstanding that were issued outside of equity incentive plans, as inducement options.

During the nine months ended June 30, 2013, 949,000 options were granted under the 2004 Equity Incentive Plan.

The following tables summarize information about stock options under the 2000 Stock Option Plan, the 2004 Stock Option Plan and as inducement options outside of an equity incentive plan:

	Number of Options Outstanding	Weighted- Average Exercise Price Per Share	Weighted- Average Remaining Contractual Term	Aggregate Intrinsic Value
Balance At September 30, 2011	729,096	\$ 9.03		
Granted	1,229,500	4.40		
Cancelled	(42,919)	11.77		
Exercised	(4,883)	5.20		
Balance At September 30, 2012	1,910,794	\$ 6.01		
Granted	949,000	2.03		
Cancelled	0	0		
Exercised	0	0		
Balance At June 30, 2013	2,859,794	\$ 4.69	8.2 years	\$ —
Exercisable At June 30, 2013	1,129,939	\$ 7.01	6.6 years	\$ —

Stock-based compensation expense for the nine months ended June 30, 2013 and 2012 was \$1,114,375 and \$837,188, respectively. 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 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 during the nine months ended June 30, 2013 and 2012 is estimated at \$1,197,588 and \$3,505,912, respectively. The aggregate fair value of options granted by Calando during the nine months ended June 30, 2013 and 2012 is estimated at \$0 and \$33,690, respectively.

The intrinsic value of the options exercised during the nine months ended June 30, 2013 was \$0, there were no options exercised during the nine months ended June 30, 2013.

As of June 30, 2013, the pre-tax compensation expense for all unvested stock options at Arrowhead in the amount of approximately \$3,775,514 will be recognized in our results of operations over a weighted average period of 2.9 years. As of June 30, 2013, the pre-tax compensation expense for all unvested stock options at Calando in the amount of approximately \$39,169 will be recognized in our results of operations over a weighted average period of 2.2 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:

	Nine months ended June 30,	
	2013	2012
Dividend yield	0	0
Risk-free interest rate	0.7% to 1.25%	0.9% to 1.7%
Volatility	69%	90% to 100%
Expected life (in years)	5.5 to 6.25	5.5 to 6.25
Weighted average grant date fair value per share of options granted	\$1.26	\$3.79

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 10. 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 June 30, 2013 and September 30, 2012 for assets and liabilities measured at fair value on a recurring basis:

June 30, 2013:

	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	\$ 29,025,930	\$ —	\$ —	\$ 29,025,930
Marketable securities (1)	\$ 4,040,795	\$ —	\$ —	\$ 4,040,795
Derivative assets	\$ —	\$ —	\$ —	\$ —
Derivative liabilities	\$ —	\$ —	\$ 2,335,163	\$ 2,335,163
Contingent consideration	\$ —	\$ —	\$ 173,621	\$ 173,621

September 30, 2012:

	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	\$ 3,377,288	\$ —	\$ —	\$ 3,377,288
Marketable securities	\$ 106,500	\$ —	\$ —	\$ 106,500
Derivative assets	\$ —	\$ —	\$ 250,250	\$ 250,250
Derivative liabilities	\$ —	\$ —	\$ 647,213	\$ 647,213
Contingent consideration	\$ —	\$ —	\$ 173,621	\$ 173,621

- (1) Marketable securities at June 30, 2013 were comprised of investments classified as "held-to-maturity", and are recorded at amortized cost on the Company's Consolidated Balance Sheet.

As part of the proceeds from the sale of Unidym in January 2011, Arrowhead received a bond from Wisepower, a Korean corporation, in the face amount of \$2.5 million. The bond is convertible to Wisepower common stock 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. During the quarter ended March 31, 2013, the trading of Wisepower stock was halted. Trading resumed in July 2013, but the trading price is significantly below the conversion price. The Company determined that the probability of realizing value from the conversion feature was remote, and the derivative asset value has been reduced to zero.

During the nine months ended June 30, 2013, the Company recorded a loss from the change in fair value of the derivative asset of \$250,250.

The assumptions used in valuing the derivative asset were as follows:

June 30, 2013                      September 30, 2012

	<u>June 30, 2013</u>	<u>September 30, 2012</u>
Risk free interest rate	NA	0.23%
Expected life	0 Years	1.3 Years
Dividend yield	none	none
Volatility	72%	72%

The following is a reconciliation of the derivative asset:

Value at September 30, 2011	\$	161,125
Receipt of instruments		—
Increase in value		89,125
Net settlements		—
Value at September 30, 2012	\$	250,250
Receipt of instruments		—
Change in value		(250,250)
Net settlements		—
Value at June 30, 2013	\$	—

As part of an equity financing in June 2010, Arrowhead issued warrants to acquire up to 329,649 shares of Common Stock (the “2010 Warrants”), of which 322,150 warrants were outstanding at June 30, 2013, which contain a mechanism to adjust the strike price upon the issuance of certain dilutive equity securities. If during the term of the 2010 Warrants, the Company issues Common Stock at a price lower than the exercise price of the 2010 Warrants, the exercise price of the 2010 Warrants would be reduced to the amount equal to the issuance price of the Common Stock. Similarly, as part of a financing in December 2012, Arrowhead issued warrants to acquire up to 912,543 shares of Common Stock (the “2012 Warrants”) which contain a mechanism to adjust the strike price upon the issuance of certain dilutive equity securities. If during the term of the 2012 Warrants, the Company issues Common Stock at a price lower than the exercise price of the 2012 Warrants, the exercise price of the 2012 Warrants would be reduced to the amount equal to the issuance price of the Common Stock. Further, as part of a financing in January 2013, Arrowhead issued warrants to acquire up to 833,530 shares of Common Stock (the “2013 Warrants”) which contain a mechanism to adjust the strike price upon the issuance of certain dilutive equity securities. If during the term of the 2013 Warrants, the Company issues Common Stock at a price lower than the exercise price of the 2013 Warrants, the exercise price of the 2013 Warrants would be reduced to the amount equal to the issuance price of the Common Stock.

As a result of these features, the 2010 Warrants, the 2012 Warrants, and the 2013 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 nine months ended June 30, 2013, the Company recorded a non-cash gain from the change in fair value of the derivative liability of \$465,869.

The assumptions used in valuing the derivative liabilities were as follows:

<b>2010 Warrants</b>	<u>June 30, 2013</u>	<u>September 30, 2012</u>
Risk free interest rate	0.51%	0.31%
Expected life	2.5 Years	3.2 Years
Dividend yield	None	none
Volatility	69%	100%

  

<b>2012 Warrants</b>	<u>June 30, 2013</u>	<u>September 30, 2012</u>
Risk free interest rate	1.41%	N/A
Expected life	4.5 Years	N/A
Dividend yield	None	N/A
Volatility	69%	N/A

  

<b>2013 Warrants</b>	<u>June 30, 2013</u>	<u>September 30, 2012</u>
Risk free interest rate	1.41%	N/A
Expected life	4.6 Years	N/A
Dividend yield	none	N/A
Volatility	69%	N/A

The following is a reconciliation of the derivative liability related to these warrants:

Value at September 30, 2011	\$ 944,980
Issuance of instruments	—
Change in value	(297,767)
Net settlements	—
Value at September 30, 2012	\$ 647,213
Issuance of instruments	1,137,896
Issuance of instruments	1,015,923
Change in value	(465,869)
Net settlements	—
Value at June 30, 2013	\$ 2,335,163

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 shares of Arrowhead Common Stock 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. 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. 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 nine months ended June 30, 2013, the Company recorded a non-cash gain from the change in fair value of the derivative liability of \$9,877.

The assumptions used in valuing the derivative liability were as follows:

	June 30, 2013	September 30, 2012
Risk free interest rate	1.41%	0.62%
Expected life	4.5 Years	5.3 Years
Dividend yield	none	None
Volatility	69%	100%

The following is a reconciliation of the derivative liability related to these exchange rights:

Value at September 30, 2010	\$ —
Issuance of instruments	100,650
Change in value	(69,758)
Value at September 30, 2011	\$ 30,892
Issuance of instruments	—
Change in value	(20,520)
Net settlements	—
Value at September 30, 2012	\$ 10,372
Issuance of instruments	—
Change in value	(9,877)
Net settlements	—
Value at June 30, 2013	\$ 495

During the year ended September 30, 2012, contingent consideration was recorded upon the acquisitions of Roche Madison, Inc. and Alvos Therapeutics, Inc., totaling \$173,621. The fair value measurement of the contingent consideration obligations is determined using Level 3 inputs. The fair value of contingent consideration obligations is based on a discounted cash flow model using a probability-weighted income approach. The measurement is based upon unobservable inputs supported by little or no market activity based on our own assumptions and experience. Estimating timing to complete the development, and obtain approval of products is difficult, and there are inherent uncertainties in developing a product candidate, such as obtaining U.S. Food and Drug Administration (FDA) and other regulatory approvals. In determining the probability of regulatory approval and commercial success, we utilize data regarding similar milestone events from several sources, including industry studies and our own experience. These fair value measurements represent Level 3 measurements as they are based on significant inputs not observable in the market. Significant judgment is employed in determining the appropriateness of these assumptions as of the acquisition date and for each subsequent

period. Accordingly, changes in assumptions could have a material impact on the amount of contingent consideration expense we record in any given period. Changes in the fair value of the contingent consideration obligations are recorded in our consolidated statement of operations.

There were no changes in contingent consideration fair value.

Value at September 30, 2011	\$	—
Purchase price contingent consideration		173,621
Contingent consideration payments		—
Change in fair value of contingent consideration		—
Value at September 30, 2012	\$	173,621
Purchase price contingent consideration		—
Contingent consideration payments		—
Change in fair value of contingent consideration		—
Value at June 30, 2013	\$	173,621

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. The carrying value of the Company's debt obligations approximates fair value based on market interest rates.

#### NOTE 11. SUBSEQUENT EVENTS

On August 6, 2013, Calando, a majority-owned subsidiary of the Company, terminated a License Agreement with the California Institute of Technology (the "License"). The License provided Calando with exclusive rights to develop and commercialize therapeutics based on the linear cyclodextrin drug delivery technology invented at Caltech. The drug delivery technology platforms, CycloSert™ and RONDEL™, as well as the drug candidates IT-101 and CALAA-01, were developed based on the licensed technology. Calando was responsible to direct and pay for the prosecution of the patents and patent applications covered by the License and to progress the technology. In conjunction with a previous business acquisition, the patents covered by this license agreement had been capitalized, and had a net book value of \$1.3 million at June 30, 2013. Management has determined that the value of the patents was impaired as of June 30, 2013, and the Company recorded an impairment charge of \$1.3 million, and is presented as a part of operating expenses in the period ended June 30, 2013.

## 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 biopharmaceutical company developing targeted RNAi therapeutics. The Company is leveraging its proprietary drug delivery technologies to develop targeted drugs based on the RNA interference (RNAi) mechanism that efficiently and specifically silence target genes. Arrowhead technologies also enable partners to create peptide-drug conjugates (PDCs) that specifically home to cell types of interest while sparing off-target tissues. Arrowhead's pipeline includes programs in chronic hepatitis B virus, obesity, and cancer.

Arrowhead is leveraging its in-house R&D expertise and capabilities, as well as a broad intellectual property portfolio for RNAi therapeutics, and RNAi and peptide delivery vehicles and targeting methods to seek 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 operates a lab facility in Madison, Wisconsin, supporting the Company's initiatives including the development of RNAi therapeutics. The Company's principal executive offices are located at 225 South Lake Avenue, Suite 1050, 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 for the foreseeable future.

At June 30, 2013, the Company had \$33.1 million in cash and short-term investments to fund operations. During the nine months ended June 30, 2013, the Company's cash position increased significantly primarily due proceeds from the sale of equity securities of approximately \$42.5 million, net of related fees. Other cash collections were \$1.5 million. The Company had cash outflows of \$14.0 million related to its continuing operating activities.

During the nine months ended June 30, 2013, cash used in operating activities was \$13.6 million, which represents the on-going expenses for research and development activities, business development, and general and administrative expenses. Cash expenses were partially offset by cash received from revenues and other inflows of \$0.4 million.

Cash used in investing activities was \$3.3 million. \$4.1 million invested in short-term fixed income securities, partially offset by \$1.2 million related to proceeds from sales of Wisepower stock.

Cash provided by financing activities was \$42.3 million. The majority was related to a private financing completed in May 2013 in the amount of \$35.4 million net of fees. Additionally, the Company closed financings in December 2012, and January 2013 totaling \$7.1 million. Payments on capital leases were \$0.2 million.

#### *Recent Financing Activity:*

In May 2013, the Company sold 14.3 million shares of Arrowhead common stock at a price of \$1.83 per share, and 9,900 shares of Arrowhead series B convertible preferred stock at a price of \$1,000 per share. The series B preferred stock is convertible into common stock at a conversion price of \$1.83. Gross proceeds were \$36 million.

On January 25, 2013, the Company sold 1.7 million units at a price of \$2.12 per unit in a public offering. Each unit consisted of one share of Common Stock and a warrant to purchase 0.5 share of Common Stock. The exercise price of these warrants was \$2.14 as of June 30, 2013. Gross proceeds from the offering were \$3.5 million; net proceeds were \$3.3 million after deducting commissions and other offering expenses.

On December 6, 2012, the Company sold 1.8 million units at a price of \$2.26 per unit in a public offering. Each unit consisted of one share of Common Stock and a warrant to purchase 0.5 share of Common Stock. The exercise price of these warrants was \$2.12 as of June 30, 2013. Gross proceeds from the offering were \$4.1 million; net proceeds were \$3.8 million after deducting commissions and other offering expenses.

In fiscal 2012, on August 10, 2012, the Company sold 2.3 million units at a price of \$2.76 per unit in a registered offering. Each unit consisted of one share of Common Stock and a warrant to purchase 0.75 share of Common Stock exercisable at \$3.25 per share. Gross proceeds from the offering were approximately \$6.2 million, with net proceeds of \$5.8 million after deducting commissions and other offering expenses.

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, 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 agreement. Additionally, the Company filed a registration statement with the U.S. Securities & Exchange Commission covering the resale of the shares that may be issued to LPC under the agreement. On January 30, 2012, the SEC declared the registration statement effective for the resale of such shares. The Company has 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 agreement. As of June 30, 2013, the Company had drawn \$1 million from the facility. The use of this facility requires a minimum share price of \$2.00, as defined in the agreement.

Although the Company has sources of liquidity, as described above, the Company anticipates that further equity financings, and/or license agreements, or other sources of revenue, will be necessary to continue to fund operations in the future. There can be no assurance that we will be able to obtain the needed financing on reasonable terms or at all. Additionally, equity financings may have a dilutive effect on our existing stockholders and may result in downward pressure on the value of our Common Stock.

#### ***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 Basis of Presentation*, 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 nine months ended June 30, 2013**

During the nine months ended June 30, 2013, the Company continued its research and development efforts, focusing on advancing ARC-520, its drug candidate for treatment of chronic hepatitis B virus (HBV). The Company completed internal preclinical requirements for ARC-520 and has taken the necessary steps to enter clinical trials, including GMP manufacturing and GLP toxicology. Subsequent to quarter-end, the Company received approval to begin its phase 1 clinical trial for ARC-520, which is designed to test safety and determine a maximum tolerated dose in healthy volunteers. This phase of the clinical trial is being conducted in Australia; the first patient was dosed on July 23, 2013.

### **Results of Operations**

The Company had a consolidated loss attributable to Arrowhead of \$17,451,105 for the nine months ended June 30, 2013, compared to a consolidated loss attributable to Arrowhead of \$15,812,247 for the nine months ended June 30, 2012. Details of the results of operations are presented below.

### **Revenue**

The Company recorded revenue of \$246,516 during the nine months ended June 30, 2013, compared to \$103,125 during the nine months ended June 30, 2012. The revenue in fiscal 2013 was related to three license agreements related to technology acquired through the acquisition of Roche Madison, Inc., totaling \$131,250, as well as \$115,266 in non-recurring services revenue. The revenue in fiscal 2012 was related to the two license agreements acquired through the acquisition of Roche Madison, Inc.

### **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 and nine months ended June 30, 2013 and 2012.

### ***Salaries – Three and nine months ended June 30, 2013 compared to the three and nine months ended June 30, 2012***

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 Leonardo and charges fees for those services. The following tables provide detail of salary and wage expenses for the three and nine months ended June 30, 2013 as compared to the three and nine months ended June 30, 2012.

(in thousands, except percentages)

	Three months Ended	% of Expense	Three months Ended	% of Expense	Increase (Decrease)	
	June 30, 2013	Category	June 30, 2012	Category	\$	%
G&A - compensation-related	\$ 780	\$ 47%	\$ 783	\$ 47%	\$ (3)	\$ 0%
R&D - compensation-related	872	53%	872	53%	0	0%
<b>Total</b>	<b>\$ 1,651</b>	<b>\$ 100%</b>	<b>\$ 1,655</b>	<b>\$ 100%</b>	<b>\$ (3)</b>	<b>\$ 0%</b>

  

	Nine months Ended	% of Expense	Nine months Ended	% of Expense	Increase (Decrease)	
	June 30, 2013	Category	June 30, 2012	Category	\$	%
G&A - compensation-related	\$ 2,283	\$ 46%	\$ 2,500	\$ 50%	\$ (217)	\$ -9%
R&D - compensation-related	2,723	54%	2,493	50%	230	9%
<b>Total</b>	<b>\$ 5,006</b>	<b>\$ 100%</b>	<b>\$ 4,993</b>	<b>\$ 100%</b>	<b>\$ 13</b>	<b>\$ 0%</b>

G&A compensation expense was \$780,000 during the three months ended June 30, 2013, compared to \$783,000 in the comparable prior period. Salary expense was higher by approximately \$90,000 during the quarter as compared to the comparable prior period. During the quarter ended June 30, 2013, the Company employed two additional management employees as compared to the prior year. Additionally, wage allocation to nonconsolidated entities was lower by \$69,000 mostly due to the suspension of allocations to Nanotope which halted operations. These unfavorable variances were offset by lower accrual of performance bonuses of \$167,000. Bonus expense was not accrued in fiscal 2013. R&D compensation expense was relatively constant during the quarter ended June 30, 2013 as compared to the comparable prior period. Two additional R&D employees were employed during the current quarter, which cost was mostly offset by lower bonus expense.

During the nine months ended June 30, 2013, G&A compensation expense was \$2,283,000 compared to \$2,500,000 in the comparable prior period. During the nine months ended June 30, 2012, similar to the results for the quarter, salary expense was higher and wage allocation was lower, offset by lower bonus accrual. R&D compensation expense increased from \$2,493,000 to \$2,723,000 due to higher R&D headcount in 2013 versus 2012.

#### **General & Administrative Expenses – Three and nine months ended June 30, 2013 compared to the three and nine months ended June 30, 2012**

The following tables provide detail of G&A expenses for the three and nine months ended June 30, 2013 as compared to the three and nine months ended June 30, 2012.

(in thousands, except percentages)

	Three months Ended	% of Expense	Three months Ended	% of Expense	Increase (Decrease)	
	June 30, 2013	Category	June 30, 2012	Category	\$	%
Professional/outside services	\$ 323	\$ 36%	\$ 412	\$ 13%	\$ (89)	\$ -22%
Patent expense	257	29%	323	10%	(66)	-20%
Facilities and related	41	5%	28	1%	13	46%
Travel	141	16%	133	4%	8	6%
Business insurance	49	6%	52	2%	(3)	-6%
Communication and technology	27	3%	36	1%	(9)	-25%
Office expenses	22	2%	23	1%	(1)	-4%
Other	40	5%	2,130	68%	(2,090)	-98%
<b>Total</b>	<b>\$ 900</b>	<b>\$ 100%</b>	<b>\$ 3,137</b>	<b>\$ 100%</b>	<b>\$ (2,237)</b>	<b>\$ -71%</b>

	Three months Ended June 30, 2013	% of Expense Category	Three months Ended June 30, 2012	% of Expense Category	Increase (Decrease)	
					\$	%
	Nine months Ended June 30, 2013	% of Expense Category	Nine months Ended June 30, 2012	% of Expense Category	Increase (Decrease)	
					\$	%
Professional/outside services	\$ 991	38%	\$ 1,592	30%	\$ (601)	\$ -38%
Patent expense	707	27%	835	16%	(128)	-15%
Facilities and related	128	5%	80	1%	48	60%
Travel	333	13%	282	5%	51	18%
Business insurance	148	6%	152	3%	(4)	-3%
Communication and technology	113	4%	138	3%	(25)	-18%
Office expenses	81	3%	75	1%	6	8%
Other	96	4%	2,181	41%	(2,085)	-96%
<b>Total</b>	<b>\$ 2,597</b>	<b>100%</b>	<b>\$ 5,335</b>	<b>100%</b>	<b>\$ (2,738)</b>	<b>\$ -51%</b>

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 \$323,000 during the three months ended June 30, 2013, compared to \$412,000 in the comparable prior period. The decrease in professional fees primarily related to lower legal fees during the quarter, as well as lower consulting fees. During the nine months ended June 30, 2013, professional/outside services expense was \$991,000 compared to \$1,592,000 in the comparable prior period. The decrease in professional services for the nine month ended June 30, 2013 primarily relates to certain fees and expenses associated with the acquisition of Roche Madison, Inc. incurred in the first quarter of fiscal 2012 which were not repeated in fiscal 2013.

Patent expense was \$257,000 during the three months ended June 30, 2013, compared to \$323,000 in the comparable prior period. During the nine months ended June 30, 2013, patent expense was \$707,000 compared to \$835,000 in the comparable prior period. The decrease in patent-related expenses was primarily due to reduction in patent prosecution costs for the Calando patent portfolio. The Company has been strategically reducing Calando patent costs. The Company expects to continue to invest in patent protection as the Company extends and maintains protection for its strategic patents 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 \$41,000 during the three months ended June 30, 2013, compared to \$28,000 in the comparable prior period. During the nine months ended June 30, 2013, facilities-related expense was \$128,000 compared to \$80,000 in the comparable prior period. Facilities expense increased due to the increase of lease costs as the Company moved from a temporary lower cost location to a new corporate office in August of 2012.

Travel expense was \$141,000 during the three months ended June 30, 2013, compared to \$133,000 in the comparable prior period. During the nine months ended June 30, 2013, travel expense was \$333,000 compared to \$282,000 in the comparable prior period. Travel expense increased due to travel in support of its GMP manufacturing campaign, as well as cost related to travel in preparation of the clinical trial in Australia. Other travel costs included travel for fund raising efforts, investor relations meetings and business development efforts. Also, this category includes travel expenses related to operational business meetings between company locations and collaborations with other companies, and for marketing 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 \$49,000 during the three months ended June 30, 2013, compared to \$52,000 in the comparable prior period. During the nine months ended June 30, 2013, business insurance expense was \$148,000 compared to \$152,000 in the comparable prior period. Business insurance costs have remained stable in fiscal 2013 as compared to fiscal 2012.

Communication and technology expense was \$27,000 during the three months ended June 30, 2013 compared to \$36,000 in the comparable prior period. During the nine months ended June 30, 2013, communication and technology expense was \$113,000 compared to \$138,000 in the comparable prior period. The decrease was related to lower software consulting costs incurred. Consulting costs can vary from quarter to quarter depending on needs of the IT infrastructure and/or based on specific projects or issues incurred.

Office expense was \$22,000 during the three months ended June 30, 2013 compared to \$23,000 in the comparable prior period. During the nine months ended June 30, 2013, office expense was \$81,000 compared to \$75,000 in the comparable prior period. The increase was related to higher costs associated with the new corporate headquarters, as well as increased costs at the Madison facility.

**Research and Development Expenses – Three and nine months ended June 30, 2013 compared to the three and nine months ended June 30, 2012**

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 and nine months ended June 30, 2013, as compared to the three and nine months ended June 30, 2012.

(in thousands, except percentages)

	Three months Ended	% of	Three months Ended	% of	Increase (Decrease)	
	June 30, 2013	Expense Category	June 30, 2012	Expense Category	\$	%
Outside labs & contract services	160	9%	106	9%	54	51%
In vivo studies	594	34%	52	4%	542	410%
Drug manufacturing	312	18%	242	20%	70	29%
Consulting	61	3%	100	8%	(39)	-39%
License, royalty & milestones	13	1%	26	2%	(13)	-50%
Laboratory supplies & services	219	12%	321	26%	(102)	-32%
Clinical trials	205	12%	166	14%	39	23%
Facilities and related	178	10%	198	16%	(20)	-10%
Sponsored research	—	0%	(1)	0%	1	-100%
Other research expenses	14	1%	9	1%	5	56%
<b>Total</b>	<b>\$ 1,756</b>	<b>\$ 100%</b>	<b>\$ 1,219</b>	<b>\$ 100%</b>	<b>\$ 537</b>	<b>\$ 44%</b>

	Nine months Ended	% of	Nine months Ended	% of	Increase (Decrease)	
	June 30, 2013	Expense Category	June 30, 2012	Expense Category	\$	%
Outside labs & contract services	695	13%	557	17%	138	25%
In vivo studies	1,402	26%	158	5%	1,244	787%
Drug manufacturing	1,016	19%	713	21%	303	42%
Consulting	193	3%	284	8%	(91)	-32%
License, royalty & milestones	175	3%	63	2%	112	178%
Laboratory supplies & services	755	14%	624	19%	131	21%
Clinical trials	483	8%	330	10%	153	46%
Facilities and related	542	10%	528	16%	14	3%
Sponsored research	156	3%	73	2%	83	114%
Other research expenses	41	1%	17	1%	24	141%
<b>Total</b>	<b>\$ 5,458</b>	<b>\$ 100%</b>	<b>\$ 3,347</b>	<b>\$ 100%</b>	<b>\$ 2,111</b>	<b>\$ 63%</b>

Outside labs and contract services expense was \$160,000 during the three months ended June 30, 2013, compared to \$106,000 in the comparable prior period. During the nine months ended June 30, 2013, outside labs and contract services expense was \$695,000 compared to \$557,000 in the comparable prior period. The increase was primarily related to study and analytic development costs for ARC-520, our HBV drug candidate.

In vivo studies expense was \$594,000 during the three months ended June 30, 2013, compared to \$52,000 in the comparable prior year period. During the nine months ended June 30, 2013, in vivo studies expense was \$1,402,000 compared to \$158,000 in the comparable prior period. The current period expense relates to preclinical GLP toxicology program costs related to our HBV program.

Drug manufacturing expense was \$312,000 during the three months ended June 30, 2013, compared to \$242,000 in the comparable prior year period. During the nine months ended June 30, 2013, drug manufacturing expense was \$1,016,000 compared to \$713,000 in the comparable prior period. Drug manufacturing costs during the current quarter related to manufacturing costs for clinical supplies for the HBV program. Drug manufacturing costs in 2012 related to costs to manufacture of polymer components for RONDEL. Drug manufacture costs for the Phase 1 safety study clinical trial of the HBV program are largely complete. The Company expects that these clinical supplies will also be sufficient for a planned Phase 2a efficacy and safety study.

Consulting expense was \$61,000 during the three months ended June 30, 2013, compared to \$100,000 in the comparable prior period. During the nine months ended June 30, 2013, consulting expense was \$193,000 compared to \$284,000 in the comparable prior period. The majority of consulting expense during the current quarter relates to clinical and regulatory consulting related to the Company's HBV program. The costs in the prior period related to clinical consulting for our cancer candidate, CALAA-01, which has since been curtailed. The Company expects consulting costs related to the HBV program to accelerate over the next several quarters.

Licensing fees, royalty and milestones expense was \$13,000 during the three months ended June 30, 2013, compared to \$26,000 in the comparable prior period. During the nine months ended June 30, 2013, licensing fees, royalty and milestones expense was \$175,000 compared to \$63,000 in the comparable prior period. Licensing fees, royalty and milestones expenses increased due to a nonrecurring payment of \$120,000, related to access to certain targeting technology, during the three months ended March 31, 2013.

Laboratory supplies and services expense was \$219,000 during the three months ended June 30, 2013, compared to \$321,000 in the comparable prior period. The decrease is a result of one-time costs associated with siRNA synthesis that occurred during the three months ended June 30, 2012. During the nine months ended June 30, 2013, laboratory supplies and services expense was \$755,000 during compared to \$624,000 in the comparable prior period. This increase relates to expenses associated with the advancement of our research and development pipeline.

Clinical trial expense was \$205,000 during the three months ended June 30, 2013, compared to \$166,000 in the comparable prior period. During the nine months ended June 30, 2013, clinical trial expense was \$483,000 compared to \$330,000 in the comparable prior period. Expenses relating to clinical trial are increasing as the Company advances ARC-520, its drug candidate for Hepatitis B.

Facilities expense was \$178,000 during the three months ended June 30, 2013, compared to \$198,000 in the comparable prior period. During the nine months ended June 30, 2013, facilities expense was \$542,000 compared to \$528,000 in the comparable prior period. Facilities expenses were fairly constant during the quarter and year-to-date, with minor fluctuations in repairs and maintenance, electricity, property taxes and common area maintenance largely offsetting.

Sponsored research expense was zero during the three months ended June 30, 2013, compared to (\$1,000) in the comparable prior period. During the nine months ended June 30, 2013, sponsored research expense was \$156,000 during compared to \$73,000 in the comparable prior period. Sponsored research expense in both periods relates solely to work at the University of Cincinnati related to our obesity program. Such research expense is dependent upon studies undertaken, and vary based on needs and priority of the program.

Other research expense was \$14,000 during the three months ended June 30, 2013, compared to \$9,000 in the comparable prior period. During the nine months ended June 30, 2013, other research expense was \$41,000 during compared to \$17,000 in the comparable prior period. The increase primarily relates to the costs of other laboratory services, primarily waste disposal costs, which vary based on the type and level of R&D activity.

#### ***Stock-based compensation expense***

Stock-based compensation expense, a noncash expense, was \$1,114,000 during the nine months ended June 30, 2013, compared to \$837,000 during the comparable prior period. Stock-based compensation expense is based upon the valuation of stock options granted to employees, directors, and certain consultants. Many variables affect the amount expensed, including the Company's stock price on the date of the grant, as well as other assumptions. Based on the completion of vesting of a number of stock options during the second half of fiscal 2012, compensation expense related to those awards ended. This was mostly offset by additional options granted to new and existing employees in fiscal 2013.

#### ***Depreciation and amortization expense***

Depreciation and amortization expense, a noncash expense, was \$1,352,000 during the nine months ended June 30, 2013, compared to \$1,302,000 during the comparable prior period. The majority of depreciation and amortization expense relates to depreciation on lab equipment and leasehold improvements in Madison. The increase in depreciation expense relates to newly acquired lab equipment in Madison facility with its normal depreciation.

#### ***Other income / expense***

Other expense was \$1,308,000 during the nine months ended June 30, 2013, compared to \$799,000 in the comparable prior period. The primary component of other expense during the nine months ended June 30, 2013 was a nonrecurring charge related to the write down of a note receivable in the amount of \$1 million. During the prior period, the Company recorded an impairment of its unconsolidated affiliate for \$1.5 million, and, the Company recorded a loss of \$0.9 million related to the disposal of fixed assets. These losses were somewhat offset by a gain from the acquisition of Roche Madison in the amount of \$1.6 million.

## **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) and 15d-15(f) of 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**

There have been no material changes to the risk factors included in our Annual Report on Form 10-K for the year ended September 30, 2012. Please carefully consider the information set forth in this Quarterly Report on Form 10-Q and the risk factors discussed in Part I, “Item 1A. Risk Factors” in our Annual Report on Form 10-K for the year ended September 30, 2012, which could materially affect our business, financial condition or future results. The risks described in our Annual Report on Form 10-K, as well as other risks and uncertainties, could materially and adversely affect our business, results of operations and financial condition, which in turn could materially and adversely affect the trading price of shares of our common stock. Additional risks not currently known or currently material to us may also harm our business.

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

None.

### **ITEM 3. DEFAULTS UPON SENIOR SECURITIES**

None.

### **ITEM 4. MINE SAFETY DISCLOSURES**

Not Applicable.

### **ITEM 5. OTHER INFORMATION**

On August 5, 2013, Calando, a majority-owned subsidiary of the Company, terminated a License Agreement with the California Institute of Technology (the “License”). The License provided Calando with exclusive rights to develop and commercialize therapeutics based on the linear cyclodextrin drug delivery technology invented at Caltech. The drug delivery technology platforms, CycloSert™ and RONDEL™, as well as the drug candidates IT-101 and CALAA-01, were developed based on the licensed

technology. Calando was responsible to direct and pay for the prosecution of the patents and patent applications covered by the License and to progress the technology.

In 2009, the Company entered into transactions with Cerulean Pharma, Inc. (the "Cerulean Transaction") whereby the rights provided under the License related to Cycloset and IT-101 were sublicensed to Cerulean. Calando retained the rights under the License for the delivery of nucleic acids (and certain other small molecule drugs that had been previously sublicensed to other third parties) and continued the development of the RONDEL platform and the clinical investigation of CALAA-01. Based on the rapid and steady progress of the Company's DPC platform and associated drug candidate, ARC-520, as well as the results of the development and clinical program for RONDEL and CALAA-01, the Company has determined to cease further investment in the RONDEL™ siRNA delivery platform and CALAA-01.

At the time of the Cerulean Transaction, Cerulean and Caltech entered an agreement whereby, in the event that the License was terminated by Calando, Cerulean would directly assume certain of the rights and obligations of the License related to Cycloset and IT-101 (now known as CRLX-101). Beginning on the date of the termination of the License, Cerulean assumed control of the related patent portfolio and the obligation to pay patent-related expenses. Future expenses incurred by Cerulean related to the patent prosecution may be deducted from future payments owed by Cerulean to Calando pursuant to the Cerulean Transaction.

## ITEM 6. EXHIBITS

<b>Exhibit Number</b>	<b>Document Description</b>
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 June 30, 2013, 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. **

\* 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: August 7, 2013

ARROWHEAD RESEARCH CORPORATION

By: /s/ Kenneth A. Myszowski

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Kenneth A. Myszowski  
Chief Financial Officer

## CERTIFICATION PURSUANT SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

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: August 7, 2013

/s/ CHRISTOPHER ANZALONE

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**Christopher Anzalone**  
**Chief Executive Officer**

## CERTIFICATION PURSUANT SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

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: August 7, 2013

/s/ Kenneth A. Myszkowski

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

**CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

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 June 30, 2013, 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: August 7, 2013

/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 PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

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 June 30, 2013, 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: August 7, 2013

/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.

