

ARROWHEAD RESEARCH CORP  
Form 10-Q  
May 15, 2009  
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**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**

Washington, DC 20549

**FORM 10-Q**

(Mark One)

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

For the quarterly period ended March 31, 2009.

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

Commission file number 000-21898

**ARROWHEAD RESEARCH CORPORATION**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State of incorporation)

201 S. Lake Avenue, Suite 703

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

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Pasadena, California 91101

(626) 304-3400

(Address and telephone number of principal executive offices)

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

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

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

Large accelerated

Accelerated filer

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

Smaller reporting company

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

The number of shares outstanding of the issuer's classes of common equity, as of the latest practicable date is 42,934,517 shares of common stock as of May 15, 2009.

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

	(unaudited) March 31, 2009	September 30, 2008
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 3,557,340	\$ 10,093,585
Trade receivable, net of allowance for doubtful account of \$116,031 for 2009 and 2008	114,703	4,054
Grant receivable, net of allowance for doubtful account of \$0	50,982	54,436
Other receivables	3,109	28,109
Other prepaid expenses	451,434	380,933
<b>TOTAL CURRENT ASSETS</b>	<b>4,177,568</b>	<b>10,561,117</b>
<b>PROPERTY AND EQUIPMENT</b>		
Computers, office equipment and furniture	575,036	571,616
Research equipment	1,960,242	1,986,117
Software	167,615	167,615
Leasehold improvements	115,871	115,871
	2,818,764	2,841,219
Less: Accumulated depreciation and amortization	(1,914,774)	(1,596,009)
<b>NET PROPERTY AND EQUIPMENT</b>	<b>903,990</b>	<b>1,245,210</b>
<b>INTANGIBLE AND OTHER ASSETS</b>		
Rent deposit	228,814	254,289
Patents, <i>Note 1.</i>	2,541,469	2,749,555
Investment in Nanotope Inc., equity basis	2,128,859	2,258,271
Investment in Leonardo Biosystems Inc., at cost	187,000	187,000
<b>TOTAL OTHER ASSETS</b>	<b>5,086,142</b>	<b>5,449,115</b>
<b>TOTAL ASSETS</b>	<b>\$ 10,167,700</b>	<b>\$ 17,255,442</b>
<b>LIABILITIES AND STOCKHOLDERS EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable	\$ 2,001,827	\$ 1,342,000
Accrued expenses	1,042,652	844,549
Payroll liabilities	310,844	479,294
Accrued severance	250,000	250,000
Capital lease obligation short term, <i>Note 10.</i>	843,420	810,456
<b>TOTAL CURRENT LIABILITIES</b>	<b>4,448,743</b>	<b>3,726,299</b>
<b>LONG-TERM LIABILITIES</b>		
Notes payable, <i>Note 6.</i>	2,516,467	
Capital lease obligation long term, <i>Note 10.</i>	296,419	726,534
Accrued severance, <i>Note 11.</i>	500,000	500,000
<b>TOTAL LONG-TERM LIABILITIES</b>	<b>3,312,886</b>	<b>1,226,534</b>

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Minority interests		
Unidym Series C-1 Preferred Stock with liquidation preference and put option, <i>Note 7.</i>	2,000,000	
Commitment and contingencies, <i>Note 11.</i>		
<b>STOCKHOLDERS EQUITY, <i>Note 8.</i></b>		
Common stock	42,950	42,950
Preferred stock		
Additional paid-in capital	99,179,335	97,756,126
Accumulated deficit during the development stage	(98,816,214)	(85,496,467)
<b>TOTAL STOCKHOLDERS EQUITY</b>	<b>406,071</b>	<b>12,302,609</b>
<b>TOTAL LIABILITIES AND STOCKHOLDERS EQUITY</b>	<b>\$ 10,167,700</b>	<b>\$ 17,255,442</b>

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

**Table of Contents****Arrowhead Research Corporation and Subsidiaries****(A Development Stage Company)****Consolidated Statements of Operations**

	Three Months Ended 31-Mar-09	Three Months Ended 31-Mar-08	Six Months Ended 31-Mar-09	Six Months Ended 31-Mar-08	May 7, 2003 (Inception) to March 31, 2009
<b>REVENUE, Note 1</b>	<b>\$ 235,650</b>	<b>\$ 724,766</b>	<b>\$ 937,373</b>	<b>\$ 1,127,627</b>	<b>\$ 4,686,865</b>
<b>OPERATING EXPENSES</b>					
Salaries	2,441,953	3,398,721	5,576,780	6,400,883	37,745,794
Consulting	343,994	687,166	942,751	1,270,199	7,548,907
General and administrative expenses	1,032,171	1,513,588	2,662,159	3,177,010	21,327,539
Research and development	1,515,298	1,839,854	5,438,603	3,618,561	50,412,671
Patent amortization	118,556	103,991	208,086	207,982	1,607,457
<b>TOTAL OPERATING EXPENSES</b>	<b>5,451,972</b>	<b>7,543,320</b>	<b>14,828,379</b>	<b>14,674,635</b>	<b>118,642,368</b>
<b>OPERATING LOSS</b>	<b>(5,216,322)</b>	<b>(6,818,554)</b>	<b>(13,891,006)</b>	<b>(13,547,008)</b>	<b>(113,955,503)</b>
<b>OTHER INCOME (EXPENSES)</b>					
Loss on equity of investment Nanotope	(60,032)		(129,412)		(244,141)
Gain on sale of stock in subsidiary					2,292,800
Gain on sale of equity of investment Ensysce			700,000		700,000
Gain on sale of fixed assets	52,457		52,457		52,457
Realized and unrealized gain (loss) in marketable securities					382,264
Interest income (expense), net	(65,382)	247,578	(51,846)	576,227	2,965,091
Other income					3,637
<b>TOTAL OTHER INCOME (EXPENSES)</b>	<b>(72,957)</b>	<b>247,578</b>	<b>571,199</b>	<b>576,227</b>	<b>6,152,108</b>
<b>LOSS BEFORE MINORITY INTERESTS</b>	<b>(5,289,279)</b>	<b>(6,570,976)</b>	<b>(13,319,807)</b>	<b>(12,970,781)</b>	<b>(107,803,395)</b>
Minority interests		1,144,995	60	2,480,971	15,287,738
<b>LOSS FROM CONTINUING OPERATIONS</b>	<b>(5,289,279)</b>	<b>(5,425,981)</b>	<b>(13,319,747)</b>	<b>(10,489,810)</b>	<b>(92,515,657)</b>
Loss from operation of discontinued Nanotechnica, Inc.					(1,342,505)
Loss on disposal of Nanotechnica, Inc. (July 2005 September 2005)					(73,797)
Loss from operation of discontinued Aonex Technologies, Inc.		(268,834)		(438,779)	(5,188,999)
Gain on sale of Aonex Technologies, Inc.					306,344
Provision for income taxes					(1,600)
<b>LOSS FROM DISCONTINUED OPERATIONS</b>		<b>(268,834)</b>		<b>(438,779)</b>	<b>(6,300,557)</b>
<b>NET INCOME (LOSS)</b>	<b>\$ (5,289,279)</b>	<b>\$ (5,694,815)</b>	<b>\$ (13,319,747)</b>	<b>\$ (10,928,589)</b>	<b>\$ (98,816,214)</b>
Income (loss) from continuing operations per share, diluted and undiluted	\$ (0.12)	\$ (0.14)	\$ (0.31)	\$ (0.27)	
Loss per share from discontinued operations, diluted and undiluted	\$	\$ (0.01)	\$	\$ (0.01)	
	\$ (0.12)	\$ (0.15)	\$ (0.31)	\$ (0.28)	

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Net income (loss) per share, diluted and undiluted

Weighted average shares outstanding, diluted and undiluted

42,934,517

38,754,239

42,934,517

38,689,780

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

**Table of Contents****Arrowhead Research Corporation and Subsidiaries****(A Development Stage Company)****Consolidated Statement of Stockholders Equity****from inception to March 31, 2009**

	Common Stock		Additional Paid-in-Capital	Accumulated Deficit	Totals
	Shares	Amount		during the Development Stage	
<b>Initial Issuance of Stock:</b>					
Common stock & warrants issued for cash @ \$0.001 per unit	3,000,000	\$ 3,000	\$	\$	\$ 3,000
Common stock & warrants issued for cash @ \$1.00 per unit	1,680,000	1,680	1,678,320		1,680,000
Stock issuance cost charged to additional paid-in capital			(168,000)		(168,000)
Net loss for period from inception to September 30, 2003				(95,238)	(95,238)
<b>Balance at September 30, 2003</b>	<b>4,680,000</b>	<b>4,680</b>	<b>1,510,320</b>	<b>(95,238)</b>	<b>1,419,762</b>
Exercise of stock options @ \$0.20 per share	75,000	75	14,925		15,000
Common stock & warrants issued for cash @ \$1.00 per unit	475,000	475	474,525		475,000
Common stock & warrants issued for marketable securities @ \$1.00 per unit	500,000	500	499,500		500,000
Stock issuance cost charged to additional paid-in capital			(96,500)		(96,500)
Common stock and warrants issued for cash @ \$1.50 per unit	6,608,788	6,609	9,906,573		9,913,182
Common stock issued in reverse acquisition	705,529	706	(151,175)		(150,469)
Common stock issued as a gift for \$1.09 per share	150,000	163	162,587		162,750
Common stock and warrants issued as stock issuance cost @ \$1.50 per unit	356,229	356	533,988		534,344
Stock issuance cost charged to additional paid-in capital			(991,318)		(991,318)
Exercise of stock option @ \$0.20 per share	75,000	75	14,925		15,000
Exercise of stock options @ \$1.00 per share	6,000	6	5,994		6,000
Stock-based compensation			175,653		175,653
Net loss for the year ended September 30, 2004				(2,528,954)	(2,528,954)
<b>Balance at September 30, 2004</b>	<b>13,631,546</b>	<b>13,645</b>	<b>12,059,997</b>	<b>(2,624,192)</b>	<b>9,449,450</b>
Exercise of warrants @ \$1.50 per share	13,812,888	13,813	20,705,522		20,719,335
Exercise of stock options @ \$1.00 per share	25,000	25	24,975		25,000
Purchase of Insert Therapeutics shares @ \$0.28/share	502,260	502	1,999,498		2,000,000
Common stock issued for services	12,500	12	49,988		50,000
Stock-based compensation			508,513		508,513
Change in percentage of ownership in subsidiary			230,087		230,087
Net loss for the year ended September 30, 2005				(6,854,918)	(6,854,918)
<b>Balance at September 30, 2005</b>	<b>27,984,194</b>	<b>27,997</b>	<b>35,578,580</b>	<b>(9,479,110)</b>	<b>26,127,467</b>
Exercise of stock options	115,794	116	341,421		341,537
Common stock issued @ \$4.88 per share	204,854	205	999,795		1,000,000
Common stock issued @ \$3.84 per share to Dr. M. Moskovits as payment for application of patents	15,000	15	57,585		57,600
Common stock issued @ \$3.50 per share	5,590,000	5,590	19,539,410		19,545,000
Common stock issued to Caltech as payment for legal fees	25,364	25	149,975		150,000
Purchase of Calando Pharmaceuticals, Inc. @ \$5.17/share	208,382	208	1,077,125		1,077,333
Stock-based compensation			1,270,339		1,270,339
Accelerated stock options			99,139		99,139
Net loss for the year ended September 30, 2006				(18,997,209)	(18,997,209)
<b>Balance at September 30, 2006</b>	<b>34,143,588</b>	<b>34,156</b>	<b>59,113,369</b>	<b>(28,476,319)</b>	<b>30,671,206</b>
Exercise of stock options	186,164	186	434,541		434,727



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Common stock issued, net	2,849,446	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.	1,431,222	1,431	5,398,569		5,400,000
Stock-based compensation			2,175,544		2,175,544
Net loss for the year ended September 30, 2007				(29,931,118)	(29,931,118)
<b>Balance at September 30, 2007</b>	<b>38,610,420</b>	<b>38,622</b>	<b>84,672,783</b>	<b>(58,407,437)</b>	<b>26,303,968</b>
Exercise of stock options	105,357	106	289,921		290,027
Common stock issued, net	3,863,989	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 @ \$2.72 per share to Rice University as a gift	50,000	50	135,950		136,000
Common stock issued to purchase shares of Unidym, Inc.	70,547	71	199,929		200,000
Common stock issued to purchase MASA Energy, LLC	105,049	105	309,895		310,000
Common stock issued to Unidym for the acquisition of Nanoconduction	114,155	114	249,886		250,000
Common stock issued @ \$2.18/sh to Alan Gotcher	15,000	15	32,685		32,700
Stock-based compensation			3,187,397		3,187,397
Net loss for the year ended September 30, 2008				(27,089,030)	(27,089,030)
<b>Balance at September 30, 2008</b>	<b>42,934,517</b>	<b>42,950</b>	<b>97,756,126</b>	<b>(85,496,467)</b>	<b>12,302,609</b>
Stock-based compensation			727,934		727,934
Net loss for the three months ended December 31, 2008				(8,030,468)	(8,030,468)
<b>Balance at December 31, 2008</b>	<b>42,934,517</b>	<b>42,950</b>	<b>98,484,060</b>	<b>(93,526,935)</b>	<b>5,000,075</b>
Stock-based compensation			695,275		695,275
Net loss for the three months ended March 31, 2009				(5,289,279)	(5,289,279)
<b>Balance at March 31, 2009</b>	<b>42,934,517</b>	<b>42,950</b>	<b>99,179,335</b>	<b>(98,816,214)</b>	<b>406,071</b>

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

**Table of Contents****Arrowhead Research Corporation and Subsidiaries****(A Development Stage Company)****Consolidated Statements of Cash Flows****For the six months ended March 31, 2009 and 2008 and from inception through March 31, 2009**

	Six months ended March 31, 2009	Six months ended March 31, 2008	Period from May 7, 2003 (Date of inception) to March 31, 2009
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>			
Net Loss	\$ (13,319,747)	\$ (10,928,589)	\$ (98,816,214)
Realized and unrealized (gain) loss on investment	(700,000)		(1,082,263)
Gain from sale of subsidiary			(306,344)
Stock issued as gift to Caltech			162,750
Stock issued as gift to Rice University		136,000	136,000
Stock issued for professional services			232,700
Stock issued for in-process research and development			10,874,338
Purchased-In-process research and development Nanoconduction			2,685,208
Stock-based compensation	1,423,209	1,541,497	8,839,794
Depreciation and amortization	526,852	582,688	4,269,893
Gain on sale of stock in subsidiary			(2,292,800)
Non-cash loss from equity investment	129,412		244,141
Minority interests		(2,480,971)	(16,287,926)
Increase (decrease) of cash flow from:			
Receivables	(82,195)	(218,656)	(169,634)
Subscription receivable			
Prepaid research expense		441,106	(1)
Other prepaid expenses	(70,500)	(61,447)	(453,910)
Deposits	25,475	45,176	(230,874)
Accounts payable	659,826	(188,596)	1,369,557
Accrued expenses	198,103	(57,971)	555,180
Deferred revenue		(98,570)	
Other liabilities	(168,450)	(257,707)	1,078,033
<b>NET CASH USED IN OPERATING ACTIVITIES</b>	<b>(11,378,015)</b>	<b>(11,546,040)</b>	<b>(89,192,372)</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>			
Purchase of marketable securities US Treasury Bills			(18,575,915)
Purchase of property and equipment	(28,100)	(355,680)	(3,538,373)
Purchase of MASA Energy, LLC			(250,000)
Sale of property and equipment	50,554		50,554
Minority equity investment			(2,000,000)
Cash paid for interest in Nanotechnica			(4,000,000)
Cash paid for interest in Aonex			(5,000,000)
Cash paid for interest in Insert			(10,150,000)
Cash paid for interest in Calando			(8,000,000)
Cash paid for interest in Unidym	(225,000)	(3,000,000)	(12,226,000)
Cash paid for interest in Tego	1,700,000	(2,400,000)	(801,000)
Cash obtained from interest in Nanotechnica			4,000,000
Cash obtained from interest in Aonex			5,001,250
Cash obtained from interest in Insert			10,529,594
Cash obtained from interest in Calando			8,000,000
Cash obtained from interest in Unidym	225,000	3,000,000	12,226,000
Cash obtained from interest in Tego	(1,700,000)	2,400,000	801,000
Proceeds from sale of marketable securities US Treasury Bills			18,888,265
Proceeds from sale of investments	700,000		1,269,913
Proceeds from sale of subsidiary (net)		7,013,897	359,375
Payment for patents			(303,440)
Restricted cash			50,773

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NET CASH USED IN INVESTING ACTIVITIES	722,454	6,658,217	(3,668,004)
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>			
Payments of capital leases	(397,151)		(537,161)
Proceeds of issuance of Calando debt	2,516,467		2,516,467
Proceeds from sale of stock in subsidiary	2,000,000		18,575,168
Proceeds from issuance of common stock and warrants, net		290,027	75,863,242
<b>NET CASH PROVIDED BY FINANCING ACTIVITIES</b>	<b>4,119,316</b>	<b>290,027</b>	<b>96,417,716</b>
<b>NET INCREASE (DECREASE) IN CASH</b>	<b>(6,536,245)</b>	<b>(4,597,796)</b>	<b>3,557,340</b>
<b>CASH AT BEGINNING OF PERIOD</b>	<b>10,093,585</b>	<b>24,120,097</b>	
<b>CASH AT END OF PERIOD</b>	<b>\$ 3,557,340</b>	<b>\$ 19,522,301</b>	<b>\$ 3,557,340</b>
Supplementary disclosures:			
Interest paid	\$ 52,264	\$	\$ 62,511
Income tax paid	\$ 4,800	\$ 4,800	\$ 9,600

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

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SUPPLEMENTAL NON-CASH TRANSACTIONS

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

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

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

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

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

On August 8, 2008, Unidym acquired all of the outstanding stock of Nanoconduction, Inc. in exchange for 114,155 shares of Arrowhead stock with an estimated fair market value of \$250,000.

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

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**Arrowhead Research Corporation**

**Notes to Consolidated Financial Statements**

**March 31, 2009**

*Unless otherwise noted, (1) the term Arrowhead Research refers to Arrowhead Research Corporation, a Delaware corporation, (2) the terms Arrowhead, the Company, we, us and our refer to the ongoing business operations of Arrowhead and its subsidiaries, whether conducted through Arrowhead Research or a subsidiary of the Company, (3) the term Common Stock refers to Arrowhead Research's Common Stock, (4) the term Warrant refers to warrants to purchase Company Common Stock and (5) the term subsidiary refers to Unidym, Calando, Tego BioSciences Corporation and Agonn Systems, Inc.*

**NOTE 1. ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES**

*Nature of Business and Going Concern*

Arrowhead is a development stage nanotechnology holding company with assets in the areas of life sciences, electronics and energy. Arrowhead's mission is to build value through the identification, development and commercialization of nanotechnology-related products and applications. Arrowhead is active in the operation of its subsidiaries, providing key management to the subsidiaries. Each subsidiary is staffed with its own technical team that focuses on its specific technology and markets, while Arrowhead provides services including management, operational support, business development and financing.

Arrowhead currently owns two majority-owned subsidiaries, Unidym and Calando, two wholly-owned subsidiaries, Tego BioSciences Corporation ( Tego ) and Agonn Systems, Inc. ( Agonn ) and has minority investments in two early-stage nanotechnology companies, Nanotope, Inc. ( Nanotope ) and Leonardo Biosystems, Inc. ( LBS ). The Company's subsidiaries seek to commercialize a variety of nanotech products and applications, including anti-cancer drugs, RNAi therapeutics, carbon-based electronics and fullerene anti-oxidants. The Company's minority investments are focused on developing advanced nanomaterials for spinal cord injury and wound healing and drug delivery technology. Arrowhead's business plan includes adding to its portfolio through selective acquisition and formation of new companies, as capital resources allow.

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

Arrowhead and its subsidiaries fund research and operations from cash on hand, government grants, license royalties and carbon nanotube (CNT) sales. Neither Arrowhead nor its subsidiaries derived revenue from product sales from its inception until the acquisition of Carbon Nanotechnologies, Inc. ( CNI ) in April 2007 by Arrowhead's consolidated subsidiary, Unidym. Since the acquisition, Unidym has manufactured CNTs for the primary purpose of using them in research and development activities and derives minimal revenues from the sale of CNTs for research and commercial applications.

*Going Concern*

At March 31, 2009, the Company had approximately \$3.6 million in cash to fund operations. Since the September 30, 2008 fiscal year end, the Company has raised an additional \$4.5 million in capital through a combination of direct investments or convertible loans into its subsidiaries. Unidym also received \$700,000 from the sale of its ownership interest in Ensysce BioSciences Inc. ( Ensysce ), a Unidym affiliate. The Company is generating no significant revenue, and its fiscal 2008 operating losses and negative cash flows from operations raised doubts about its then ability to continue as a going concern over the next 12 months and beyond. The accompanying financial statements do not reflect any adjustments that might result if the Company were unable to continue as a going concern.

For fiscal 2009 and beyond, the Company's Board of Directors has approved a strategy for the Company to conserve cash resources and seek sources of new capital. To execute on this strategy, the Company is seeking to accomplish one or more of the following:

out-license of technology;

sale of a subsidiary;

sale of non-core assets or intellectual property of its subsidiaries;

funded joint development or partnership arrangements; and

sale of securities.

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The Company is actively involved in discussions with third parties regarding many of these alternatives. Until such time as one or more of these goals is accomplished, the subsidiaries have scaled back their activities. During fiscal 2008, two of Arrowhead's biopharmaceutical subsidiaries, Insert Therapeutics, Inc. and Calando Pharmaceuticals, Inc. were merged, significant personnel cuts were made at both Calando and Insert, and the number and development pace of clinical candidates was reduced or eliminated. Through the first half of 2009, the trend to reduce operations at Calando has continued. Calando is currently in discussions with potential partners to continue the development of its delivery platforms and clinical candidates. This strategy is designed to conserve cash, eliminate liabilities and retain upside potential from the future commercialization of Calando's technology. In the first half of fiscal 2009, Unidym made substantial reductions in personnel and is nearing the completion of its efforts to consolidate its operations into one facility in Northern California. Tego and Agonn have limited operations and currently require very little cash. Cash conservation measures at the Arrowhead level have been taken and are expected to continue.

*Summary of Significant Accounting Policies*

**Basis of Presentation** This report on Form 10-Q for the three months and six months ended March 31, 2009, should be read in conjunction with the Company's Annual Report on Form 10-K for the year ended September 30, 2008 filed with the SEC on December 15, 2008. The accompanying unaudited consolidated financial statements have been prepared in accordance with generally accepted accounting principles for interim financial statements and with the instructions to Form 10-Q and Rule 10-01 of Regulation S-X. Accordingly, they do not include all the information and footnotes required by generally accepted accounting principles for complete financial statements. Certain prior period amounts have been reclassified to conform to the current period's presentation. In the opinion of management, all normal recurring adjustments considered necessary for a fair presentation have been included. Operating results for the three months and six months ended March 31, 2009 are not necessarily indicative of the results that might be expected for the fiscal year ending September 30, 2009.

**Principles of Consolidation** The consolidated financial statements of the Company include the accounts of Arrowhead and its subsidiaries. Arrowhead's subsidiaries include Calando, which merged, in April 2008, with another of the Company's majority-owned subsidiaries, Insert Therapeutics, Inc. The merged entity continues to operate under the name Calando. The other subsidiaries include Unidym, Tego, Agonn and Aonex Technologies, Inc. (Aonex). Aonex was sold in May 2008 and is included in the results as Loss from Discontinued Operations. Nanotechnica, Inc. (Nanotechnica) a majority-owned subsidiary dissolved in June 2005, is also included in the cumulative results as Loss from Discontinued Operations. All significant intercompany accounts and transactions are eliminated in consolidation, and minority interests are accounted for in the consolidated statements of operations and the balance sheets.

**Use of Estimates** The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the accompanying financial statements. Significant estimates made in preparing these financial statements include valuing of the stock of the subsidiaries, assumptions to calculate the value of stock options, stock-based compensation expense, allowance for doubtful accounts, deferred tax asset valuation allowance, patents, minority-interest Common Stock and useful lives for depreciable and amortizable assets. Actual results could differ from those estimates.

**Cash and Cash Equivalents** For purposes relating to the statement of cash flows, the Company considers all liquid debt instruments purchased with a maturity of three months or less to be cash equivalents.

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

**Concentration of Credit Risk** The Company maintains checking accounts for Arrowhead and separate accounts for each subsidiary at either of four financial institutions. These accounts are insured by the Federal Deposit Insurance Corporation (FDIC) for up to \$250,000 as of March 31, 2009. The Company has three wealth management accounts at one financial institution that invests in higher yield money market accounts and in government securities. At March 31, 2009, the Company had uninsured cash deposits totaling \$3,185,389. The Company has not experienced any losses in such accounts.

**Property and Equipment** Property and equipment are recorded at cost. Depreciation of property and equipment is recorded on the straight-line method over the respective useful lives of the assets ranging from 3 to 7 years. Leasehold improvements are amortized over the initial term of the leases.

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**Intellectual Property** At March 31, 2009, intellectual property consisted of patents and patent applications licensed or purchased in the gross amount of \$792,434. A portion of the consideration paid for Calando (formerly Insert) has been allocated to the patents held by Calando. The Calando patents, in the gross amount of \$3,301,190, are being amortized over the life of these patents. The accumulated amortization of patents totaled \$1,552,155 at March 31, 2009. Patents are being amortized over 3 years to 20 years unless a patent is determined to have no foreseeable commercial value and is written down to \$1. The weighted average original amortization period is 13 years. The weighted average remaining amortization period is 9.7 years.

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

**Minority Equity Investments** The Company's minority equity investment in LBS, a privately held biotechnology company, is classified as an other asset. This investment is carried at cost because Arrowhead owns less than 20% of the voting equity and only has the ability to exercise nominal, not significant, influence over this company. This investment is inherently high risk as the market for technologies or products manufactured by this company were in an early stage at the time of the investment by Arrowhead and such markets may never be significant. Arrowhead could lose its entire investment in some or all of this company. Arrowhead monitors these investments for impairment and makes appropriate reductions in carrying values when necessary.

**Minority Interests in Majority-Owned Subsidiaries** Operating losses applicable to the majority-owned Calando and Unidym have periodically exceeded the minority interests in the equity capital of either subsidiary. Such excess losses applicable to the minority interests have been and are borne by the Company as there is no obligation of the minority interests to fund any losses in excess of their original investment. There is also no obligation or commitment on the part of the Company to fund operating losses of any subsidiary whether wholly-owned or majority-owned.

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

When Insert Therapeutics raised \$10.1 million in October of 2006, the Company participated by investing \$5.0 million in the offering. In comparison, the value of the Company's equity in Insert increased by \$7,401,394. Consistent with the guidance found in Staff Accounting Bulletin Topic 5H, the difference between the amount invested by the Company and the increase in Company's equity value in the subsidiary or \$2,401,394 was recorded as an increase in Arrowhead's proportionate share of the subsidiary's equity and is shown as an increase in the Company's Additional Paid in Capital. A similar calculation was made for the Unidym \$10.0 million offering in the fall of 2007. The Company contributed \$3.0 million but the value of its interest in the equity of Unidym increased by \$4,720,962. The \$1,720,962 difference was recorded as an increase in Arrowhead's proportionate share of the subsidiary's equity and is shown as an increase in the Company's Additional Paid in Capital.

**Revenue Recognition** The Company follows the guidance of the Securities and Exchange Commission's (SEC) Staff Accounting Bulletin 104 (SAB No. 104) for revenue recognition. Revenue from product sales is recognized when the related goods are shipped and all significant obligations of the Company have been satisfied. The Company recognizes license fee revenue on a straight-line basis over the term of the license. Development fees, milestone fees, collaboration fees and grant revenues are recognized upon the completion and payment of services or achievement of the mutually agreed milestones.

The Company generated revenues of \$235,650 and \$724,766 for the three months ended March 31, 2009 and 2008, respectively. The revenue for the three months ended March 31, 2009 consist of \$7,500 from license fees from Unidym technology, \$20,000 in collaboration fees from Calando, \$117,715 in grants to Unidym to fund research and \$90,435 from sales and delivery of CNTs and inks by Unidym. The prior year revenues consist of \$557,471 in grants to Unidym to fund research and \$167,295 from Unidym's sales and delivery of CNTs.

The Company generated revenues of \$937,373 and \$1,127,627 for the six months ended March 31, 2009 and 2008, respectively. The revenue for the six months ended March 31, 2009 consist of \$457,500 from license fees from Unidym technology, \$202,948 in grants to Unidym to fund research \$20,000 in collaboration fees from Calando and \$256,925 from sales and delivery of CNTs and inks by Unidym. The prior year revenues consist of \$748,487 in grants to Unidym to fund research and \$379,140 from Unidym's sales and delivery of CNTs.





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**Cost of Goods Sold** Unidym produces nanotubes for the primary purpose of using them in research and development activities, therefore the nanotubes produced are not capitalized as inventory, nor is a cost of goods sold calculated, even though some nanotubes are eventually sold to third parties.

**Research and Development** Costs and expenses that can be clearly identified as research and development are charged to expense as incurred in accordance with FASB statement No. 2, Accounting for Research and Development Costs.

**Earnings (Loss) per Share** Basic earnings (loss) per share is computed using the weighted-average number of common shares outstanding during the period. Diluted earnings (loss) per share are computed using the weighted-average number of common shares and dilutive potential common shares outstanding during the period. Dilutive potential common shares primarily consist of stock options issued to employees and consultants and Warrants.

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

**NOTE 2. BASIS OF CONSOLIDATION**

The consolidated financial statements for the three months and six months ended March 31, 2009 and 2008 respectively, include the accounts of Arrowhead and its subsidiaries. All significant intercompany accounts and transactions are eliminated in consolidation and minority interests are accounted for in the consolidated statements of operations and the balance sheets.

**NOTE 3. ALLOWANCE FOR DOUBTFUL ACCOUNTS**

The Company accrues an allowance for doubtful accounts based on estimates of uncollectible revenues by analyzing historical collections, accounts receivable aging and other factors. Accounts receivable are written off when all collection attempts have failed. The allowance for doubtful accounts applicable to Unidym as of March 31, 2009, and 2008 is \$116,031 and \$46,031, respectively.

**NOTE 4. INVESTMENT IN SUBSIDIARIES**

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

On April 17, 2008, Calando merged with and into Insert, with Insert as the surviving company (the Calando Merger). Following the common-control merger, Insert changed its name to Calando. Insert and Calando effectuated the Calando Merger with and into Insert pursuant to the Agreement and Plan of Reorganization dated January 14, 2008 (the Calando Merger Agreement).

Prior to the Calando Merger, Arrowhead had financed the operations of Insert and Calando through a series of working capital loans. At the time of the Calando Merger, Arrowhead had a series of 6% simple-interest working capital loans outstanding to Insert totaling \$1,600,000. Arrowhead also had a series of 6% simple-interest working capital loans outstanding to Calando totaling \$4,450,000. As part of the Calando Merger, an Agreement to Provide Additional Capital, dated as of March 31, 2006, between Calando and the Company was amended and terminated to accelerate the payment of the remaining \$6,000,000 payable thereunder, against receipt of the repayment of the principal and interest on all loans extended by the Company to either Insert or Calando (\$6,187,663 principal and interest as of the date of the merger).

Among other things, the Calando Merger was conditioned upon the recapitalization of Insert and Calando to eliminate the preferred stock of each company. In the Insert recapitalization, immediately before the effective time of the Calando Merger, each share of Insert Series B Preferred Stock, Series C Preferred Stock and Series C-2 Preferred Stock was converted into one share of common stock, par value \$0.0001 per share, of Insert (the Insert Common Stock). All warrants outstanding for the purchase of Insert Series D Preferred Stock became exercisable for a like number of shares of Insert Common Stock. In the Calando recapitalization, immediately before the effective time of the Calando Merger, each share of Calando Series A Preferred Stock was converted into one share of Calando common stock, par value \$0.0001 per share (the Calando Common Stock).

At the time of the Calando Merger, each issued and outstanding share of Calando Common Stock was canceled and automatically converted into the right to receive shares of Insert Common Stock based on the relative enterprise valuation of Insert to Calando of 1 to 1.5, or a Calando Merger share exchange ratio of 5.974126 shares of Insert Common Stock issued for each share of Calando Common Stock. Outstanding options to acquire Calando Common Stock were converted into an option to acquire approximately 5.974126 shares of Insert Common Stock.

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As a result of the Calando Merger, the following agreements to which the Company was a party terminated: (i) Insert's Right of First Refusal and Co-Sale Agreement, dated as of June 4, 2004, (ii) Insert's Voting Agreement, dated as of June 4, 2004, (iii) Calando's Amended and Restated Investors' Rights Agreement, dated as of March 31, 2006, (iv) Calando's Amended and Restated Voting Agreement, dated as of March 31, 2006, and (v) Calando's Right of First Refusal and Co-Sale Agreement, dated as of March 31, 2006. Upon the effective date, the license agreement between Insert and Calando, dated as of March 14, 2005, pursuant to which Insert granted Calando worldwide exclusive rights to Insert's intellectual property related technologies, and a broad patent application covering methods and uses for the therapeutic use of RNAi, including its linear cyclodextrin polymers, was terminated.

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In connection with the Calando Merger, Insert entered into an Amended and Restated Investors Rights Agreement (the Restated Investors Rights Agreement ), restating Insert Investors Rights Agreement, dated as of June 4, 2004, as amended by Amendment No. 1 to Investors Rights Agreement, dated as of March 30, 2005, and as further amended by Amendment No. 2 to Investors Rights Agreement, dated as of October 25, 2006.

On November 26, 2008, Calando entered into Unsecured Convertible Promissory Note Agreements ( Notes ) for \$2.5 million with accredited investors plus Arrowhead which invested \$200,000 in the Note offering. Arrowhead invested an additional \$500,000 in the same offering on February 23, 2009. The Notes mature on November 26, 2010 and bear 10% annual interest. Unpaid principal of the Notes and accrued but unpaid interest thereon is convertible into common stock of Calando at a conversion price of \$0.576647 per share (subject to adjustment) at any time in the sole discretion of the holder. In the event of a Calando Company Sale, each holder has the option to exchange the Notes for two times the then outstanding principal amount owed under the Notes plus accrued and unpaid interest thereon ( Redemption Amount ) or convert the outstanding principal and accrued and unpaid interest thereon into Calando common stock at the Conversion Price. A Company Sale is defined under the Notes as the earliest to occur of: (a) the sale, exchange, or other transfer by any shareholder(s) of Calando of capital stock representing, individually or in the aggregate, greater than fifty percent (50%) of the outstanding voting capital of Calando; (b) a merger, consolidation, reorganization, or other transaction approved by the shareholders that would directly or indirectly produce the results described in (a) above; (c) a sale of all or substantially all of Calando s assets approved by the shareholders; or (d) the consummation of an exclusive license of i) substantially all of the Company s intellectual property assets; and/or to the ii) RONDEL siRNA delivery system, to a third party for a prepaid fee exceeding the Redemption Amount. At any time a Note is outstanding, Calando may redeem such Note for the Redemption Amount.

To facilitate the above investment in Calando, Arrowhead subordinated Calando s debt obligations to Arrowhead aggregating approximately \$5.3 million for principal plus interest thereon.

As March 31, 2009, the Company owns 67.8% of the outstanding shares of the combined company (63.6% on a fully diluted basis).

As of March 31, 2009, Arrowhead had a series of 6% simple-interest working capital loans and advances outstanding to Calando totaling \$5,501,395 plus accrued interest of \$188,054 payable upon demand, of which approximately \$5.3 million is subordinate to the Unsecured Convertible Promissory Note Agreements described previously.

*Unidym, Inc. (formerly NanoPolaris, Inc.)*

On April 4, 2005, Arrowhead founded NanoPolaris, Inc. ( NanoPolaris ) as a wholly-owned subsidiary of Arrowhead. NanoPolaris was initially capitalized with \$1,000.

On June 13, 2006, NanoPolaris acquired substantially all of the net assets and the name Unidym from Unidym s founding scientist. Unidym was a developer of CNT-based electronics. The net assets acquired included Unidym s intellectual property, prototypes and equipment, for a purchase price consisting of \$25,000 in cash, the assumption of \$75,000 of liabilities and shares of NanoPolaris common stock, with an estimated value of \$154,350. At the time of the purchase, the shares issued for the purchase represented 11.9% (10% on a fully diluted basis) of NanoPolaris outstanding voting stock. Concurrently with the purchase, Arrowhead agreed to provide up to \$4,000,000 in additional capital contributions over the next two years. In August 2006, NanoPolaris changed its name to Unidym, Inc.

On April 20, 2007, a wholly-owned subsidiary of Unidym merged with CNI, a Texas-based company involved in the development, manufacture and marketing of CNTs (the CNI Merger ). In connection with the CNI Merger, Arrowhead agreed to accelerate the \$4,000,000 capital contribution to Unidym and made payment on April 23, 2007. In aggregate consideration for the acceleration of the additional capital to Unidym and the transfer from Arrowhead to Unidym of rights and obligations under two sponsored research agreements, Unidym issued 448,000 shares of Unidym common stock to Arrowhead.

Prior to the CNI Merger, certain shareholders of CNI assumed all of CNI s outstanding debt, a total of \$5,400,000, in exchange for 1,080,000 shares of Series E Preferred Stock of CNI. On the date of the CNI Merger, Arrowhead purchased the Series E Preferred Stock in exchange for 1,431,222 shares of Arrowhead Common Stock with an estimated fair market value of \$5,400,000. The CNI Series E Preferred Stock was exchanged in the merger for 2,784,252 shares of newly authorized Unidym Series B Preferred Stock. The existing 2,889,000 shares of Unidym Series A Preferred Stock owned by Arrowhead were exchanged for 2,889,000 shares of Unidym Series B Preferred Stock.

In exchange for all the outstanding shares of CNI common stock, Unidym issued 5,000,000 shares of newly authorized Unidym Series A Preferred Stock with an estimated total value of \$4,200,000. The Series A Preferred Stock is convertible into 8,400,482



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shares of Unidym common stock under certain conditions. Unidym also assumed CNI's 2007 Restricted Stock Unit Plan subject to which 1,104,010 shares of Unidym common stock are issuable on the later of March 31, 2008, or an initial public offering by Unidym. Unidym also assumed a warrant to purchase 64,000 shares of Unidym common stock.

The consolidated statement of operations includes the results of the merged companies since April 21, 2007.

Prior to the CNI Merger, Arrowhead owned 88.1% of the outstanding voting securities of Unidym. Immediately following the CNI Merger, Arrowhead's ownership of the outstanding voting securities was 60.1%. If all options were awarded and exercised, all common stock subject to restricted stock units was issued and all preferred stock was converted, Arrowhead's interest would have been 42.1% immediately following the CNI Merger.

In December 2007, Unidym completed a private financing with strategic and financial investors, pursuant to which Unidym issued and sold an aggregate of 5,764,778 shares of its Series C Preferred Stock for \$1.80 per share. The private placement generated net cash proceeds of \$10,013,897, including \$3,000,000 invested by Arrowhead.

Immediately following the private financing, in December 2007, Arrowhead's ownership of the outstanding, voting securities was 51.2%. If at that point in time all options were awarded and exercised, all common stock subject to restricted stock units was issued and all preferred stock were converted, Arrowhead's interest would have been 39.2%.

On April 23, 2008, the Company entered into a stock purchase agreement whereby the Company purchased from a Unidym stockholder and director 550,000 shares of Unidym common stock in exchange for \$350,000 in cash and restricted Arrowhead Common Stock valued at \$200,000. As part of the agreement, the director resigned from his seat on the Unidym board and the Chief Executive Officer of the Company was appointed to the Unidym board.

On June 12, 2008 and June 16, 2008, Unidym entered into subscription agreements with Entegris, Inc. and Arrowhead Research Corporation, respectively, pursuant to which Unidym issued and sold an aggregate of 2,222,222 shares of its Series C Preferred Stock for aggregate cash proceeds of \$4,000,000 in a private financing transaction. Entegris' investment was made in connection with its expanded customer relationship with Unidym for CNTs. The Company purchased 1,111,111 shares of Series C Preferred Stock for a purchase price of \$2,000,000. After giving effect to the Shares issued in this private placement, Arrowhead retains majority ownership of Unidym.

On November 13, 2008, Unidym entered into a subscription agreement with Tokyo Electron Ventures (TEL Ventures), pursuant to which Unidym sold 1,111,111 shares of newly authorized Series C-1 Preferred Stock for cash proceeds of \$2 million in a private financing transaction. Shares of Series C-1 carry the same rights and preferences as the existing Series C Preferred Stock, except that the Series C-1 are senior to the Series C and all other outstanding stock of Unidym, and the Series C-1 have a \$2.16 per share liquidation preference, subject to increase to \$3.60 per share in the event Unidym fails to achieve a defined cash flow requirement by June 30, 2009 (as defined in Unidym's Certificate of Amendment of the Amended and Restated Certificate of Incorporation). The cash flow requirement is the receipt by Unidym of cash proceeds of at least \$7 million from the date of the Restated Certificate through June 30, 2009 from any combination of sales of Unidym equity (not counting the Series C-1 sold to TEL Ventures), the monetization by Unidym of some or all of its assets and/or business operations in materials for anti-static polymers and other applications such as carbon fibers, the sale by Unidym of its shares in any of its subsidiaries and net cash flow from operations during the measurement period. The Series C have a liquidation preference of \$1.80 with no adjustment for cash flow requirement. The liquidation preferences of the Series C-1 and Series C are subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the relevant series of stock.

Pursuant to the agreement, TEL Ventures may in certain circumstances convert its Series C-1 Preferred stock into shares of preferred stock at a subsequent offering. TEL Ventures investment in Unidym was made in connection with an anticipated joint development program between TEL Ventures and Unidym. In the event the parties do not enter into a joint development agreement by June 30, 2009, TEL Ventures shall have until July 31, 2009 to exercise a put option pursuant to which Unidym will be obligated to repurchase the Series C-1 (or converted shares in the case of a qualified transaction) for an aggregate purchase price of \$2 million. Regardless of the joint development program, TEL Ventures shall have an additional put option if Unidym fails to meet the cash flow requirement (set forth above) by June 30, 2009. In this event, TEL Ventures may exercise this put option by July 31, 2009, and Unidym will be obligated to repurchase the Series C-1 held by TEL Ventures for \$2.16 per share, or an aggregate maximum of \$2.4 million. Unidym does not intend to escrow or reserve the \$2 million of investment proceeds until passage of these contingencies. Unidym's contingent buy back obligations are secured by a separate security agreement between Unidym and TEL Ventures, dated as of November 13, 2008.

In connection with this transaction, TEL Ventures, as a holder of Series C-1 shares, became a party to Unidym's Investor Rights Agreement, Right of First Refusal Agreement and Voting Agreement. TEL Ventures was previously a party to these agreements as a holder of Series C

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shares. Other than joining the Series C-1 shares, none of the Investor Rights Agreement, Right of First Refusal Agreement or Voting Agreement were amended.

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In February 2009, the Company agreed to increase its ownership in Unidym, Inc. through a stock exchange with certain holders of Unidym's Series A Preferred Stock. Each share of Unidym Series A Preferred Stock is convertible into 1.68 shares of Unidym common stock. Under the agreement, Arrowhead is exchanging an aggregate of 1,499,785 restricted shares of Arrowhead Common Stock for an aggregate of 1,499,785 shares of Unidym Series A Preferred Stock with the holders. Upon the conclusion of the transaction, Arrowhead's ownership in Unidym would increase from approximately 51.5% to 57.8%. As of March 31, 2009, the exchange was in process but had not been completed.

On March 30, 2009, Unidym entered into a subscription agreement with the Company, pursuant to which Unidym sold 125,000 shares of its newly authorized Series C-1 Preferred Stock for cash proceeds of \$225,000 or \$1.80 per share. Shares of Series C-1 carry the same rights and preferences as the existing Series C Preferred Stock, except that the Series C-1 are senior to the Series C and all other outstanding stock of Unidym, and the Series C-1 have a \$2.16 per share liquidation preference. However, the Arrowhead shares do not include any of the put options that are specific to the TEL Ventures Series C-1 shares.

### *Ensysce BioSciences Inc.*

On March 14, 2008, Unidym sub-licensed certain of its intellectual property to Ensysce that is focusing on research into the medical therapeutic applications of CNTs. Ensysce is both funded and effectively controlled by a related party to Unidym who also serves as a director of Unidym. Terms of the licensing arrangement between Unidym and Ensysce included a \$25,000 up-front sub-licensing fee, ongoing royalties and an initial 50% equity position for Unidym in Ensysce. Unidym also provided contract services to Ensysce, including supplies of research grade nanotubes, back-office and accounting support.

On November 25, 2008, Unidym sold its 50% equity position to the controlling shareholder for \$700,000 in cash. Unidym no longer provides Ensysce back office and accounting support. The Company recognized a \$700,000 gain on the sale of its equity interest in Ensysce during the first quarter of fiscal 2009 ended December 31, 2008.

### *Tego BioSciences Corporation*

On April 20, 2007, Tego BioSciences Corporation, a newly formed, wholly-owned subsidiary of Arrowhead, acquired the assets of C-Sixty, Inc., a Texas-based company developing protective products based on the anti-oxidant properties of fullerenes for \$1,000. On July 3, 2007, Arrowhead capitalized Tego with a purchase of 5,000,000 shares of Tego Series A-1 Preferred Stock for \$100,000. On October 25, 2007, Arrowhead provided \$2.4 million in additional capital to Tego in exchange for 15,000,000 shares of Series A-2 Preferred Stock. A portion of the additional capital was used to develop and commercialize therapeutics and other products based on the antioxidant properties of modified fullerenes.

On November 21, 2008, Tego repurchased from the Company 5,000,000 shares of Tego Series A-1 Preferred Stock for \$1.7 million. The repurchase was effected to redirect funds from Tego to the Company in connection with Tego's revised business plan to focus on the out-license of its technology and to reduce its internal development activities. After the buyback, Arrowhead continues to own 100% of the outstanding stock of Tego and 85% of Tego's stock on a fully diluted basis.

As of March 31, 2009, the Company has incurred approximately \$890,000 of expenses related to Tego since its inception.

### *Agonn Systems Inc.*

On May 1, 2008, the Company formed a wholly-owned subsidiary, Agonn Systems, Inc. to explore strategic opportunities in energy storage technologies and to develop prototypes. As of March 31, 2009, the Company has incurred approximately \$438,000 of expenses related to Agonn since its inception.

### *Nanotope, Inc.*

Through the acquisition of Masa Energy LLC a Delaware limited liability company for \$250,000 of cash and \$310,000 of Arrowhead Common Stock, the Company acquired a 5.78% minority position in Nanotope and a 6.13% minority position in LBS. Masa Energy LLC has no other assets or operations.

In July and September 2008, the Company acquired shares of Series B Preferred Stock of Nanotope for an aggregate investment of \$2 million, bringing the Company's ownership to approximately 22% of Nanotope



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Nanotope is developing advanced nanomaterials for the treatment of spinal cord injuries and wound healing. Nanotope is based on technology developed in the laboratories of Dr. Samuel Stupp at Northwestern University. Nanotope's lead product is a compound that, when injected or applied at a wound site, self-assembles to form a scaffold of nanofibers on which cells can grow and differentiate to heal the wound. The Company has no obligation for future funding of Nanotope.

During the first six months of fiscal 2009, Nanotope has had no revenues. Operating expenses for the three month and six month periods ended March 31, 2009 total approximately \$274,000 and \$595,000, respectively. Nanotope's net loss for the three month and six month periods ended March 31, 2009 was \$273,000 and \$588,000, respectively.

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*Leonardo Biosystems, Inc.*

Through the acquisition of Masa Energy LLC, Arrowhead acquired a 6.13% ownership interest in LBS. LBS is developing a drug-delivery platform technology based on novel methods of designing spheroid porous silicon microparticles that selectively accumulate in tumor vasculature. The microparticles are designed to be loaded with drug associated nanoparticles that LBS created to commercialize technology developed in the University of Texas laboratory of Dr. Mauro Ferrari. The Company has no obligation for future funding of LBS.

**NOTE 5. DISCONTINUED OPERATIONS AONEX**

On May 5, 2008, Aonex entered into an Agreement and Plan of Merger (the *Aonex Merger Agreement*) by and among AmberWave Systems Corporation, a Delaware corporation in the business of research, development and licensing of advanced technologies for semiconductor manufacturing (*Amberwave*) and Aonex Acquisition Corporation, a California corporation and wholly-owned subsidiary of Amberwave formed for the purpose of acquiring Aonex's business (*Acquiror*). On May 6, 2008, the merger was consummated and the outstanding Company loans to Aonex of \$1,298,000 were converted to equity.

At the time of the Aonex Merger, all of the issued and outstanding shares of Aonex capital stock automatically converted into the right to receive an aggregate amount equal to (a) \$450,000 minus (b) the sum of the of Aonex transaction expenses and \$15,625. In addition, the stockholders of Aonex are entitled to receive future payments as follows:

(i) Upon Acquiror's completion of a successful laminate substrate production at its facilities, Acquiror will pay the stockholders of Aonex capital stock (*Aonex Stockholders*) an additional amount equal to \$500,000;

(ii) For each agreement the Acquiror enters into with a customer during the 24-month period following the closing of the Merger (each a *Customer Agreement*), the Acquiror will pay Aonex Stockholders an additional amount equal to \$500,000 (with the aggregate amount not to exceed \$2 million), subject to the satisfaction of certain procedural requirements set forth in the Aonex Merger Agreement;

(iii) During the 42-month period beginning on the closing of the Aonex Merger, the Acquiror will pay Aonex Stockholders, on a quarterly basis, the sum of: (A) 20% of the cash gross margin contribution received by the Acquiror or its subsidiaries from its customers during such period for the sale of specified products, services or devices employing Aonex's intellectual property assets, and (B) 35% of the revenues from the licensing or sale of Aonex's intellectual property assets received by the Acquiror from its customers during such period; provided however, that (1) the aggregate payments under this subsection do not exceed \$7 million and (2) certain procedural requirements set forth in the Aonex Merger Agreement are satisfied; and

(iv) During the ten-year period following the Aonex Merger, the Acquiror will pay Aonex Stockholders royalty payments, payable on a quarterly basis, equal to one-half of one percent of the revenues associated with the sale of any product incorporating the Aonex's intellectual property assets for solar applications or the license of Aonex's intellectual property assets for solar applications; subject to the satisfaction of certain procedural requirements set forth in the Aonex Merger Agreement.

Notwithstanding the above, the aggregate Earn-out Payments made by the Acquiror (other than those payments under subsection (iv) above) to Aonex Stockholders shall not exceed \$7.95 million.

Arrowhead has preference to the first \$6,298,000 in future payments after which any additional payments will be split 64% to Arrowhead and 36% to the holders of the common stock of Aonex. As of March 31, 2009, only the initial payment due at the time of the merger had been received.

**NOTE 6. NOTES PAYABLE**

On November 26, 2008, Calando entered into Unsecured Convertible Promissory Note Agreements (*Notes*) for \$2.5 million with accredited investors, plus Arrowhead which invested \$200,000 in the Note offering. Arrowhead invested an additional \$500,000 in the same offering on February 23, 2009. The Notes mature on November 26, 2010 and bear 10% annual interest. Unpaid principal of the Notes and accrued but unpaid interest thereon is convertible into common stock of Calando at a conversion price of \$0.576647 per share (subject to adjustment) at any time in the sole discretion of the holder. In the event of a Calando Company Sale, each holder has the option to exchange the Notes for two times the then outstanding principal amount owed under the Notes plus accrued and unpaid interest thereon (*Redemption Amount*) or convert the outstanding principal and accrued and unpaid interest thereon into Calando common stock at the Conversion Price.

**NOTE 7. MEZZANINE FINANCING**

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Unidym sold 1,111,111 shares of Series C-1 Preferred Stock for cash proceeds of \$2 million in a private financing transaction with TEL Ventures. The Series C-1 are senior to all other outstanding stock of Unidym, and the Series C-1 have a \$2.16 per share

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liquidation preference, subject to increase to \$3.60 per share in the event Unidym fails to achieve a defined cash flow requirement by June 30, 2009. The cash flow requirement is the receipt by Unidym of cash proceeds of at least \$7 million from the date of the Restated Certificate through June 30, 2009.

TEL Ventures' investment in Unidym was made in connection with an anticipated joint development program between TEL Ventures and Unidym. In the event the parties do not enter into a joint development agreement by June 30, 2009, TEL Ventures shall have until July 31, 2009 to exercise a put option pursuant to which Unidym will be obligated to repurchase the Series C-1 (or converted shares in the case of a qualified transaction) for an aggregate purchase price of \$2 million. Regardless of the joint development program, TEL Ventures shall have an additional put option if Unidym fails to meet the cash flow requirement (set forth above) by June 30, 2009. In this event, TEL Ventures may exercise this put option by July 31, 2009, and Unidym will be obligated to repurchase the Series C-1 held by TEL Ventures for \$2.16 per share, or an aggregate maximum of \$2.4 million. Unidym does not intend to escrow or reserve the \$2 million of investment proceeds until passage of these contingencies. Unidym's contingent buy back obligations are secured by a separate security agreement between Unidym and TEL Ventures, dated as of November 13, 2008.

**NOTE 8. STOCKHOLDERS' EQUITY**

The number of authorized shares of stock of the Company at March 31, 2009, is a total of 75,000,000 shares, consisting of 70,000,000 authorized shares of Common Stock, par value \$0.001, and 5,000,000 authorized shares of Preferred Stock.

As of March 31, 2009, total shares outstanding consisted of 42,934,517 shares of Common Stock. At March 31, 2009, 1,559,000 shares and 5,738,310 shares were reserved for issuance upon exercise of options granted under Arrowhead's 2000 Stock Option Plan and 2004 Equity Incentive Plan, respectively. On December 3, 2007, an inducement grant of options to purchase 2,000,000 shares of Common Stock was made outside of Arrowhead's equity incentive plans to the Company's newly hired CEO. The terms of the inducement option are substantially similar to the terms of the Company's 2004 Equity Incentive Plan. Through March 31, 2009, options to purchase 1,559,000 shares were outstanding under the 2000 Stock Option Plan and options to purchase 4,269,588 shares were outstanding under the 2004 Equity Incentive Plan.

On January 24, 2006, the Company completed a private placement of 5,590,000 shares of restricted Common Stock at \$3.50 per share that generated \$19.6 million in total proceeds. The purchasers received Warrants, exercisable after July 25, 2006, to purchase an additional 1,397,500 shares of restricted Common Stock at \$5.04 per share. The Warrants may be called by the Company any time after July 25, 2006, if the closing price of the Company's Common Stock is \$6.50 or above for the previous 30 trading days.

On May 29, 2007, the Company completed a private placement of 2,849,466 shares of restricted Common Stock at \$5.78 per share that generated \$15.2 million in net proceeds. The purchasers received Warrants to purchase an additional 712,362 shares of Common Stock at \$7.06 per share. The Warrants may be called by the Company any time after May 29, 2008, if the closing price of the Company's Common Stock is \$8.47 or above for the previous 20 trading days.

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

The following table summarizes information about Warrants outstanding at March 31, 2009:

Exercise prices	Number of Warrants	Weighted Average Remaining	Weighted Average
		Life in Years	Exercise Price
\$5.04	1,397,500	6.8	\$5.04
\$7.06	712,362	8.2	\$7.06
\$2.00	3,863,989	4.4	\$2.00

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On January 30, 2008, Arrowhead's Form S-3 Registration Statement, originally filed on December 20, 2007, was declared effective. The prospectus allows Arrowhead to issue, from time to time in one or more offerings, shares of Common Stock and Warrants for an aggregate dollar amount of up to \$50 million of which approximately \$6.9 million was issued in the September 2008 registered direct offering described above.

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It is the Company's intent to use the net proceeds from the sale of the securities and the net proceeds received upon exercise of the Warrants for general corporate purposes, which may include one or more of the following: working capital, research and clinical development activities, repayment of debt, potential future acquisitions of companies and/or technologies, and capital expenditures.

**NOTE 9. LEASES**

As of March 31, 2009, the Company leases the following facilities:

	Lab/Office Space	Monthly Rent	Lease Commencement	Lease Term
Arrowhead				
Pasadena(1)	7,388 sq ft	\$ 17,731	March 1, 2006	62 Months
New York(2)	130 sq ft	\$ 1,600	October 1, 2008	14 Months
Calando	4,354 sq ft	\$ 12,599	June 1, 2006	36 Months
Unidym				
Menlo Park, CA(3)	9,255 sq ft	\$ 14,345	February 1, 2007	36 Months
Sunnyvale, CA(3)	20,500 sq ft	\$ 25,625	October 1, 2008	60 Months
Houston, TX(4)	8,017 sq ft	\$ 13,362	February 1, 2007	Monthly
Pasadena, TX(5)	28,500 sq ft	\$ 18,200	September 1, 2008	120 Months

- (1) Arrowhead leases corporate office space in Pasadena, which it occupied beginning March 1, 2006. The lease agreement provides Arrowhead with two months' free rent which was recorded as a deferred liability and is being amortized over the life of the lease.
- (2) As of April 1, 2009, Arrowhead closed its New York office and is seeking a subtenant.
- (3) Unidym is in the process of relocating its Menlo Park, CA operations to Sunnyvale with the intent of subleasing the Menlo Park facility for the remainder of the current lease.
- (4) Unidym is in the process of relocating portions of its Houston, TX production operations to Sunnyvale, CA. At the current time, Unidym is terminating its Houston, TX lease and negotiating the obligation to restore the facility upon vacancy.
- (5) As of March 31, 2009, Unidym was in the process negotiating the termination of the Pasadena, TX lease agreement. Unidym entered into a lease termination agreement with the landlord on April 22, 2009. Under terms of the agreement, Unidym will forfeit its \$109,200 security deposit and pay the landlord \$14,800.

The Company has no plans to own any real estate and expects all facility leases will be operating leases.

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

Twelve months ending March 31	Facilities Leases	Equipment Leases
2010	\$ 936,239	\$ 11,672
2011	769,091	5,407
2012	580,809	756
2013	576,880	0
2014	406,944	0

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2015 and thereafter

1,036,989

0

Facility and equipment rent expense for the three months ended March 31, 2009 and 2008 was \$357,089 and \$272,272, respectively. Facility and equipment rent expense for the six month ended March 31, 2009 and 2008 was \$688,199 and \$555,784, respectively. From inception to date, rent expense has totaled \$3,666,330.

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

Capitalized lease payable in 16 monthly installments of \$75,343, due in July 2010, secured by equipment at Unidym.	\$ 1,205,502
Twelve months ending March 31, 2010	\$ 904,127
2011	301,375
Total minimum lease payments	1,205,502
Less interest	65,663
Present value of future minimum payments	1,139,839
Less current portion	843,420
Long term portion	\$ 296,419

Research and development equipment under capitalized lease was allocated a cost of \$0 at the Nanoconduction acquisition by Unidym as the equipment has no alternative use.

**NOTE 11. COMMITMENTS AND CONTINGENCIES SUBSIDIARIES AND SPONSORED RESEARCH****Subsidiaries and Investments**

As of March 31, 2009, Arrowhead held a majority of the following four subsidiaries:

Subsidiary	% Ownership <sup>1</sup>	Technology/Product Focus
Calando Pharmaceuticals, Inc. <i>acquired June 4, 2004</i> Unidym, Inc. (formerly NanoPolaris)	67.8%	Nano-engineered RNAi therapeutics and drug delivery systems
<i>founded April 4, 2005</i> Tego Biosciences Corporation	51.5%	Developing strategic opportunities for the commercialization of nanotube-based products
<i>acquired April 20, 2007</i> Agonn Systems, Inc.	100.0%	Owner of intellectual property related to protective products based on the anti-oxidant properties of buckminsterfullerenes
<i>founded May 1, 2008</i>	100.0%	Developing nanotechnology based energy storage solutions for hybrid electric vehicles and other large format applications

- (1) Each subsidiary has an option plan to help motivate and retain employees. Calando has 4,335,473 outstanding warrants, primarily issued in connection with a financing event that closed in October 2006. As of March 31, 2009, assuming all options in each subsidiary plan were awarded and exercised and all warrants were exercised; the Company would own approximately 62.1% of Calando, 36.6% of Unidym and 85% of Tego. Agonn has not yet adopted an option plan and does not have any outstanding warrants.

Investment

Technology/Product Focus



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	%	
	<b>Ownership</b>	
Nanotope, Inc.		Developing nano-engineered, self-assembling, bioactive scaffolding for the treatment of spinal cord injury and peripheral artery disease
<i>Acquired April 29, 2008</i>	22.0%	
Leonardo Biosystems, Inc.		Developing an advanced set of nanotechnology tools to deliver anti-cancer therapeutics
<i>Acquired April 29, 2008</i>	6.1%	
<b><i>Sponsored Research</i></b>		

In exchange for the exclusive right to license technology developed in sponsored laboratories, Arrowhead has worked with universities in areas such as stem cell research, carbon electronics and molecular diagnostics. By funding university research, Arrowhead has the opportunity to ascertain the technical success at low research cost and, if warranted, continue cost-effective development at the university by leveraging the already existing resources available to scientists at universities, such as laboratories

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and equipment and a culture that encourages the exchange of ideas. If sponsored research results in technology that appears to have commercial applications, the Company can form a majority-owned subsidiary to develop the technology. Should the technology proves to be too difficult or too expensive to commercialize, Arrowhead may terminate the license agreement and return the licensed intellectual property to the university.

Sponsored research expense for the three months ended March 31, 2009 and 2008 was \$9,319 and \$294,733, respectively. Sponsored research expense for the six months ended March 31, 2009 and 2008 was \$120,000 and \$535,972, respectively. As of March 31, 2009, there were no active sponsored research agreements at the parent company and Unidym had only one agreement in place. In the future, as capital resources allow, Arrowhead may invest in nanoscience research and development at universities by entering into sponsored research agreements.

*Rice University Patents*

Unidym controls an intellectual property portfolio containing more than 200 foreign and domestic patents and patent applications, including more than 90 issued patents. The portfolio contains patent claims directed to fundamental CNT compositions of matter, as well as CNT synthesis, purification, dispersion and functionalization. Furthermore, the portfolio contains claims to the use of CNTs in many different application areas including fibers, electronics, composite materials, energy storage/generation, medical devices and drug delivery. Some patents are owned by Unidym but most are exclusively in-licensed from academic institutions, one of which is Rice University. Additionally, Unidym acquired the right to sublicense the basic patent claiming single-walled nanotube compositions of matter. Unidym also exclusively in-licenses Tego Biosciences' entire intellectual property for nontherapeutic fields of use. Unidym has opted to focus its resources on electronic applications of CNTs. Unidym has out-licensed its portfolio to Ensysce in the field of therapeutics. Unidym is currently executing a plan to encourage third parties and competitors to enter non-exclusive licenses of its intellectual property outside of its core areas. To facilitate this plan, Unidym is also making options available to acquire non-exclusive licenses at a later date.

A material portion of Unidym's intellectual property portfolio is exclusively licensed from Rice University. If the sum of Unidym's debts, liabilities and other obligations is greater than all of Unidym's assets at fair valuation or if Unidym is generally not paying its debts, liabilities and other obligations as they come due; the Rice license would terminate.

*Sponsored Research Agreement Duke University*

The terms of the current sponsored research agreement between Unidym and Duke University ( Duke ) are summarized in the following table:

Research Project	Period Covered	Total Estimated Project Cost	Annual Cost	Amount Paid	Prepaid Amt
				as of Mar. 31, 2009	as of Mar. 31, 2009
Electrical Conductivity of Carbon Nanotubes (Dr. Jie Liu)	Dec. 1, 2007 -  Nov. 30, 2010 (3 years)	\$ 574,124	\$ 191,375	\$ 216,641	\$ 0

*Sponsored Research Agreement University of Florida*

The terms of the sponsored research agreement with the University of Florida ( UF ) are summarized in the following table:

Research Project	Period Covered	Total Estimated Project Cost	Annual Cost	Amount Paid	Prepaid Amt
				as of Mar. 31, 2009	as of Mar. 31, 2009
Development of flexible electronic devices Thin film transistors (Dr. Andrew Rinzler)	Jul. 1, 2006 -  Jun. 30, 2008 (2 years)	\$ 647,533	\$ 323,767	\$ 647,533	\$ 0

In connection with the CNI Merger, the rights and obligations under the sponsored research agreement with UF were transferred to Unidym. All payments under this agreement had been made and the agreement had been concluded.

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In July of 2008, Calando made a contribution of \$50,000 to Caltech for laboratory research in the field of synthetic polymers for use primarily in drug delivery applications. Caltech has granted Calando an exclusive license to the patent rights in the field of synthetic polymers for drug delivery.

### ***Employment Agreements***

On May 24, 2007, the Company entered into a Severance Agreement with each of R. Bruce Stewart, the Company's Chairman and then Chief Executive Officer, and Joseph T. Kingsley, the Company's then Interim President and Chief Financial Officer, to provide for payments to the officers in the event of their retirement or the termination of their employment. The agreements provide

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that the executives will be entitled to receive severance payments and payments for any accrued and unused vacation time in the event that (i) the executive dies or voluntarily retires from the Company, (ii) the executive voluntarily terminates his employment other than for cause or (iii) the Company terminates the executive's employment other than for cause (each, a Termination Event). Upon the occurrence of a Termination Event, Mr. Stewart is entitled to receive as severance, during each of the first three years following the Termination Event, payments equal to his highest annual salary while employed by the Company, payable in equal monthly installments. Upon the occurrence of a Termination Event, Mr. Kingsley was entitled to receive as severance, during the first year following the Termination Event, payments equal, in the aggregate, to 100% of his highest annual salary while employed by the Company, payable in equal monthly installments, which payments would be reduced by any payments received by Mr. Kingsley or his estate from the Company's Long Term Disability Plan. Each agreement also provides that, if any payment to the executive is subject to excise tax under Section 4999 of the Internal Revenue Code of 1986, as amended (the Code), the Company will pay to the executive an amount sufficient, on an after-tax basis, to put the executive in the same position he would have been in if the excise tax was not imposed. The timing of payments under the agreements is also subject to adjustment to avoid any adverse tax treatment under Section 409A of the Code.

Mr. Kingsley stepped down from his positions as Interim President on December 1, 2007 and as Chief Financial Officer of the Company on January 14, 2008 and remained an employee of the Company. On March 10, 2008, the Company entered into an Employment Agreement with Mr. Kingsley. Under the Agreement, Mr. Kingsley served as Assistant to the President from January 14, 2008 through January 13, 2009 and was paid his previous base salary. Mr. Kingsley's previously granted stock options ceased vesting as of January 14, 2008 and all remaining unvested stock options were cancelled. The exercise period for Mr. Kingsley's vested stock options was extended by the Employment Agreement from 90 days after retirement to one year after he terminates employment with the Company. As a condition to the Employment Agreement, the Severance Agreement between the Company and Mr. Kingsley, entered into on May 24, 2007 was terminated in its entirety.

As of March 31, 2009, the Company had accrued \$750,000 related to the Severance Agreement for Mr. Stewart. However, effective May 12, 2009, Mr. Stewart and the Company agreed to amend the Severance Agreement for Mr. Stewart such that, in the event his employment with the Company terminates, he would receive a lump sum payment equal to one month's salary. In future periods, this change will result in a reduction in the accrued severance liability on Company balance sheet from \$750,000 as of March 31, 2009, to approximately \$21,000 for the period ending June 30, 2009. *See Note 16, Subsequent Events.*

On June 11, 2008, the Company, entered into an Employment Agreement and a Stock Option Agreement with Dr. Christopher Anzalone, the Company's Chief Executive Officer and President as well as a Director of the Company. Dr. Anzalone commenced employment with the Company on December 1, 2007. Under the agreement, Dr. Anzalone is paid an annual base salary of \$400,000 and is eligible to receive bonuses based on the performance of the Company and individual performance objectives. Dr. Anzalone was also granted an option to purchase 2,000,000 shares of Arrowhead Common Stock with an exercise price of \$3.92 per share, which is equal to the closing price of Arrowhead's Common Stock on NASDAQ Global Market on the date of grant, December 3, 2007. The option will vest as follows: 250,000 shares vest on the six-month anniversary of Dr. Anzalone's date of hire and the balance of the shares vest in 42 equal installments on the first of each successive month. These options were granted outside of the Company's current equity incentive plans and are covered in an agreement with substantially similar terms as the Company's 2004 Equity Incentive Plan. Dr. Anzalone was reimbursed \$100,000 in relocation expenses and the Company provides supplemental life insurance to bring his life insurance benefit up to \$2,000,000. If the Company terminates Dr. Anzalone's employment without cause, the Company will pay Dr. Anzalone his base salary and benefits for twelve months. However, effective May 12, 2009, Dr. Anzalone and the Company agreed to amend the Employment Agreement such that, if his employment with the Company is terminated without cause, he would receive a lump sum payment equal to one month's salary. *See Note 16, Subsequent Events.*

**NOTE 12. STOCK OPTIONS**

**Stock-Based Compensation** Arrowhead has two plans that provide for equity-based compensation. Under the 2000 Stock Option Plan, 1,559,000 shares of Arrowhead's Common Stock are reserved for issuance upon exercise of non-qualified stock options. No further grants can be made under the 2000 Stock Option Plan. The 2004 Equity Incentive Plan reserves 5,738,310 shares for the grant of stock options, stock appreciation rights, restricted stock awards and performance unit/share awards by the Board of Directors to employees, consultants and others expected to provide significant services to Arrowhead. As of March 31, 2009, there were options granted and outstanding to purchase 1,559,000 and 4,269,588 shares of Common Stock under the 2000 Stock Option Plan and the 2004 Equity Incentive Plan, respectively. During the three and six months ended March 31, 2009, 120,000 and 360,000 options were granted under the 2004 Equity Incentive Plan, respectively.

On December 3, 2007, an inducement grant of an option to purchase two million shares of Common Stock was made outside of Arrowhead's equity incentive plans to Dr. Anzalone. The option vests over 48 months with the first 250,000 shares vesting six months from the date of original grant and 41,667 shares vesting on the first of each month in 42 successive equal installments thereafter. The option price is \$3.92 per share, the closing price of Arrowhead's stock on the date of grant. The estimated fair value at the date of grant was \$4,692,207.



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The following tables summarize information about stock options:

	Number of Options Outstanding	Weighted- Average Exercise Price Per Share
Balance at May 7, 2003		
Granted	150,000	0.20
Canceled		
Exercised		
Balance at September 30, 2003	150,000	0.20
Granted	1,570,000	1.00
Canceled	(25,000)	1.00
Exercised	(156,000)	0.23
Balance at September 30, 2004	1,539,000	1.00
Granted	2,095,000	2.53
Canceled	(170,000)	1.00
Exercised	(25,000)	1.00
Balance at September 30, 2005	3,439,000	1.93
Granted	2,235,000	4.79
Canceled	(1,161,167)	4.27
Exercised	(115,794)	2.95
Balance at September 30, 2006	4,397,039	2.74
Granted	945,000	4.97
Canceled	(160,952)	5.32
Exercised	(186,164)	2.34
Balance At September 30, 2007	4,994,923	3.07
Granted	3,445,000	3.49
Canceled	(326,934)	3.74
Exercised	(105,357)	2.75
Balance At September 30, 2008	8,007,632	3.24
Granted	240,000	1.11
Canceled		
Exercised		
Balance At December 31, 2008	8,247,632	3.18
Granted	120,000	0.49
Canceled	(539,044)	4.53
Exercised		
Balance At March 31, 2009	7,828,588	3.05
Exercisable At March 31, 2009	4,997,486	2.98

**Exercise Prices**

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		Number of Options	Weighted Average Remaining Life in Years	Weighted Average Exercise Price
\$1.00	6.89	7,828,588	7.5	\$ 3.05

At March 31, 2009, there were 1,468,722 options available for future grants under Arrowhead's 2004 Equity Incentive Plan. The intrinsic value of the options exercised during the three months ended March 31, 2009 and 2008 was \$0 and \$0 respectively, as none were exercised. The intrinsic value of the options exercised during the six months ended March 31, 2009 and 2008 was approximately \$0 and \$69,000 respectively.

The fair value of the options granted by Arrowhead for the three months ended March 31, 2009 and 2008 is estimated at \$41,200 and \$728,000, respectively. The fair value of the options granted by Arrowhead for the six months ended March 31, 2009 and 2008 is estimated at \$230,000 and \$5,970,000, respectively.

Options granted by Unidym, Calando, Tego or Agonn for the three months and six months ended March 31, 2009 had a combined estimated fair value of \$195,000. There were no options granted during the first three months of fiscal 2009. As of March 31, 2009, the estimated fair value of the unvested options for Arrowhead is \$5,457,000 with a weighted average remaining amortization period of 2.7 years.

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As of March 31, 2009, the estimated aggregate fair value of the unvested options for Unidym, Calando and Tego is \$722,000 with a weighted average remaining amortization period of 1.5 years.

The fair value of options is estimated at the date of grant using the Black-Scholes option-pricing model with the following weighted-average assumptions: dividend yield of 0%, expected volatility of 49% to 81% (0% to 81% for subsidiaries), risk-free interest rate of 2.34% to 5.10%, and expected life of five to six years. The weighted-average fair value of options granted by Arrowhead for the three months ended March 31, 2009 and 2008 is estimated at \$0.34 and \$1.89, respectively, and the weighted-average exercise price is estimated at \$0.49 and \$2.30, respectively.

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

### **NOTE 13. INCOME TAXES**

The Company utilizes SFAS No. 109, Accounting for Income Taxes, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns.

Under this method, deferred income taxes are recognized for the tax consequences in future years of differences between the tax bases of assets and liabilities and their financial reporting amounts at each year-end based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amount expected to be realized. The provision for income taxes represents the tax payable for the period and the change during the period in deferred tax assets and liabilities.

For the three and six month periods ended March 31, 2009, the Company had consolidated losses of \$5,289,000 and \$13,320,000, respectively. For the three and six month periods ended March 31, 2008, the Company had consolidated losses of \$5,695,000 and \$10,929,000, respectively. The 2009 losses result in a deferred income tax benefit of approximately \$2,089,000 and \$5,261,000 for the three and six months ended March 31, 2009. For the three and six month periods ended March 31, 2008, the Company's losses resulted in a deferred income tax benefit of approximately \$2,249,000 and \$4,317,000, respectively. The deferred income tax benefits are offset by increases in the valuation allowance for the same amount for Arrowhead. Management has chosen to take a 100% valuation allowance against the tax benefit until such time as management believes that its projections of future profits, as well as expected future tax rates, make the realization of these deferred tax assets more-likely-than-not. Significant judgment is required in the evaluation of deferred tax benefits, and differences in future results from our estimates could result in material differences in the realization of these assets.

### **NOTE 14. SEGMENT AND GEOGRAPHIC REPORTING**

The Company accounts for segments and geographic product and licensing revenues in accordance with SFAS No. 131, Disclosure about Segments of an Enterprise and Related Information. The Company operates in a single segment, nanotechnology.

Grant and collaborations agreements are not considered to be product or licensing revenue, as the Plan of Operations for the Company is to sell products and/or license technology. The grant revenue is a way to fund and to offset development costs.

### **NOTE 15. RELATED PARTY TRANSACTIONS**

During the three months and six months ended March 31, 2009 the Company's majority-owned subsidiary, Unidym had product sales of \$15,550 and \$47,218, respectively, to one of its stockholders, Sumitomo. During the same three month and six month periods, in the prior year, sales to Sumitomo totaled \$74,727 and \$121,945, respectively.

During the three months and six months ended March 31, 2009 the Company's majority-owned subsidiary Calando paid \$0 and \$30,000, respectively, in consulting fees to Dr. Mark Davis at Caltech. During the same three month and six month periods, in the prior year, payments to Dr. Davis \$22,500 and \$45,000, respectively. Dr. Davis was a director and consultant for Calando.



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During the six months ended March 31, 2009, Calando raised \$2.5 million through the sale of senior unsecured convertible promissory notes ( New Notes ), to accredited investors, plus \$700,000 from Arrowhead. Dr. Anzalone, Arrowhead s CEO personally participated by buying \$100,000 of the New Notes.

**Table of Contents****NOTE 16. SUBSEQUENT EVENTS**

On April 22, 2009, Unidym entered into a lease termination agreement with the landlord for its Pasadena, Texas location. At the time of the termination, approximately 9.5 years remained on the term of the lease with the minimum estimated future payments totaling approximately \$2,139,000. Under terms of the lease termination agreement, Unidym forfeited its \$109,200 security deposit and made an additional payment to the landlord of \$14,800.

On May 1, 2009, Unidym entered into an agreement with Continental Carbon Nanotechnologies, Inc. ( CCNI ), a subsidiary of Continental Carbon Company, a Houston, TX-based manufacturer of carbon products. Pursuant to the agreement, Unidym transferred certain assets to CCNI, including specified inventory, equipment and intellectual property rights related to the manufacture of CNTs. In exchange, CCNI agreed to reimburse Unidym an amount up to \$200,000 for dismantling and moving the equipment from the facility that Unidym previously occupied in Houston, Texas. Pursuant to the CCNI agreement, Unidym and CCNI are negotiating the terms and conditions of a second agreement to provide for the license or transfer of additional specified intellectual property rights and other agreements necessary for manufacturing CNTs and a supply agreement under which CCNI would supply CNTs to Unidym for Unidym's CNT-based electronics business. The consideration for the assets to be transferred and licenses to be granted in the second agreement is still being negotiated, but is expected to consist of upfront payments and royalties. Additionally, subject to completion of the second closing, CCNI will make earn out payments up to \$26.5 million to Unidym based on achieving certain sales milestones. Unidym and CCNI also executed a warrant agreement, whereby CCNI can purchase up to 3,346,208 shares of Unidym common stock at \$.25 per share expiring May 1, 2012.

On May 12, 2009, Unidym entered into a subscription agreement with the Company, pursuant to which Unidym sold 680,556 shares of its Series C-1 Preferred Stock for cash proceeds of \$275,000 and the payment of \$950,001 of cash advances and inter-company charges incurred by Arrowhead for the benefit of Unidym since October 2007. Shares of Series C-1 carry the same rights and preferences as the existing Series C Preferred Stock, except that the Series C-1 are senior to the Series C and all other outstanding stock of Unidym, and the Series C-1 have a \$2.16 per share liquidation preference. However, the Unidym Series C-1 shares purchased by Arrowhead do not include any of the put options that are specific to the TEL Venture Series C-1 shares. As a result of this transaction Arrowhead's ownership interest in Unidym's voting stock increases from 51.5% to 52.8%.

Effective May 12, 2009, the Company entered into an Amendment to the Severance Agreement with Mr. Stewart the Company's Executive Chairman. The Severance Agreement, dated May 24, 2007, previous to the amendment, entitled Mr. Stewart to receive as severance, during each of the first three years following a Termination Event, payments equal to his highest annual salary while employed by the Company, payable in equal monthly installments. The amendment reduces the payments from three years to a single lump sum amount equivalent to one (1) month of Mr. Stewart's highest monthly salary while employed at the Company. This change will result in a reduction in the accrued severance liability on the Company's balance sheet from \$750,000 as of March 31, 2009, to approximately \$21,000 for the period ending June 30, 2009.

Effective May 12, 2009, the Company entered into an Amendment to the Employment Agreement with Dr. Anzalone, the Company's Chief Executive Officer and President. The Employment Agreement, dated June 11, 2008, previous to the amendment, provided for severance equal to one year's salary based on his highest annual salary while employed by the Company in the event that Dr. Anzalone was terminated by the Company without cause or if he resigned for good reason. The amendment reduces the payments from one year to a single lump sum amount equivalent to one (1) month of Dr. Anzalone's highest monthly salary while at Arrowhead Research Corporation.

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

This Quarterly Report on Form 10-Q contains forward-looking statements concerning future events and performance of the Company. When used in this report, the words intends, estimates, anticipates, believes, plans, may, will, should, projects or expects and similar included to identify forward-looking statements. These forward-looking statements are based on our current expectations and assumptions and many factors could cause our actual results to differ materially from those indicated in these forward-looking statements. You should review carefully the factors identified in this report under the caption Risk Factors and in our most recent Annual Report on Form 10-K filed with the SEC. We disclaim any intent to update or announce revisions to any forward-looking statements to reflect actual events or developments. Except as otherwise indicated herein, all dates referred to in this report represent periods or dates fixed with reference to the calendar year, rather than our fiscal year ending September 30. The three-month period ended March 31, 2009, may also be referred to as the second quarter of fiscal 2009.

**Overview**

Arrowhead is a nanotechnology holding company with assets related to the healthcare, electronics, and clean energy industries. Our mission is to create shareholder value by building subsidiaries that may be monetized in one of three primary ways: (1) subsidiaries may be sold to other

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companies with proceeds flowing back to Arrowhead; (2) subsidiaries may execute an IPO, with proceeds flowing back to Arrowhead and/or providing Arrowhead with tradable stock; and (3) subsidiaries may become mature operating units with earnings consolidated with Arrowhead. In the near-term, the Company is focused on maximizing the value of the most mature subsidiaries, Calando through partnership and license of its drug delivery platforms and clinical candidates and Unidym, Inc. through internal development, partnership and license arrangements, as well as pursuing new sources of cash investments. The longer-term strategy for development and investment in existing subsidiaries and minority investments will be determined by cash availability, strength of the technologies and market opportunity. Arrowhead continually works to identify and develop business opportunities for new areas of investment which may be pursued based upon available capital resources.

### ***Cash Resources***

As a development-stage company, Arrowhead has historically financed its operations through the sale of securities of Arrowhead and its subsidiaries. Development of products at our subsidiaries, in particular Calando and Unidym, has required significant capital investment since the Company's inception in 2003 and will continue to require significant cash investment in fiscal 2009 for the

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Company to fund operations. At March 31, 2009, Arrowhead had cash on hand of approximately \$3.6 million on a consolidated basis. Arrowhead is focused on pursuing a strategy to improve the Company's cash position in order to remain a going concern, while simultaneously implementing cash conservation measures.

In December 2008, our board of directors approved a strategy for the Company to focus on conserving cash resources while also seeking sources of new capital. To execute on this strategy, the Company will seek to accomplish one or more of the following:

out-license of technology;

sale of a subsidiary;

sale of non-core assets;

funded joint development or partnership arrangements; and

sale of securities.

The Company is actively involved in discussions with third parties regarding several of these alternatives. Until such time as one or more of these goals is accomplished, the Company will continue to implement streamlining and cash conservation measures begun in fiscal 2008 and defer major cash investment in new initiatives. As planned, since additional cash had not been secured by mid-second quarter 2009, the Company made additional cuts in its operations at Calando and Unidym and reduced expenses at Arrowhead. Efforts to preserve sufficient resources to fund development at lower cost through fiscal 2009 and into 2010 continue.

***Majority-owned Subsidiaries***

Arrowhead currently has two majority-owned subsidiaries, two wholly-owned subsidiaries, and has minority investments in two development stage nanotechnology companies. The Company's subsidiaries are seeking to commercialize a variety of nanotech products and applications, including anti-cancer drugs, RNAi therapeutics, carbon-based electronics and fullerene anti-oxidants. The Company's minority investments are focused on developing advanced nanomaterials for spinal cord injury and wound healing and drug delivery technology.

Arrowhead has been active in the operation of its subsidiaries, providing key management functions. Each subsidiary is staffed with its own technical team that focuses on its specific technology and markets, while Arrowhead provides management and services including operational support, business development and financing. The Company has determined that having large management teams at Calando and Unidym required significant cash and reduced the overall operational efficiency of each subsidiary and the Company on a consolidated basis. During fiscal 2008 and in the first quarter of fiscal 2009, Calando and Unidym terminated their respective senior management teams. As a result, greater managerial responsibilities have been delegated by the subsidiaries to Arrowhead, a trend the Company expects to continue in fiscal 2009.

*Calando*

Calando is Arrowhead's most mature biopharmaceutical subsidiary. Based on technology developed at the California Institute of Technology, Calando's proprietary linear cyclodextrin nanoparticle technology is designed to deliver small molecule drugs using Calando's CycloSystem and RNAi therapeutics using the RONDEL system. Using these platform systems, Calando has developed two anti-cancer drug candidates.

Calando has phased down its operations significantly in the first half of fiscal 2009. Calando's siRNA clinical candidate CALAA-01 is currently undergoing a Phase I clinical study at UCLA Jonsson Cancer Center in Los Angeles, California, and at South Texas Accelerated Research Therapeutics (START) in San Antonio, Texas. The study has progressed without complications. Calando's other clinical candidate, IT-101, completed a Phase I trial in October 2008. In September 2008, a Phase II trial to test IT-101 as a maintenance therapy for ovarian cancer was opened for enrollment. In April 2009, the Phase II trial was closed to enrollment due to difficulty recruiting patients for reasons unrelated to safety or efficacy. The effect of the closure is a further reduction in burn rate. Calando does not plan further development of CALAA-01 or

IT-101 without a development partner.

Calando is in ongoing negotiations with potential partners and acquirers although there can be no assurance regarding if or when a transaction might be concluded. Such partnership is anticipated to include a modest upfront payment with potential for milestone payments and royalties as the technology is developed by the partner(s).

Significant cash was consumed in fiscal 2008 for Calando's clinical program and the development of a second siRNA therapeutic. Calando's cash consumption has been reduced from fiscal 2008 levels of \$2.2 to \$2.6 million per quarter to 1.4 million in second fiscal quarter 2009. It is expected that Calando's cash burn will further decrease as it completes the phase down of operations and the CALAA-01 Phase I trial is concluded. Further clinical development of Calando's drug candidates will depend on entering into licensing or partnership arrangements with third parties, although Arrowhead does expect to invest minimal cash to maintain limited operations at Calando going forward.

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During the six months ended March 31, 2009, Calando raised \$2.5 million from qualified investors through the New Notes, plus Arrowhead participated by buying an additional \$700,000 of the New Notes and agreeing to subordinate principal and interest on Arrowhead's approximately \$5.3 million of demand notes to the New Notes. The New Notes have a two-year maturity and bear 10% interest compounded annually. Unpaid principal on the New Notes and accrued but unpaid interest is convertible into common stock of Calando at a conversion price of \$0.576647 per share, subject to adjustment, at any time in the sole discretion of the note holder. In the event of a defined sale event, holders of New Notes have other exchange and conversion options. During the period from April 2008 until November 2008, Arrowhead advanced Calando \$5.3 million in working capital under a series of unsecured promissory notes which are subordinate to the New Notes.

The Company believes there is an opportunity to derive additional value from the further development of Cycloset and RONDEL systems, as they have been demonstrated to enhance and enable the delivery of diverse pharmaceutical entities, including peptides and small molecules as well as other RNA and DNA-based oligonucleotides. Ultimately, the Company believes Calando provides a platform opportunity that could enable the creation of multiple new drug candidates. Arrowhead owns approximately 68% of the outstanding stock of Calando.

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

Advancing Calando's pipeline candidates requires extensive preclinical testing and approval by the U.S. Food and Drug Administration, ( FDA ) is required before clinical testing can commence.

Advancing Calando's therapeutic candidates through preclinical and clinical testing is expensive, resource intensive and time consuming.

Complications may arise that would cause the clinical testing to be interrupted or stopped. FDA approval is required before Calando's products could be sold.

Even if FDA approval is eventually obtained, there is no assurance that it will be accepted by the medical community. It is not possible at this time to accurately determine the final cost of Calando's development projects, the completion dates, or when or if revenue will commence.

### *Unidym*

Unidym is the Company's most mature nanomaterials subsidiary. Through the acquisition of a foundational intellectual property portfolio in the manufacture and applications of CNTs, Unidym has developed a strong technology base in CNT technology that we believe can serve as a platform for innovation and new products. Unidym has already developed world-leading high performance CNT materials manufactured by scalable processes. Unidym's product development efforts are focused on the electronics industry, where there is continuing demand for higher performance materials. Unidym's product development has been focused on thin, transparent film of CNTs on a flexible substrate. Unidym is also working with leading LCD companies, including a joint development agreement with Samsung Electronics, to incorporate CNT films into their display devices. Through its various collaborations, Unidym has fabricated prototype LCD and electrophoretic displays incorporating CNT-based films.

The capital expenditures associated with CNT synthesis are kept low by both the scalability of Unidym's CNT synthesis process and the fact that only trace amounts of CNTs are required per unit area of film. Additionally, Unidym plans to leverage the substantial excess capacity left in the coating industry by the decrease in demand for photographic film. For its initial product offering to touch panel makers, Unidym is planning to work with partners to leverage its expertise and minimize capital requirements. On May 1, 2009, Unidym transferred a portion of its assets for CNT manufacturing to Continental Carbon, a manufacturer of CNTs and carbon black, and is in the process of negotiating a license and supply agreement so that Continental Carbon can supply the majority of Unidym's CNT supply needs. Unidym retains some limited in-house CNT manufacturing capability for product improvements and as a second source of supply. Unidym plans to manufacture CNT inks and is negotiating with potential partners to manufacture and sell films to customers.



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In the first half of fiscal 2009, Unidym has focused on reducing costs and restructuring operations. In fiscal 2008, Unidym expanded its activities substantially in anticipation of a product launch and an initial public offering. Unidym's cash burn peaked at \$4.2 million in the fourth quarter of fiscal 2008. During the fourth quarter of fiscal 2008, it became clear that Unidym would be unable to meet its fund raising goals to support the fiscal 2009 cash needs under its then current plan of operations. Moreover, technical development took longer than expected. Additionally, it became evident that dramatic changes in the financial markets would not allow a near-term initial public offering. In first quarter of fiscal 2009, Unidym's plant in Texas was downsized, the Unidym executive management team was terminated and management responsibilities were delegated by the Unidym board to Arrowhead personnel. Early in the second quarter of fiscal 2009, the decision was made to close the Texas facility and terminate the remaining Texas employees. Cash burn during the second quarter of fiscal 2009 has decreased from \$825,000 in January to \$410,000 in March. Further reductions in cash burn are expected as Unidym exits facilities in Texas and Menlo Park and restructures its obligations.

In November 2008, Unidym raised \$2 million from the sale of Series C-1 Preferred Stock to TEL Ventures. The sale of these securities was associated with Unidym's entry into a Security Agreement granting TEL Ventures a security interest in Unidym's physical and intellectual property (the Collateral), excluding Unidym's rights under the Rice license and shares of Ensysce. The Subscription Agreement provides TEL Ventures with two put options. TEL Ventures may exercise the first put option if Unidym fails to enter into a Joint Development Agreement with TEL Ventures by June 30, 2009. In that case, Unidym must buy back TEL Ventures' Unidym shares for \$2 million before March 2010. TEL Ventures may exercise the second put option if Unidym fails to meet certain cash requirements by June 30, 2009. Those requirements would be met if Unidym raises \$7 million through any combination of a sale of its equity; the sale or license of some or all of its assets and businesses including positions in Ensysce, Nexeon MedSystems or Nanoconduction; or sales of products. Only if TEL Ventures exercises this put option between June 30 and July 31, 2009 shall Unidym be obligated to repurchase the Series C-1 Preferred Stock for \$2.4 million within ten days notification of exercise. In the event of a default under the Security Agreement, (e.g. inability to pay either of the put options, bankruptcy, admission of inability to pay its bills), TEL Ventures can take possession of the Collateral and keep the net proceeds of any sale thereof.

Unidym still needs to obtain additional cash to fund its operations and obligations through fiscal 2009.

A material portion of Unidym's intellectual property portfolio is exclusively licensed from Rice University. If the sum of Unidym's debts, liabilities and other obligations were greater than all of Unidym's assets at fair valuation or if Unidym were generally not paying its debts, liabilities and other obligations as they come due, the Rice license would terminate.

The development, production and sale of Unidym's products has required and is expected to continue to require significant investment and to take a long time. There are a variety of technical, cost, and marketing barriers that must be overcome. It is not possible at this time to predict the final cost of developing Unidym's transparent conductive film or other CNT products, the final cost of scaling up the production process, when or if Unidym will generate significant licensing revenue, or when or if Unidym will become profitable.

In August 2008, Unidym acquired Nanoconduction, Inc., a Sunnyvale, CA company developing nano-based electronic cooling technology. The merger provided Unidym with access to Nanoconduction's patent portfolio, which will supplement Unidym's existing patent portfolio and offer Unidym with additional opportunities to out-license and leverage its technology. In addition, through the merger, Unidym gained access to research facilities and equipment.

Unidym accomplished the acquisition of Nanoconduction through an equity exchange, as follows: Arrowhead invested \$250,000 in Unidym through a cashless investment by issuing 114,155 shares of unregistered Common Stock to the owners of Nanoconduction. In exchange for this investment, Arrowhead received 138,889 additional shares of Series C Preferred Stock of Unidym. As additional consideration, Unidym agreed to assume and discharge Nanoconduction's assets and liabilities. Assets included equipment and leasehold improvements with an estimated net book value of approximately \$2.9 million including intellectual property related to the use of CNTs for thermal management. Liabilities included approximately \$1.0 million of accounts payable and accrued liabilities and approximately \$1.7 million in capital equipment loans. The equipment loans are guaranteed by Unidym and secured by a lien on Nanoconduction's assets. Unidym entered into a new five-year lease for the facilities currently occupied by Nanoconduction in Sunnyvale, California, and is in the process of relocating Unidym's existing Menlo Park operations to the Nanoconduction facility.

In March 2008, Unidym sub-licensed certain of its intellectual property to Ensysce, whose focus is research into the medical therapeutic applications of CNTs. From March 2008 to November 2008, Ensysce was both funded and effectively controlled by a party related to Unidym who also serves as a director of Unidym. In November 2008, Unidym sold its 50 percent interest in Ensysce to the controlling shareholder for \$700,000, and recognized a gain on the sale of its equity interest in the first quarter of fiscal 2009.



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### **Wholly-owned Subsidiaries**

#### *Tego*

Tego's primary asset is an intellectual property portfolio that includes key patents for the modification of fullerenes. Tego does not control the intellectual property relating to making fullerenes, however the Company believes that it does control key patents that are critical in making fullerenes into useable products. The Company believes Tego is in a position to monetize its proprietary compounds and enabling patents through a licensing and partnership model. Currently, Tego has no employees or facilities and its technical and business development is handled at the Arrowhead level. Tego is in discussions with other companies regarding potential partnerships and licenses which could enable Arrowhead to capture value via near-term revenue, and long-term royalties. Tego's development and licensing activities are preliminary, and there is no assurance that they will be successful. It is not possible at this time to accurately determine the final cost of developing or licensing Tego's technology, the completion date, or when or if revenue will commence.

#### *Agonn*

Agonn was formed in 2008 to develop and commercialize nanotechnology-based energy storage devices for electric vehicles and other large format applications. Agonn is pursuing a strategy to acquire energy storage technologies based on nanoscale engineering from research institutions. Agonn has outsourced the development of prototype ultracapacitors based on carbon nanomaterials and other advanced materials. The Company believes the markets for energy storage products are substantial, ranging from consumer electronics to vehicles to heavy industry and that emerging clean technology platforms offer significant market opportunities for new energy storage devices, in part because traditional batteries do not meet many of the key requirements for energy density, lifetime and efficiency. Agonn has no facilities or employees and is managed entirely by Arrowhead. Agonn's research and development activities are preliminary, and there is no assurance that they will be successful. It is not possible at this time to accurately determine the final cost of developing Agonn's technology, the completion date, or when or if revenue will commence.

### **Minority Investments**

#### *Nanotope*

Nanotope is a development stage company in the field of regenerative medicine developing a suite of products customized to regenerate specific tissues; including neuronal, vascular, bone, myocardial, and cartilage. Its two lead candidates are focused on spinal cord regeneration and treatment of peripheral artery disease.

The Company acquired its initial stake in Nanotope from a Nanotope shareholder in April 2008 and increased its position through a direct investment of \$2 million in two tranches of \$1 million each in July and September 2008. At March 31, 2009, the Company owned 22% of Nanotope's outstanding securities. The Company may increase its stake in Nanotope if the opportunity arises, the Company has the capital resources to do so and Nanotope's technology development continues to move forward. The Company's investment in Nanotope is accounted for using the equity method of accounting.

### **Related-Party Interests**

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

#### *Leonardo Biosystems, Inc.*

LBS is a development stage drug delivery company that employs a novel strategy aimed at dramatically increasing targeting efficiency. LBS has licensing agreements and contract research agreements with University of Texas Houston for production of preclinical amounts of nanoparticles.

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Animal testing suggests that LBS's platform enables significantly increased targeting. The Company currently owns approximately 6% of LBS. The Company is interested in increasing its stake in LBS if the opportunity arises, the Company has the capital resources and LBS's technology development continues to move forward. The Company's investment in LBS of \$187,000 is accounted for using the cost method of accounting.

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### **Related-Party Interests**

Like Nanotope, LBS was co-founded by Dr. Anzalone, through the Benet Group. Through the Benet Group Dr. Anzalone owns 918,750 shares of LBS common stock, or approximately 17% of the outstanding stock of LBS. Dr. Anzalone does not hold options, warrants or any other rights to acquire securities of LBS directly or through the Benet Group. The Benet Group has the right to appoint a representative to the board of directors of LBS. Dr. Anzalone currently serves on the LBS board in a seat reserved for LBS's CEO and another individual holds the seat designated by the Benet Group. Dr. Anzalone has served as President and Chief Executive Officer of LBS since its formation and continues to serve in these capacities. Dr. Anzalone has not received any compensation for his work on behalf of LBS since joining the Company on December 1, 2007. Dr. Anzalone has also waived his right to any unpaid compensation accrued for work done on behalf of LBS before he joined the Company.

### **Aonex Discontinued Operation**

In 2007, Arrowhead determined that in order to monetize its investment in majority-owned subsidiary Aonex, it should seek to partner its technology with another company with greater financial resources and market reach. In May 2008, Arrowhead sold its stake in Aonex to New Hampshire-based Amberwave Systems, Inc. for upfront and milestone payments of up to \$7.5 million plus a royalty on solar products or licenses. Amberwave took over Aonex's Pasadena, California operations and is continuing to develop Aonex's technology. The losses incurred by Aonex are segregated in the Consolidated Statement of Operations as Loss from Discontinued Operation Aonex.

Arrowhead has preference to the first \$6,298,000 in future payments after which any additional payments will be split 64% to Arrowhead and 36% to the holders of the common stock of Aonex. As of March 31, 2009, only the payment payable at the time of the merger has been received.

### **Academic Partnerships**

In prior years, Arrowhead devoted significant capital resources to sponsored research. As the subsidiaries have matured, the Company has decreased its reliance on sponsored research for technology development and sponsored research expense has decreased. As of March 31, 2009, Unidym had one active sponsored research agreement at Duke University. Depending on capital resources, Arrowhead and/or its subsidiaries expect to continue to invest in nanoscience research and development through sponsored research agreements at universities.

### **Factors Affecting Further R&D Expenses**

On December 12, 2008, the Company's board of directors approved a plan to reduce expenses at Arrowhead and to support steps to reduce expenses at the Company's subsidiaries. In particular, Unidym has streamlined operations to reduce its cash burn by more than 60%. During the second quarter of fiscal 2009, Unidym closed its operations in Houston, Texas. Calando has also taken steps to reduce its cash burn. Until the Company obtains additional cash resources, R&D expenditures will be limited to available cash.

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

In addition to these general factors, specific factors that will determine the eventual cost to complete the current projects at Calando include the following:

the number, size and duration of clinical trials required to gain FDA approval;

the costs of producing supplies of the drug candidates needed for clinical trials and regulatory submissions;

the efficacy and safety profile of the drug candidate; and

the costs and timing of, and the ability to secure, regulatory approvals.

It is possible that the completion of studies could be delayed for a variety of reasons, including difficulties in enrolling patients, delays in manufacturing, incomplete or inconsistent data from the pre-clinical or clinical trials, difficulties evaluating the trial results and lack of funding. Any delay in completion of a trial would increase the cost of that trial, which would harm the Company's results of operations. Due to these uncertainties, the Company cannot reasonably estimate the size, nature nor timing of the costs to complete,

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or the amount or timing of the net cash inflows from Calando's current activities. Until the Company obtains further relevant pre-clinical and clinical data from Calando clinical trials, it will not be able to estimate its future expenses related to the Calando's programs or when, if ever, and to what extent, the Company will receive cash inflows from resulting products.

### ***Critical Accounting Policies and Estimates***

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

### ***Revenue Recognition***

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

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

Revenue associated with up-front license fees and 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 substantive milestones and future product royalties is recognized as earned based on the completion of the milestones and product sales, as defined in the respective agreements. Payments received in advance of recognition as revenue are recorded as deferred revenue.

### ***Research and Development Expenses***

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

### ***Impairment of Long-lived Assets***

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

### ***Intellectual Property***

Intellectual property consists of patents and patent applications internally developed, licensed from universities or other third parties or obtained through acquisition. Patents and patent applications are reviewed for impairment whenever events or circumstances indicate that the carrying amount may not be recoverable, and any impairment found is written off. Licensed or internally developed patents are written off over the life of the patent unless impairment occurs. Purchased patents are written off over three years, unless an impairment occurs sooner.

### **Results of Operations**

In each of fiscal 2005, 2006, and 2007, Arrowhead and its subsidiaries raised approximately \$21 million of capital on a consolidated basis. In fiscal 2008, Arrowhead raised approximately \$16 million of capital on a consolidated basis. Based on these historical levels, Calando continued its clinical program, began development of an additional RNAi therapeutic and began seeking a partner or an acquirer for its business. Unidym

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began to aggressively ramp up operations to manufacture and sell its CNT-based products and to prepare for an initial public offering. In addition, Arrowhead had several potential ventures in the pipeline. During the first quarter of fiscal 2009, it became apparent that it was unlikely in the near term in light of dramatic changes in the capital markets, that the Company would be able to raise or obtain sufficient capital to sustain operations at a historical level. In December 2008, the

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Company's Board of Directors approved a plan to focus various development efforts on those projects with the highest probability of creating value and bringing in cash over the shorter term and to streamline the organization to reduce cash consumption on a consolidated basis. While the Company has made significant progress on reducing cash consumption, operational inertia and the current economic climate continue to challenge the Company as it strives to implement this plan.

During the first quarter of fiscal 2009, the Company obtained \$5.2 million of additional cash on a consolidated basis through a combination of debt and equity financing and sale of non-core assets. During the second quarter, Unidym made substantial progress in restructuring its strategy, operations and obligations in order to continue its product development in a less capital intensive way and has continued to gain traction with key partners and customers. Calando and Tego are in discussions with potential partners and licensees with the goal of bringing additional capital into the Company, however, near term cash payments related to the Company's biotech subsidiaries are expected to be modest with potential substantial future payments. Many of the employees and projects added previously in pursuit of larger, longer-term efforts have been scaled back or suspended in response to the changing capital markets. Cost savings from the various scale back activities are beginning to be realized and are expected to be more fully reflected in the operating results over the remaining two quarters of fiscal 2009.

The Company had a consolidated net loss of approximately \$5.3 million and \$13.3 million for the three month and six month periods ended March 31, 2009, respectively, versus a consolidated net loss of \$5.7 and \$10.9 during the same three month and six month periods in the prior year. The decrease in the quarterly loss resulted primarily from a \$2.1 million decrease in operating expenses compared to the same quarter in the prior year. The approximately \$2.1 million decrease in operating expenses is partially offset by a \$500,000 decrease in revenues and a \$1.1 million reduction in the portion of the operating loss allocable to minority interests compared to the prior year.

### **Revenues**

The Company generated revenues of \$235,650 and \$724,766 for the three months ended March 31, 2009 and 2008, respectively. The revenue for the three months ended March 31, 2009 consist of \$7,500 from license fees from Unidym technology, \$20,000 in collaboration fees from Calando, \$117,715 in grants to Unidym to fund research and \$90,435 from sales and delivery of CNTs and inks by Unidym. The prior year second quarter revenues consist of \$557,471 in grants to Unidym to fund research and \$167,295 from Unidym's sales and delivery of CNTs.

The Company generated revenues of \$937,373 and \$1,127,627 for the six months ended March 31, 2009, and 2008, respectively. The revenue for the six months ended March 31, 2009 consist of \$457,500 from license fees from Unidym technology, \$202,948 in grants to Unidym to fund research \$20,000 in collaboration fees from Calando and \$256,925 from sales and delivery of CNTs and inks by Unidym. The prior year six month revenues consist of \$748,487 in grants to Unidym to fund research and \$379,140 from Unidym's sales and delivery of CNTs.

It is anticipated that the mix of revenues will change over future periods. Upon the completion of an anticipated supply agreement between Unidym and a partner to outsource manufacturing of CNTs for Unidym's CNT-based electronics business (*see Note 16. Subsequent Events*), revenues from CNT sales will cease in the near term, while revenues from sales of Unidym's CNT-based inks or films are expected to commence in the next twelve months.

### **Operating Expenses**

The Company had operating expenses of \$5.5 million and \$14.8 million during the three months and six months ended March 31, 2009, compared to \$7.5 million and \$14.7 million in the same three and six month periods in the prior year.

#### *Three months ended March 31, 2009 and 2008*

The Company has undertaken a program to reduce its cash consumption on a consolidated basis. The cost savings began to be realized in the results of operations for the second quarter of fiscal 2009. Many of the actions were taken throughout the first quarter but some expenses for projects in progress at Calando could not be immediately reduced or avoided. Certain expenses, such as license fees, legal and accounting expenses and capital expenses vary over time and on a project by project basis resulting in fluctuations in expenses as periods are compared. Actions subsequent to quarter-end have also been implemented and it is expected that the reductions in cash consumption will continue to be realized in the third and fourth quarters of 2009.

Calando's cash consumed by operations was approximately \$1,422,000 during the second quarter compared to \$2.4 million of cash consumed in the first quarter of fiscal 2009. During the second quarter, Calando incurred expenses related to the ongoing clinical trials for its two clinical candidates, IT-101 and CALAA-01, as well as additional preclinical expenses related to its clinical candidate, CALAA-02. These expenses include clinical consulting, clinical trial maintenance, and manufacturing costs of the components for CALAA-02 totaling approximately \$500,000. The combination of these activities resulted in approximately \$296,000 of additional expense for consulting, outside lab, and contract

services in the second quarter of this fiscal year compared to the prior year.



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Expenses incurred at Calando during the second quarter of fiscal 2009 include approximately \$428,000 in salary and related expense, \$1.1 million in clinical and preclinical research and development and consulting expenses and \$312,000 in general and administrative expenses compared to approximately \$860,000 in salary and related expense, \$1.0 million in clinical and preclinical research, development and consulting expenses and \$325,000 in general and administrative expenses in the same period in fiscal 2008. Calando has now stopped work on all preclinical candidates and has reduced headcount throughout the current year. Calando is actively pursuing partnership and licensing discussions with other pharmaceutical and biotech companies. Clinical and preclinical development of Calando's drug candidates are in the process of being concluded or have been ceased as a result of the limited cash resources available to Calando.

Unidym's cash consumed by operations was approximately \$1.7 million in the second quarter. Unidym's continuing business development efforts include sampling films and inks to customers in the touch panel and LCD industries and continuing its joint development with Samsung. Product development efforts were focused on CNT inks and films as well as improving its processes for high quality CNT production. In December, Unidym took aggressive steps to reduce its cash consumption beginning in the fourth quarter of the prior fiscal year. Reductions in management headcount made during the first quarter of fiscal 2009 included the CFO, CTO, VP of Finance, Corporate Controller, Vice President of Sales and Marketing, Vice President of Business Development and Plant Controller position. The CEO was terminated in December 2008 and executive management responsibility was delegated by the Unidym board to Arrowhead personnel. In addition, several employees at Unidym's Texas facilities were put on unpaid furlough in November 2008 and terminated in December 2008 and January 2009. During the second quarter of fiscal 2009, the decision was made to close Unidym's Texas facility and the remaining employees in Texas were terminated. Expenses incurred in the second quarter of fiscal 2009 include approximately \$955,000 in salaries and related expenses, approximately \$565,000 in research and development expenses, and approximately \$280,000 in general, administrative and consulting expenses. Comparable expenses incurred during the second quarter of fiscal 2008 included approximately \$1,410,000 in salaries and related expenses, approximately \$1,001,000 in research and development expenses, and approximately \$611,000 in general, administrative and consulting expenses. Expenses are expected to decrease in the coming quarters as the streamlining and consolidating measures take effect.

The closure of the Texas plant has begun to result in significant savings that were expected to be partially offset by near term closure expenses estimated at \$200,000 to \$300,000 and the build out of CNT production capability in Northern California estimated at \$500,000. On May 1, 2009, Unidym entered into an agreement with a partner to transfer certain assets related to CNT manufacturing from its Texas facility in anticipation of a license and supply agreement currently being negotiated. Pursuant to the agreement, the partner has agreed to reimburse Unidym up to \$200,000 to dismantle and move the equipment out of the Texas plant. This reimbursement is expected to significantly offset closure expenses. Additionally, in light of the agreement to outsource the manufacturing of CNTs to a partner, the requirements to build out a manufacturing facility in Northern California now are expected to be less capital intensive than previously projected and may be deferred to a later time. *See Note 16. Subsequent Events.*

The pace of development in fiscal 2009 will depend on the cash resources available to Unidym. Unidym is seeking additional capital to continue to fund development of its products. If Unidym is unsuccessful in obtaining sufficient capital to fund its operations, further development of Unidym's products may have to be slowed, interrupted or ceased altogether.

Expenses incurred at Arrowhead corporate during the second quarter of fiscal 2009 include approximately \$422,000 in salary and related expense, \$31,000 in consulting expenses and \$500,000 in general and administrative expenses. Expenses during the same period in the prior year were approximately \$266,000 in salary and related expense, \$69,000 in consulting expenses, \$727,000 in general and administrative expenses and \$150,000 in sponsored research. Excluding the non-cash stock based compensation expense, Arrowhead corporate expenses for the second quarter of fiscal 2009 were \$260,000 lower than the same period in the prior year. Arrowhead corporate expenses should continue to decrease as the full impact of the staff reductions during the second quarter of fiscal 2009 are reflected in the operating results.

Expenses related to Tego and Agonn were ramped down during the quarter. Management of Tego was transferred to Arrowhead and efforts are focused on an out-licensing program rather than product development. Development and testing of Agonn's prototypes was reduced to a minimal level. Total combined expenses of approximately \$32,000 and \$300,000 were incurred by Tego and Agonn, respectively, in the continued development of their respective technologies during the three and six month periods ended March 31, 2009.

*Six months ended March 31, 2009 and 2008*

Unidym's expenses during the first six months of fiscal 2009 include \$2.3 million in salaries and related expense, \$2.1 million in research and development expenses and \$715,000 in general, administrative and \$165,000 in consulting expense compared to \$2.7 million in salaries and related expense, \$1.8 million in research and development expenses and \$908,000 in general and administrative expense and \$491,000 in consulting expense in the same period in the last fiscal year.

Expenses incurred at Calando during the first six months of fiscal 2009 include approximately \$900,000 in salary and related expense, \$3,672,000 in clinical and preclinical research, development and consulting expenses and \$614,000 in general and



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administrative expenses. Expenses incurred at Calando during the first six months of fiscal 2008 include approximately \$1.7 million in salary and related expense, \$1,982,000 in clinical and preclinical research, development and consulting expenses and \$994,000 in general and administrative expenses.

During the first six months of fiscal 2008, Unidym was focused on staffing up for an initial public offering and ramping up for pilot scale manufacturing and marketing of its products, Calando and Insert were preparing to merge, continuing clinical development of IT-101 and preparing for clinical development of CALAA-01. During the first six month of fiscal 2008, Unidym completed a \$10 million equity financing and added a CFO and a Vice President of Finance to prepare for an initial public offering. Unidym also hired other executive level personnel and consulting expertise in this period to rapidly expand its capability to produce its transparent conductive film and add to its CNT production capacity. Unidym was continuing to ramp up its research and development efforts through the first six months of fiscal 2008.

Development expenses at Calando consisted of expenses related to the ongoing Phase 1 trial for IT-101, completion of the final studies in preparation for its Investigational New Drug Application for CALAA-01, and expenses related to expanding Insert's pipeline.

Expenses incurred at Arrowhead corporate during the first six months of 2009 include approximately \$1,006,000 in salary and related expense, \$67,000 in consulting expenses and \$1,212,000 in general and administrative expenses as compared to approximately \$776,000 in salary and related expense, \$74,000 in consulting expenses, \$1,181,000 in general and administrative expenses and \$267,000 in sponsored research for the same period in the prior fiscal year. Excluding the non-cash stock based compensation expense, Arrowhead corporate expenses for the first six months of fiscal 2009 were \$12,000 higher than the same period in the prior fiscal year. Arrowhead corporate salaries were lower in the prior year as prior year expenses included only a portion of the cost for the newly hired CEO and VP of Medical Technology.

For purposes of comparison, the amounts for the three months and six months ended March 31, 2009 and 2008, respectively, are shown in the tables below. Prior period amounts have been reclassified to conform to the current period presentation. Historical amounts have been adjusted to eliminate any Aonex related activities as a result of its sale in May 2008. Aonex is now reflected as Discontinued Operations in the financial statements.

**Salary & Wage Expenses**

The Company employs management, administrative and technical staff at Arrowhead and the subsidiaries. Salary and wage expense consists of salary, benefits, and non-cash charges related to equity based compensation in the form of stock options. Salary and benefits are allocated to two major categories: general and administrative compensation related expense and research and development compensation related expense depending on the primary activities of each employee. The following table details salary and related expenses for three months and six months ended March 31, 2009 and 2008.

**For the three months ended March 31, 2009 and 2008***(in thousands)*

	Three Months Ended		Three Months Ended		Increase (Decrease)	
	Mar 31, 2009	% of Expense Category	Mar 31, 2008	% of Expense Category	\$	%
G&A compensation-related	\$ 1,069	44%	\$ 1,403	41%	\$ (334)	(24)%
Stock-based compensation	\$ 696	28%	\$ 852	25%	\$ (156)	(18)%
R&D compensation-related	\$ 677	28%	\$ 1,144	34%	\$ (467)	(41)%
Total	\$ 2,442	100%	\$ 3,399	100%	\$ (957)	(28)%

**Table of Contents****For the six months ended March 31, 2009 and 2008***(in thousands)*

	Six Months Ended Mar 31, 2009	% of Expense Category	Six Months Ended Mar 31, 2008	% of Expense Category	Increase (Decrease)	
					\$	%
G&A compensation-related	\$ 2,384	43%	\$ 2,527	40%	\$ (143)	(6)%
Stock-based compensation	\$ 1,423	25%	\$ 1,541	24%	\$ (118)	(8)%
R&D compensation-related	\$ 1,770	32%	\$ 2,333	36%	\$ (563)	(24)%
Total	\$ 5,577	100%	\$ 6,401	100%	\$ (824)	(13)%

General and Administrative (G&A) compensation expense decreased 24% in the second quarter compared to the same period in the prior year due to a combination of terminations and salary reductions at Arrowhead, Unidym and Calando. The Company made a combination of reductions during the first and second quarters of fiscal 2009 compared to the prior year periods. In the prior year, positions were added at Arrowhead including a Chief Executive Officer (December 2007), a Vice President, Medical Technologies (February 2008), a Chief Patent Officer (April 2008) and a Vice President, Advanced Materials (May 2008). Comparing periods on a consolidated basis, the cost of the new positions at Arrowhead is offset by the termination of several senior management positions at Unidym made during the six months ended March 31, 2009. The terminations were executed to reduce Unidym's rate of cash consumption by reducing Unidym's administrative overhead. The Unidym terminations included the CEO, CFO, VP of Finance, Corporate Controller, Vice President of Sales, Vice President of Marketing and Business Development and Plant Controller positions. These responsibilities have been absorbed by remaining Unidym employees or remaining Arrowhead management, administrative and finance personnel.

The decrease in G&A salaries also includes the impact of the salary reductions for management and selected staff at Arrowhead and Unidym.

Stock-based compensation is a non-cash charge related to the issuance and vesting of stock options to new and existing employees. This expense is recorded pursuant to the adoption of SFAS 123R, which requires expensing of stock-based compensation for all options vested. Stock options are awarded to new full time employees and to existing employees. During the quarter, the number of options outstanding decreased overall as a result of options being canceled following terminations. The number of options outstanding and the option expense will vary from period to period depending on hiring, on terminations and on awards to new and existing employees.

Research and development (R&D) compensation expense decreased in the three months and six months ended March 31, 2009 compared to the same period the prior year due primarily to Unidym's reduction in research scientists and process engineers and the closure of Unidym's Texas facility. On a consolidated basis, the Company expects that the salaries and wages expense will continue to decrease compared to the prior year as a result of recent reductions in headcount and salaries throughout the organization.

**Table of Contents****General & Administrative Expenses**

The following table details G&A expenses for the three months and six months ended March 31, 2009 and 2008.

**For the three months ended March 31, 2009 and 2008**

(in thousands)

	Three Months Ended		Three Months Ended		Increase (Decrease)	
	Mar 31, 2009	% of Expense Category	Mar 31, 2008	% of Expense Category	\$	%
Professional/outside services	\$ 547	53%	\$ 449	30%	\$ 98	22%
Recruiting	\$ 7	1%	\$ 80	5%	\$ (73)	(91)%
Patent expense	\$ 79	8%	\$ 291	19%	\$ (212)	(73)%
Facilities and related	\$ 75	7%	\$ 72	5%	\$ 3	4%
Travel	\$ 77	7%	\$ 153	10%	\$ (76)	(50)%
Business insurance	\$ 115	11%	\$ 64	4%	\$ 51	80%
Depreciation	\$ 37	4%	\$ 44	3%	\$ (7)	(6)%
Communications and technology	\$ 33	3%	\$ 68	4%	\$ (35)	(51)%
Office expenses	\$ 41	4%	\$ 102	7%	\$ (61)	(60)%
Other	\$ 21	2%	\$ 191	13%	\$ (170)	(89)%
<b>Total</b>	<b>\$ 1,032</b>	<b>100%</b>	<b>\$ 1,514</b>	<b>100%</b>	<b>\$ (482)</b>	<b>(32)%</b>

**For the six months ended March 31, 2009 and 2008**

(in thousands)

	Six Months Ended		Six Months Ended		Increase (Decrease)	
	Mar 31, 2009	% of Expense Category	Mar 31, 2008	% of Expense Category	\$	%
Professional/outside services	\$ 1,207	45%	\$ 1,012	32%	\$ 195	19%
Recruiting	\$ 31	1%	\$ 168	5%	\$ (137)	(82)%
Patent expense	\$ 400	15%	\$ 707	22%	\$ (307)	(43)%
Facilities and related	\$ 148	6%	\$ 140	4%	\$ 8	6%
Travel	\$ 285	11%	\$ 263	8%	\$ 22	8%
Business insurance	\$ 230	9%	\$ 256	8%	\$ (26)	(10)%
Depreciation	\$ 73	3%	\$ 88	3%	\$ (15)	(17)%
Communications and technology	\$ 121	4%	\$ 144	5%	\$ (23)	16%
Office expenses	\$ 106	4%	\$ 176	6%	\$ (70)	(40)%
Other	\$ 61	2%	\$ 223	7%	\$ (162)	(73)%
<b>Total</b>	<b>\$ 2,662</b>	<b>100%</b>	<b>\$ 3,177</b>	<b>100%</b>	<b>\$ (515)</b>	<b>(16)%</b>

Professional/outside services include general legal, accounting and other outside services retained by the Company and its subsidiaries. All periods include normally occurring legal and accounting expenses related to SEC compliance and other corporate matters. During the current period, Calando incurred approximately \$155,000 of legal fees and finder's fees related to the unsecured promissory note offering. Public relations expenses were approximately \$68,000 higher than the same period in the prior year. The prior year's results include legal costs associated with the proposed merger of Calando and Insert amounting to approximately \$181,000, and legal work for Unidym's private placement amounting to approximately \$77,000.

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Recruiting expense was higher in the prior year due to the recruiting fees and relocation fees to hire a CEO for Calando and a polymer chemist for Unidym. The current year expense results primarily from relocation costs and interim living expenses of an Arrowhead senior executive. Recruiting fees are not expected to change significantly in the future as there are no current plans to add to the Company's management team or those of its subsidiaries.

Patent expense decreased as a result of Arrowhead hiring a Chief Patent Officer to manage the patent portfolio and as a result of decreased patent activity by Calando and Unidym. Certain Calando patents that are not being utilized were returned to Caltech which reduced the ongoing patent expense. Patent expenses of approximately \$26,000 for Unidym in the current quarter includes payments to Rice University and UCLA for legal fees related to Unidym's licensed technology as well as legal fees on patents filed by Unidym. Patent expenses incurred by Calando of approximately \$58,000 relate primarily to extending intellectual property protection for

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Calando products to Europe. The Company expects to continue to invest in patent protection as the Company extends and maintains protection for its current portfolios and files new patent applications as its products applications are improved. The cost will vary depending on the needs of the Company.

The increase in facilities and related expense during the three months and six months ended March 31, 2009, compared to the prior period, reflects the rent increases for office space in Pasadena and New York. Arrowhead's New York office was closed on March 31, 2009. The Company is obligated to pay the base rent on the office through the lease term, but expects to realize savings related to salary and incidental expenses previously incurred by the operation of the New York office. Facilities expense related to the Arrowhead corporate office and the New York office has been allocated to G&A and facilities expense related to the subsidiaries has been allocated to R&D.

Travel expense includes recurring expenses related to travel by the Company as management travels to and from Company locations in Pasadena and Menlo Park, California and Houston, Texas. Travel expense is also incurred as Company management pursues business initiatives and collaborations throughout the world with other companies and for marketing, investor relations, fund raising and public relations. The expenses for the fiscal year to date are consistent with prior period as travel expense decreased in the most recent quarter. Travel expense fluctuates from quarter to quarter depending on current projects. This expense is expected to decrease in comparison to the prior year as a result of the recent reductions in headcount and closure of Unidym's Houston, Texas operations.

Insurance expense has decreased due to generally lower rates in insurance markets despite the increase in limits and coverage for new clinical trials and the expansion of Unidym's operations since the same period in the prior year. This expense is expected to fluctuate but eventually decrease as a result of changes in the market and the status of clinical trials and the reduction in number of facilities at Unidym requiring insurance.

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

**Research and Development Expenses**

Most of Arrowhead's R&D expenses during the three months and six months ended March 31, 2009, were related to research and development activities by Arrowhead's subsidiaries. Currently, Arrowhead owns positions in two majority-owned subsidiaries, two wholly-owned subsidiaries and two minority investments, each focused on development and commercialization of nanotechnology products or applications.

The following table details R&D expenses for the three months and six months ended March 31, 2009 and 2008.

**For the three months ended March 31, 2009 and 2008**

*(in thousands)*

	Three Months Ended		Three Months Ended		Increase (Decrease)	
	Mar 31, 2009	% of Expense Category	Mar 31, 2008	% of Expense Category	\$	%
Outside labs & contract services	\$ 837	55%	\$ 845	46%	\$ (8)	(1)%
License, royalty & milestones	\$ 124	8%	\$ 65	4%	\$ 59	91%
Laboratory supplies & services	\$ 65	4%	\$ 255	14%	\$ (190)	(75)%
Facilities and related	\$ 315	21%	\$ 225	12%	\$ 90	40%
Sponsored research	\$ 9	1%	\$ 295	16%	\$ (286)	(97)%
Depreciation-R&D-related	\$ 130	9%	\$ 119	6%	\$ 11	9%
Other research expenses	\$ 35	2%	\$ 36	2%	\$ (1)	(3)%
Total	\$ 1,515	100%	\$ 1,840	100%	\$ (325)	(18)%

**Table of Contents****For the six months ended March 31, 2009 and 2008***(in thousands)*

	Six Months Ended	% of Expense	Six Months Ended	% of Expense	Increase (Decrease)	
	Mar 31, 2009	Category	Mar 31, 2008	Category	\$	%
Outside labs & contract services	\$ 3,507	64%	\$ 1,600	44%	\$ 1,907	119%
License, royalty & milestones	\$ 373	7%	\$ 168	5%	\$ 205	122%
Laboratory supplies & services	\$ 251	5%	\$ 455	13%	\$ (204)	(45%)
Facilities related	\$ 662	12%	\$ 483	13%	\$ 179	37%
Sponsored research	\$ 120	2%	\$ 536	15%	\$ (416)	(78%)
Depreciation-R&D-related	\$ 273	5%	\$ 225	6%	\$ 48	21%
Other research expenses	\$ 253	5%	\$ 152	4%	\$ 101	66%
<b>Total</b>	<b>\$ 5,439</b>	<b>100%</b>	<b>\$ 3,619</b>	<b>100%</b>	<b>\$ 1,820</b>	<b>50%</b>

Fiscal year to date, outside labs & contract services increased significantly as the types of expenses incurred has changed between years. During the first quarter of fiscal 2009, the process development and preclinical expenses for Calando's drug candidate CALAA-02, together with the clinical trial expenses for CALAA-01 (Phase I) and IT-101 (Phase I and II) total approximately \$1.96 million. During the second quarter of fiscal 2009, those same expenses totaled approximately \$600,000 compared to \$60,000 in the same period in the prior year. Current year expenses include the preclinical studies and manufacture of components for CALAA-02 which have now been suspended. The current year to date outside lab & contract services expense also included approximately \$153,000 attributable to Agonn's prototype development efforts. During the same quarter in the prior year, Calando's outside labs & contract services expense included approximately \$60,000 for outsourced preclinical studies in preparation for an Investigational New Drug application by Calando, and outsourced manufacture of Calando's therapeutic candidate for clinical studies and \$149,000 for Tego's beginning operations.

Unidym incurred approximately \$53,000 of outside lab and contract services during the second quarter of the current fiscal year compared to approximately \$443,000 during the same period in the prior year. The decrease in Unidym's expenses relates primarily to the scaling down of its research and development and production operations in Texas. Development expenses for Unidym are expected to continue to decrease in 2009 as Unidym develops a less costly source of CNT materials. Efforts are also focused on the sale of Unidym's CNT based inks rather than the manufacture of film which is expected to be less capital intensive. A partner will be sought for the manufacture of Unidym's film. Outside laboratory & contract services expenses will continue to fluctuate depending upon where a particular project is in its development, approval or trial process.

Licensing fees, milestones & royalties consist primarily of amounts incurred by Unidym under the terms of its license agreement with Rice University and Calando for the license for siRNA targets from Alnylam.

Laboratory supplies and services consist primarily of materials, supplies and services consumed in the laboratory. Of the approximately \$65,000 shown above, \$47,000 relates to materials and small tools used in the R&D of CNT manufacturing processes and conductive thin film applications. Of the prior year amounts approximately \$217,000 were incurred for similar activities at Unidym.

Facilities related expenses increased in the three months and six months ended March 31, 2009 over the prior year period due primarily to the addition of two facilities in Houston, TX and in Sunnyvale, CA for Unidym. Relocation of the Menlo Park operations to the larger Sunnyvale, CA location is imminent. The lease for the new facility in Houston, TX has been terminated (*see Note 16. Subsequent Events.*) These expenses are expected to fluctuate as the size, configuration and number of facilities is adjusted in the future to adapt to needs and opportunities.

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

Increased depreciation expense is primarily due to the addition of depreciable equipment at Unidym's Sunnyvale facility resulting from the purchase of Nanoconduction in August of 2008.



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

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Name of Subsidiary / Project	Project	Project	Project
	cash expenses for the Three Months Ended March 31, 2009	cash expenses for Six Months Ended March 31, 2009	cash expenses from inception of Project through March 31, 2009
Calando Pharmaceuticals, Inc. / CALAA-01 & IT 101	\$ 1.4 Million	\$ 3.8 Million	\$ 37.5 Million
Unidym, Inc. / Thin Film CNTs	\$ 1.7 Million	\$ 4.6 Million	\$ 23.7 Million
Tego Biosciences Corp. / Fullerene Anti-oxidants	\$ 0.0 Million	\$ 0.1 Million	\$ 0.9 Million
Agonn Systems, Inc. / Fullerene Anti-oxidants	\$ 0.0 Million	\$ 0.2 Million	\$ 0.4 Million
Total of all listed subsidiaries	\$ 2.4 Million	\$ 8.0 Million	\$ 61.8 Million

**Consulting**

During the three months ended March 31, 2009, consulting fees and related travel totaled approximately \$344,000 compared to \$687,000 the same period in the prior year. Total consulting fees in the current three month period consisted of \$203,000 for Calando and \$71,000 for Unidym, \$30,000 for Arrowhead and \$5,000 for Agonn.

The consulting fees incurred by Calando consisted of \$175,000 and \$501,000 for clinical and regulatory consulting fees during the three months and six months ended March 31, 2009 compared to \$99,000 and \$167,000 for similar items in the same period in the prior year, respectively. The current year consulting expense is for administration of the various clinical trials in process and the prior year expenses relate to preclinical research, preparation for the filing of its Investigational New Drug application (INDA) with the FDA.

The consulting fees incurred by Unidym consisted of \$47,000 for consulting related to the process to manufacture sheets of thin film nanotubes and performance testing of those sheets. In same period in the prior year, there was approximately \$131,000 of consulting fees incurred in similar projects.

**Leveraged Technology and Revenue Strategy**

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

License the products and processes to a third party for a royalty or other payment. By licensing, the Company would not be required to allocate resources to build a sales or a production infrastructure and could use those resources to develop additional products.

Retain the rights to the products and processes, but contract with a third party for production. The Company would then market the finished products. This approach would require either the establishment of a sales and distribution network or collaboration with a supplier who has an established sales and distribution network, but would not require investment in production equipment.

Build production capability in order to produce and market the end products. This last approach would likely require the most capital to build the production, sales and distribution infrastructure.

On a case-by-case basis, the Company and each subsidiary will choose the strategy which, in the opinion of management, can be supported by available capital resources and is likely to generate the most favorable return.

On April 20, 2007, through the merger with CNI, Unidym acquired the production capability to make CNTs. These CNTs were used for product development and sold externally to third parties. Subsequent to quarter end, Unidym entered into an agreement with a partner to transfer the assets related to CNT manufacturing and expects to enter into a license and supply agreement in the near term. Revenue from sales of CNT is

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expect to decrease and eventually cease and revenue from sales of other products to commence in the next twelve months (*see Note 16. Subsequent Events.*). Prior to this merger, the only revenue generated by the Company was through grants from public and private entities and through one licensing deal. While the ultimate goal of the Company is to generate revenue through the sale of products and/or the licensing of technology, the Company does record revenue from license fees, grants and from development fees. Revenue from grants and development fees are considered to be reimbursements for efforts performed on behalf of third parties and not part of the Company's primary strategy to generate revenue.

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The Company does not expect substantial product sales in fiscal 2009. Therefore, losses can be expected to increase before any substantial revenue is generated. To partially offset these losses, the Company is pursuing other means of funding such as licenses, contracts and collaborations with third parties. The award of such grants and contracts depends on numerous factors, many of which are not in the Company's control and, therefore, it is difficult to predict if this strategy will be successful.

### **Liquidity and Capital Resources**

#### ***Cash Flow Position***

Since inception in May 2003, the Company has incurred significant losses. Cash and cash equivalents decreased during the quarter by \$4.0 million to \$3.6 million from \$7.6 million at December 31, 2008. It is anticipated that cash consumption will decrease sequentially over subsequent quarters unless additional cash resources are obtained by Arrowhead and its subsidiaries. The Company invests available cash in certificates of deposit, U.S. government obligations and high grade commercial paper. The Company's investment objectives are primarily to preserve capital and liquidity and secondarily to obtain investment income.

The Company has historically financed its operations through the sale of securities of Arrowhead and its subsidiaries. During the first quarter of fiscal 2009, Unidym sold its equity interest in Ensysce for \$700,000 in cash. During the six months ended March 31, 2009, Calando raised an additional \$2.5 million through an offering of senior unsecured convertible promissory notes. Additionally, Arrowhead purchased \$700,000 of the notes, and Unidym raised \$2 million through the sale of newly issued shares of Series C-1 to TEL Ventures. In addition to the \$2 million of Series C-1 issued to TEL Ventures, Arrowhead also purchased \$225,000 of the Series C-1 Preferred Stock. Net cash from financing activities totaled \$16.1 million in fiscal 2008 for Arrowhead and its subsidiaries. Arrowhead invested \$2.0 million in Nanotope in fiscal 2008.

The Company has an effective shelf registration statement on file with the SEC covering the public sale by the Company of up to approximately \$35 million in Common Stock and Warrants.

The Company's board of directors has approved a strategy for the Company to conserve cash and seek sources of new capital. While the Company has made significant reportable progress on its cash conservation efforts, the Company is working to consummate one or more of the following: the out-license of technology, sale of a subsidiary, sale of non-core assets, scaling down development efforts, funded joint development or partnership arrangements, and sale of securities. The probability that any of these events will occur is uncertain, in light of the lack of liquidity in the current capital and credit markets. Until such time as one or more of these goals is accomplished, Arrowhead has supported steps to scale back the activities of its subsidiaries. If we are unable to raise needed capital through any of these means, we may be forced to curtail or cease operations at the Company or one or more of the subsidiaries. See Note 1 regarding our ability to continue as a Going Concern.

#### ***Contractual Obligations and Commercial Commitments***

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

##### ***Capital Lease Obligations***

In connection with its acquisition of Nanoconduction in August 2008, Unidym guaranteed an equipment lease with an original balance of \$1,677,000, bearing interest at 8% with a remaining principal balance of \$1,139,838 as of March 31, 2009. The lease requires 16 monthly payments of principal and interest of \$75,344 each through July 1, 2010. The equipment lease is secured by research and development assets at Nanoconduction.

##### ***Patents and Licenses***

Our subsidiaries have entered into various licensing agreements requiring royalty payments of specified product sales. Some of these agreements contain provisions for the payment of guaranteed or minimum royalty amounts. Typically, the licensor can terminate our license if we fail to pay minimum annual royalties. A material portion of Unidym's intellectual property portfolio is exclusively licensed from Rice University. If the sum of Unidym's debts, liabilities and other obligations were greater than all of Unidym's assets at fair valuation or if Unidym were generally not

paying its debts, liabilities and other obligations as they come due, the Rice license would terminate.

*Purchase Commitments*

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

**Table of Contents***Note Commitments*

Calando entered into Unsecured Convertible Promissory Note Agreements for \$2.5 million with accredited investors and for \$700,000 with Arrowhead. The Notes have a 2-year maturity and bear 10% annual interest. Unpaid principal of the Note and accrued but unpaid interest thereon is convertible into common stock of Calando at any time in the sole discretion of the holder. In the event of a Calando Company Sale, each holder has the option to exchange the Note for two times the then outstanding principal amount owed under the Note plus accrued and unpaid interest thereon ( Redemption Amount ) or convert the outstanding principal and accrued and unpaid interest thereon, into Calando common stock. A Company Sale is defined in the Note.

Calando may redeem a Note at any time for the Redemption Amount. To facilitate the above investment in Calando, Arrowhead subordinated to the Notes Calando s debt obligations aggregating \$5.3 million for principal plus interest thereon. These debt obligations result from \$5.3 million in principal loaned to Calando under a series of demand notes for capital Arrowhead has advanced to Calando since March 2008.

**Off-Balance Sheet Arrangements**

The Company does not have and has not had any off-balance sheet arrangements or relationships.

**Inflation and Changing Prices**

Inflation has not generally been a material factor affecting our financial condition, results of operations or cash flows in the periods shown. Management does not believe that inflation will be a material factor in fiscal 2009, even though our general operating expenses, such as salaries, employee benefits and facilities costs are subject to normal inflationary pressures.

**Contractual Obligations and Commitments**

Our contractual commitments as of March 31, 2009 are summarized by category in the following table:

	<b>Total</b>	<b>Less than 1 year</b>	<b>1-3 Years</b>	<b>3-5 Years</b>	<b>More than 5 Years</b>
Operating Lease Obligation(1)	\$ 4,324,787	\$ 947,911	\$ 1,356,063	\$ 983,824	\$ 1,036,989
Capital Lease Obligation(2)	\$ 1,205,502	\$ 904,127	\$ 301,375	\$	\$
Calando Promissory Notes Obligation	\$ 3,019,761	\$ 251,647	\$ 2,768,114	\$	\$
Sponsored Research(3)	\$ 317,483	\$ 176,099	\$ 141,384	\$	\$

- (1) The operating lease obligations consist almost exclusively of minimum payments due under facility leases for the Company and its Subsidiaries.
- (2) The capital lease obligations consist entirely of an equipment finance lease assumed in the Nanoconduction acquisition by Unidym and guarantee by Unidym for equipment in Unidym s Sunnyvale facility.
- (3) The sponsored research obligation consists entirely of Unidym s research agreement with Duke University.

**ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.**

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

**ITEM 4. DISCLOSURE CONTROLS AND PROCEDURES.**

Our Chief Executive Officer and our Chief Financial Officer, after evaluating our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15-d-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, have concluded that as of March 31, 2009, our disclosure controls and procedures are effective to ensure that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and to ensure that information required to be disclosed by us in such reports is accumulated and communicated to our management, including our chief executive officer and chief financial officer where appropriate, to allow timely decisions regarding required disclosure.

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

**PART II OTHER INFORMATION**

**ITEM 1. LEGAL PROCEEDINGS.**

None.

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**ITEM 1A. RISK FACTORS.**

**Risks Related to Our Financial Condition**

*We do not have sufficient cash reserves to fund our activities at their current pace for the next fiscal year.*

Our plan of operations is to provide substantial amounts of research project funding and financial support for majority-owned subsidiaries over an extended period of time. Our Board of Directors has adopted a cash conservation strategy that scales back Arrowhead's financial support for Unidym and Calando at this time. This has influenced Unidym's decision to partner its capital intensive bulk CNT manufacturing and concentrate its resources on its CNT inks and CNT based film products. Development of new drug candidates at Calando has been suspended and Calando's Board of Directors has determined to substantially scale back its operations. The Company will need to obtain additional capital in the near term to support our projects, and we may plan to do so by out-licensing technology, selling one or more of our subsidiaries, securing funded partnerships, conducting one or more private placements of equity securities of Arrowhead or its subsidiaries, selling additional securities in a registered public offering, or through a combination of one or more of such financing alternatives. However, there can be no assurance that we will be successful in any of these endeavors or, if we are successful that such transactions will be accomplished on favorable terms. If we are unable to obtain additional capital, we will be required to implement additional cash savings measures by limiting further activities at one or more of our subsidiaries, or at Arrowhead, which could materially harm our business and our ability to achieve cash flow in the future, including delaying or reducing implementation of certain aspects of our plan of operations or deferring or abandoning research programs. Even if the Company is successful in raising capital for Arrowhead or one of our subsidiaries, because Arrowhead and each subsidiary are separate entities, it could be difficult or impossible to allocate funds in a way that meets the needs of all the entities.

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

Neither Arrowhead nor its subsidiaries generate substantial revenue, and, to date, our operations, research and development activities have been primarily funded through the sale of Arrowhead securities and securities of our subsidiaries. Current market conditions are likely to impair our ability to raise the capital we need. If we are unable to secure additional cash resources from the sale of securities or other sources, it could become necessary to further slow, interrupt or close down development efforts at Calando or Unidym. In addition, we may have to make additional cuts in expenses at the Arrowhead level which could impair our ability to manage our business and our subsidiaries. Even if investment capital is available to us, in the current market the terms may be onerous and could significantly dilute our ownership interest in either Calando or Unidym. The sale of additional Arrowhead stock to fund operations could result in significant dilution to stockholders.

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

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

To maintain our listing on the NASDAQ Capital Market we must satisfy certain minimum financial and other continued listing standards, including, among other requirements, (i) a \$1.00 minimum bid price requirement and (ii) a \$2.5 million minimum stockholder's equity requirement, \$500,000 minimum net income requirement or \$35 million minimum market value of listed securities requirement. As of May 14, 2009, the bid price of our common stock was \$0.56 per share and our approximate market value for listed securities was approximately \$24 million. Further, as reported in this 10-Q, at March 31, 2009 our stockholders' equity was \$406,000 and our net loss was \$27 million for fiscal year ended September 30, 2008. If our common stock were threatened with delisting from the NASDAQ Capital Market, we may, depending on the circumstances, seek to extend the period for regaining compliance with NASDAQ listing requirements or we may pursue other strategic alternatives to meet the continuing listing standards.

In addition, we may choose to voluntarily delist from NASDAQ, or "go dark," in the event we believe we may be subject to a delisting proceeding or for any other reason our Board of Directors determines to be in the best interest of our stockholders.

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



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

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

**Calando.** Calando has \$2.5 million in unsecured convertible promissory notes outstanding. The notes bear 10% interest accrued annually and have a two year maturity. Following maturity, the notes become payable on demand. If Calando is unable to meet its obligations to the bearers of the notes after maturity, Arrowhead may also not be in a position to lend Calando sufficient cash to pay such demand notes individually or all at once. Unless other sources of financing become available, this could result in Calando's insolvency and Calando would be unable to continue operations.

**Unidym.** We have debt on our consolidated balance sheet, including a capital lease obligation acquired in connection with Unidym's acquisition of Nanoconduction, Inc. The capital lease obligation requires us to pay \$1.3 million in 16 monthly payments for capital equipment at Unidym's Sunnyvale, California location and the equipment itself serves as collateral for the debt. Unidym's ability to make payments on its indebtedness will depend on its ability to conserve the cash that it has on hand and to generate cash in the future. Neither Unidym nor Arrowhead currently generates significant revenue. Because Unidym does not currently have a substantial amount of cash on hand, Unidym might be required to divert cash from development activities or to generate cash via debt or equity financing to be able to meet the monthly payment requirements under the capital lease obligation. This, to some extent, is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control. Also, given the current economic credit crisis, financing options might be limited going forward, which could prevent Unidym from obtaining the necessary funds to pay its indebtedness when due. Because the equipment serves as collateral for the debt, if Unidym is unable to make the monthly payments when due, the lessor of the equipment, at its discretion, may seize the equipment and Unidym would not be able to use the equipment in its development activities.

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

It is possible that the completion of our clinical studies could be delayed for a variety of reasons, including difficulties in enrolling patients, delays in manufacturing, incomplete or inconsistent data from the pre-clinical or clinical trials, and difficulties evaluating the trial results. Any delay in completion of a trial would increase the cost of that trial, which would harm the Company's results of operations. Due to these uncertainties, the Company cannot reasonably estimate the size, nature or timing of the costs to complete or the amount or timing of the net cash inflows from the current activities of any of our biopharmaceutical subsidiaries or investments. Until the Company obtains further relevant pre-clinical and clinical data, it will not be able to estimate its future expenses related to these programs or when, if ever, and to what extent, the Company will receive cash inflows from resulting products.

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

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

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

### **Risks Related to Our Business Model and Company**

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

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

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***The costs and effect of consolidating Unidym's facilities and operations are difficult to predict and could be substantial.***

Unidym is in the process of consolidating its facilities and operations. Unidym has closed its Texas operations and the facility must be completely vacated in the near future. As part of its lease on its Houston facility, Unidym is obligated to make certain repairs and clean up the facility. In addition, Unidym has two facilities in Northern California, both of which it will continue to occupy until its Sunnyvale, CA facility is retrofitted with all of the capabilities that are needed. The amount of time for which Unidym will be obligated under the various leases and the cost for retrofitting is difficult to estimate, as well as the associated clean-up costs. These costs will divert funds from development activities and could place significant financial strain on Unidym and the time required to make the retrofits could result in delay in bringing Unidym's products to market. The operating results included some recent reduction in Unidym's management and technical teams and Unidym plans to make additional cuts in the near future. With these cuts, it is possible that valuable know-how will be lost and that Unidym's development efforts could be negatively affected.

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

As part of our cash conservation strategy that scales back Arrowhead's financial support for Calando at this time, Calando has embarked on a phase down of its operations and has shifted its focus to licensing its technologies to partners. There can be no assurance that the shift in strategy will be successful and that Calando will be able to license its technologies upon terms favorable to it or at all.

***If Calando is successful in licensing its technologies, it will lose a considerable amount of control over its intellectual property.***

The business model of our subsidiaries has historically been to develop new nanotechnologies and to exploit the intellectual property created through the research and development process to develop commercially successful products. If Calando is successful in licensing its technology to other companies it will lose control over certain of the technologies it licenses and will be unable to significantly direct the commercialization of its technologies. It is possible that Calando's licensees will not be successful in the further commercialization of Calando's technologies and anticipated revenues from license agreements may be less than expected or may not be paid at all.

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

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

***We have not generated significant revenues and our business model does not predict significant revenues in the foreseeable future.***

To date, we have only generated a small amount of revenue as a result of our current plan of operations. Moreover, given our strategy of financing new and unproven technology research, we do not expect to realize significant revenue from operations in the foreseeable future, if at all.

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

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

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acceptance of our technology among original equipment manufacturers and customers, or if the associated products do not achieve wide market acceptance, our business will be materially and adversely affected.

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*We may be unable to scale up our manufacturing processes in a cost effective way.*

In some cases, nanotechnology will require new technological and manufacturing processes that, at this time, are very expensive and subject to error. There is no assurance that technology and manufacturing processes will expand and improve quickly enough to enable our targeted products to be made within rigorous tolerances cost effectively. If manufacturing and mass production are not available at a favorable cost, our technology may not be adopted by the applicable industry. Under such scenario, we may not achieve our business plan for one or more processes or products, which could adversely impact the value of our common stock.

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

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

a development partner would likely gain access to our proprietary information, potentially enabling the partner to develop products without us or design around our intellectual property;

we may not be able to control the amount and timing of resources that our collaborators may be willing or able to devote to the development or commercialization of our product candidates or to their marketing and distribution; and

disputes may arise between us and our collaborators that result in the delay or termination of the research, development or commercialization of our product candidates or that result in costly litigation or arbitration that diverts our management's resources. The occurrence of any of the above risks could impair our ability to generate revenues and harm our business and financial condition.

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

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

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

limitations on its ability to borrow;

limitations on its capital structure;

restrictions on acquisitions of interests in associated companies;

prohibitions on transactions with affiliates;

restrictions on specific investments; and

compliance with reporting, record keeping, voting, proxy disclosure and other rules and regulations.

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

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

There is public concern regarding the human health, environmental and ethical implications of nanotechnology that could impede market acceptance of products developed through these means. Nanotechnology-enabled products could be composed of materials such as carbon, silicon, silicon carbide, germanium, gallium arsenide, gallium nitride, cadmium selenide or indium phosphide, which may prove to be unsafe or harmful to human health or to the environment because of the size, shape or composition

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of the nanostructures. For this reason, these nanostructures may prove to present risks to human health or the environment that are different from and greater than the better understood risks that may be presented by the constituent materials in non-nanoscale forms. Because of the potential, but at this point unknown, risks associated with certain nanomaterials, government authorities in the United States or individual states, and foreign government authorities could, for social or other purposes, prohibit or regulate the use of some or all nanotechnologies. The United States Environmental Protection Agency has in that regard recently taken steps towards regulation of the manufacture and use of certain nanotechnology-enabled materials, including those containing carbon nanotubes or nanosilver. Further, in a just-released report, the United States National Academy of Sciences/National Research Council concluded that the U.S. government needs to develop a more robust and coordinated plan for addressing the potential environmental, health, and safety risks of nanomaterials. The regulation and limitation of the kinds of materials used in or used to develop nanotechnology-enabled products, or the regulation of the products themselves, could halt or delay the commercialization of nanotechnology-enabled products or substantially increase the cost, which will impair our ability to achieve revenue from the license of nanotechnology applications.

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

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

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

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

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

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

the difficulty of integrating operations and personnel; and

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

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

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

changes to our income to reflect the amortization of acquired intangible assets, including goodwill;



interest costs and debt service requirements for any debt incurred to fund our growth strategy; and

any issuance of securities to fund our operations or growth, which dilutes or lessens the rights of current stockholders.

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

Our future success will depend to a significant extent on the continued services of our key employees. In addition, we rely on several key executives to manage each of our subsidiaries. We do not maintain key man life insurance for any of our executives. Our ability to execute our strategy also will depend on our ability to continue to attract and retain qualified scientists, sales, marketing and additional managerial personnel. If we are unable to find, hire and retain qualified individuals, we could have difficulty implementing our business plan in a timely manner, or at all.

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

While we expect that our officers and directors who also serve as officers and/or directors of our subsidiaries will comply with their fiduciary duties owed to our stockholders, they may have conflicting fiduciary obligations to our stockholders and the minority stockholders of our subsidiaries. Specifically, Dr. Anzalone, our CEO and President is a minority equity holder in and the founder, CEO and board member of Nanotope and LBS. To the extent that any of our directors choose to recuse themselves from particular Board actions to avoid a conflict of interest, the other members of our Board will have a greater influence on such decisions.

***Our research and product development efforts pertaining to the pharmaceutical industry are subject to additional risks.***

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

clinical trial results are not acceptable, even though preclinical trial results were promising;

inefficacy and/or harmful side effects in humans or animals;

the necessary regulatory bodies, such as the FDA, did not approve our potential product for the intended use; and

manufacturing and distribution is uneconomical.

Clinical trial results are frequently susceptible to varying interpretations by scientists, medical personnel, regulatory personnel, statisticians and others, which often delays, limits, or prevents further clinical development or regulatory approvals of potential products. If Calando is unable to cost-effectively achieve acceptance of their respective biopharmaceutical technology, or if the associated drug products do not achieve wide market acceptance, the business of Calando will be materially and adversely affected, and the value of our interest in this subsidiary will diminish.

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

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

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

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

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

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

#### ***If Unidym is unable to raise additional cash, Unidym may lose rights to critical intellectual property.***

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

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

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

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

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

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

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

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

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

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

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

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### **Risks Related to Regulation of Our Products**

*We will need approval from governmental authorities in the United States and other countries to successfully realize commercial value from our activities.*

In order to clinically test, manufacture and market products for commercial use, two of our current subsidiaries and both of our investments must satisfy mandatory procedures and safety and effectiveness standards established by various regulatory bodies, including the U.S. Food and Drug Administration, or FDA. Technology and product development and approval within this regulatory framework takes a number of years and involves the expenditure of substantial resources. The time and expense required to perform the necessary testing can vary and is substantial. In addition, no action can be taken to market any biologic, drug or device in the United States until the FDA approves an appropriate marketing application. Furthermore, even after initial FDA approval has been obtained, further trials may be required to obtain additional data on safety and effectiveness. Adverse events that are reported during regulatory trials or after marketing approval can result in additional limitations being placed on a product's use and, potentially, withdrawal of the product from the market. Any adverse event, either before or after approval, can result in product liability claims against us, which could significantly and adversely impact the value of our common stock.

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

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

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

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

### **Risks Related to our Stock**

*Stockholder equity interest may be substantially diluted in additional financings.*

Our certificate of incorporation authorizes the issuance of 70,000,000 shares of common stock and 5,000,000 shares of preferred stock, on such terms and at such prices as our board of directors may determine. As of May 14, 2009, 42,934,517 shares of common stock and no shares of preferred stock were issued and outstanding. As of May 14, 2009, 1,559,000 shares and 5,738,310 shares were reserved for issuance upon exercise of options granted under our 2000 Stock Option Plan, or 2000 Plan, and 2004 Equity Incentive Plan, or 2004 Plan, respectively. As of May 14, 2009, options to purchase 1,559,000 shares were outstanding under our 2000 Plan and options to purchase 4,269,588 shares were outstanding under our 2004 Plan. In addition, an inducement grant of an option to purchase 2,000,000 shares of common stock was issued to our CEO as part of his compensation package. As of May 14, 2009, we had warrants outstanding to purchase 5,973,851 shares of common stock that are callable by us under certain market conditions. The issuance of additional securities in financing transactions by us or through the exercise of options or warrants would dilute the equity interests of our existing stockholders, perhaps substantially, and might result in dilution in the tangible net book value of a share of our common stock, depending upon the price and other terms on which the additional shares are issued.

*Our common stock price has fluctuated significantly during fiscal 2005, 2006, 2007, and 2008 and may continue to do so in the future.*

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

announcements of developments related to our business;

developments in our strategic relationships with scientists within the nanotechnology field;

our ability to enter into or extend investigation phase, development phase, commercialization phase and other agreements with new and/or existing partners;

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announcements regarding the status of any or all of our collaborations or products;

market perception and/or investor sentiment regarding nanotechnology as the next technological wave;

announcements regarding developments in the nanotechnology field in general;

the issuance of competitive patents or disallowance or loss of our patent rights; and

quarterly variations in our operating results.

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

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

Although our common stock is listed for trading on the NASDAQ Capital Market, our securities are currently relatively thinly traded. Our current solvency concerns could serve to exacerbate the thin trading of our securities. For example, mandatory sales of our common stock by institutional holders could be triggered if an investment in our common stock no longer satisfies their investment standards and guidelines as a result of the solvency concerns. Accordingly, it may be difficult to sell shares of common stock quickly without significantly depressing the value of the stock. Unless we are successful in developing continued investor interest in our stock, sales of our stock could continue to result in major fluctuations in the price of the stock. Moreover, our stock price has generally been declining for the last 12 months.

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

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

***The market price of our common stock may be adversely affected by the sale of shares by our management or founding stockholders.***

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

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

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

***We do not intend to declare cash dividends on our common stock.***



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

***Our board of directors has the authority to issue shares of blank check preferred stock, which may make an acquisition of our company by another company more difficult.***

We have adopted and may in the future adopt certain measures that may have the effect of delaying, deferring or preventing a takeover or other change in control of our company that a holder of our common stock might consider in its best interest. Specifically, our board of directors, without further action by our stockholders, currently has the authority to issue up to 5,000,000 shares of

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preferred stock and to fix the rights (including voting rights), preferences and privileges of these shares ( blank check preferred). Such preferred stock may have rights, including economic rights, senior to our common stock. As a result, the issuance of the preferred stock could have a material adverse effect on the price of our common stock and could make it more difficult for a third party to acquire a majority of our outstanding common stock.

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

None.

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

None.

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

The Company held an annual meeting on March 26, 2009. The following matters were submitted to a vote of the stockholders of record as of January 27, 2009 through a solicitation of proxies and the results are shown below:

1. Election of five directors.

	Number of Shares For	Percent of Shares Voting	Number of Shares Withheld	Percent of Shares Voting
Christopher Anzalone	28,881,702	>94%	1,724,906	<6%
R. Bruce Stewart	28,618,721	>93%	1,987,887	<7%
Edward W. Frykman	28,209,328	>92%	2,397,280	<8%
LeRoy R. Rahn	28,216,854	>92%	2,389,754	<8%
Charles P. McKenney	28,216,170	>92%	2,390,438	<8%