UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended September 30, 2008.

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

For the transition period from to

Commission file number 000-21898

ARROWHEAD RESEARCH CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	**46-0408024**
(State of incorporation)	**(I.R.S. Employer Identification No.)**

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

Securities registered under Section 12(b) of the Exchange Act:

Title of each class	Name of each exchange on which registered
Common Stock, $0.001 par value	**The NASDAQ Global Market**

Securities registered pursuant to Section 12(g) of the Exchange Act:

None

Indicate by a check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by a check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes ☐ No ☒

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐ Accelerated filer ☒ Non-accelerated filer ☐ Smaller Reporting Company ☐

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

Issuer's revenue for its most recent fiscal year: $1,303,201.

The aggregate market value of issuer's outstanding Common Stock held by non-affiliates was approximately $107.5 million based upon the bid price of issuer's Common Stock on March 31, 2008.

As of December 11, 2008, 42,934,517 shares of the issuer's Common Stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement for fiscal year ended September 30, 2008, expected to be filed with the Commission no later than January 28, 2009, for the registrant's 2008 Annual Meeting of Stockholders to be held March 12, 2009, are incorporated by reference into Part III of this report.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

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

The forward-looking statements included herein are based on current expectations of our management based on available information and involve a number of risks and uncertainties, all of which are difficult or impossible to predict accurately and many of which are beyond our control. As such, our actual results may differ significantly from those expressed in any forward-looking statements. Factors that may cause or contribute to such differences include, but are not limited to, those discussed in more detail in Item 1 (Business) and Item 1A (Risk Factors) of Part I and Item 7 (Management's Discussion and Analysis of Financial Condition and Results of Operations) of Part II of this Annual Report on Form 10-K. Readers should carefully review these risks, as well as the additional risks described in other documents we file from time to time with the Securities and Exchange Commission. In light of the significant risks and uncertainties inherent in the forward-looking information included herein, the inclusion of such information should not be regarded as a representation by us or any other person that such results will be achieved, and readers are cautioned not to place undue reliance on such forward-looking information. Except as may be required by law, we undertake no obligation to revise the forward-looking statements contained herein to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

WHERE YOU CAN FIND MORE INFORMATION

As a public company, we are required to file annual, quarterly, and current reports, proxy statements and other information with the SEC. You may read and copy any of our materials on file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, DC 20549, as well as at the SEC's regional office at 5757 Wilshire Boulevard, Suite 500, Los Angeles, California 90036. Our filings are available to the public at the SEC's website at www.sec.gov. Please call the SEC at 1-800-732-0330 for further information on the Public Reference Room. We also provide copies of our Forms 8-K, 10-K, 10-Q, Proxy Statements and Annual Reports at no charge to investors upon request and make electronic copies of our most recently filed reports available through our website at www.arrowheadresearch.com as soon as reasonably practicable after filing such material with the SEC.

PART I

ITEM 1. BUSINESS

Description of Business

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

Overview

Arrowhead is a nanotechnology holding company striving to bring new products to market via its subsidiaries and investments in the healthcare, electronics, and clean energy industries. Our mission is to create shareholder value by building Subsidiaries that may be monetized in three primary ways: (1) Subsidiaries may be sold to other 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, we are focused on maximizing the value of our most mature Subsidiaries, Calando Pharmaceuticals, Inc. and Unidym, Inc., through internal development, partnership and license arrangements, as well as pursuing new sources of cash investments. Our longer-term strategy for development and investment in existing Subsidiaries and minority investments will be determined by cash availability and the strength of technology and market opportunity. Arrowhead is continually identifying and developing business opportunities for new areas of investment which may be engaged as capital resources allow.

Arrowhead has created a scalable platform on which to build highly specialized subsidiaries with an eye to maximizing capital efficiency and accelerating the rate of product development. Our subsidiaries are built around university-derived technologies and by acquisition of existing companies. Arrowhead is highly active in the operation of its subsidiaries, providing initial management, operational support, business development and financing. We believe the combination of these strategies is advantageous and unique for a single institution and that it provides unique advantages to Arrowhead's stockholders. Arrowhead's approach is designed to give its Subsidiaries and investments an edge in commercializing nanotechnologies by allowing Subsidiary management both guidance and the freedom to focus on the development and marketing of their technologies by providing key services to its Subsidiaries.

Arrowhead currently operates two majority-owned Subsidiaries, two wholly owned Subsidiaries and has minority investments in two early stage nanotechnology companies focused on developing and commercializing nanotech products and applications, including anti-cancer drugs, RNAi therapeutics, regenerative therapeutics, advanced drug delivery technology, energy storage technology, and carbon-based electronics.

The Company was originally incorporated in South Dakota in 1989, and was reincorporated in Delaware in 2000 under the name InterActive, Inc. ("InterActive"). On January 12, 2004, InterActive consummated a stock exchange transaction with the owners of ARC, a privately-held California corporation. This transaction is referred to as the "Share Exchange." Upon consummation of the Share Exchange, the owners of ARC acquired approximately 89% of the Common Stock of the Company. InterActive changed its name to Arrowhead Research Corporation and ARC was subsequently dissolved. The Company's principal executive offices are located at 201 South Lake Avenue, Suite 703, Pasadena, California 91101, and its telephone number is (626) 304-3400. As of September 30, 2008, Arrowhead Research Corporation had 15 full-time employees at the corporate office and 53 full-time employees at its Subsidiary companies.

Subsidiaries and Investments

The Company's two majority-owned Subsidiaries, two wholly owned Subsidiaries and two minority investments are focused on developing and commercializing a variety of nanotechnology products and applications, including anti-cancer drugs, RNAi therapeutics, regenerative therapeutics, advanced drug delivery technology, energy storage technology, carbon-based electronics, and fullerene anti-oxidants. Arrowhead anticipates expanding its portfolio through selective acquisition and the formation of new companies, as capital resources allow.

As of September 30, 2008, Arrowhead held a majority of the outstanding voting stock of the following four Subsidiaries and minority interests in two additional companies.

Subsidiary	% Ownership	Technology/Product Focus
Calando Pharmaceuticals, Inc. *acquired June 4, 2004*	67.8%	Clinical stage nano-engineered delivery of RNAi therapeutics and small molecule drugs for the treatment of cancer with first anti-cancer compound
Unidym, Inc. (formerly NanoPolaris) *founded April 4, 2005*	53.8%	Commercialization of carbon nanotube products for the electronics industry
Tego Biosciences Corporation *acquired April 20, 2007*	100.0%	License and partnership of technology related to modification of fullerenes for therapeutic and diagnostic applications
Agonn Systems, Inc. *founded May 1, 2008*	100.0%	Developing nanotechnology based energy storage devices for hybrid electric vehicles and other large format applications

* Each of Calando, Unidym and Tego 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 September 30, 2008, assuming all options in each of Calando, Unidym and Tego were awarded and exercised and all warrants were exercised, the Company would own approximately 63.6% of Calando, 37.8% of Unidym, 80% and Tego. Agonn has not yet adopted an option plan and does not have any outstanding warrants.

Minority Investment	% Ownership[1]	Technology/Product Focus
Nanotope, Inc	22%	Developing nano-engineered, self-assembling, bioactive scaffolding for the treatment of spinal cord injury and peripheral artery disease
Leonardo Biosystems, Inc.	6%	Developing an advanced set of nanotechnology tools to deliver anti-cancer therapeutics

* In April 2008, Arrowhead acquired Masa Energy LLC, a limited liability company whose sole assets were an approximately 6% owner ship position in each Nanotope, Inc. and Leonardo Biosystems, Inc. Arrowhead invested $2 million in Nanotope in two tranches of $1 million in July 2008 and $1 million in September 2008 which brought Arrowhead's ownership in Nanotope to 22%.

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 Company to fund operations at historical levels. At September 30, 2008, Arrowhead had cash on hand of approximately $10 million on a consolidated basis. The Company recognizes that if no additional cash resources are obtained, the Company must scale back its cash consumption to remain a going concern.

The Board has approved a strategy for the Company to conserve cash and seek sources of new capital. To execute this strategy, the Board will seek to accomplish one or more of the following on favorable terms:

- 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 many 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 investment in new initiatives. If no additional cash is obtained by mid second quarter 2009, the Company has a plan to make even deeper cuts in its development efforts at Calando and Unidym and reduce expenses at Arrowhead so that the Company has cash to fund operations in a limited manner through fiscal 2009 and into fiscal 2010. See Risk Factors beginning on page 15.

Subsidiaries

Calando Pharmaceuticals, Inc.

Liquidity

In the second quarter of fiscal 2008, the Company merged two majority owned Subsidiaries, Insert Therapeutics, Inc. and Calando to bring both drug delivery platforms into the same company. The merged company is operating under the name Calando Pharmaceuticals, Inc. At the same time, Calando shifted focus from preclinical and pipeline development to emphasize its clinical program. Consequently, Calando's operations were streamlined by reductions in executive and technical staff and the facilities for the two companies were consolidated. In connection with the reduction in Calando's executive management, Arrowhead took over the management of Calando. These actions reduced the consumption of cash for salaries and facilities. However, significant cash was consumed in fiscal 2008 in preparation of an IT-101 Phase II clinical trial, the CALAA-01 Phase I clinical trial, and the development of a second RNAi therapeutic. Since the merger in April 2008, Arrowhead has made a series of cash advances totaling approximately $5 million to fund Calando's operations. Subsequent to September 30, 2008, Calando has signed agreements to issue $2.7 million in senior unsecured convertible promissory notes with a two-year maturity of which $1.1 million has been received. and is seeking to raise an additional $2.3 million under the same terms. Calando's cash consumption fluctuates from quarter to quarter depending on the progress of its projects, but in fiscal 2008, it has ranged between $2.2 million and $2.6 million per quarter. If Calando is unsuccessful in attracting additional capital and Arrowhead does not have sufficient cash resources to support Calando's operations, some or all of Calando's development projects would have to be scaled back, interrupted, or abandoned in order to manage cash that Calando can operate in a limited manner through fiscal 2009 and into fiscal 2010.

General

The Company believes that Calando is an attractive near term partnership candidate or acquisition target for several pharmaceutical and biotech companies that are active in the development of RNAi therapeutics. Systemic delivery has posed a major hurdle to the clinical development of siRNA therapeutics. Calando is in ongoing discussions with multiple potential partners and acquirers.

Calando is Arrowhead's most mature biopharmaceutical Subsidiary. Calando's technology and products are based on technology developed at the California Institute of Technology. Calando utilizes modified cyclodextrin molecules as building blocks to create an entirely new class of drug delivery materials: linear cyclodextrin-containing polymeric nanoparticles ("**LCDPs**"). Calando's proprietary linear cyclodextrin nanoparticle technology is designed to deliver small molecule drugs using Calando's Cyclosert™ system and RNAi therapeutics using the RONDEL™ system. Using these platform systems, Calando has developed two anti-cancer drug candidates that are currently undergoing human clinical trials.

By combining small molecule drugs, nucleic acids (i.e., microRNA or siRNA) or peptides with our Cyclosert polymers, Calando believes it can significantly improve the targeting, solubility, stability, toxicity, efficacy and pharmacokinetic profile of therapeutic compounds. Calando's LCDP nanoparticle platform technologies (**"Cyclosert™ and RONDEL™")** actively facilitate the directed transport, efficient uptake and controlled release of therapeutic payloads. Additionally, cell surface receptor ligands can also be attached to our delivery system to provide for targeted delivery of therapeutic agents directly to tumor cells or to other selected tissues. Studies done by Calando and others have demonstrated the importance of therapeutic targeting in eliciting a desired therapeutic effect.

Calando's first small molecule/nanoparticle conjugate drug candidate, IT-101, began clinical trials in July 2006. IT-101 is a conjugate of Cyclosert and the anti-cancer agent, Camptothecin ("CPT"). Camptothecin is a potent anti-cancer agent that was never commercialized mainly due to its devastating side effects, instability in the bloodstream and insolubility. By combining Camptothecin with Cyclosert, the solubility, stability, toxicity profile, biodistribution and pharmacokinetics of Camptothecin have been significantly improved as shown in Calando's phase I clinical trial. Results of in vivo studies in tumor-bearing mice

demonstrate that Calando's Cyclosert enhanced Camptothecin conjugate ("**IT-101**") has significantly greater anti-tumor activity than its analog anticancer agent, inrinotecan, marketed by Pfizer as Camptosar®. In Phase I clinical studies, IT-101 demonstrated safety and multiple patients with extended progression free survival, and was not associated with the severe hematological and gastrointestinal toxicities associated with Camptosar.

CALAA-01 is Calando's first nanoparticle drug candidate delivering siRNA. CALAA-01 is a targeted nanoparticle, comprised of a proprietary, non-chemically-modified siRNA against the M2 subunit of ribonucleotide reductase—a clinically-validated cancer target—formulated with our proprietary RONDEL (RNAi/Oligonucleotide Nanoparticle Delivery) polymer delivery system. CALAA-01 is the first drug delivery system enabled siRNA therapeutic to enter clinical trials. The drug is currently in a dose escalation phase I clinical trial at UCLA and the START Clinic in San Antonio.

The Drug Delivery and Oncology Markets

Despite advances in drug discovery, pharmaceutical firms remain challenged by getting the right compound to the right place in the human body, where it can maximize effect. Additionally, over the next decade, multiple "blockbuster" pharmaceuticals will go off patent, resulting in a significant loss to the pharmaceutical industry as generics enter the market. Patent expiration coupled with a challenging drug discovery environment, and continued problems with late stage trial failures has left pharmaceutical pipelines thin. In response, the industry has pursued reformulation of existing or previously failed compounds using new drug delivery technology to expand pipelines and prolong patent life. The global drug delivery market for all delivery technologies is expected to exceed $67B by 2009.[1] The market for targeted delivery of small molecule pharmaceuticals using particulate/liposomal delivery systems is estimated to grow to $4.8B in 2012.[2] According to the American Cancer Society, cancer is the second leading cause of death in the United States and accounts for approximately one in every four deaths. The National Institutes of Health has estimated the direct medical cost of cancer to be in excess of $74 billion per year. Dose limiting toxicity, poor tissue specificity, and large effective distribution are major restrictive factors in effective cancer chemotherapy. Consequently, complete tumor response is not often achieved in patients receiving chemotherapy alone. This offers a potential for significant opportunity for firms developing technologies to more effectively deliver anti-cancer agents to malignant cells.

Calando Pharmaceuticals Platform Technologies

Cyclosert Nanoparticles

Cyclosert links potent therapeutics to linear, cyclodextrin-based polymers to generate macromolecular prodrugs. Cyclodextrins are cyclical sugars that are highly water soluble but contain a hydrophobic cavity enabling the formation of complexes with insoluble molecules. Functionalized cyclodextrins are biocompatible and non-immunogenic, resist degradation by human enzymes and are non-toxic, resulting in their use in many pharmaceutical formulations. Preclinical and clinical studies show that Cyclosert retains all of these characteristics of cyclodextrin while providing unprecedented additional functionality. The components of Cyclosert undergo a highly reproducible, proprietary self-assembly process resulting in nanoparticles with close to neutral surface charge. This assembly is mediated by the presence of the drug on the polymer.

Data from our preclinical as well as clinical research indicate that Cyclosert have been observed to have the following advantages over traditional chemotherapeutics:

- *High solubility without the need for additional solubilizing agents*
- *Increased circulation half-life*
- *Tumor accumulation*
- *Protection of drugs from enzymatic degradation*
- *Stealthy to the immune system*
- *Non-toxic polymer carrier*

1 www.nanomarkets.net
2 SkyePharma 10Q, www.skyepharma.com

- *Stable under physiological conditions*
- *Significant improvement in therapeutic index compared to the active molecule alone. This may result in improved quality of life and better efficacy due to on-time administration with fewer dose reductions or limitations on the optimal number of therapy cycles.*

RONDEL Nanoparticles:

RNA interference, or RNAi, is a naturally occurring mechanism within cells that selectively silences and regulates specific genes. Since many diseases are caused by the inappropriate activity of specific genes, the ability to silence genes selectively through RNAi could provide a new way to treat a wide range of human diseases. RNAi is induced by small, double-stranded RNA molecules. One method to activate RNAi is with chemically synthesized small interfering RNAs, or siRNAs, which are double-stranded RNAs that are targeted to a specific disease-associated gene. The siRNA molecules are used by the natural RNAi machinery in cells to cause highly targeted gene silencing. A key roadblock to the therapeutic use of RNAi is the lack of an effective delivery mechanism. siRNA is degraded and destroyed in the bloodstream if unprotected and "naked" siRNA is not taken up by cells.

Calando addresses the RNAi delivery issue with its targeted, cyclodextrin-containing polymers that form the foundation for the RONDEL delivery technology. The first component is a cyclodextrin-containing polycation that, when mixed with siRNA, binds to the anionic "backbone" of the siRNA. The polymer and siRNA self-assemble into nanoparticles of approximately 50-70 nm diameter that fully protect the siRNA from nuclease degradation in serum. The cyclodextrin in the polymer enables the surface of the particles to be decorated by stabilizing agents and targeting ligands. These surface modifications are formed through proprietary linkages.

The surface-modifying agents have terminal adamantane groups that form inclusion complexes with the cyclodextrin and contain polyethylene glycol (PEG) to endow the particles with properties that prevent aggregation, enhance stability and enable systemic administration. Ligands to cell surface receptors can be covalently attached to the adamantane-PEG modifier, enabling the siRNA-containing particles to be targeted to tissues of interest. Numerous ligand types (e.g., small molecules, peptides, proteins) can be used.

The RONDEL system has been designed for use as part of a two-vial system: one vial contains the foregoing delivery components, and the second vial containing the therapeutic siRNA payload. When mixed pursuant to a simple protocol, the particles self-assemble into the nanoparticles as described above. The RONDEL delivery system has been designed for intravenous injection. Upon delivery to the target cell, the targeting ligand binds to membrane receptors on the cell surface and the RNA-containing nanoparticle is taken into the cell by endocytosis. There, the polymer functions to unpackage the siRNA from the delivery vehicle.

Clinical Development Programs

IT-101: Cyclosert-enhanced Camptothecin

Calando's lead small molecule drug candidate is IT-101. IT-101 is comprised of Cyclosert conjugated with the anticancer compound CPT for systemic treatment of both primary and metastatic solid tumors. The primary target of IT-101 is topoisomerase I (Topo I), an enzyme essential to mammalian DNA replication. CPT and its derivatives, such as topotecan and irinotecan, face a number of pharmacologic challenges that IT-101 was designed to address: (i) it provides high intratumoral drug concentrations for extended periods of time, keeping the reversible cleavage complex between Topo I and CPT from dissociating, (ii) it minimizes plasma free CPT concentrations thereby reducing the severity of side effects such as diarrhea and severe neutropenia observed with other CPT analogs, and (iii) it prevents the degradation of CPT to its inactive, open-ring (carboxylate) form.

Additionally, recent studies illustrate that low-dose and increased frequency of CPT administration results in a down-regulation of hypoxia-inducible factor 1 (HIF-1) with a sustained inhibition of tumor growth independent of DNA breaks. The IT-101 development program is specifically designed to take full advantage of these mechanisms of action by providing linear delivery of CPT for prolonged periods with a low plasma free-CPT concentration; thus avoiding the toxicity observed with traditional non-polymerized topoisomerase inhibitors.

Calando completed clinical trials with IT-101 at the City of Hope Cancer Center ("**COH**") in Duarte, California in October 2008. The trial was an open-label, dose-escalation Phase I study in patients with unresectable or metastatic solid tumors refractory to other therapies. Initially, the trial utilized a weekly dosing schedule. A subsequent Phase Ib

study was conducted utilizing a twice monthly dosing schedule. All trial endpoints have been successfully achieved. The drug was found to be well tolerated in both the Phase Ia and Ib studies of the trial. A high proportion of patients displayed stable disease following treatment thereby showing evidence of IT-101's cytostatic activity. This activity is consistent with several published clinical studies reporting improved outcomes when lower doses of topotecan were administered on a continuous regimen compared to traditional intermittent schedules. Topotecan is an FDA-approved a cytotoxic chemotherapeutic that is an analog of CPT.

CALAA-01: siRNA for RRM2 Knockdown

Calando's lead siRNA product candidate, CALAA-01, is a formulation containing Calando's proprietary delivery technology with an siRNA duplex payload targeting the M2 subunit of ribonucleotide reductase, a well-established cancer target. Ribonucleotide reductase catalyzes the conversion of ribonucleosides to deoxyribonucleosides and is necessary for DNA synthesis and replication. The duplex, developed at Calando, demonstrates potent anti-proliferative activity across multiple types of cancer cells. Calando believes that CALAA-01 is the first systemically delivered siRNA therapeutic to enter the oncology clinic. Calando believes that CALAA-01 is also the first clinical stage siRNA therapeutic utilizing a targeted nanoparticle delivery system.

Calando and its collaborators have generated preclinical data that demonstrate sequence-specific inhibition of tumors from the systemic administration of targeted formulations of siRNA. Using the RONDEL delivery system and siRNA developed at Calando targeting the M2 subunit of ribonucleotide reductase (RRM2), in collaboration with colleagues at the Livingston Research Institute, reduced tumor growth rates and/or tumor reduction have been observed in a variety of animal cancer models.

In May 2008, Calando initiated an open label, dose escalation phase I study in patients with solid tumors refractory to other therapies. This study is ongoing at UCLA Jonsson Cancer Center in Los Angeles, CA and at South Texas Accelerated Research Therapeutics (START) in San Antonio, Texas.

Product Pre-Clinical Development Programs

CALAA-02: RONDEL+siRNA

Calando's next anti-cancer siRNA therapeutic is currently in preclinical development. The intracellular target for CALAA-02 is HIF-2alpha, or Hypoxia Inducible Factor-2 alpha. HIF-2alpha is over expressed in a number of solid tumors and is critical for many aspects of tumorigenesis, such as metastasis, angiogenesis, tumor cell proliferation, and tumor response to radiation. HIF-2alpha has been difficult to target using traditional drugs but has been shown to be effectively targeted by the proprietary siRNA in CALAA-02.

Intellectual Property

Calando controls an intellectual property portfolio. Patents covering linear cyclodextrin polymers for delivery of small molecule, nucleic acid and peptide drug candidates are exclusively licensed from Caltech. These patents are directed at both RONDEL and Cyclosert and contain composition of matter, method of use and manufacturing process claims. Calando also owns a patent on the siRNA active ingredient in CALAA-01 and has filed a patent application to cover the siRNA active ingredient of CALAA-02. The Camptothecin component of IT-101 is off-patent. Calando has licensed patents from Alnylam relevant to siRNA therapeutics for CALAA-01 and CALAA-02. Calando has in-licensed from R&D Pharmaceuticals exclusive rights to second generation synthetic epothilones. However, the RNAi and nanoparticle drug delivery patent landscape is complex and rapidly evolving. As such, Calando may need to obtain additional patent licenses prior commercialization of its lead drug candidates.

Outsourced Manufacturing and Product Supply

Calando currently uses, and expects to continue to be dependent upon, contract manufacturers to manufacture each of its product candidates. Calando has established a quality control and quality assurance program, including a set of standard operating procedures and specifications, designed to ensure that its products are manufactured in accordance with current Good Manufacturing Procedures, or cGMPs, and other applicable domestic and foreign regulations. Additional manufacturing resources would require additional investment, and Calando may seek to enter into additional collaborative arrangements with other parties that have established manufacturing capabilities. It is likely that Calando will continue to rely on third party manufacture of its development and commercial products on a contract basis. Currently, Calando has agreements with third party vendors to furnish CALAA-01 and IT-101 drug supply for clinical studies. Calando will be dependent upon these third parties to supply products in a timely manner manufactured in compliance with cGMPs or similar standards imposed by foreign regulatory authorities where its products are tested and/or marketed.

Competition

Calando is engaged in the rapidly changing business of developing treatments for human disease through the regulation of gene expression and delivery of generic and proprietary novel cancer therapies. Competition in these fields is intense as other companies are developing therapies similar to our nanoparticle drug delivery systems, and targeting patient populations that are similar to the patient populations that are targeted by Calando. A number of companies are pursuing research and development programs relating to the emerging area of cancer therapies using nanoparticle conjugates and RNA interference. A number of these companies have filed patent applications in the area of nanoparticle conjugates and RNA interference. It is difficult to predict whether any of these companies will be successful in obtaining patent protection, whether the patent protection sought will address important aspects of the technology and to what extent these companies will be successful in their RNA interference efforts. New competitors may arise and we may not be aware of all competitors in this space. A number of Calando's competitors are more established and have greater resources than Calando does. Furthermore, even if Calando is successful in developing commercial products, it is possible that competitors will achieve greater market acceptance.

In addition to irinotecan (Pfizer/Daiichi) and topotecan (GSK), which are small molecule analogs of camptothecin, other companies are developing topoisomerase I formulations with a goal of delivering a more effective and tolerable therapy than the approved Camptothecin-based products. Companies engaged in nanoparticle chemotherapeutic drug formulations at various stages of development include, Nippon Kayaku, Sonus Pharmaceuticals, Celator Pharmaceuticals, Samyang, Cell Therapeutics, PharmaEngine, Enzon, Nektar Therapeutics, Tempo Pharmaceuticals, BIND Biosciences, Hermes, NeoPharm and Alza. This list of potential competitors may not be a complete list of competing firms developing nanoparticle-based oncology products.

Systemic delivery of siRNA and other oligonucleotide therapeutics has proven critical for the success of all nucleic acid therapeutics. Naturally, multiple firms have recognized the problem of systemic siRNA delivery as a significant opportunity and other firms are developing products in this space. Companies developing siRNA delivery products include but are not limited to Alnylam, Merck, Roche, Tekmira, RXi Pharmaceuticals, PharmRX and Intradigm. Additionally, many academic groups are developing and may seek to commercialize siRNA delivery technologies.

Key Personnel

James Hamilton, M.D., M.B.A. is President of Calando. Dr. Hamilton also serves as Vice President, Medical Technologies of Arrowhead Research. Dr. Mark Davis is the Company's founder and Chief Scientific Advisor. Dr. Davis is the Warren and Katharine Schlinger Professor of Chemical Engineering and Executive Officer of Chemical Engineering at the California Institute of Technology.

Calando's Board of Directors consists of R. Bruce Stewart, Executive Chairman of Arrowhead, Christopher Anzalone, CEO and director of Arrowhead, Nanotope and Leonardo, Edward W. Frykman, member of the Arrowhead Board and Mark Davis.

As of September 30 2008 and December 12, 2008, there were 11 full time employees at Calando.

Unidym, Inc.

Liquidity

Unidym raised a total of $14 million of equity financing in fiscal 2008. In fiscal 2008, Unidym consumed large amounts of cash to scale up the manufacture of carbon nanotubes, scale up for the production and sale of carbon nanotube based film product, acquire another nanotech company, expand its business development activities, and prepare for an initial public offering. In the first and second quarters of fiscal 2008, Unidym expanded its executive, technical and administrative staff for these activities. Unidym's cash burn increased from $2 million in the second quarter, to $3.6 million in the third quarter and $4.2 million in the fourth quarter. In the fourth quarter, it became clear that Unidym would be unable to meet its fund raising goals to support its 2009 cash needs. Moreover, technical development took longer than expected. Additionally, it became evident that dramatic changes in the financial markets would not allow for an initial public offering. Starting in October 2008, several general and administrative positions were eliminated. Approximately half of Unidym's employees at the Houston, TX facility were put on unpaid leave to conserve cash. Further cuts to personnel and consolidation of facilities are planned to bring Unidym's cash needs to 75% of those in fourth quarter 2008. Despite these changes, Unidym will still need to obtain additional cash to fund its operations and obligations through fiscal 2009.

Subsequent to September 30, 2008, Unidym obtained financing from a strategic investor. The terms of the investment include a put option whereby certain material intellectual property assets could be foreclosed on unless Unidym meets certain obligations by mid 2009. Moreover, pursuant to a license between Unidym and Rice University, should Unidym become insolvent, other material intellectual property assets would revert to Rice. See "Intellectual Property" below.

General

Unidym is the Company's most mature nanomaterials company and provides an example of a company-building strategy that Arrowhead plans to replicate in other areas of nanotechnology. Through the acquisition of a foundational intellectual property portfolio in the manufacture and applications of carbon nanotubes (CNTs), Unidym has developed a strong technology base in CNT technology that we believe can serve as a platform for innovation and new products. Carbon nanotubes are a novel material with extraordinary electrical, thermal, and mechanical properties. Unidym has already developed world-leading high performance carbon nanotube 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 is initially targeting sales of its film product to the touch panel market. Unidym has recently entered into selective intellectual property licensing arrangements to license its CNT technologies to customers or partners in markets outside Unidym's primary focus of electronics.

Unidym's product development has been focused on thin, transparent films of carbon nanotubes on a flexible substrate. The CNT based film is designed to replace the expensive, failure-prone materials currently employed by manufacturers of such devices as touch screens, flat panel displays, solar cells and solid state lighting. CNT-based film offers substantial advantages over ITO and IZO, the currently used materials, including: lower cost, improved durability, enhanced flexibility, higher yields, better readability in display applications, and simplified processing. Unidym is currently sampling its film products to the world's leading touch panel companies. 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 also fabricated prototype LCD and electrophoretic displays incorporating CNT-based films. For its initial product offering to touch panel makers, Unidym is currently evaluating the most favorable business model to pursue. In one model, Unidym would synthesize CNTs, formulate those CNTs into a coating ink, and outsource production of the films to a toll coater to produce the film. Unidym would pay for production of the films on a time and materials basis, and Unidym would directly market and sell the films to touch panel makers. Under a second model that is less capital intensive, Unidym would synthesize CNTs and CNT inks, and then ship the inks to company that would manufacture and sell films to touch panel makers.

Acquisitions

In 2005, Arrowhead saw an opportunity in carbon nanotubes and started the company that would become Unidym to address it. We believed that CNTs had the potential to significantly impact multiple large and diverse industries. At the time Unidym was launched, the CNT market was highly fragmented with key patents dispersed across multiple owners and there was no clear industry leader. Unidym has since licensed technology from a dozen universities and acquired three prominent CNT companies, including Carbon Nanotechnologies, Inc., the pioneering company in high performance CNTs, and has become a leader in the development of innovative CNT-enabled products for the electronics industry. In the process, Unidym has assembled a strong and diverse patent portfolio that we believe covers high performance CNT manufacturing and processing, as well as multiple product applications.

Unidym was formed when NanoPolaris, a Subsidiary of Arrowhead Research Corporation, acquired the assets of an early stage company called Unidym, Inc. At the time of the acquisition, NanoPolaris had already consolidated certain intellectual property related to carbon nanomaterials. NanoPolaris purchased the assets of the former Unidym to gain access to the company's substantial expertise and intellectual property in carbon nanotube films. After its purchase of Unidym's assets in June 2006, NanoPolaris changed its name to Unidym.

In April 2007, Unidym merged with Carbon Nanotechnologies, Inc. (CNI) of Houston, Texas, a company founded in 2000 by the late Dr. Richard Smalley of Rice University. Dr. Smalley and his collaborators won the 1996 Nobel Prize in Chemistry for their discovery of carbon fullerenes, an allotrope (or molecular form) of carbon closely related to the carbon nanotube. Dr. Smalley's pioneering work led to the development of a suite of more than 100 patents (including 54 issued US patents) owned by CNI or exclusively licensed to CNI by Rice University, as well as the development of significant development and production infrastructure for the production of CNT materials. Since its inception, CNI provided bulk CNT materials to customers and has won research grants from government agencies such as the National Institute of Science (NIST) and the State of Missouri.

In July 2008, Unidym acquired Nanoconduction, Inc., a Sunnyvale, CA company developing nano-based electronic cooling technology ("Nanoconduction"). The merger provides Unidym with access to Nanoconduction's patent portfolio, which will supplement Unidym's existing patent portfolio and provides Unidym with additional opportunities to out-license and leverage its technology. In addition, through the merger, Unidym will gain access to research facilities and equipment that will be used in Unidym's ongoing research and development activities.

Unidym accomplished the acquisition of Nanoconduction through an equity exchange, as follows. Arrowhead invested $250,000 in Unidym through a cashless investment by issuing 114,115 shares of unregistered Common Stock to the owners of Nanocondution. In exchange for this investment, the Company 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 carbon nanotubes 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 assets. Unidym entered into a new five-year lease for the facilities currently occupied by Nanoconduction in Sunnyvale, California, with the intention of moving Unidym's existing Menlo Park operations to the Nanoconduction facility.

Competition

Unidym faces competition from a number of start-ups and established companies in the industries it enters. In the electronics industry, there are a number of start-up or private companies that are focused on the application or production of nanotubes including Atomate, C-Nano, Eikos, Nantero and Southwest Nanotechnologies. More established companies with announced CNT programs include Brewer Sciences, DuPont, Honeywell, Samsung, Sumitomo and Toray. There are also potential competitors who are pursuing alternative nanotech based approaches to the markets served by Unidym, including the start-up Cambrios and large Japanese companies such as Fujitsu.

Production

Production Carbon Nanotube Based Transparent Conductive Films

Unidym's film production model involves in-house synthesis of a proprietary grade of CNTs, formulation of those CNTs into a coating ink, and then shipment of that ink to an outsourced coating partner or customer for deposition. To conserve cash and pursue a strategy designed to yield revenues in the short term, Unidym is exploring partnerships or outsourcing arrangements for volume manufacture and distributions of its films.

Unidym has in-house deposition or coating equipment which is used for the deposition of CNTs onto plastic or glass substrates in sample quantities. Unidym has also tested production samples from several coating subcontractors. The use of outsourced coating partners for its touch panel films would take advantage of the substantial excess capacity left in the coating industry by the decrease in demand for photographic film. Unidym expects that given the abundance of these subcontractors and the availability of cost effective subcontract capacity, there will be no need to bring production capacity in house for the near or intermediate term. However, longer term, Unidym could decide to bring such production in house if it is advantageous to the company to do so.

Carbon Nanotube Production and Purification

Unidym has developed two different processes for commercial production: High Pressure Carbon Monoxide ("HiPco" or "MGP1") and Modified Gas Phase 2 ("MGP2"); as well as a new process, Modified Gas Phase 3 ("MGP3") which is in the final stages of development and qualification. By varying production conditions and post-processing techniques, Unidym is able to produce a wide variety of nanotube grades that are tailored to different markets.

Unidym is focusing its CNT production capabilities on producing electronic grade CNTs for transparent conductive film rather than volume manufacture of several grades of bulk materials. Unidym is currently exploring more cost efficient alternatives to operating its Houston facility. In addition to significant cuts to personnel in Houston, Unidym is exploring the move of its production capabilities to its facility in Sunnyvale or outsourcing the production of its CNT products to a third party. It is expected that significant cuts in personnel in Houston will be implemented in the near future.

Collaborations and Partnerships

Unidym has several ongoing joint development agreements with various partners to incorporate its transparent conductive films into touch panels and displays. In 2008, several prototypes were demonstrated at industry conferences. Unidym and Samsung Electronics Co., Ltd. extended their collaboration to integrate carbon nanotube materials as the transparent conductive layer in display devices. The world's first carbon nanotube-based color active matrix electrophoretic display (EPD) e-paper was demonstrated at the Society for Information Display in May 2008 and at the International Meeting on Information Display (iMiD) at KINTEX, Ilsan, Korea in October 2008. The new color e-paper device is a 14.3" format display that uses a carbon nanotube (CNT) transparent electrode developed by Unidym. The display was one product of the ongoing joint development agreement between Unidym and Samsung. In addition, Unidym displayed a carbon nanotube based active matrix LCD made in collaboration with Silicon Display Technology, a company based in Seoul, Korea.

In March 2008, Unidym sub-licensed certain of its intellectual property to Ensysce BioSciences Inc. ("Ensysce") whose focus is research into the medical therapeutic applications of carbon nanotubes. From March 2008 to November 2008, Ensysce was both funded and effectively controlled by a related party 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 will recognize a gain on the sale during the first quarter of fiscal 2009.

Unidym entered into a strategic alliance with the Battelle Memorial Institute in July 2007 to explore opportunities to leverage their respective capabilities to commercialize products incorporating carbon nanotubes. Battelle is the world's largest non-profit independent research and development organization, with 20,000 employees in more than 120 locations worldwide. In 2008, Unidym expanded this relationship to include an alliance focused on multi-functional nanocomposites for aerospace and transportation applications.

Other collaborative projects include the use of Unidym's carbon nanotubes to increase strength and flexibility, while reducing stress failures due to flight loads, in the engine cowling of an aerobatic airplane and the use of Unidym's transparent conductive film in solar cells.

Marketing and Sales

Unidym expected to generate a small amount of revenue from sales of thin films in fourth quarter of fiscal 2008. That expectation was not met and Unidym has revised its projections. Revenue is expected to be generated through direct product sales and license deals into relatively consolidated industries. In the near term, Unidym does not expect to generate enough revenue to self fund its operations and growth. Unidym currently has a distribution relationship with the large Japanese trading firm, Sumitomo, for the distribution of its CNT materials in Asia. Unidym expects to use similar distributors to assist in the distribution of its CNT-based transparent conductive films.

Intellectual Property

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 carbon nanotube compositions of matter, as well as carbon nanotube synthesis, purification, dispersion and functionalization. Furthermore, the portfolio contains claims to the use of carbon nanotubes 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 licensed from institutions such as Rice University, IBM, Georgia Tech, Clemson, University of Florida, SUNY, Penn State, UCLA, Duke, Rensselaer Polytechnic Institute, and Caltech. Additionally, Unidym acquired the right to sublicense U.S. Patent 5,424,054, which is the basic patent claiming single-walled nanotube compositions of matter. Unidym also exclusively licenses Tego's entire intellectual property including Siemens AG's U.S. Patent 5,739,376 and its international counterparts, for non-therapeutic fields of use.

Unidym has exclusively licensed its portfolio to Ensysce Biosciences Inc., in the field of the 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 will terminate. See Risk Factors—If Unidym is unable to raise additional cash, Unidym may lose rights to critical intellectual property.

On November 13, 2008, Unidym raised $2 million from the sale of Series C-1 Preferred Stock to TEL Ventures ("TEL"). The sale of these securities was associated with Unidym's entry into a Security Agreement granting TEL a security interest in Unidym's physical and intellectual property (the "Collateral;" which, however, excludes Unidym's rights under the Rice license and shares of Ensysce Biosciences, Inc.). The Subscription Agreement provided TEL with two put options. TEL may exercise the first put option if Unidym fails to enter into a Joint Development Agreement with TEL by June 30, 2009. In that case, Unidym must buy back TEL's Unidym shares for $2 million before March 2010. TEL may exercise the second 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 Biosciences, Nexeon MedSystems or Nanocondution; or sales of products. Only if TEL 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 can take possession of the Collateral and keep net proceeds of any sale thereof. See Risk Factors—If Unidym is unable to raise additional cash, Unidym may lose rights to critical intellectual property.

Key Personnel

Mark Tilley, Ph.D is the CEO of Unidym and Vice President, Advanced Materials at Arrowhead. Dr. Tilley joined Arrowhead from a 9 year tenure at DSM N.V.a $12B Netherlands based specialty performance materials and life science company. During his tenure, he worked in DSM's venturing arm, led marketing and technical teams, and built a nano-enabled flat panel displays materials business that was acquired by JSR in 2005. Dr. Tilley also co-founded Kriya Materials B.V., a venture capital backed nano-materials and coatings company based in the Netherlands. Dr. Tilley has held marketing and R&D positions at SDC Coatings, a J.V. founded by Dow Corning and Pilkington Glass, Valspar and GE Plastics where he started his career at their Corporate R&D center as a Senior Scientist. He holds a BS in Chemistry from the University of Manchester Institute of Science and Technology in Manchester, UK, a PhD from North Dakota State University in Fargo, and a MBA from Pepperdine University.

Unidym's Board of Directors is comprised of R. Bruce Stewart, Executive Chairman of Arrowhead, Christopher Anzalone, CEO and director of each Arrowhead, Nanotope and Leonardo, Edward W. Frykman and Charles McKenney, both Arrowhead Directors, Dr. Bob Gower, former CEO of CNI, and Ray McLaughlin, former CFO of CNI.

At September 30, 2008, Unidym had 44 full-time employees. Subsequent to September 30, 2008, Unidym has streamlined its general and administrative staff, including its CFO and financial staff in light of the current state of the financial markets. On December 14, 2008, the employment of Unidym's CEO was terminated. Unidym is expecting to make further cuts in its production and research staffs. On December 15, 2008, Unidym had 33 full time employees, 7 of which were on unpaid leave as a cash conservation measure.

Agonn Systems, Inc.

General

Arrowhead founded Agonn in May 2008 to explore, 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. We believe the markets for energy storage products are substantial, ranging from consumer electronics to vehicles to heavy industry. We believe that emerging clean technology platforms offer market opportunities for new energy storage devices, in part because traditional batteries lack sufficient performance for widespread adoption.

Ultracapacitors are energy storage devices that generally have high power but low energy storage capabilities. In other words, they can provide large bursts of power, but only for short periods of time. However, unlike batteries which generally take minutes or hours to charge, ultracapacitors can be charged in seconds or less. Moreover, while the lifetimes of the best lithium ion batteries are generally limited to several thousand charging cycles, ultracapacitors can last for hundreds of thousands of cycles. Given these characteristics, ultracapacitors often serve as complements to, as opposed to replacements, for batteries. If the energy storage capability of ultracapacitors could be sufficiently increased, however, ultracapacitors could represent a viable alternative to batteries in certain applications. This could result in ultracapacitor-based energy storage devices that are rapidly chargeable, capable of delivering large amounts of power over long periods of time, while also being lighter and more long-lived than currently available batteries.

Research and Development

Agonn is currently pursuing a capital efficient R&D model based on outsourced prototyping and testing. Agonn is prototyping and testing different electrode architectures based on carbon nanomaterials (including random networks of carbon nanotubes, vertically aligned carbon nanotubes, and graphene) as well as metal nitride nanoparticles. Additionally, Agonn is evaluating novel electrolytes that have been shown to operate at higher voltages than existing electrolytes and within greater temperature ranges. Agonn is also evaluating new cell designs based on asymmetric electrode configurations. Concurrent with its technology evaluation program, Agonn is seeking to determine the most cost effective path for large volume manufacturing of ultracapacitor products based on these new materials. These activities are preparatory in nature and require little capital and other resources. If Agonn is able to aggregate a suite of intellectual property relating to the field of ultracapacitor technology, based on cash resources, technology development and market opportunity, Arrowhead may more aggressively pursue the development of Agonn.

Intellectual Property

Through its outsourced prototyping, Agonn is in the process of generating new intellectual property and identifying key intellectual property for potential future acquisition.

Key Personnel

John Miller is the President of Agonn. Mr. Miller is also Vice President, Business Development at Arrowhead.

Agonn's board of directors consists of John Miller, Christoper Anzalone, CEO and Director of each Arrowhead, Nanotope and Leonardo, and Mark Tilley, Arrowhead's Vice President, Advanced Materials and CEO of Unidym.

At September 30, 2008, Agonn had no facilities or employees and is managed entirely by Arrowhead.

Tego BioSciences Corporation

General

Tego was formed to acquire the assets of C-Sixty, Inc. in April 2007. Since 1999, C-Sixty had been developing fullerene based products. C-Sixty's primary asset was an intellectual property portfolio which includes key patents for the modification of fullerenes. Fullerenes are a family of symmetrical carbon-cage molecules whose prototypical soccer-ball shaped member is comprised of sixty carbon atoms (denoted C60).

In order to exploit the therapeutic potential of fullerenes, they must first be chemically modified to render them water-soluble. A patented process known as the Bingel reaction is of particular significance to fullerene chemistry because it enables modification of the fullerene sphere to provide solubility and appropriate physiologic behavior. Tego has an exclusive license to patents directed at the Bingel reaction itself, as well as a large number of modified soluble fullerenes created through its use. Tego also owns or has exclusive licenses to patents directed to a variety of medical uses of Bingel-modified fullerenes.

Tego does not initially intend to manufacture and market its products directly. Rather, it is pursuing a strategy of partnering, licensing, and outsourced manufacturing.

Collaborations, Research and Development

Tego does not intend to hire staff to develop fullerene products. However, Tego is currently evaluating certain proprietary fullerenes for their suitability as potential therapeutics in macular degeneration utilizing a contract research organization.

The National Cancer Institute, working in concert with the National Institute of Standards and Technology (NIST) and the U.S. Food and Drug Administration (FDA), established the Nanotechnology Characterization Laboratory (ncl.cancer.gov) to perform preclinical efficacy and toxicity testing of nanoparticles. In August 2008, the NCL issued a report containing the evaluation of several Tego owned fullerenes entitled, "Functionalized Fullerenes for C-Sixty, Inc." which is available on the NCL's website at the following link: http://ncl.cancer.gov/NCL200701A_073007.pdf

Tego and the Huntington Medical Research Institute ('HMRI') have completed a project investigating the hyperpolarization potential of the 13C-labeled fullerene derivatives developed by Tego. The study found that a proprietary carbon-13 labeled fullerene provided a sufficiently strong signal to potentially enable powerful real time magnetic resonance imaging of biological and physiological functions in patients.

To conserve cash, Tego is pursuing a model that seeks to earn revenue from licenses and collaborative partnerships. To the extent cash resources permit, Tego will focus any future development efforts on contrast agents and therapeutics for back of the eye disease.

Competition

Tego is competing with other companies developing fullerene products as well as alternatives to fullerene products. There are several companies that manufacture and sell fullerenes and fullerene formulations, including Frontier Carbon Corporation (Mitsubishi subsidiary) and Nano-C. There are also companies developing fullerene-based therapeutics, including Luna nanoWorks and Vitamin C60 Bioresearch (Mitsubishi subsidiary).

Intellectual Property

Tego controls a domestic and international patent portfolio. It owns and controls patents covering a library of functionalized fullerenes as well as methods of their synthesis. The fullerenes on which Tego has concentrated its efforts are C3 and DF1. Tego is the exclusive licensee of Siemens AG's U.S. Patent 5,739,376 and its international counterparts for therapeutics and diagnostics. The Bingel patent covers a vast library of fullerenes functionalized according to the Bingel method, e.g., C3, as well as methods of making them. Tego also exclusively licenses Siemens' U.S. Patent No. 6,506,928 and its international counterparts for therapeutics and diagnostics. This patent covers dendrimeric fullerenes such as DF1. Tego licenses patents from Washington University which are directed at methods of using Tego's fullerenes, e.g., C3, to enhance neuronal survival in a variety of contexts. Tego further owns patents and applications related to the use of substituted fullerenes in drug delivery, as contrast agents; as well as for treating dermatological conditions, oxidative stress, shock and hearing loss.

Key Personnel

Dr. Thomas Haag is Chief Executive Officer of Tego. Dr. Haag also serves as General Counsel and Chief Patent Officer of Arrowhead and Corporate Secretary and Counsel to Unidym, Inc. Prior to joining Arrowhead, Dr. Haag was in private practice in the Washington D.C. offices of Kenyon & Kenyon LLP and McDermott Will & Emery LLP. Dr. Haag received his B.S. in Biology and Ph.D. in Molecular, Cell & Developmental Biology from UCLA where he was an NIH Predoctoral Fellow in Genetic Mechanisms. He graduated from The George Washington University Law School with honors, receiving the ABA/BNA Award for Excellence in the Study of Intellectual Property Law.

Tego's Board of Directors is composed of R. Bruce Stewart, Executive Chairman of Arrowhead, Christopher Anzalone, CEO and director of each Arrowhead, Nanotope & Leonardo, Edward W. Frykman, an Arrowhead Board member and John Miller.

As of September 30, 2008, Tego has had no employees or facilities and is managed entirely by Arrowhead.

Minority Investments

Nanotope, Inc.

General

Nanotope is a 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 ("PAD"). PAD causes the loss of vasculature in the extremedities and it has been estimated that as many as 20% of people over the age of 70 has some form of PAD. Currently there is no treatment for regenerating lost vasculature. Nanotope has demonstrated in multiple animal models that injection of its angiogenic compound leads to revascularization of affected areas. Importantly, neither the spinal cord or PAD treatments use stem cells. Nanotope's products work with surviving cells and tissues to spur regeneration.

The Company acquired its initial stake in Nanotope from a Nanotope shareholder in April 2008 and increased its position through a direct in investment of $2M in two tranches of $1 million each in July and September 2008. At September 30, 2008, the Company owned 22% of Nanotope's outstanding securities. The Company is interested in increasing its stake in Nanotope if the opportunity arises, the Company has the capital resources and Nanotope's technology development continues to move forward.

Related Party Interests

Nanotope was co-founded by the Company's President and Chief Executive Officer, Dr. Christopher Anzalone, through the Benet Group, a private investment entity solely owned and managed by Dr. Anzalone. 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.

General

Leonardo is a drug delivery company that employs a novel strategy aimed at dramatically increasing targeting efficiency. The Company currently owns 6% of Leonardo. Leonardo's silicon microparticulate technology involves transporting a therapeutic agent past multiple biological barriers using, multiple carriers, each optimized for a specific barrier. Leonardo's proprietary primary vehicles are designed to preferentially accumulate at tumor vasculature. Secondary carriers are then released from the primary carriers that are designed to accumulate around tumor cells and release their therapeutic payloads. Animal testing suggests that Leonardo's platform enables significantly increased targeting. The Company is interested in increasing its stake in Leonardo if the opportunity arises, the Company has the capital resources and Leonardo's technology development continues to move forward.

Related Party Interests

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

Aonex Technologies, Inc.

In May 2008, Arrowhead sold its majority-owned subsidiary Aonex Technologies, Inc. to New Hampshire-based AmberWave Systems, Inc. for an upfront fee of $450,000 and earn-out payments of up to $7.95 million plus a royalty on solar products or licenses covering 10 years from the date of the merger. 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 Operation of Discontinued Aonex.

Academic Partnerships

Since inception, Arrowhead has worked with some of the most outstanding academic institutions in the country, including the California Institute of Technology (Caltech), Stanford University, Duke University and the University of Florida, in critical areas such as stem cell research, carbon electronics and molecular diagnostics. This has provided the Company with deep network in the academic community, insight into cutting edge technologies and a world class scientific advisory board. Through these partnerships, Arrowhead has gained access to exclusive rights that have formed the basis for the Company's subsidiaries and minority investments and have leveraged university resources to further develop and test technology in a highly cost effective way. The collaborations with academic scientists have included technology licenses and options to license technology, sponsored research, donations to the labs of individual scientists and use of university facilities that are made available to development stage companies. 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 September 30, 2008, Arrowhead had one active sponsored research agreement at Duke University through Unidym. Depending on capital resources, Arrowhead is likely to continue to invest in nanoscience research and development through sponsored research agreements at universities.

ITEM 1A. RISK FACTORS

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

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

Risks Related to Our Financial Condition

We 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 shift from capital intensive bulk CNT manufacturing to thin film license and partnerships for electronic ink products. Development of new drug candidates at Calando has slowed during this time as well. We will need to obtain additional capital in the near term to support all of these 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 engage in additional cash savings 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 possibly delaying or reducing implementation of certain aspects of our plan of operations or deferring or abandoning research programs. Even if we are successful in raising capital for one area of our business, because Arrowhead and each Subsidiary are separate entities, it could be difficult or impossible to allocate funds as we would like.

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 funded through the sale of Arrowhead securities and securities of our subsidiaries. Current market conditions could impair our ability to raise the capital we need and if we are unable to secure additional cash resources from the sale of securities or other sources, it could become necessary to slow, interrupt or close down development efforts at Calando or Unidym. In addition, we may have to cut 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 could depend on our ability to exit our ownership position each Subsidiary. Exit opportunities could include an initial public offering for the Subsidiary or acquisition of the Subsidiary by another company. Due to the current financial crisis, companies are adopting conservative acquisition strategies and, even if there is interest, may not be able to acquire our Subsidiaries on attractive terms or at all. This could reduce the return we realize on our investment if we sell a Subsidiary. Additionally, the market for initial public offerings is severely limited, which limits public exit opportunities for our Subsidiaries.

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.

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

There is also the possibility that Unidym investor TEL Ventures will have the right to exercise a put right in July 2009, forcing Unidym to redeem TEL Venture's Series C-1 Preferred Stock for $2.4 million. Unidym's potential repurchase obligation is secured by a first priority lien in Unidym's physical and intellectual property (excluding rights under the Rice license). In the event Unidym is unable to pay TEL Ventures upon exercise of the put right, TEL Ventures will acquire all right, title and interest in the collateral intellectual property and Unidym's patent protection for its products and its ability to pursue a licensing strategy would be impaired significantly.

Further, 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.

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 $2.7 million in unsecured convertible promissory notes outstanding of which $1.1 m has been received. 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 $1.5 million in 19 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 currently have a substantial amount of cash on hand, Unidym might be required 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 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.

Risks Related to Our Business Model and Company

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

The implementation of our business strategy is still in the development stage. We currently own majority interests in 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 our company.

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 leased a new facility in Texas that it has decided not to occupy and we cannot predict how long it will take to sublease the property, if it can be subleased at all. The lease on a portion of Unidym's current facility has been terminated and the facility must be completely vacated in the near future. As part of it 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 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 consolidation 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.

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

We 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 process or product, 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.

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 human health or to the environment because of the size, shape or composition of the nanostructures. For this reason, these nanostructures may prove to present risks to human health or the environment that are different from and greater than the better understood risks that may be presented by the constituent materials in non-nanoscale forms. Because of the potential, but at this point unknown, risks associated with certain nanomaterials, government authorities in the 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, and 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.

Failure to effectively manage our growth could place strains on our managerial, operational and financial resources and could adversely affect our business and operating results.

Arrowhead provides managerial and operational support for our Subsidiaries. At times over the course of the Company's development, our growth has placed, and is expected to continue to place, a strain on our managerial, operational and financial resources. Further, as our subsidiaries' businesses grow, we will be required to manage multiple relationships. Any further growth by us or our subsidiaries, or an increase in the number of our strategic relationships will increase this strain on our managerial, operational and financial resources. This strain may inhibit our ability to achieve the rapid execution necessary to implement our business plan, and could have a material adverse effect upon our financial condition, business prospects and operations and the value of an investment in our company. In the near term, Arrowhead has consolidated management responsibilities for our Subsidiaries at the Arrowhead level. Failure to effectively manage those responsibilities in light of increased responsibilities and the Company's financial condition could have a material adverse effect upon the value of the Company.

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.

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 Leonardo. To the extent that any of our directors choose to recuse themselves from particular Board actions to avoid a conflict of interest, the other members of our Board 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.

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

Risks Related to Our Intellectual Property

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

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

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

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

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

Because the nanotechnology intellectual property landscape is rapidly evolving and interdisciplinary, it is difficult to conclusively assess our freedom to operate without infringing on third party rights. However, we are currently aware of certain patent rights held by third parties that, if found to be valid and

enforceable, could be alleged to render one or more of our business lines infringing. If a claim should be brought and is successful, we may be required to pay substantial damages, be forced to abandon any affected business lines and/or seek a license from the patent holder. In addition, any patent infringement claims brought against us or our subsidiaries, whether or not successful, may cause us to incur significant expenses and divert the attention of our management and key personnel from other business concerns. These could negatively affect our results of operations and prospects. There can also be no assurance that patents owned or licensed by us or our subsidiaries will not be challenged by others.

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

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

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

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

Risks Related to Regulation of Our Products

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.

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.

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 September 30, 2008, 42,934,517 shares of common stock and no shares of preferred stock were issued and outstanding. As of September 30, 2008, 1,559,000 shares and 4,738,310 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 September 30, 2008, options to purchase 1,559,000 shares were outstanding under our 2000 Plan and options to purchase 4,710,322 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 September 30, 2008, 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;
- 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 Global 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. Although our common stock had a closing market price of $1.33 as of December 12, 2008, our stock had a closing market value of less than $1.00 at various points in October 2008, which is in violation of Nasdaq's standard continued listing requirements. Nasdaq has temporarily suspended the enforcement of rules requiring a minimum $1.00 closing bid price, but this suspension is currently only in effect through January 16, 2009. Given the volatility of our stock price, there is no guarantee that we will be in compliance with Nasdaq's continued listing requirements when this suspension is lifted. If our stock is trading below $1.00 when the temporary suspension is lifted, Nasdaq may commence delisting procedures against us. If we were to be delisted, the market liquidity of our common stock would likely be adversely affected and the market price of our common stock would likely decrease. Such a delisting 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.

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.

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 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 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our corporate headquarters is located in Pasadena, California. The Company leases the following facilities:

	Lab/Office Space	Monthly Rent	Lease Commencement	Lease Term
Arrowhead				
Pasadena(1)	7,388 sq ft	$ 17,362	March 1, 2006	62 Months
New York(2)	130 sq ft	$ 3,600	September 15, 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
Springfield, MO	1,900 sq ft	$ 2,533	December 1, 2007	24 Months
Houston, TX(4)	8,017 sq ft	$ 13,362	February 1, 2007	Monthly
Pasadena, TX(4)	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) In September 2005, Arrowhead opened an office in New York City and has one employee working out of that office. In September 2008, the lease was renewed for 12 months effective December 1, 2008.

(3) Unidym is in the process of relocating its Menlo Park, CA operations to Sunnyvale and intends to sublease the Menlo Park facility for the remainder of the current lease.

(4) Unidym is in the process of relocating portions of its Houston, TX manufacturing operations to Sunnyvale, CA. At the current time, it is Unidym's intent to sublease the Pasadena, TX location for the remainder of the lease term.

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

Facility and equipment rent expense for the years ended September 30, 2008, 2007 and 2006 was $1,075,524, $870,289, and $604,630, respectively. From inception to date, rent expense has totaled $2,978,131.

ITEM 3. LEGAL PROCEEDINGS

The Company is not currently party to any material legal proceedings.

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

No matters were submitted to a vote of security holders during the fourth quarter of fiscal year ended September 30, 2008.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Price Range of Common Stock

Our Common Stock is traded on the NASDAQ Stock Market under the symbol "ARWR". The following table sets forth the high and low bid prices for a share of the Company's Common Stock during each period indicated. During the year ended September 30, 2008, the weekly trading volume ranged from 183,700 shares to 4,084,200 shares with an average weekly volume of 907,223 shares.

	Fiscal Year Ended September 30,			
	2008		2007	
	High	Low	High	Low
1st Quarter	5.01	3.36	5.30	4.13
2nd Quarter	3.55	1.90	4.63	3.60
3rd Quarter	3.07	2.13	7.60	4.48
4th Quarter	2.59	1.04	5.42	3.97

Shares Outstanding

At December 11, 2008, an aggregate of 42,934,517 shares of the Company's Common Stock were issued and outstanding, and were owned by ____ stockholders of record, based on information provided by the Company's transfer agent.

Dividends

The Company has never paid dividends on its Common Stock and does not anticipate that it will do so in the foreseeable future.

Sales of Unregistered Securities

The Company did not conduct any offerings of equity securities during the fourth quarter of 2008 that were not registered under the Securities Act of 1933.

Repurchases of Equity Securities

We did not repurchase any shares of our common stock during fiscal 2008 or fiscal 2007.

Information Regarding Equity Compensation Plans

The following table provides certain information as of September 30, 2008, with respect to all of the Company's equity compensation plans in effect on that date.

	Equity Compensation Plan Information		
Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders(1)	6,007,632	$ 3.24	289,678
Equity compensation plans not approved by security holders(2)	2,000,000	3.92	—
Total	8,007,632		289,678

(1) Includes the 2000 Stock Option Plan and the 2004 Equity Incentive Plan.
(2) Represents an inducement grant as part of the Company's CEO's compensation package.

ITEM 6. SELECTED FINANCIAL DATA

The table below presents selected consolidated financial data of Arrowhead and its Subsidiaries as of and for the years ended September 30, 2008, 2007, 2006, 2005, and 2004, derived from Arrowhead's audited consolidated financial statements included in this Annual Report on Form 10-K and prior years' reports filed on Form 10-K. Certain prior year amounts have been reclassified to conform to current year presentation or the retroactive application of FAS 123(R) and the sale of Aonex in 2008 and the discontinuance of Nanotechnica in 2005.

The selected consolidated financial data set forth below should be read in conjunction with our consolidated financial statements and related notes thereto and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this Annual Report on Form 10-K.

Arrowhead Research Corporation & Subsidiaries Selected Financial Data
Arrowhead Research Corporation

Selected Financial Data

	Year Ended September 30,				
	2008	2007	2006	2005	2004
Consolidated Statements of Operations Data:					
REVENUE	$ 1,303,201	$ 1,208,022	$ 461,280	$ 580,683	$ 196,306
OPERATING EXPENSES					
Salaries	13,720,561	10,011,266	5,474,018	2,524,234	381,923
Consulting	3,181,952	1,784,080	701,775	348,096	565,253
General and administrative	6,848,332	5,105,357	3,840,562	2,009,695	820,862
Research & development	12,144,529	20,983,824	8,300,838	2,898,345	643,155
Patents amortization	410,408	415,473	391,248	181,752	
TOTAL OPERATING EXPENSES	36,305,782	38,300,000	18,708,441	7,962,122	2,411,193
OPERATING LOSS	(35,002,581)	(37,091,978)	(18,247,161)	(7,381,439)	(2,214,887)
OTHER INCOME (EXPENSE)					
Loss on equity of investment	(114,729)	—	—	—	—
Gain on sale of stock in subsidiary	—	—	—	2,292,800	—
Unrealized (loss) in marketable securities	—	—	315,616	78,761	(12,113)
Interest	736,343	1,264,237	837,421	147,956	30,980
Other income	—	329	—	3,308	—
TOTAL OTHER INCOME (EXPENSES)	621,614	1,264,566	1,153,037	2,522,825	18,867
LOSS BEFORE MINORITY INTERESTS	(34,380,967)	(35,827,412)	(17,094,124)	(4,858,614)	(2,196,020)
Minority interests	7,445,542	6,727,284	(126,532)	1,078,376	163,008
LOSS FROM CONTINUING OPERATIONS	(26,935,425)	(29,100,128)	(17,220,656)	(3,780,238)	(2,033,012)
Loss from discontinued operations - Nanotechnica, Inc.	—	—	—	(1,234,233)	(108,272)
Loss on disposal of Nanotechnica, Inc.	—	—	—	(73,797)	—
Loss from discontinued operations - Aonex Technologies, Inc.	(459,949)	(830,990)	(1,776,553)	(1,766,650)	(354,858)
Gain on sale of Aonex Technologies	306,344	—		—	—
Provision for income taxes	—	—	—	—	(800)
NET LOSS	$(27,089,030)	$(29,931,118)	$(18,997,209)	$ (6,854,918)	$ (2,496,942)
Amounts per common share:					
Loss from continuing operations per share, basic and diluted	$ (0.69)	$ (0.81)	$ (0.54)	$ (0.20)	$ (0.18)
Loss from discontinued operations per share, basic and diluted	(0.00)	(0.02)	(0.05)	(0.07)	(0.01)
Net loss per share, basic and diluted	(0.69)	(0.83)	(0.59)	(0.27)	(0.19)
Weighted-average shares, basic and diluted	39,191,298	35,867,091	31,953,806	18,725,263	11,002,094
Consolidated Balance Sheet Data:					
Cash, cash equivalents and marketable securities	10,093,585	$ 24,120,097	$ 28,020,304	$22,543,896	$ 9,040,554
Working capital	8,176,818	22,409,053	25,855,557	21,789,931	8,807,377
Total assets	17,255,442	29,852,952	34,525,878	29,040,721	11,915,778
Current liabilities	2,384,299	2,896,375	2,920,234	1,024,064	689,698
Minority interest	—	152,609	934,438	1,889,190	1,777,699
Stockholders' equity	12,302,609	26,303,968	30,671,206	26,127,467	9,448,381

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview

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

Arrowhead is a nanotechnology holding company striving to bring new products to market via its subsidiaries and investments in the healthcare, electronics, and clean energy industries. Our mission is to create shareholder value by building Subsidiaries that may be monetized in three primary ways: (1) Subsidiaries may be sold to other 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, we are focused on maximizing the value of our most mature Subsidiaries, Calando Pharmaceuticals, Inc. and Unidym, Inc., through internal development, partnership and license arrangements, as well as pursuing new sources of cash investments. Our longer-term strategy for development and investment in existing Subsidiaries and minority investments will be determined by cash availability and the strength of technology and market opportunity. Arrowhead is continually identifying and developing business opportunities for new areas of investment which may be engaged as capital resources allow.

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 Company to fund operations at historical levels. At September 30, 2008, Arrowhead had cash on hand of approximately $10 million on a consolidated basis. The Company recognizes that if no additional cash resources are obtained, the Company must scale back its cash consumption to remain a going concern.

The Board has approved a strategy for the Company to conserve cash resources and seek sources of new capital. To execute on this strategy, the Board will seek to accomplish one or more of the following on favorable terms:

- 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 many 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 investment in new initiatives. If no additional cash is obtained by mid second quarter 2009, the Company has a plan to make even deeper cuts in its development efforts at Calando and Unidym and reduce expenses at Arrowhead to insure that the Company has cash to fund operations in a limited manner through fiscal 2009 and into 2010.

Majority-owned Subsidiaries

Arrowhead is highly active in the operation of its Subsidiaries, centralizing key management responsibilities at the Arrowhead level. Each Subsidiary is staffed with its own technical team that focuses on its specific technology and markets, while Arrowhead provides initial management and services including operational support, business development and financing. We believe this provides our Subsidiaries with significant competitive advantages. We previously retained management teams at Calando and Unidym to manage and grow their operations. Our board of directors determined that independent management teams at Calando and Unidym required significant cash and reduced the overall efficiency of the companies on a consolidated basis. During fiscal 2008 and in the first quarter of fiscal 2009, Calando and Unidym terminated senior management to conserve cash and consolidate financial and strategic operations at Arrowhead.

Arrowhead currently has two majority-owned Subsidiaries, two wholly owned subsidiaries (the "Subsidiaries"), and has minority investments in two development stage nanotechnology companies. 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. In fiscal 2008, the Company took significant steps to streamline operations at each of its majority-owned subsidiaries and to consolidate management at the Arrowhead level. The Company expects to continue this trend into fiscal 2009.

At September 30, 2008, the Company had two majority-owned, operating Subsidiaries, Calando Pharmaceuticals, Inc. ("Calando") and Unidym, Inc. ("Unidym", formerly NanoPolaris, Inc.), and two wholly owned subsidiaries, Tego BioSciences Corporation ("Tego") and Agonn Systems, Inc. ("Agonn"). In fiscal 2008, the Company acquired minority interest in two other nanotechnology companies, Nanotope, Inc. ("Nanotope") and Leonardo Biosystems, Inc. ("Leonardo") Arrowhead's business plan includes adding to its portfolio through selective acquisition and formation of new companies. As part of its model, the Company expects to create or acquire subsidiaries to commercialize promising technologies, close a subsidiary based upon lack of technical or business progress or sell a subsidiary if an attractive offer is received.

Calando

In the second quarter of fiscal 2008, the Company merged two majority owned Subsidiaries, Insert Therapeutics, Inc. and Calando to bring both drug delivery platforms into the same company. The merged company is operating under the name Calando Pharmaceuticals, Inc. At the same time, Calando shifted focus from preclinical and pipeline development to emphasize its clinical program. Consequently, Calando's operations were streamlined by reductions in executive and technical staff and the two facilities were consolidated. In connection with the reduction in Calando's executive management, Arrowhead took over the management of Calando. These actions reduced the consumption of cash for salaries and facilities, however, significant cash was consumed in fiscal 2008 in preparations to enter a second clinical trial, clinical trial expenses for Calando's Phase I study, and the development of a second RNAi therapeutic. Since the merger in April 2008, Arrowhead has made a series of cash advances totaling approximately $5 million to fund Calando's operations. Calando's cash consumption fluctuates from quarter to quarter depending on the progress of its projects, but in fiscal 2008, it has ranged between $2.2 million and $2.6 million per quarter. If Calando is unsuccessful in attracting additional capital and Arrowhead does not have sufficient cash resources to support Calando's operations, some or all of Calando's development projects would have to be scaled back, interrupted, or abandoned in order to manage cash so that Calando limited operations through fiscal 2009 and into 2010.

Subsequent to September 30, 2008, Calando raised $2.7 million of additional funds through the sale of senior unsecured convertible promissory notes ("New Notes") (of which $1.1 million has been received), in which financing, Arrowhead participated by buying $200,000 of the New Notes and agreeing to subordinate principal and interest on Arrowhead's $5.3 million of demand notes to the New Notes sold. The New Notes have a 2 year maturity and bear 10% interest compounded annually. Unpaid principal of the Note 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 defined sale event holders of New Notes have other exchange and conversion options.

Calando Pharmaceuticals 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 Cyclosert™ system and RNAi therapeutics using the RONDEL™ system. Using these platform systems, Calando has developed two anti-cancer drug candidates that are currently undergoing human clinical trials. The Company believes that Calando is an attractive near term partnership candidate or acquisition target for several pharmaceutical and biotech companies that are active in the development of RNAi therapeutics. Systemic delivery has posed a major hurdle to the clinical development of siRNA therapeutics. Calando is in ongoing discussions with multiple potential partners and acquirers.

Calando's RONDEL-enabled siRNA-based therapeutic, CALAA-01, is currently undergoing a phase I clinical trial in patients with solid tumors at the UCLA Jonsson Cancer Center in Los Angeles, California, and at South Texas Accelerated Research Therapeutics (START) in San Antonio, Texas. CALAA-01 targets the expression of the M2 subunit of ribonucleotide reductase, a clinically validated cancer target. To our knowledge, Calando is the first and only company with a clinical stage systemic delivery system enabled siRNA therapeutic. Further, we believe CALAA-01 is also the only clinical stage siRNA therapeutic candidate for the treatment of cancer. Although this study has only recently begun, it has progressed without complications. Additionally, Calando is performing preclinical studies on CALAA-02, a second RONDEL-enabled anti-cancer siRNA therapeutic candidate targeting expression of the hypoxia inducible factor-2 alpha gene.

Calando's other nano-engineered polymer delivery system, Cyclosert, is designed to deliver small molecule drugs and peptides. IT-101, Calando's first clinical small molecule candidate, is a combination of Cyclosert and Camptothecin, a potent anti-cancer therapeutic. A Phase I trial for IT-101 was completed in October 2008. All Phase I trial endpoints were successfully achieved. The drug was found to be well tolerated in both the Phase Ia and Ib studies of the trial. In addition, a high proportion of patients displayed stable disease following treatment. Based on these encouraging Phase I results, Calando has opened a Phase II trial for ovarian cancer.

We believe there is opportunity to derive additional value from the further development of Cyclosert and RONDEL systems, as they have been demonstrated to enhance and enable the delivery of multiple pharmaceutical entities, including peptides and small molecules as well as other RNA and DNA-based oligonucleotides. CALAA-02 is being developed to demonstrate the fast track to the clinic that can be provided by the RONDEL system. Also, Calando is applying its library of Cyclosert linkers to develop new conjugate oncology therapeutics with the goal of improving the efficacy and side effect profile of generic and in-licensed compounds. Ultimately, the Company believes Calando provides a platform opportunity that could enable the creation of multiple new drug candidates. Continuation of Calando clinical and pipeline candidates could be limited by the capital resources available. In order to fund continued development, subsequent to September 30, 2008, Calando has signed agreements to issue $2.7 million in New notes of which $1.1 million has been received and is seeking an additional $2.3 million. If Calando is unable to secure additional funding, and Arrowhead has insufficient capital to loan or invest in Calando, Calando's development efforts could be slowed or interrupted. Arrowhead owns 64% of the outstanding stock of Calando. If Calando raises substantial outside capital to fund operations, Arrowhead's ownership interest could be diluted.

Calando's efforts on CALAA-01, IT-101 and its 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 FDA is required before clinical testing can commence.
- Advancing Calando's therapeutic candidates through preclinical and clinical testing is expensive and takes a long time.
- 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 raised a total of $14 million of equity financing in fiscal 2008. In fiscal 2008, Unidym consumed large amounts of cash to scale up the manufacture of carbon nanotubes, scale up for the production and sale its first carbon nanotube based film product, acquire another nanotech company, expand its business development activities, and prepare for an initial public offering. In the first and second quarters of fiscal 2008, Unidym expanded its executive, technical and administrative staff for these activities. Unidym's cash burn ramped from $2 million in the second quarter, $3.6 million in the third quarter and $4.2 million in the fourth quarter. In the fourth quarter, it was clear that Unidym would be unable to meet its fund raising goals to support its 2009 cash needs. Moreover, technical development took longer than expected. Additionally, it became evident that dramatic change in the financial market would not allow an

initial public offering. Starting in October 2008, several general and administrative positions were eliminated. Approximately, half of its team in its Houston, TX facility was put on unpaid leave to conserve cash. Further cuts to personnel and consolidation of facilities are planned to bring Unidym's cash burn to 60% of its high water mark in fourth quarter 2008. However, Unidym will still need to obtain additional cash to fund its operations and obligations through fiscal 2009.

Subsequent to September 30, 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 a security interest in Unidym's physical and intellectual property (the 'Collateral;' which, however, excludes Unidym's rights under the Rice license and shares of Ensysce Biosciences, Inc.). The Subscription Agreement provided TEL with two put options. TEL may exercise the first put option if Unidym fails to enter into a Joint Development Agreement with TEL by June 30, 2009. In that case, Unidym must buy back TEL's Unidym shares for $2 million before March 2010. TEL may exercise the second 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 Biosciences, Nexeon MedSystems or Nanocondution; or sales of products. Only if TEL 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 can take possession of the Collateral and keep net proceeds of any sale thereof.

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.

Unidym is the Company's most mature nanomaterials company and provides an example of a company-building strategy that Arrowhead plans to replicate in other areas of nanotechnology. Through the acquisition of a foundational intellectual property portfolio in the manufacture and applications of carbon nanotubes (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 carbon nanotube 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 carbon nanotubes 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 also 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 can 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 currently evaluating the most favorable business model to pursue. In one model, Unidym would synthesize CNTs, formulate those CNTs into a coating ink, and outsource production of the films to a toll coater to produce the film. Unidym would pay for production of the films on a time and materials basis, and Unidym would directly market and sell the films to touch panel makers. Under a second model that is less capital intensive, Unidym would synthesize CNTs and CNT inks, and then ship the inks to company that would manufacture and sell films to touch panel makers.

Unidym's facilities in Houston, Texas have historically provided bulk CNT materials to customers primarily for research or early commercial prototyping processes. This activity has provided modest revenues for Unidym. The lease on the Houston facility has been terminated and Unidym must vacate the premises in the near future. Unidym has decided not to occupy its new facility in Houston and is currently evaluating whether to continue to sell bulk CNT materials. The facility in Houston also provides materials for Unidym's CNT film product. Unidym is currently exploring more cost effective alternatives to produce CNTs for its film product than operating its Houston facility. Alternatives include moving its production capabilities to its Sunnyvale facility or outsourcing CNT production to a third party. If Unidym decides to move its production capabilities for CNTs Sunnyvale, it will incur significant costs for the retrofit and the time required could result in a delay in bringing Unidym's products to market and an interruption or cessation of Unidym's revenues.

Development, production and sale of Unidym's products have 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 July 2008, Unidym acquired Nanoconduction, Inc., a Sunnyvale, CA company developing nano-based electronic cooling technology ("Nanoconduction"). The merger provides Unidym with access to Nanoconduction's patent portfolio, which will supplement Unidym's existing patent portfolio and provides Unidym with additional opportunities to out-license and leverage its technology. In addition, through the merger, Unidym will gain access to research facilities and equipment that will be used in Unidym's ongoing research and development activities.

Unidym accomplished the acquisition of Nanoconduction through an equity exchange, as follows. Arrowhead invested $250,000 in Unidym through a cashless investment by issuing 114,115 shares of unregistered Common Stock to the owners of Nanocondution. In exchange for this investment, the Company 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 carbon nanotubes 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 assets. Unidym entered into a new five-year lease for the facilities currently occupied by Nanoconduction in Sunnyvale, California, with the intention of moving Unidym's existing Menlo Park operations to the Nanoconduction facility.

In March 2008, Unidym sub-licensed certain of its intellectual property to Ensysce BioSciences Inc. ("Ensysce') whose focus is research into the medical therapeutic applications of carbon nanotubes. From March 2008 to November 2008, Ensysce was both funded and effectively controlled by a related party 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 will recognize a gain on the sale during the first quarter of fiscal 2009.

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 we believe that it does control key patents that are critical in making fullerenes into useable products. We believe 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, as well as 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 Systems Corporation is Arrowhead's newest Subsidiary, 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. We believe 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. At September 30, 2008, Agonn was a wholly-owned subsidiary of the Company. The Company expects that this ownership interest may be diluted in the future with the issuance of equity to strategic partners. 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 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 in investment of $2M in two tranches of $1 million each in July and September 2008. At September 20, 2008, 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 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. Christopher 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.

Leonardo is a drug delivery company that employs a novel strategy aimed at dramatically increasing targeting efficiency. Leonardo has licensing agreements and contract research agreements with UT Houston for production of preclinical amounts of nanoparticles. Animal testing suggests that Leonardo's platform enables significantly increased targeting. The Company currently owns 6% of Leonardo. The Company is interested in increasing its stake in Nanotope if the opportunity arises, the Company has the capital resources and Leonardo's technology development continues to move forward. The Company's investment in Leonardo is accounted for using the cost method of accounting.

Related Party Interests

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

Aonex—Discontinued Operation

In 2007, Arrowhead determined that in order to monetize its investment in majority owned subsidiary Aonex Technologies, Inc., 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.

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 September 30, 2008, Arrowhead had one active sponsored research agreement at Duke University through Unidym. Depending on capital resources, Arrowhead is likely to continue to invest in nanoscience research and development through sponsored research agreements at universities.

Factors Affecting Further R&D Expenses

The Company expects that research and development expenses will continue to increase in the foreseeable future as it adds personnel, expands its pre-clinical research, begins clinical trial activities, and increases its regulatory compliance capabilities. The amount of these increases 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 mature, 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, 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 nor timing of the costs to complete, or the amount or timing of the net cash inflows from Insert or Calando's current activities. Until the Company obtains further relevant pre-clinical and clinical data, it will not be able to estimate its future expenses related to the Subsidiaries' 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 had passed and delivery has occurred, a price was fixed and determinable, and collection was 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 our 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 our 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.

Valuation of Goodwill

In accordance with *Statement of Financial Accounting Standards*, or SFAS, *No. 142, Goodwill and Other Intangible Assets*, we review goodwill (if any) for impairment annually and whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Goodwill is tested for impairment by comparing the fair value of the single reporting unit to its carrying value. If the implied fair value of goodwill is less than its carrying value, an impairment charge would be recorded.

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

The Company had a consolidated loss of approximately $27.1 million for the year ended September 30, 2008, compared to a consolidated loss of $29.9 million and $19.0 million for the years ended September 30, 2007 and 2006, respectively.

The decrease in the fiscal 2008 consolidated loss over fiscal 2007 and fiscal 2006 is the result of a number of factors. First, there was a non-recurring expense of $9,597,000 in 2007 for purchased in-process research and development related to Unidym’s merger with CNI. Secondly, there was a reduction of approximately $3 million in Calando’s fiscal 2008 outside lab and contract services expense. Calando incurred major expenses during fiscal 2007 related to preclinical research, preparation for the filing of its Investigational New Drug application (IND) with the U.S. Food and Drug Administration, (“FDA”) for CALAA-01, obtaining sufficient drug inventories to be able to enter phase I clinical trials with CALAA-01, and payment for preparation required to enter the trials. With the initiation of the phase I trial for CALAA-01, the need in 2008 to incur outside labs and contract service expenses was reduced. Salary expense continued to increase in fiscal 2008 as the Company bolstered its management team at Arrowhead and Unidym. Unidym’s rapid growth started in July of 2006 and accelerated with the merger with CNI in April 2007.

In 2007 and 2006, staff increased at Calando to accommodate the increase in development efforts of new products and of the IND to be filed by Calando. Also in fiscal 2007, legal expenses increased as the Company completed the merger with CNI, a private placement for Calando and a private placement for Arrowhead.

In fiscal 2009, significant expense is expected to be incurred in the manufacture of the components for CALAA-02, preparation for an IND for CALAA-02 and the continuation of Calando's clinical trials. Continued clinical and preclinical development of Calando's drug candidates will depend on the cash resources available to Calando. Significant expense is expected to be incurred in the further development of Unidym's products. It is expected that an alternative source for carbon nanotubes will be identified or manufacture of carbon nanotubes will be consolidated with Unidym's product development facility in California. This is expected to result in reduced cash consumption in Texas which would be partially offset by costs necessary to relocate the production capability in California. The goal is to reduce development costs at Unidym substantially and the pace of development will depend on the cash resources available to Unidym. It is expected that the trend to consolidate management of the Subsidiaries at Arrowhead will continue with the goal to reduce cash outlay throughout the Company.

Revenues

The Company generated revenues of $1,303,000, $1,208,000 and $595,000 for the three years ended September 30, 2008, 2007 and 2006, respectively. The revenue for the year ended September 30, 2008 consists of $570,000 from grants to fund research for the development of carbon nanotube applications, $85,000 from license fees from Unidym technology, and $648,000 from the sale and delivery of carbon nanotubes to third parties. The revenue for fiscal 2007 consists of $874,000 from grants to fund research for the development of carbon nanotube applications, $326,000 from the sale and delivery of carbon nanotubes to third parties and $8,000 for in residual funded research. The $461,000 of revenue in 2006 resulted from a commercial license fees when Calando granted an exclusive worldwide license to Benitec Ltd. (ASX:BLT) for the combination of Calando's polymeric RNAi delivery technology with Benitec's RNAi-based therapeutic for the hepatitis C virus. The license was terminated by mutual agreement in July 2006. Revenues in 2009 cannot be estimated as Unidym is re-evaluating its strategy with regard to the sale of bulk carbon nanotubes and it is not clear when Unidym may have revenue from film sales.

Operating Expenses

The analysis below details the operating expenses and discusses the expenditures of the Company within the major expense categories. For purposes of comparison, the amounts for the three years ended September 30, 2008, 2007 and 2006, are shown in the tables below. Prior period amounts have been reclassified to conform to the current period presentation. The amounts for each period have been adjusted to include the adoption of SFAS 123R and the sale of Aonex and its inclusion in discontinued operations.

Salary & Wage Expenses

Arrowhead employs management, administrative and technical staff at the Arrowhead corporate offices and the Subsidiaries. Salary and wage expense consists of salary, benefits, and non-cash charges related to equity based compensation in the form of stock options. Salary and benefits are allocated to two major categories: general and administrative 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 fiscal 2008, fiscal 2007 and fiscal 2006.

(in thousands)

	Year Ended September 30, 2008	% of expense category	Year Ended September 30, 2007	% of expense category	Year Ended September 30, 2006	% of expense category
G&A—compensation-related	$ 6,675	49%	$ 4,376	44%	$ 2,125	39%
Stock-based compensation	3,187	23%	2,176	22%	1,369	25%
R&D—compensation-related	3,858	28%	3,459	34%	1,948	36%
Total	$ 13,720	100%	$ 10,011	100%	$ 5,442	100%

In reviewing comparative information from year to year, it is helpful to understand that since inception in May 2003 and hiring its first employee in mid-2004, the Company founded Aonex (April 2004), NanoPolaris (April 2005), Calando (February 2005), Nanotechnica (September 2004 and closed in June 2005), acquired Insert (June 2004) and Unidym (June 2006) and merged Unidym with NanoPolaris (July 2006) and later merged Unidym with Carbon Nanotechnologies, Inc. (April 2007) Unidym hired two senior technical employees from Nanoconduction after the acquisition. During fiscal 2007, Arrowhead also acquired the intellectual property of C-Sixty (April 2007) that is held in Tego BioSciences Corporation (June 2007) which expanded its operations beginning in October 2007. The merger of Unidym and CNI added about 30 employees to the payroll in April 2007 and Unidym continued to expand its operations, research and management team throughout 2008 in anticipation of its becoming a self-sustaining, independent operation. In November 2007, Insert and Calando reduced technical and administrative staff by ten employees in preparation for the merger between Calando and Insert that was completed in April 2008.

Salary and Wage Expenses – Fiscal 2008 compared to Fiscal 2007

General and Administrative (G&A) compensation expense increased 52.5% compared to 2007 due to the hiring in order to fill several new positions. Positions hired included Chief Executive Officers at Arrowhead (December 2007), Unidym (June 2007) and Calando (November 2007). Arrowhead has also added a Vice President, Medical Technologies (February 2008), a Chief Patent Officer (April 2008) and a Vice President, Advanced Materials (May 2008). Unidym hired the new employees in the positions of Vice President of Business Development (July 2007), Chief Financial Officer (September 2007), Vice President of Finance (October 2007), Corporate Controller (April 2008), Vice President of Marketing (May 2008) and additional scientific and administrative staff. Tego hired the new position of Vice President of Finance (December 2007). The increase in G&A salaries also includes the impact of the annual pay increases for existing staff. The Company and its Subsidiaries will continue to selectively hire additional executives and administrative staff consistent with its business strategies and operational needs.

In fiscal 2007, the Company accrued the cost of the severance (approximately $1 million) to be paid to two Arrowhead executives upon their departure from the Company over periods ranging from one to three years. This charge is non-cash until paid but is included in G&A compensation for fiscal 2007. In fiscal 2008, the severance agreement with one executive was terminated and the executive and the Company entered into an employment contract which expires in January 2009.

Subsequent to September 30, 2008, in response to the changes in capital markets and the world-wide economy, Unidym has reduced its rate of cash consumption by reducing administrative overhead. The reductions included the CEO, CFO, VP of Finance, Corporate Controller, Vice President of Sales and Marketing and Plant Controller positions. These responsibilities have been absorbed by remaining Unidym employees or existing Arrowhead administrative and finance personnel. Further reductions in Unidym's staff are expected.

In February 2008, prior to the April merger with Calando, Insert's CEO and Executive Vice President positions were eliminated. Severance and release agreements resulted in each Executive receiving additional compensation (totaling approximately $280,000) which was partially offset by the termination of the severance agreement with one Arrowhead executive (approximately $245,000).

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. While the number of options has increased overall, this number varies from year to year depending on hiring, on terminations and on awards to new and existing employees. The December 2007 inducement grant of options to purchase 2 million shares of Arrowhead common stock awarded to Arrowhead's new CEO resulted in approximately $977,000 in additional stock-based compensation expense in the current fiscal year as compared to 2007.

Research and development (R&D) compensation expense increased by approximately $400,000 in the year ended September 30, 2008 compared to the prior year due primarily to Unidym's addition of 7 full-time employees which included research scientists and process engineers. On a consolidated basis, the increase in Unidym's R&D compensation expense was partially offset by the November 2007 reductions in the administrative and research and development staff at Insert and Calando in preparation for their merger which was completed in April 2008. The Company expects salaries and wages will not increase significantly during fiscal 2009 and may decrease as compared to fiscal 2008 depending on cash resources available to the Company. However, Arrowhead will continue to identify and selectively hire talent to support development and commercialization efforts as required.

Salary and Wage Expenses – Fiscal 2007 compared to Fiscal 2006

General and Administrative (G&A) compensation expense increased 105.9% in 2007 compared to 2006 due to the hiring of employees to fill several new executive positions. New positions hired included a Chief Executive Officer (June 2007). Unidym also hired the new positions of Vice President of Business Development (July 2007) and Chief Financial Officer (September 2007). The increase in G&A salaries also include the impact of the annual pay increases for existing staff. In addition, two administrative staff were added with the merger of CNI into Unidym.

In fiscal 2007, the Company accrued the cost of the severance (approximately $1 million) to be paid to two executives upon their departure from the Company over periods ranging from one to three years. This charge is non-cash until paid but is included in G&A compensation for fiscal 2007.

In January 2007, Insert recruited a President and CEO whose employment terminated at the end of May 2007. In fiscal 2007 and 2006 the Company and its Subsidiaries increased the pay of existing employees where warranted. These increases contributed to the growth in salary expense over the two year period.

Stock-based compensation is a non-cash charge related to the issuance of stock options to new and existing employees and the vesting of these options. This expense is recorded pursuant to the adoption of SFAS 123R which requires expensing of stock-based compensation for all options granted. Stock options are awarded to new full time employees and to existing employees. While the number of options has increased overall, this number will vary from year to year depending on hiring, on terminations and on awards to new and existing employees.

Research and development (R&D) compensation expense has increased each fiscal year as the Company has grown. However, the primary growth factor in fiscal 2007 was the June 2006 acquisition of Unidym. The merger with CNI added about 30 employees to the payroll in April 2007. With the acquisition of Unidym and the merger with CNI, the subsequent ramp-up of development activities resulted in a significant increase in R&D related payroll expense from 2007 compared to 2006. In addition, technical staff was added at Calando to increase the scope of development of drug candidates.

General & Administrative Expenses

The following table summarizes our general and administrative expenses for each of the fiscal years ended September 30, 2008, 2007 and 2006.

(in thousands)

	Year Ended September 30, 2008	% of expense category	Year Ended September 30, 2007	% of expense category	Year Ended September 30, 2006	% of expense category
Professional/outside services	$ 2,331	34%	$ 1,364	27%	$ 1,506	38%
Recruiting	397	6%	550	11%	200	5%
Facilities related	284	4%	294	6%	337	8%
Patent expense	1,268	18%	890	17%	778	20%
Travel expense	792	12%	645	13%	272	7%
Business insurance	519	8%	446	9%	206	5%
Depreciation-G&A	164	2%	166	3%	123	3%
Communications and technology	333	5%	243	5%	142	4%
Office expense	339	5%	260	5%	224	6%
Others	421	6%	247	4%	181	4%
Total	$ 6,848	100%	$ 5,105	100%	$ 3,969	100%

General & Administrative Expenses – Fiscal 2008 compared to Fiscal 2007

Professional/outside services include general legal, accounting and other outside services retained by the Company and its Subsidiaries. All years include normally occurring legal and accounting expenses related to SEC compliance and other corporate matters. The 2008 increase over 2007 is the result of additional legal costs associated with the Calando/Insert merger and Insert and legal work for Unidym including a private placement in first quarter 2008, establishment of Ensysce, and the acquisition of Nanoconduction, Inc.

The 2008 recruiting expenses are the result of the recruitment of scientific and executive personnel to fill positions at Calando and Unidym. Recruiting fees are expected to continue as the Company builds out its management team and the teams of its Subsidiaries. Recruiting expenses were higher in 2007 due to the payment of approximately $150,000 to hire a president for Insert (now Calando) and approximately $150,000 paid to hire a CEO for Unidym.

Patent expenses increased compared to the prior year as a result of the patent portfolio that was acquired by the merger of Unidym and CNI in April 2007 and increased patent activity by Calando. Patent expenses incurred by Calando in 2008 total approximately $772,000, compared to $371,000 in 2007, and relate primarily to extending intellectual property protection for Calando's products, IT-101 and CALAA-01 abroad. Patent expenses for Unidym of $411,000 in 2008, compared to $377,000 in 2007, 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. 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 and applications are improved. Patent costs will vary depending on the needs of the Company and patent portfolio activity.

Travel expense includes recurring expenses for management and technical staff to travel to and from Company locations in Pasadena and Menlo Park, California and Houston, Texas. Travel expense is also incurred as Company management pursues new

business initiatives and collaborations with other companies throughout the world and for marketing, and public and investor relations efforts. In 2008, the travel expense is higher primarily due to travel by Unidym employees for collaboration and business development in Asia. Travel expense fluctuates from year to year depending on current projects and priorities.

Insurance expense increased during 2008 due to increases in limits and coverage for new Phase I and Phase II clinical trials and the expansion of Unidym's operations. The specific cost of some coverages fell year over year partially offsetting other increases in coverages. Overall, insurance expense will vary depending on activity at the subsidiaries. For example, each facility and the equipment located at each subsidiary is insured. If the Company adds facilities, insurance expense will increase. Current projections for fiscal 2009 foresee a decrease in locations for Unidym and no addition of facilities for other subsidiaries which could result in a decrease in insurance expense. However, such decrease could be offset by additional clinical trial insurance required to cover potential liabilities resulting from Calando's clinical activities.

The increase in communications and technology expense for the year compared to the prior year is primarily related to the addition of two Unidym locations, the purchase of equipment for new employees, and configuration of data networks among Menlo Park, California, and Pasadena, California, and Houston, Texas. The Company expects that costs will be incurred in fiscal 2009 to maintain and make minor upgrades to the Company's existing data networks, but no large scale upgrades or additional buildouts are anticipated.

General & Administrative Expenses – Fiscal 2007 compared to Fiscal 2006

Professional/outside services include general legal, accounting, and other outside services retained by the Company and its Subsidiaries. Each year includes normally occurring legal and accounting expenses related to SEC compliance and other corporate matters as well as legal expenses related to intellectual property matters. Legal expenses for fiscal 2007 include expenses applicable to the merger with CNI (approximately $350,000) and a private placement for Arrowhead and legal expenses related to a financing by Insert.

Recruiting expense increased significantly due to the payment of approximately $150,000 to hire a president for Insert in the first quarter of fiscal 2007 and the payment of approximately $150,000 in the second quarter of Fiscal 2007 related to the search for a president for Unidym as compared to fiscal 2006.

The Company incurred additional expense for new or expanded leases as Subsidiaries were established or expanded in fiscal 2006. Calando moved to a larger facility July 2006, which increased Calando's rent expense. In June 2006, the Company purchased the assets of Unidym and established office and lab facilities for Unidym. Facilities related expenses remained stable in fiscal 2007.

Patent expenses for 2007 increased over 2006 as the mix of expenses changed. The increase in fiscal 2007 over fiscal 2006 was due to the patent portfolio acquired by the Company in connection with the CNI merger. Unidym's patent expense in 2007 increased to $377,000 compared to $134,000 in the prior year while Calando's patent expense decreased from $584,000 in 2006 to $446,000 in 2007.

With the growth of the Company through mergers and acquisitions, the Company acquired multiple locations in California, Texas and New York City in 2007. The increased travel among those locations resulted in a significant increase in travel expense in fiscal 2007 compared to fiscal 2006. In addition, the employees traveled to Europe and Asia in pursuit of collaborations and agreements.

Insurance increased in 2007 as a result of increases in limits and coverage. For instance, the director and officer insurance coverage was increased from $5 million in fiscal 2005, 2006 to $15 million in fiscal 2007. The Company incurred this expense in anticipation of attracting new executive management to the Company and its Subsidiaries. Calando added additional insurance as a result of its entry into clinical trials beginning in fiscal 2006.

Research and Development Expenses

Most of Arrowhead's R & D expenses for fiscal 2008, fiscal 2007 and fiscal 2006 were related to research and development activities by Arrowhead's Subsidiaries. Currently, Arrowhead operates two majority-owned Subsidiaries, two wholly-owned subsidiary and two minority investments, each focused on development and commercialization of nanotechnology products or applications. Arrowhead has also funded a number of sponsored research efforts in leading university labs in exchange for the exclusive right to license the technology developed in such labs.

The following table details R&D expenses for the three fiscal years ended September 30, 2008, 2007 and 2006:

(in thousands)

	Year Ended September 30, 2008	% of expense Category	Year Ended September 30, 2007	% of expense Category	Year Ended September 30, 2006	% of expense category
Outside labs & contract services	$ 3,702	30%	$ 7,027	33%	$ 3,578	44%
License, royalty & milestones	1,044	9%	659	3%	114	1%
In-Process R&D purchased	3,276	27%	9,597	46%	2,448	30%
Laboratory supplies & services	1,624	14%	1,181	6%	339	4%
Facilities related	991	8%	689	3%	331	4%
Sponsored research	742	6%	1,343	7%	1,170	14%
Depreciation-R&D	497	4%	286	1%	133	2%
Other research expenses	268	2%	202	1%	91	1%
Total	$ 12,144	100%	$ 20,984	100%	$ 8,204	100%

Research and Development Expenses – Fiscal 2008 compared to Fiscal 2007

Overall, research and development expense decreased significantly in fiscal 2008 as compared to fiscal 2007. The largest decrease was related to a non-recurring in-process R&D purchase in relation to the acquisition of CNI by Unidym in 2007. A more extensive overview of the various line items is included below.

Outside labs & contract services decreased significantly in fiscal 2008. The process development and preclinical trial expenses for Calando are related to preclinical work for pipeline candidates, but decreased from the prior year as Calando finished up its preparation for the phase I trial of CALAA-01 and phase II clinical trials for its drug candidate IT-101. The 2008 expense includes the outsourced preclinical studies in preparation for the INDA filing for a phase I study of Calando's CALAA-01 completed in March 2008, outsourced manufacture of components for CALAA-01 for clinical studies and Tego's outsourced pre-clinical studies. The combined outside labs and contract services expense for IT-101 and CALAA-01 was $1,811,000 during 2008 compared to $6,535,000 in the prior year. Significant expense has already been incurred in the first quarter of fiscal 2009 for preclinical studies and manufacture of components for CALAA-02 and this expense is expected to continue through 2009 as capital resources allow. Unidym incurred approximately $1,717,000 of outside lab and contract services expense during the year compared to approximately $492,000 of such expenses in the prior year. The increase in Unidym expenses is related to the scale up of the operations to develop the manufacturing processes for carbon nanotubes and thin film conductive materials. Development expenses for Unidym are expected to decrease in 2009 as Unidym develops a less costly source of CNT materials than operating the Houston facility. Efforts were focused on the sale of Unidym's carbon nanotube based inks rather than manufacture of film which is expected to be less expensive and 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 paid by Calando for the license for siRNA targets from Alnylam and the milestone payments due with the submission of the INDA.

On August 8, 2008, Unidym completed an acquisition of Nanoconduction, Inc., a company originally formed to develop carbon nanotube-based thermal management solutions for the microprocessor industry ("Nanoconduction"). The acquisition of Nanoconduction was consummated through a merger of a wholly-owned subsidiary of Unidym, formed solely for the purpose of the acquisition, with and into Nanoconduction. In fiscal 2008 Arrowhead expensed purchased in-process research and development of $3,276,000. This expense results from the Nanoconduction acquisition, write off of approximately $2,726,000 of research and development related single-purpose equipment and facility improvements acquired, and from Arrowhead's purchase of 550,000 shares of Unidym common stock for $550,000 from Unidym's founder for a combination of $350,000 in cash and $200,000 in Company common stock. In 2007, $9,597,000 purchased in-process research and development expense is the result of the purchase price allocation for the April 2007 acquisition of CNI by Unidym. The Company's Subsidiaries may engage in merger and acquisition activity in the future, resulting in additional Purchased In Process R&D expense. The amount and timing of such expense will fluctuate depending on the nature of activity and is impossible to predict at this time.

Laboratory supplies and services consist primarily of materials, supplies and services consumed in the laboratory or in clinical trials. Of the approximately $1,624,000 shown above, $889,000 relates to materials used in the R&D of carbon nanotube production processes and conductive thin film applications, and approximately $726,000 was used in the laboratories and clinical trials of Calando. Of the prior year amount of $1,181,000, $416,000 was related to Unidym and $764,000 was for research activities at Calando.

Facilities related expenses increased in 2008 over the prior year due to the addition of Unidym's laboratory space in Menlo Park, California in February 2007, scheduled rent increases, Unidym's addition of a Texas location in April 2007 and holdover

rents incurred since the expiration of Unidym's Houston lease in December 2007. In August 2008, Unidym entered into two new lease agreements for expanded facilities in the Houston, TX area and in Sunnyvale, CA. The intent is to relocate the Menlo Park facility to the larger Sunnyvale, CA location and to sublease the new facility in the Houston, TX area rather than relocate to that facility. 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 year ended September 30, 2008, compared to the prior year, as projects were completed (Stanford & Duke) or terminated (Caltech). A Unidym sponsored research project at Duke University commenced during fiscal 2008. The expense for the project at the University of Florida was transferred to Unidym in April 2007.

Increased depreciation expense is primarily due to the addition of depreciable equipment at Unidym's Houston and Menlo Park facilities.

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

Name of Subsidiary / Project	Project expenses for year ended September 30, 2008	Project expenses for year ended September 30, 2007	Project expenses for year ended September 30, 2006	Project expenses from inception of Project through September 30, 2008
Calando Pharmaceuticals, Inc. / CALAA-01 & IT 101	$ 9.8 Million	$ 14.2 Million	$ 7.3 Million	$ 33.6 Million
Unidym, Inc. / Thin Film Carbon Nanotubes	$ 12.4 Million	$ 5.7 Million	$ 0.9 Million	$ 19.0 Million
Tego Biosciences Corp. / Fullerene Anti-oxidants	$ 0.8 Million	—	—	$ 0.8 Million
Agonn Systems, Inc. / Fullerene Anti-oxidants	$ 0.3 Million	—	—	$ 0.3 Million
Total of all listed Subsidiaries	$ 23.3 Million	$ 19.9 Million	$ 8.2 Million	$ 53.7 Million

Consulting

For fiscal 2008, consulting fees and related travel totaled approximately $3,181,000 compared to $1,784,000 in 2007 and $702,000 in 2006. Total 2008 consulting fees consisted of $1,502,000 for Calando and $1,077,000 for Unidym, 198,000 for Tego, $222,000 for Arrowhead and $183,000 for Agonn.

The consulting fees incurred by Calando consisted of $1,121,000 for clinical and regulatory consulting fees during fiscal 2008 compared to $343,000 for similar items in 2007 and $46,000 in 2006. 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 (IND) with the U.S. Food and Drug Administration, ("FDA").

The consulting fees incurred by Unidym consisted of $717,000 was for consulting related to the process to manufacture sheets of thin film nanotubes and performance testing of those sheets. In 2007, there was approximately $465,000 of consulting fees incurred in similar projects.

For fiscal 2007, consulting fees and related travel totaled approximately $1,784,000 which consisted of $1,021,000 for Calando, $715,000 for Unidym, $37,000 for Tego and $11,000 for Arrowhead.

Calando's 2007 consulting fees were primarily related to clinical and regulatory issues, scientific and strategic business consulting.

Unidym's 2007 consulting fees were primarily related to production sheets of thin film nanotubes and performance testing of those sheets and strategic business consulting.

In fiscal 2006, consulting fees consisted of $311,000 paid for strategic business and governance consulting, acquisition related consulting of approximately $175,000, professors/non employee subsidiary founders of approximately $120,000, advisory board fees of about $50,000 and approximately $46,000 for consultants for regulatory and clinical trial services.

The use of consultants with diverse backgrounds enabled the Company to accomplish various objectives without having to add full time staff and is expected to continue in fiscal 2009.

Leveraged Technology and Revenue Strategy

Arrowhead continues to follow its strategy to leverage technology that is being or has been developed at universities. By doing so, Arrowhead benefits from work done at those universities and through majority-owned Subsidiaries, which can commercialize the most promising technologies developed from sponsored research and other sources. The Subsidiaries are likely to produce prototypes to advance their strategies. The Subsidiaries have three primary strategies to 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, Unidym and CNI merged. Unidym then had the production capability to make carbon nanotubes that it uses internally for product development and sells externally to third parties. 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 grants and from development fees. Revenue from grants and development fees are considered to be reimbursements for efforts performed on behalf of third parties and not part of the Company's primary strategy to generate revenue.

Unidym generated combined revenues from grants and sales of carbon nanotubes totaling approximately $1,303,000 in fiscal 2008 and $1,201,000 in fiscal 2007. The remaining 2007 revenue of $7,000 was from a Calando grant.

In fiscal 2006, Calando generated approximately $ 311,000 in revenue applicable to a license with Benitec Ltd. for the combination of Calando's polymeric RNA interference ("RNAi") delivery technology with Benitec's RNAi-based therapeutic for the hepatitis C virus ("HCV"). The license was signed in June 2005 and called for an upfront fee of $150,000, per year and reimbursement for development expenses that Calando incurred on Benitec's behalf. The fee was paid in fiscal 2006, at which time Calando booked the revenue. On July 31, 2006, the License Agreement with Benitec was terminated by mutual agreement.

Also in fiscal 2006, Aonex recognized revenue of about $134,000 related to an SBIR grant and other research fees. During fiscal 2006, Arrowhead was told by the Small Business Administration that it no longer qualified as a small business because it could not show that 51% of its shareholders were U.S. citizens or legal resident aliens. Therefore, the Company does not expect to receive any small business funding in the future.

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 by $14 million from $24.1 million at September 30, 2007 to $10.1 million at September 30, 2008. 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.

Arrowhead has historically financed its operation through the sale of securities of Arrowhead and its Subsidiaries. Net cash from financing activities totaled $16.1 million in fiscal 2008 for Arrowhead and its Subsidiaries. Nanotope raised $2.0 from financing activities in fiscal 2008. Subsequent to September 30, 2008, Calando raised and additional $2.7 million (of which $1.1 million has been received) from the sale of senior unsecured convertible promissory notes, and Unidym raised $2 million through the sale of newly issued shares of Series C-1 Preferred Stock to TEL Ventures. Also in the first quarter of fiscal 2009, Unidym sold its equity interest in Ensysce BioSciences Inc. for $700,000. We have an effective shelf registration statement on file with the SEC covering the public sale by the Company of common stock and warrants to purchase common stock. If the Company meets the market capital requirements in the future, it may seek to sell securities from this shelf registration statement to investors.

The Board has approved a strategy for the Company to conserve cash and seek sources of new capital. To execute this strategy, the Board will seek to accomplish one or more of the following on favorable terms: the out-license of technology, sale of a subsidiary, sale of non-core assets, scaling down development efforts, funded joint development or partnership arrangements, and sale of securities. The probability that any of these events will occur is uncertain, especially in light of the lack of liquidity in the current capital and credit markets. Until such time as one or more of these goals is accomplished, the Company has scaled back the activities at its Subsidiaries

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:

- *Operating Lease Obligations*

In connection with its acquisition of Nanoconduction, Unidym guaranteed an equipment lease of $1,677,000, bearing interest at 8% with a remaining principal balance of $1,536,990 as of September 30, 2008. The lease requires 22 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.

- *Purchase Commitments*

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

Subsequent Commitments

Calando entered into Unsecured Convertible Promissory Note Agreements for $2.7 million with accredited investors of which $1.1 million has been received. 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 to 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 subjugated 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. Arrowhead invested $200,000 in the note offering.

Unidym entered into a subscription agreement with Tokyo Electron Ventures ("TEL"), pursuant to which Unidym sold 1,111,112 shares of newly authorized Series C-1 Preferred Stock for cash proceeds of $2 million in a private financing transaction. Series C-1 shares are senior to all other outstanding stock of Unidym, and 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. 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 and net cash flow from operations during the measurement period. Tokyo Electron Ventures may in certain circumstances convert its Series C-1 Preferred stock into shares of preferred stock at a subsequent offering.

TEL Venture's investment in Undiym 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 shares 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.

Off-Balance Sheet Arrangements

We do not have and have 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 September 30, 2008 are summarized below by category in the following table:

	Total	Less than 1 year	>1-3 Years	>3-5 Years	More than 5 Years
Operating Lease Obligation	$4,833,876	$1,005,370	$1,522,964	$1,153,762	$ 1,151,75
Capital Lease Obligation	$1,657,565	$ 904,127	$ 753,439	$ 129,290	$ —
Sponsored Research(1)	$ 437,483	$ 191,375	$ 191,375	$ 54,733	$ —

(1) The sponsored research obligations in the table above include our commitments to Duke University.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We manage our fixed income investment portfolio in accordance with our Investment Policy that has been approved by our Board of Directors. The primary objectives of our Investment Policy are to preserve principal, maintain a high degree of liquidity to meet operating needs, and obtain competitive returns subject to prevailing market conditions. Investments are made primarily in certificates of deposit, U.S. government agency debt securities and high grade commercial paper. Management may use additional investment vehicles as long as the vehicle meets the Investment Objectives and Minimum Acceptable Credit Quality. Our Investment Policy specifies credit quality standards for our investments. We do not own derivative financial instruments in our investment portfolio.

As of September 30, 2008, we have no derivative instruments outstanding and we did not have any financing arrangements that were not reflected in our balance sheet.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Financial statements and notes thereto appear on pages F-1 to F-21 of this Annual Report on Form 10-K.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

None.

ITEM 9A. CONTROLS AND PROCEDURES.

Our chief executive officer and our chief financial officer, after evaluating our "disclosure controls and procedures" (as defined in Securities Exchange Act of 1934 (Exchange Act) Rules 13a-15(e) and 15-d-15(e)) as of the end of the period covered by this Annual Report on Form 10-K (Evaluation Date) have concluded that as of the Evaluation Date, our disclosure controls and procedures are effective to ensure that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission 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.

Management's Annual Report on Internal Control over Financial Reporting

Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. This process includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of the internal control over financial reporting to future periods are subject to risk that the internal control may become inadequate because of changes in conditions, or that the degree of compliance with policies or procedures may deteriorate.

Management's Assessment of the Effectiveness of our Internal Control over Financial Reporting

Management has evaluated the effectiveness of our internal control over financial reporting as of September 30, 2008. In conducting its evaluation, management used the framework set forth in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on our evaluation under such framework, our management has concluded that our internal control over financial reporting was effective as of September 30, 2008.

Attestation Report

Rose, Snyder & Jacobs, the independent registered public accounting firm that audited our consolidated financial statements included in this Annual Report on Form 10-K, independently assessed the effectiveness of our internal control over financial reporting. Such attestation report is included below under the heading "Attestation Report of Independent Registered Public Accounting Firm."

Attestation Report of Independent Registered Public Accounting Firm

Report of Independent Registered Public Accounting Firm on Internal Control Over Financial Reporting

The Board of Directors and Stockholders of Arrowhead Research Corporation

We have audited Arrowhead Research Corporation's internal control over financial reporting as of September 30, 2008, based on criteria established in *Internal Control-Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Arrowhead Research Corporation's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Arrowhead Research Corporation maintained, in all material respects, effective internal control over financial reporting as of September 30, 2008, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Arrowhead Research Corporation as of September 30, 2008 and 2007, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended September 30, 2008, and for the period from May 7, 2003 (inception) through September 30, 2008 of Arrowhead Research Corporation and our report dated December 15, 2008 expressed an unqualified opinion thereon.

/s/ Rose, Snyder & Jacobs

A Corporation of Certified Public Accountants

Encino, California
December 15, 2008

Changes in Internal Control Over Financial Reporting

There was no change in our internal control over financial reporting that occurred during the fourth quarter of the year ended September 30, 2008, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

Not applicable

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT.

The information required hereunder is incorporated herein by reference to our Proxy Statement to be filed within 120 days of September 30, 2008 and delivered to stockholders in connection with our Annual Meeting of Stockholders to be held on March 12, 2009.

We have adopted a code of conduct that applies to our Chief Executive Officer, Chief Financial Officer, and to all of our other officers, directors and employees. The code of conduct is available at the Corporate Governance section of the Investor Relations page on our website at www.arrowheadresearch.com. Any waivers from or amendments to the code of conduct, if any, will be posted on our website.

ITEM 11. EXECUTIVE COMPENSATION.

The information required hereunder is incorporated herein by reference to our Proxy Statement to be filed within 120 days of September 30, 2008 and delivered to stockholders in connection with our Annual Meeting of Stockholders to be held on March 12, 2009.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

The information required hereunder is incorporated herein by reference to our Proxy Statement to be filed within 120 days of September 30, 2008 and delivered to stockholders in connection with our Annual Meeting of Stockholders to be held on March 12, 2009.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE.

The information required hereunder is incorporated herein by reference to our Proxy Statement to be filed within 120 days of September 30, 2008 and delivered to stockholders in connection with our Annual Meeting of Stockholders to be held on March 12, 2009.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required hereunder is incorporated herein by reference to our Proxy Statement to be filed within 120 days of September 30, 2008 and delivered to stockholders in connection with our Annual Meeting of Stockholders to be held on March 12, 2009.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this Annual Report on Form 10-K:

(1) Financial Statements.

See Index to Financial Statements and Schedule on page F-1.

(2) Financial Statement Schedules.

See Index to Financial Statements and Schedule on page F-1. All other schedules are omitted as the required information is not present or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements or notes thereto.

(3) Exhibits.

The following exhibits are filed (or incorporated by reference herein) as part of this Annual Report on Form 10-K:

Exhibit Number	Document Description
3.1	Certificate of Incorporation of InterActive, Inc., a Delaware company, dated February 8, 2001. (1)
3.2	Certificate of Amendment of Certificate of Incorporation of InterActive Group, Inc., dated January 12, 2004 (effecting, among other things a change in the corporation's name to "Arrowhead Research Corporation"). (2)
3.3	Certificate of Amendment to Certificate of Incorporation, dated January 25, 2005. (3)
3.4	Bylaws. (1)
4.1	Form of Registration Rights Agreement dated January 24, 2006. (4)
4.2	Form of Warrant to Purchase Common Stock issued January 24, 2006. (4)
4.3	Form of Warrant to Purchase Common Stock issued May 29, 2007. (14)
4.4	Form of Common Stock Warrant issued in August 2008. (28)
4.5	Form of Common Stock Warrant issued in September 2008. (29)
10.1**	Copy of the Arrowhead Research Corporation (fka InterActive, Inc.) 2000 Stock Option Plan, the Arrowhead Research Corporation Stock Option Agreement (Incentive Stock Option) and the Arrowhead Research Corporation Stock Option Agreement (Nonstatutory Option). (5)
10.2**	Copy of the Arrowhead Research Corporation 2004 Equity Incentive Plan. (6)
10.3	Common Stock and Warrant Purchase Agreement, dated as of January 11, 2006, among Arrowhead, York, Knott and certain affiliates. (4)
10.4**	Copy of Arrowhead Research Corporation 2004 Equity Incentive Plan, as amended February 23, 2006. (7)
10.5	Series A Preferred Stock Purchase Agreement between Arrowhead Research and Calando Pharmaceuticals, Inc. dated March 31, 2006. (8)
10.6	Agreement to Provide Additional Capital between Arrowhead Research and Calando Pharmaceuticals, Inc. dated March 31, 2006. (8)
10.7	Common Stock Transfer Agreement among Arrowhead Research, Mark Davis, John Petrovich and John Rossi. (8)
10.8	Series A Preferred Stock Purchase Agreement between Arrowhead Research Corporation and Nanopolaris, Inc. dated June 13, 2006. (9)
10.9	Agreement to Provide Additional Capital between Arrowhead Research Corporation and NanoPolaris, Inc. dated June 13, 2006. (9)
10.10	Severance Agreement and General Release between Arrowhead Research Corporation and Leon Ekchian dated August 1, 2006. (10)

Exhibit Number	Document Description
10.11**	Executive Incentive Plan, adopted December 12, 2006. (11)
10.12**	Directors Compensation Policy, as amended December 12, 2006. (11)
10.13	Amended and Restated License Agreement between Insert Therapeutics, Inc. and Calando Pharmaceuticals, Inc. dated July 1, 2005 (Portions omitted pursuant to request for confidential treatment). (11)
10.14	Agreement and Plan of Merger dated as of March 21, 2007 by and among Unidym, Inc., Unidym Acquisition, LLC, Carbon Nanotechnologies, Inc., and William A. McMinn as the Stockholder Representative. (12)
10.15	Stock Purchase Agreement dated as of April 20, 2007, by and among Arrowhead and the selling stockholders of Carbon Nanotechnologies, Inc. (13)
10.16	Registration Rights Agreement dated as of April 20, 2007, by and among Arrowhead and the purchasers of Arrowhead's Common Stock listed on Exhibit A thereto. (13)
10.17	Lock-up and Standstill Agreement dated as of April 20, 2007, by and among Arrowhead and the securityholders of Arrowhead listed on the signature pages thereto. (13)
10.18	Registration Rights Agreement dated May 16, 2007, by and among Arrowhead and the purchasers of Arrowhead's Common Stock listed on Exhibit A thereto. (14)
10.19	Form of Subscription Agreement by and between Arrowhead and each of the purchasers of Arrowhead's Common Stock in the private placement transaction completed in May 2007. (14)
10.20	Severance Agreement dated May 24, 2007 by and between Arrowhead and R. Bruce Stewart. (15)
10.21	Severance Agreement dated May 24, 2007 by and between Arrowhead and Joseph T. Kingsley. (15)
10.22**	Employment Offer Letter Agreement dated June 5, 2007 by and between Unidym, Inc. and Arthur L. Swift. (16)
10.23	Subscription Agreement, dated as of October 29, 2007, by and between Unidym, Inc. and Arrowhead (includes as exhibits the forms of Amended and Restated Investors Rights Agreement by and between Arrowhead and Unidym, Inc.; the Amended and Restated Right of First Refusal and Co-Sale Agreement by and between Arrowhead and Unidym, Inc. and the Amended and Restated Voting Agreement by and between Arrowhead and Unidym, Inc.). (17)
10.24	Stock Purchase Agreement by and between Arrowhead and Tego BioSciences Corporation. (18)
10.25	Employment Agreement by and among Insert Therapeutics, Inc., Calando Pharmaceuticals, Inc. and Larry Stambaugh. (19)
10.26	Offer Letter to Christopher Anzalone for employment at Arrowhead. (20)
10.27	Agreement and Plan of Reorganization between Insert Therapeutics, Inc. and Calando Pharmaceuticals, Inc. (21)
10.28	Employment Agreement dated March 10, 2008 between Joseph T. Kingsley and Arrowhead Research Corporation. (22)
10.29**	Employment Agreement, between Arrowhead and Dr. Christopher Anzalone, dated June 11, 2008. (23)
10.30**	Stock Option Agreement between Arrowhead and Dr. Christopher Anzalone, dated June 11, 2008. (23)
10.31	Insert Financing Termination Agreement, dated April 17, 2008. (24)
10.32	Calando Financing Termination Agreement, dated April 17, 2008. (24)
10.33	Insert Therapeutics, Inc. Amended and Restated Investors' Rights Agreement, dated April 17, 2008. (24)

Exhibit Number	Document Description
10.34	Agreement and Plan of Merger by and among AmberWave Systems Corporation, Aonex Acquisition Corporation, Aonex Technologies, Inc. and the stockholders signatory thereto, dated May 5, 2008. (25)
10.35	Aonex Technologies, Inc. Series B Preferred Stock Purchase Agreement, dated May 5, 2008. (25)
10.36	Second Amended and Restated Investor Rights Agreement among Unidym, Inc., Investors and the stockholders party thereto, dated October 29, 2007. (26)
10.37	Series B Preferred Stock Purchase Agreement, dated as of July 23, 2008, by and between Nanotope, Inc. and Arrowhead. (27)
10.38	Second Amended and Restated Investors' Rights Agreement, dated as of July 23, 2008, by and between Nanotope, Inc. and the Investors and Stockholders listed therein. (27)
10.39	Form of Subscription Agreement, by and between Arrowhead and the Investors listed therein. (28)
10.40	Form of Subscription Agreement, by and between Arrowhead and the Investors listed therein. (29)
10.41	Form of Subscription Agreement, by and between Unidym, Inc. and Tokyo Electron Ventures.*
10.42	Form of Security Agreement, by and between Unidym, Inc. and Tokyo Electron Ventures.*
21.1	List of Subsidiaries*
23.1	Consent of Independent Public Registered Accounting Firm.*
24.1	Power of Attorney (contained on signature page)
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002*
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002*
32.1	Certification by Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*
32.2	Certification by Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*

* Filed herewith.
** Indicates compensation plan, contract or arrangement.
(1) Incorporated by reference from the Schedule 14C filed by registrant on December 22, 2000.
(2) Incorporated by reference from the Schedule 14C filed by registrant on December 22, 2003.
(3) Incorporated by reference from the Quarterly Report on Form 10-QSB for the quarter ended December 31, 2004, filed by registrant on February 11, 2005.
(4) Incorporated by reference from the Current Report on Form 8-K, filed by registrant on January 18, 2006.
(5) Incorporated by reference from the Registration Statement on Form S-8, filed by registrant on October 29, 2004.
(6) Incorporated by reference from Annex A to the definitive Schedule 14C filed by registrant on December 16, 2004.
(7) Incorporated by reference from the Current Report on Form 8-K filed by registrant on February 28, 2006.
(8) Incorporated by reference from the Current Report on Form 8-K filed by registrant on April 6, 2006.
(9) Incorporated by reference from the Current Report on Form 8-K filed by the registrant on June 16, 2006.
(10) Incorporated by reference from the Quarterly Report on Form 10-Q filed by the registrant on August 9, 2006.
(11) Incorporated by reference from the Annual Report on Form 10-K filed by the registrant on December 14, 2006.
(12) Incorporated by reference from the Current Report on Form 8-K filed by the registrant on March 26, 2007.
(13) Incorporated by reference from the Current Report on Form 8-K filed by the registrant on April 25, 2007.
(14) Incorporated by reference from the Current Report on Form 8-K (Items 3.02 and 9.01), filed by the registrant on May 30, 2007.
(15) Incorporated by reference from the Current Report on Form 8-K (Items 5.02 and 9.01), filed by the registrant on May 30, 2007.

(16) Incorporated by reference from the Current Report on Form 8-K, filed by the registrant on June 18, 2007.
(17) Incorporated by reference from the Quarterly Report on Form 10-Q, filed by the registrant on February 11, 2008.
(18) Incorporated by reference from the Current Report on Form 8-K, filed by the registrant on October 30, 2007.
(19) Incorporated by reference from the Current Report on Form 8-K, filed by the registrant on November 6, 2007.
(20) Incorporated by reference from the Current Report on Form 8-K, filed by the registrant on December 3, 2007.
(21) Incorporated by reference from the Current Report on Form 8-K, filed by the registrant on January 18, 2008.
(22) Incorporated by reference from the Current Report on Form 8-K, filed by the registrant on March 13, 2008.
(23) Incorporated by reference from the Current Report on Form 8-K, filed by the registrant on June 13, 2008.
(24) Incorporated by reference from the Current Report on Form 8-K, filed by the registrant on April 23, 2008.
(25) Incorporated by reference from the Current Report on Form 8-K, filed by the registrant on May 9, 2008.
(26) Incorporated by reference from the Current Report on Form 8-K, filed by the registrant on June 18, 2008.
(27) Incorporated by reference from the Current Report on Form 8-K, filed by the registrant on July 25, 2008.
(28) Incorporated by reference from the Current Report on Form 8-K, filed by the registrant on August 26, 2008.
(29) Incorporated by reference from the Current Report on Form 8-K, filed by the registrant on September 11, 2008.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized, on this 15th day of December 2008.

ARROWHEAD RESEARCH CORPORATION

By: /S/ CHRISTOPHER ANZALONE
Christopher Anzalone
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL THESE PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Christopher Anzalone and Paul C. McDonnel and each of them, jointly and severally, his attorneys-in-fact, each with full power of substitution, for him in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each said attorneys-in-fact or his substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report on Form 10-K has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

Signature	Title	Date
/S/ CHRISTOPHER ANZALONE **Christopher Anzalone**	Chief Executive Officer, President and Director (Principal Executive Officer)	December 15, 2008
/s/ Paul C. McDonnel **Paul C. McDonnel**	Chief Financial Officer (Principal Financial and Accounting Officer)	December 15, 2008
/S/ EDWARD W. FRYKMAN **Edward W. Frykman**	Director	December 15, 2008
/S/ LEROY T. RAHN **LeRoy T. Rahn**	Director	December 15, 2008
/S/ CHARLES P. MCKENNEY **Charles P. McKenney**	Director	December 15, 2008
/S/ R. BRUCE STEWART **R. Bruce Stewart**	Executive Chairman & Director	December 15, 2008

INDEX TO FINANCIAL STATEMENTS AND SCHEDULE

As a result of the change in control resulting from the stock exchange transaction (the "Share Exchange") with the owners of Arrowhead Research Corporation, a California corporation ("ARC"), the financial statements of the Company are deemed to be the historical financial statements of ARC.

Arrowhead Research Corporation,

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Arrowhead Research Corporation

We have audited the accompanying consolidated balance sheets of Arrowhead Research Corporation (a Delaware corporation) and Subsidiaries as of September 30, 2008 and 2007 and the related consolidated statements of operations, stockholders' equity and cash flows for the years ended September 30, 2008, 2007 and 2006 and for the period from May 7, 2003 (inception) through September 30, 2008. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards established by the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Arrowhead Research Corporation and Subsidiaries as of September 30, 2008 and 2007, and the consolidated results of their operations and their cash flows for the years ended September 30, 2008, 2007 and 2006, and for the period from May 7, 2003 (inception) through September 30, 2008 in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the effectiveness of Arrowhead Research Corporation's internal control over financial reporting as of September 30, 2008, based on the criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated December 15, 2008 expressed an unqualified opinion.

Rose, Snyder & Jacobs
A Corporation of Certified Public Accountants

Encino, California

December 15, 2008

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

	September 30, 2008	September 30, 2007
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 10,093,585	$ 24,120,097
Trade receivable, net of allowance for doubtful account of $116,031 for 2008 and $45,659 for 2007	4,054	273,864
Grant receivable, net of allowance for doubtful account of $0	54,436	—
Other receivables	28,109	—
Prepaid sponsored research, *Note 9.*	—	221,053
Other prepaid research	—	278,558
Other prepaid expenses	380,933	383,729
Current assets of discontinued operation, *Note 5.*	—	28,127
TOTAL CURRENT ASSETS	10,561,117	25,305,428
PROPERTY AND EQUIPMENT		
Computers, office equipment and furniture	571,616	515,744
Research equipment	1,986,117	1,429,602
Software	167,615	104,625
Leasehold improvements	115,871	112,983
Property and equipment of discontinued operation	—	952,503
	2,841,219	3,115,457
Less: Accumulated depreciation and amortization	1,596,009	(934,876)
Accumulated depreciation and amortization of discontinued operation	—	(741,122)
NET PROPERTY AND EQUIPMENT	1,245,210	1,439,459
INTANGIBLE AND OTHER ASSETS		
Rent deposit	254,289	157,534
Patents, *Note 1.*	2,749,555	2,938,513
Investment in Nanotope Inc., equity basis	2,258,271	—
Investment in Leonardo Biosystems Inc., at cost	187,000	—
Non-current assets of discontinued operation	—	12,018
TOTAL OTHER ASSETS	5,449,115	3,108,065
TOTAL ASSETS	**$ 17,255,442**	**$ 29,852,952**
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	$ 1,342,000	$ 1,346,678
Accrued expenses	844,549	530,052
Payroll liabilities	479,294	392,554
Accrued severance	250,000	495,000
Capital lease obligation - short term	810,456	—
Deferred revenue	—	98,570
Current liabilities of discontinued operation	—	33,521
TOTAL CURRENT LIABILITIES	3,726,299	2,896,375
LONG-TERM LIABILITIES		
Capital lease obligation - long term	726,534	—
Accrued severance, *Note 9.*	500,000	500,000
TOTAL LONG-TERM LIABILITIES	1,226,534	500,000
Minority interests	—	152,609
Commitments and contingencies, *Note 9.*		
STOCKHOLDERS' EQUITY, *Note 6.*		
Common stock	42,950	38,622
Preferred stock	—	—
Additional paid-in capital	97,756,126	84,672,783
Accumulated deficit during the development stage	(85,496,467)	(58,407,437)
TOTAL STOCKHOLDERS' EQUITY	12,302,609	26,303,968
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	**$ 17,255,442**	**$ 29,852,952**

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

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

	Years Ended September 30,			May 7, 2003 (Inception) to September 30, 2008
	2008	2007	2006	
REVENUE, *Note 1*	**$ 1,303,201**	**$ 1,208,022**	**$ 461,280**	**$ 3,749,492**
OPERATING EXPENSES				
Salaries	13,720,561	10,011,266	5,442,143	32,169,014
Consulting	3,181,952	1,784,080	701,775	6,606,156
General and administrative expenses	6,848,332	5,105,358	3,968,932	18,665,380
Research and development	12,144,529	20,983,824	8,204,343	44,974,068
Patent amortization	410,408	415,473	391,248	1,399,371
TOTAL OPERATING EXPENSES	**36,305,782**	**38,300,001**	**18,708,441**	**103,813,989**
OPERATING LOSS	(35,002,581)	(37,091,979)	(18,247,161)	(100,064,497)
OTHER INCOME (EXPENSES)				
Loss on equity of investments	(114,729)	—	—	(114,729)
Gain on sale of stock in subsidiary	—	—	—	2,292,800
Realized and unrealized gain (loss) in marketable securities	—	—	315,616	382,264
Interest income	736,343	1,264,238	837,421	3,016,937
Other income	—	329	—	3,637
TOTAL OTHER INCOME (EXPENSES)	**621,614**	**1,264,567**	**1,153,037**	**5,580,909**
LOSS BEFORE MINORITY INTERESTS	(34,380,967)	(35,827,412)	(17,094,124)	(94,483,588)
Minority interests	7,445,542	6,727,284	(126,532)	15,287,678
LOSS FROM CONTINUING OPERATIONS	**(26,935,425)**	**(29,100,128)**	**(17,220,656)**	**(79,195,910)**
Loss from discontinued operations - Nanotechnica, Inc.	—	—	—	(1,342,505)
Loss on disposal of Nanotechnica, Inc. (July 2005 - September 2005)	—	—	—	(73,797)
Loss from discontinued operations - Aonex Technologies, Inc.	(459,949)	(830,990)	(1,776,553)	(5,188,999)
Gain on sale of Aonex Technologies, Inc.	306,344	—	—	306,344
Provision for income taxes	—	—	—	(1,600)
LOSS FROM DISCONTINUED OPERATIONS	**(153,605)**	**(830,990)**	**(1,776,553)**	**(6,300,557)**
Provision for income taxes				—
NET INCOME (LOSS)	**$(27,089,030)**	**$(29,931,118)**	**$(18,997,209)**	**$ (85,496,467)**
Income (loss) from continuing operations per share, diluted and undiluted	$ (0.69)	$ (0.81)	$ (0.54)	
Loss from discontinued operations	$ (0.00)	$ (0.02)	$ (0.06)	
Net income (loss) per share, diluted and undiluted	$ (0.69)	$ (0.83)	$ (0.60)	
Weighted average shares outstanding, diluted and undiluted	39,191,292	35,867,091	31,953,806	

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

Table of Contents

Arrowhead Research Corporation and Subsidiaries
(A Development Stage Company)
Consolidated Statement of Stockholders' Equity
from inception to September 30, 2008

	Common Stock		Additional Paid-in-Capital	Accumulated Deficit during the Development Stage	Totals
	Shares	Amount			
Initial Issuance of Stock:					
Common stock & warrants issued for cash @ $0.001 per unit	3,000,000	$ 3,000	$ —	$ —	$ 3,000
Common stock & warrants issued for cash @ $1.00 per unit	1,680,000	1,680	1,678,320	—	1,680,000
Stock issuance cost charged to additional paid-in capital	—	—	(168,000)	—	(168,000)
Net loss for period from inception to September 30, 2003	—	—	—	(95,238)	(95,238)
Balance at September 30, 2003	**4,680,000**	**4,680**	**1,510,320**	**(95,238)**	**1,419,762**
Exercise of stock options @ $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)
Balance at September 30, 2004	**13,631,546**	**13,645**	**12,059,997**	**(2,624,192)**	**9,449,450**
				—	—
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)
Balance at September 30, 2005	**27,984,194**	**27,997**	**35,578,580**	**(9,479,110)**	**26,127,467**
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)
Balance at September 30, 2006	**34,143,588**	**34,156**	**59,113,369**	**(28,476,319)**	**30,671,206**
Exercise of stock options	186,164	186	434,541	—	434,727
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)
Balance at September 30, 2007	**38,610,420**	**38,622**	**84,672,783**	**(58,407,437)**	**26,303,968**
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 Uniym'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	114,115	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)
Balance at September 30, 2008	**42,934,477**	**42,950**	**97,756,126**	**(85,496,467)**	**12,302,609**

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

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

	September 30,			
	2008	2007	2006	Period from May 7, 2003 (Date of inception) to September 30, 2008
CASH FLOWS FROM OPERATING ACTIVITIES:				
Net Loss	$(27,089,030)	$(29,931,118)	$(18,997,209)	$ (85,496,467)
Realized and unrealized (gain) loss on investment	—	—	(315,615)	(382,263)
Gain from sale of subsidiary	(306,344)	—	—	(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	32,700	—	150,000	232,700
Stock issued for in-process research and development	200,000	9,597,005	1,077,333	10,874,338
Purchased-In-process research and development - Nanoconduction	2,685,208	—	—	2,685,208
Stock-based compensation	3,187,397	2,175,544	1,369,478	7,416,585
Depreciation and amortization	1,133,381	1,003,868	886,956	3,743,041
Gain on sale of stock in subsidiary	—	—	—	(2,292,800)
Non-cash loss from equity investment	114,729	—	—	114,729
Minority interests	(7,445,542)	(6,753,032)	(317,590)	(16,287,926)
Decrease/increase in:				—
Receivables	188,625	(201,850)	(40,766)	(87,439)
Prepaid research expense	499,611	(133,991)	(273,954)	(1)
Other prepaid expenses	26,245	(94,002)	(170,668)	(383,410)
Deposits	(96,755)	(8,083)	(51,090)	(256,349)
Accounts payable	(437,606)	504,919	370,365	709,731
Accrued expenses	(155,523)	(132,019)	413,181	357,077
Deferred revenue	(98,570)	98,570	(106,250)	—
Preferred stock liability	—	(1,162,000)	1,162,000	—
Other liabilities	(159,203)	1,169,065	52,602	1,246,483
NET CASH PROVIDED (USED) IN OPERATING ACTIVITIES	(27,584,677)	(23,867,124)	(14,791,227)	(77,814,357)
CASH FLOWS FROM INVESTING ACTIVITIES:				
Purchase of marketable securities - US Treasury Bills	—	—	(18,575,915)	(18,575,915)
Purchase of property and equipment	(684,111)	(756,371)	(729,450)	(3,510,273)
Purchase of MASA Energy, LLC	(250,000)	—	—	(250,000)
Minority equity investment	(2,000,000)	—	—	(2,000,000)
Cash paid for interest in Nanotechnica	—	—	—	(4,000,000)
Cash paid for interest in Aonex	—	—	(1,000,000)	(5,000,000)
Cash paid for interest in Insert	—	(5,150,000)	—	(10,150,000)
Cash paid for interest in Calando	—	(1,000,000)	(5,000,000)	(8,000,000)
Cash paid for interest in Unidym	(5,000,000)	(4,000,000)	(3,000,000)	(12,001,000)
Cash paid for interest in Tego	(2,400,000)	(101,000)	—	(2,501,000)
Cash obtained from interest in Nanotechnica	—	—	—	4,000,000
Cash obtained from interest in Aonex	—	—	1,000,000	5,001,250
Cash obtained from interest in Insert	—	5,150,000	—	10,529,594
Cash obtained from interest in Calando	—	1,000,000	5,000,000	8,000,000
Cash obtained from interest in Unidym	5,000,000	4,000,000	3,000,000	12,001,000
Cash obtained from interest in Tego	2,400,000	101,000	—	2,501,000
Proceeds from sale of marketable securities - US Treasury Bills	—	—	18,888,265	18,888,265
Proceeds from sale of investments	—	—	80,145	569,913
Proceeds from sale of subsidiary (net)	359,375	—	—	359,375
Payment for patents	—	—	(205,067)	(303,440)
Restricted cash	—	—	—	50,773
NET CASH (USED) IN INVESTING ACTIVITIES	(2,574,736)	(756,371)	(542,022)	(4,390,458)
CASH FLOWS FROM FINANCING ACTIVITIES:				
Payments of capital leases	(140,010)	—	—	(140,010)
Proceeds from sale of stock in subsidiary	9,013,898	5,136,346	—	16,575,168
Proceeds from issuance of common stock and warrants, net	7,259,013	15,586,942	20,886,537	75,863,242
NET CASH PROVIDED BY FINANCING ACTIVITIES	16,132,901	20,723,288	20,886,537	92,298,400
NET INCREASE (DECREASE) IN CASH	(14,026,512)	(3,900,207)	5,553,288	10,093,585
CASH AT BEGINNING OF PERIOD	24,120,097	28,020,304	22,467,016	
CASH AT END OF PERIOD	$ 10,093,585	$ 24,120,097	$ 28,020,304	$ 10,093,585
Supplementary disclosures:				
Interest paid	$ 10,247	$ —	$ —	
Income tax paid	$ 4,800	$ 4,800	$ 4,800	

Arrowhead Research Corporation and Subsidiaries
(A Development Stage Company)

Consolidated Statements of Cash Flows—(Continued)

SUPPLEMENT NON CASH TRANSACTIONS

On March 23, 2005, Arrowhead purchased 7,375,000 shares of Insert Therapeutics, Inc. common stock from two minority stockholders of Insert for 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. 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, Carbon Nanotechnologies, Inc., the Company, and others.

On April 23, 2008, Arrowhead purchased 200,000 shares of the Common Stock of Unidym Inc., 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 Nanocomduction, Inc. in exchange for 114,115 shares of Arrowhead stock with an estimated fair market value of $250,000.

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Notes to Consolidated Financial Statements
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NOTE 1. *ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES*

Nature of Business and Going Concern

Arrowhead is a development stage nanotechnology company commercializing new technologies 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 highly active in the operation of its subsidiaries, centralizing key management responsibilities at the Arrowhead level. Each subsidiary is staffed with its own technical team that focuses on its specific technology and markets, while Arrowhead provides services including initial management, operational support, business development and financing.

Arrowhead currently owns two majority-owned Subsidiaries and two wholly owned subsidiaries (the "Subsidiaries") and has minority investments in two early stage nanotechnology companies. The Company's majority-owned 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 also has minority interests in two other nanotech companies. 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.

At September 30, 2008, the Company had two majority-owned, operating Subsidiaries, Calando Pharmaceuticals, Inc. ("Calando") and Unidym, Inc. ("Unidym", formerly NanoPolaris, Inc.), and two wholly owned subsidiaries, Tego BioSciences Corporation ("Tego") and Agonn Systems, Inc. (Agonn).

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 and license royalties. 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, Inc. Since the acquisition, Unidym has manufactured carbon nanotubes for the primary purpose of using them in research and development activities and derives minimal revenues from the sale of carbon nanotubes for research and commercial applications.

Going Concern

At September 30, 2008, the Company had approximately $10.1 million in cash to fund operations. Since September 30, 2008 fiscal year end, the Company has raised an additional $5.7 in capital through a combination of direct investments or convertible loans into its subsidiaries. The Company is generating no significant revenue, and its fiscal 2008 operating losses and negative cash flows from operations raised doubts about its ability to continue as a going concern. 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 Board will seek to accomplish one or more of the following on favorable terms:

- 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.

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 Company has scaled back the activities in its Subsidiaries. Early in the first quarter of fiscal 2008, significant personnel cuts were made at Calando and the number of pipeline candidates was reduced and development pipeline of the remaining candidates slowed. In April 2008, Calando and Insert were merged as part of a process to reduce cost and conserve cash resources. In October of 2008, significant cuts in personnel began at Unidym and the consolidation of Unidym facilities and further cuts in personnel are underway. These cost-savings measures are designed to decrease Unidym's cash needs by more than 60% of the last fiscal year's cash requirements. Arrowhead does not intend to significantly fund Unidym's operations unless a significant liquidity event occurs. Tego and Agonn have limited operations and currently require very little cash. No funding of new initiatives or further investment in minority positions is contemplated unless additional cash is obtained by the Company. As the year progresses, depending on cash inflows and outflows, the Company will scale back development efforts on Calando's clinical candidates and other cash conservation measures at Unidym and Arrowhead. Our Subsidiaries also raised $5.4 million subsequent to September 30, 2008, of which $3.7 million has been received. (see Note 14—Subsequent Events)

Summary of Significant Accounting Policies

Basis of Presentation—The presentation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates. Certain prior year amounts have been reclassified to conform with current year presentation.

Principles of Consolidation— The consolidated financial statements of the Company include the accounts of Arrowhead and its Subsidiaries. Arrowhead's subsidiaries include Insert Therapeutics, Inc. ("Insert") and Calando Pharmaceuticals, Inc. ("Calando"), which merged in April 2008. The merged entity continues to operate under the name of Calando. Other operating subsidiaries include Unidym and Tego BioSciences Corporation ("Tego"). Aonex Technologies, Inc. ("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 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.

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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 two financial institutions. These accounts are insured by the Federal Deposit Insurance Corporation (FDIC) for up to $100,000 as of fiscal year end. The Company has three wealth management accounts at the same financial institution that invest in higher yield money market accounts and in government securities. At September 30, 2008, the Company had uninsured cash deposits totaling $10,137,832. The Company has not experienced any losses in such accounts and management believes it has placed its cash on deposit with financial institutions that are financially stable.

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.

Intellectual Property—At September 30, 2008, 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 $1,344,068 at September 30, 2008. 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 10 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 Nanotopes 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 is 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 has certain minority equity investments in Leonardo Biosystems, a privately held technology company that 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 are usually 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.

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 $1,303,000, $1,208,000 and $595,000 for the three years ended September 30, 2008, 2007 and 2006, respectively. The revenue for the year ended September 30, 2008 consists of $570,000 from grants to fund research for the development of carbon nanotube applications, $85,000 from license fees from Unidym technology, and $648,000 from the sale and delivery of carbon nanotubes to third parties. The revenue for the fiscal 2007 consists of $874,000 from grants to fund research for the development of carbon nanotube applications, $326,000 from the sale and delivery of carbon nanotubes to third parties and $8,000 in residual funded research . The $461,000 of revenue in 2006 resulted from a commercial license fees when Calando granted an exclusive worldwide license to Benitec Ltd. (ASX:BLT)for the combination of Calando's polymeric RNAi delivery technology with Benitec's RNAi-based therapeutic for the hepatitis C virus. The license was terminated by mutual agreement in July 2006.

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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 of them eventually get sold to third parties. As the majority portion of Unidym's 2008 nanotube production was used in research and development, the 2007 cost of goods sold of $724,088 was reclassified into its component expenses of R&D salaries and wages (approximately $300,000) and research and development expenses (approximately $424,000) consistent with the current year's presentation. This reclassification results in no change in the net operating loss for 2007.

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 of the Company.

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.

New Accounting Standards

In July 2006, the Financial Accounting Standards Board (FASB) issued Interpretation No. 48, *"Accounting for Uncertainty in Income Taxes"*, ("FIN 48"). This Interpretation clarifies the accounting for uncertainty in income taxes recognized in an enterprise's financial statements in accordance with FASB Statement No. 109, *"Accounting for Income Taxes."* This Interpretation prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. This Interpretation also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure, and transition. FIN 48 is effective for fiscal years beginning after December 15, 2006. The adoption of FIN 48 did not have a material impact on the Company's financial statements.

In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurements* (SFAS 157), which defines fair value, establishes a framework for measuring fair value and expands disclosures about fair value measurements. This statement is effective for financial statements issued for fiscal years beginning after November 15, 2007, and interim periods within those fiscal years. Early adoption is encouraged, provided that the Company has not yet issued financial statements for that fiscal year, including any financial statements for an interim period within that fiscal year. The Company will implement the new standard effective October 1, 2008. The Company is currently evaluating the impact SFAS 157 may have on its financial statements and disclosures.

In September 2006, the Securities and Exchange Commission issued Staff Accounting Bulletin No. 108, *Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Year Financial Statements* (SAB 108). SAB 108 provides guidance on the consideration of the effects of prior year misstatements in quantifying current year misstatements for the purpose of a materiality assessment. SAB 108 establishes an approach that requires quantification of financial statement errors based on the effects of the error on each of the Company's financial statements and the related financial statement disclosures. SAB 108 is effective for the Company as of the end of fiscal 2007, allowing a one-time transitional cumulative effect adjustment to retained earnings as of October 1, 2006, for errors that were not previously deemed material, but are material under the guidance in SAB 108. SAB 108 has not had a material impact on the Company's consolidated financial statements.

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In February 2007, the FASB issued FASB Statement No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities—Including an Amendment of FASB Statement No. 115* ("SFAS 159"). This Statement provides companies with an option to measure, at specified election dates, many financial instruments and certain other items at fair value that are not currently measured at fair value. A company that adopts SFAS 159 will report unrealized gains and losses on items for which the fair value option has been elected in earnings at each subsequent reporting date. SFAS 159 also establishes presentation and disclosure requirements designed to facilitate comparisons between entities that choose different measurement attributes for similar types of assets and liabilities. SFAS 159 is effective for fiscal years beginning after November 15, 2007. The Company will implement the new standard effective October 1, 2008. The Company is currently evaluating the impact SFAS 159 may have on its financial statements and disclosures.

In December 2007, the FASB issued SFAS No. 160, "Noncontrolling Interests in Consolidated Financial Statements—an amendment of ARB No. 51." SFAS No. 160 requires all entities to report noncontrolling (minority) interests in subsidiaries as equity in the consolidated financial statements. Its intention is to eliminate the diversity in practice regarding the accounting for transactions between an entity and noncontrolling interests. This Statement is effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008. Earlier adoption is prohibited. The Company is currently evaluating the impact the adoption of this statement could have on its financial condition, results of operations and cash flows.

In December 2007, the FASB issued SFAS No. 141(R), a revised version of SFAS No. 141, "Business Combinations." The revision is intended to simplify existing guidance and converge rulemaking under U.S. generally accepted accounting principles (GAAP) with international accounting rules. This statement applies prospectively to business combinations where the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. An entity may not apply it before that date. The new standard also converges financial reporting under U.S. GAAP with international accounting rules. The Company is currently evaluating the impact the adoption of this statement will have on its financial condition, results of operations and cash flows.

Liquidity

Since inception in May 2003, the Company has incurred significant losses. As of September 30, 2008, the Company had $10.1 million in cash and cash equivalents compared to $24.1 million in cash and cash equivalents and marketable securities at September 30, 2007. The Company's investment objectives are primarily to preserve capital and liquidity and secondarily to obtain investment income. The Company invests excess cash in certificates of deposit, U.S. government obligations and high grade commercial paper.

The Company's operating activities require significant amounts of cash. During this period the Company does not expect to generate significant amounts of revenue. At September 30, 2008, the Company had no contractual commitments to provide additional capital to any of its subsidiaries. The cash on hand will be used to fund ongoing operations in accordance with the Board approved strategy for conserving cash during fiscal 2009.

On December 3, 2008, Arrowhead announced cash infusions of $2.7 million each into majority owned subsidiaries Calando and Unidym. Calando signed agreements for $2.7 million of capital structured as unsecured convertible notes of which $1.1 million has been received. The notes have a 2-year maturity, bear interest of 10% per annum, are convertible into Calando common stock and are redeemable at a premium under certain conditions. Unidym received a total of $2.7 million from a follow on equity investment from strategic investor Tokyo Electron Ventures and the sale of certain non-core assets.

NOTE 2. *BASIS OF CONSOLIDATION*

The consolidated financial statements for the years ended September 30, 2008 and 2007 respectively, include the accounts of Arrowhead and its Subsidiaries, Calando, Unidym, Tego and Agonn. All significant intercompany accounts and transactions are eliminated in consolidation and minority interests were accounted for in the consolidated statements of operations and the balance sheets.

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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 September 30, 2008, and 2007 is $116,031 and $45,659.

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. Following the common-control merger, Insert changed its name to Calando. Insert and Calando effectuated the merger (the "Calando Merger") of Calando with and into Insert pursuant to the Agreement and Plan of Reorganization dated January 14, 2008 (the "Calando Merger Agreement").

Prior to the merger, Arrowhead had financed the operations of Insert and Calando through a series of working capital loans. At the time of the 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 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.

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, relating to Insert, 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.

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.

As September 30, 2008, the Company owns 67.8% of the outstanding shares of the combined company (63.6% on a fully diluted basis).

As of September 30, 2008, Arrowhead had a series of 6% simple-interest working capital loans and advances outstanding to Calando totaling $4,924,114 plus accrued interest of $48,237 payable upon demand.

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On December 3, 2008, the Company announced that Calando had signed agreements for $2.7 million of capital structured as unsecured convertible notes of which $1.1 million has been received. The notes have a 2-year maturity, bear interest of 10% per annum, are convertible into Calando common stock and are redeemable at a premium under certain conditions. See Note 14. Subsequent Events.

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 carbon nanotube-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 carbon nanotubes (the "CNI Merger"). The combined company operates under the Unidym name, has an expansive portfolio of carbon nanotube-related patents and is one of the largest manufacturers of carbon nanotubes in the world.

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 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 Convertible Preferred Stock with an estimated total value of $4,200,000. The Series A Preferred Stock is convertible into 8,400,482 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 and also assumed was 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.

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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.

Below is a summary of the assets acquired, liabilities assumed and consideration transferred for the CNI acquisition:

Cash and cash equivalents	$ 102,302
Accounts receivable	121,977
Other receivables	6,017
Other prepaid expenses	45,187
Property and equipment	65,880
Rent deposit and other assets	27,479
Intangible assets (to be expensed as Purchased in-process R & D)	9,597,005
Total assets acquired	$ 9,965,847
Liabilities assumed	
Accounts payable	$ 143,195
Accrued expenses	201,002
Deferred revenue	21,650
Consideration transferred	
Series B preferred share of Unidym (for CNI Series E preferred stock)	5,400,000
Series A preferred share of Unidym (for CNI common stock)	4,200,000
	$ 9,965,847

Below is a summary of the assets acquired, liabilities assumed and consideration transferred for the acquisition of Nanoconduction:

Current assets	$ 13,245
Patents	247,100
Research & Development assets (expensed as purchased in-process R & D)	2,685,208
Total assets acquired	$ 2,945,553
Current liabilities	$ 1,018,553
Capital lease obligation	1,677,000
Total liabilities assumed	2,695,553
Consideration paid in the form of Arrowhead common stock	250,000
Total purchase price	$ 2,945,553

Both acquisitions have been accounted for using purchase price accounting in accordance with Financial Accounting Standard No. 141, *Business Combinations*.

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The following summarizes unaudited pro forma year-to-date information, assuming the CNI acquisition had occurred on October 1, 2006:

	Year ended September 30, 2007 (unaudited)
Revenue	$ 3,065,464
Net loss	$(31,106,353)
Loss per share	$ (0.86)

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 was 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 Company 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 carbon nanotubes. 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 March 13, 2008, the Unidym's wholly owned subsidiary, Unidym Acquisition LLC that merged with CNI was itself merged into Unidym and ceased to exist.

In addition to other licensing agreements on March 14, 2008, Unidym sub-licensed certain of its intellectual property to Ensysce BioSciences Inc. ("Ensysce") that will focus on research into the medical therapeutic applications of carbon nanotubes. 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 include a $25,000 up-front sub-licensing fee, ongoing royalties, and an initial 50% equity position for Unidym in Ensysce. Unidym also provides contract services to Ensysce, including supplies of research grade nanotubes, back-office and accounting support. Ensysce is accounted for on the equity basis.

At September 30, 2008, the Company owned 53.8% of the outstanding voting stock of Unidym and 37.8% on a fully diluted basis.

On December 3, 2008, the Company announced that Unidym had received a total of $2.7M from a follow on equity investment from strategic investor Tokyo Electron Ventures and the sale of certain non-core assets. See Note 14: Subsequent Events.

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 Preferred Stock for $100,000. Currently, the Company is evaluating opportunities for Tego's technology. Arrowhead owns 100% of the outstanding voting securities of Tego and 80% of the outstanding voting securities on a fully diluted basis. On October 25, 2007, Arrowhead provided $2.4 million in additional capital to Tego to be used for developing and commercializing therapeutics and other products based on the antioxidant properties of modified fullerenes.

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As of September 30, 2008, the Company has incurred less than $680,000 of expenses related to Tego. Subsequent to year end, the Company decided to phase down operations at Tego and to focus on out-license of its technology rather than make a large investment in product development. In connection with the change in strategy, Tego bought back certain of its securities from Arrowhead for $1.7 million. See Note 14: Subsequent Events.

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 September 30, 2008, the Company has incurred less than $240,000 of expenses related to Agonn.

Nanotope, Inc.

Through the acquisition of Masa Energy LLC, a Delaware limited liability company with no other assets or operations, in April 2008, the Company acquired a 5.78% minority position in Nanotope, Inc. (“Nanotope”) and a 6.13% minority position in Leonardo Biosystems, Inc. (“LBS”)

On July 23, 2008, the Company acquired shares of Series B Preferred Stock of Nanotope and committed to acquire shares for another $1 million on or before September 17, 2008, bringing the Company’s ownership to approximately 22% of Nanotope

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.

Leonardo Biosystems, Inc.

LBS is developing a drug-delivery platform technology is based on novel methods of designing spheroid porous silicon microparticles that selectively accumulate in the tumor vasculature. The microparticles are designed to be loaded with drug associated nanoparticles. LBS is based on technology developed in the University of Texas laboratory of Dr. Mauro Ferrari.

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 the 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 effective 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 $15,625.31. 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.

NOTE 6. *STOCKHOLDERS’ EQUITY*

The number of authorized shares of the Company At September 30, 2008, 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 shares of authorized Preferred Stock.

At September 30, 2008, 42,934,517 shares of Common Stock were outstanding. At September 30, 2008, 1,559,000 shares and 4,738,310 shares were reserved for issuance upon exercise of options granted under Arrowhead’s 2000 Stock Option Plan and 2004

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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 June 30, 2008, options to purchase 1,559,000 shares were outstanding under the 2000 Stock Option Plan and options to purchase 4,710,322 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 September 30, 2008:

Exercise prices	Number of Warrants	Weighted Average Remaining Life in Years	Weighted Average Exercise Price
$5.04	1,397,500	7.3	$ 5.04
$7.06	712,362	8.7	$ 7.06
$2.00	3,863,989	4.9	$ 2.00

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 to purchase common stock 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.

It is the Company's intent to use the net proceeds from the sale of the securities and 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, potential future acquisitions of companies and/or technologies, and capital expenditures.

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NOTE 7. *LEASES*

The Company leases the following facilities:

	Lab/Office Space	Monthly Rent	Lease Commencement	Lease Term
Arrowhead				
Pasadena(1)	7,388 sq ft	$ 17,362	March 1, 2006	62 Months
New York(2)	130 sq ft	$ 3,600	September 15, 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
Springfield, MO	1,900 sq ft	$ 2,533	December 1, 2007	24 Months
Houston, TX(4)	8,017 sq ft	$ 13,362	February 1, 2007	Monthly
Pasadena, TX(4)	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) In September 2005, Arrowhead opened an office in New York City and has one employee working out of that office. In September 2008, the lease was renewed for 12 months effective December 1, 2008.

(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, it is Unidym's intent to sublease the Pasadena, TX location for the remainder of the lease term.

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

At September 30, 2008, the future minimum commitments remaining under leases are as follows:

Twelve months ending September 30	Facilities Leases	Equipment Leases
2009	$ 990,988	$ 14,382
2010	$ 827,121	$ 9,210
2011	$ 684,365	$ 2,268
2012	$ 569,605	$ 0
2013 and thereafter	$1,735,917	$ 0

Facility and equipment rent expense for the years ended September 30, 2008, 2007 and 2006 was $1,075,524, $870,289, and $604,630, respectively. From inception to date, rent expense has totaled $2,978,131.

NOTE 8. *OBLIGATIONS UNDER CAPITALIZED LEASE*

At September 30, 2008, the future minimum commitments remaining under capitalized leases are as follows:

Captialized lease payable in 22 monthly installments of $75,343, due in July 2010, secured by equipment at Unidym.	$ 1,536,990
Years Ending September 30,	
2009	$ 904,127
2010	753,439
Total minimum lease payments	1,657,566
Less interest	120,576
Present value of future minimum payments	1,536,990
Less current portion	810,456
Long term portion	$ 726,534

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.

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NOTE 9. *COMMITMENTS AND CONTINGENCIES—SUBSIDIARIES AND SPONSORED RESEARCH*

Subsidiaries and Investments

As of September 30, 2008, Arrowhead held a majority of the following four Subsidiaries (the "Subsidiaries"):

Subsidiary	% Ownership[1]	Technology/Product Focus
Calando Pharmaceuticals, Inc. *acquired June 4, 2004*	67.8%	Nano-engineered RNAi therapeutics and drug delivery systems in clinical trials with first anti-cancer compound
Unidym, Inc. (formerly NanoPolaris) *founded April 4, 2005*	53.8%	Developing strategic opportunities for the commercialization of nanotube-based products
Tego Biosciences Corporation *acquired April 20, 2007*	100.0%	Development of protective products based on the anti-oxidant properties of buckministerfullerenes
Agonn Systems, Inc. *founded May 1, 2008*	100.0%	Developing nanotechnology based energy storage devices 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 September 30, 2008, assuming all options in each Subsidiary plan were awarded and exercised and all warrants were exercised, the Company would own approximately 63.6% of Calando, 37.8% of Unidym and 80% of Tego. Agonn has not yet adopted an option plan and does not have any outstanding warrants.

Investment	% Ownership[1]	Technology/Product Focus
Nanotope, Inc. *Acquired April 29, 2008*	22.0%	Developing nano-engineered, self-assembling, bioactive scaffolding for the treatment of spinal cord injury and peripheral artery disease
Leonardo Biosystems, Inc. *Acquired April 29, 2008*	6.1%	Developing an advanced set of nanotechnology tools to deliver anti-cancer therapeutics

Sponsored Research

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 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 prove to be too hard 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 years ended September 30, 2008, 2007 and 2006, was $741,766, $1,343,332, and $1,170,383, respectively. As of September 30, 2008, there were no active sponsored research agreements at the parent company and Unidym had only one agreement in place. In the future, 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 carbon nanotube compositions of matter, as well as carbon nanotube synthesis, purification, dispersion and functionalization. Furthermore, the portfolio contains claims to the use of carbon nanotubes 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 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 licenses Tego Biosciences's entire intellectual property, for nontherapeutic fields of use. Unidym has opted to focus its resources on electronic applications of carbon nanotubes. Unidym has licensed its portfolio to Ensysce Biosciences Inc., in the field of the 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.

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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 as of Sept. 30, 2008	Prepaid Amt as of Sept. 30, 2008
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 merger between Unidym and CNI, 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.

Sponsored Research Agreement—Duke University

The terms of the new 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 as of Sept. 30, 2008	Prepaid Amt as of Sept. 30, 2008
Electrical Conductivity of Carbon Nanotubes (Dr. Jie Liu)	Dec. 1, 2007 - Nov. 30, 2010 (3 years)	$ 574,124	$ 191,375	$ 136,641	$ 0

The first payment of $136,641, for the above sponsored research project was made in May 2008.

The agreement described below concluded in November 2007 and was one of the sponsored research obligations transferred from Arrowhead to Unidym at the time of the CNI merger.

Research Project	Period Covered	Total Estimated Project Cost	Annual Cost	Amount Paid as of Sept. 30, 2008	Prepaid Amt as of Sept. 30, 2008
CVD Growth of Well-Aligned Individual Single Walled Carbon Nanotubes (Dr. Jie Liu)	Dec. 1, 2005 - Nov. 30, 2007 (2 years)	$ 677,651	$ 338,826	$ 677,651	$ 0

Sponsored Research Agreements—California Institute of Technology

The terms of the sponsored research agreements between Arrowhead and the California Institute of Technology ("Caltech") are summarized in the following table:

Research Project	Period Covered	Total Estimated Project Cost	Annual Cost	Amount Paid as of Sept. 30, 2008	Prepaid Amt as of Sept. 30, 2008
Drug Discovery & Diagnostics (Dr. C. Patrick Collier)	Oct. 1, 2003 - Sept. 30, 2008 (5 years)	$1,393,806	$ 292,540	$1,152,266	$ 0
Gene Regulatory Networks (Dr. Eric H. Davidson)	Jan. 1, 2007 - Dec. 31, 2009 (3 years)	$ 765,000	$ 255,000	$ 404,800	$ 0

After fiscal 2007 year end, Arrowhead issued notices to terminate both sponsored research agreements with Caltech. The Company was responsible for any outstanding commitments that could not be canceled. The total cost to terminate the agreements and to settle the outstanding obligations was $201,000 and was fully satisfied at September 30, 2008.

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In January and July of 2007, Insert made contributions of $50,000 each to Caltech for laboratory research in the field of synthetic polymers for use primarily in drug delivery applications. Caltech has granted Calando (formerly known as Insert) an exclusive license to the patent rights and improvements in the field of synthetic polymers for drug delivery.

Sponsored Research Agreement—Stanford University

Arrowhead has exclusively licensed intellectual property from Stanford University ("Stanford") for a nanotech device designed to control the behavior of stem cells. Arrowhead funded additional research involving the device at Stanford to develop and commercialize the technology.

Research Project	Period Covered	Total Estimated Project Cost	Annual Cost	Amount Paid as of Sept. 30, 2008	Prepaid Amt as of Sept. 30, 2008
Microchip-based Biological Signal Delivery (Dr. Nicholas Melosh)	Jun. 1, 2005 - May 31, 2007 (2 years)	$600,000	$ 300,000	$ 600,000	$ 0

All payments under this agreement have been made and the agreement has been concluded.

Employment Agreements

On May 24, 2007, the Company entered into a Severance Agreement with each of R. Bruce Stewart, the Company's Chairman and Chief Executive Officer at that time, and Joseph T. Kingsley, the Company's Interim President and Chief Financial Officer at that time, to provide for payments to the officers in the event of their retirement or the termination of their employment. The agreements provide 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 will serve as Assistant to the President from January 14, 2008 through January 13, 2009 and he will be 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 the Executive'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 September 30, 2008, the Company had accrued $750,000 related to the Stewart Severance Agreement.

On June 11, 2008, the Company, entered into an Employment Agreement and a Stock Option Agreement (together with the Employment 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

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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.

NOTE 10. *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 4,738,310 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 September 30, 2008, there were options granted and outstanding to purchase 1,559,000 and 4,710,322 shares of common stock under the 2000 Stock Option Plan and the 2004 Equity Incentive Plan, respectively. During the year ended September 30, 2007, 1,445,000 options were granted under the 2004 Equity Incentive Plan.

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. Christopher Anzalone, the Company's new Chief Executive Officer. 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.

Effective October 1, 2005, the Company accounts for its stock options under SFAS 123R, using the retrospective method. Prior to October 1, 2005, Arrowhead accounted for employee stock option grants in accordance with Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees and Related Interpretations" (APB 25), and has adopted the "disclosure only" alternative described in Statement of Financial Accounting Standards (SFAS) No. 123, Accounting for Stock-Based Compensation, amended by SFAS No. 148 "Accounting for Stock Based Compensation-Transition and Disclosure."

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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	9 (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
Exercisable At September 30, 2008	4,522,283	2.96

Exercise Prices	Number of Options	Weighted Average Remaining Life in Years	Weighted Average Exercise Price
$1.00 – 6.89	8,007,632	7.9	$ 3.24

At September 30, 2008, there were 289,678 options available for future grants under Arrowhead's 2004 Equity Incentive Plan. The intrinsic value of the options exercised during fiscal 2008 and 2007 was approximately $69,000 and $616,000, respectively.

The fair value of the options granted by Arrowhead for the years ended September 30, 2008, 2007 and 2006 is estimated at $7,523,000, $2,346,000 and $4,702,000, respectively.

The aggregate fair value of options granted by Unidym, Calando and Tego for the years ended September 30, 2008, 2007 and 2006 is estimated at $685,000, $1,135,000 and $102,000, respectively.

As of September 30, 2008, the estimated fair value of the unvested options for Arrowhead is $7,226,000 with a weighted average remaining amortization period of 2.9 years.

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As of September 30, 2008, the estimated aggregate fair value of the unvested options for Unidym, Calando and Tego is $1,291,000 with a weighted average remaining amortization period of 3.2 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 3.04% to 5.10%, and expected life of five to six years. The weighted-average fair value of options granted by Arrowhead for the year ended September 30, 2008, 2007 and 2006 is estimated at $2.18, $2.48, and $2.10, respectively, and the weighted-average exercise price is estimated at $3.24, $4.97 and $4.79, respectively.

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

NOTE 11. *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 years ended September 30, 2008, 2007 and 2006, the Company had consolidated losses of $27,089,030, $29,931,118, and $18,997,209, respectively. The losses result in a deferred income tax benefit of approximately $10,700,000, for fiscal 2008, $11,823,000 for fiscal 2007 and $7,504,000 for fiscal 2006, offset by an increase in the valuation allowance for the same amount for Arrowhead. Since the Company is a development stage company, 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 12. *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 13. *RELATED PARTY TRANSACTIONS*

During the fiscal years ended September 30, 2008 and 2007, the Company's majority owned subsidiary, Unidym had product sales of $162,089 and $39,381, respectively, to one of its stockholders.

During the fiscal year ended September 30, 2008 the Company's majority owned subsidiary Calando paid $164,500 in consulting fees and made a $50,000 contribution to the laboratory of Dr. Mark Davis at Caltech. During fiscal 2007, the Company paid $164,000 in consulting fees and made a $100,000 contribution to the laboratory. Dr. Davis is a director and consultant for Calando.

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

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

The Company's purchase of Nanotope Series B added to the Company's previously acquired 5.78% ownership interest in Nanotope.

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

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

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

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NOTE 14. *SUBSEQUENT EVENTS*

Unidym Financing

On November 13, 2008, Unidym entered into a subscription agreement with Tokyo Electron Ventures, pursuant to which Unidym sold 1,111,112 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, Tokyo Electron Venures may in certain circumstances convert its Series C-1 Preferred stock into shares of preferred stock at a subsequent offering. TEL Venture's investment in Undiym 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 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.

After giving effect to the issuance of the Series C-1 issued in the transaction, Arrowhead retains majority ownership of Unidym and holds 51.0% of the outstanding equity of Unidym, or 36.3% on a fully diluted, as converted, basis.

Tego Repurchase of Securities from Arrowhead

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 scale back 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.

Calando Financing

On November 26, 2008, Calando entered into Unsecured Convertible Promissory Note Agreements for $2.7 million with accredited investors of which $1.1 million has been received. 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 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 Note for two times the then outstanding principal amount owed under to 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 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 it is outstanding, Calando may redeem a Note for the Redemption Amount.

To facilitate the above investment in Calando, Arrowhead subjugated 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. Arrowhead invested $200,000 in the note offering.

Termination of Unidym CEO

On December 14, 2008, the employment of Unidym's Chief Executive Officer and President, Arthur L. Swift, was terminated. Unidym has no continuing obligations under Mr. Swift's employment arrangement and the terms of a release are under negotiation. Under Unidym's option plan, Mr. Swift may exercise his vested options within ninety days of his termination date.

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NOTE 15. ***SUPPLEMENTARY QUARTERLY CONSOLIDATED FINANCIAL DATA (unaudited)***

	First Quarter Ended December 31, 2007	Second Quarter Ended March 31, 2008	Third Quarter Ended June 30, 2008	Fourth Quarter Ended September 30, 2008
Revenues:				
Net sales	$ 402,861	$ 724,766	$ 235,372	$ (59,798)
Costs and expenses:				
Salaries	3,001,991	3,398,721	3,786,132	3,533,717
Consulting	583,032	687,166	902,031	1,009,721
General & administrative	1,663,426	1,513,588	1,720,206	1,951,115
Research & development	1,778,875	1,839,854	3,620,983	4,904,816
Patents amortization	103,991	103,991	102,602	99,824
Total operating expenses	7,131,315	7,543,320	10,131,954	11,499,193
Operating loss	(6,728,454)	(6,818,554)	(9,896,582)	(11,558,991)
Other income (expenses), net	1,664,625	1,392,573	2,109,246	2,900,712
Loss from continuing operations	(5,063,829)	(5,425,981)	(7,787,336)	(8,658,279)
Loss from discontinued operations, net	(169,945)	(268,834)	285,174	—
Net income (loss)	$ (5,233,774)	$ (5,694,815)	$ (7,502,162)	$ (8,658,279)
Amounts per common share:				
Income (loss), continuing operations undiluted	$ (0.13)	$ (0.14)	$ (0.20)	$ (0.21)
Income (loss), discontinued operations	$ (0.01)	$ (0.01)	$ 0.01	$ —
Net loss per share, undiluted	$ (0.14)	$ (0.15)	$ (0.19)	$ (0.21)
Weighted-average shares, undiluted	38,626,023	38,754,239	38,891,995	40,484,907

	First Quarter Ended December 31, 2006	Second Quarter Ended March 31, 2007	Third Quarter Ended June 30, 2007	Fourth Quarter Ended September 30, 2007
Revenues:				
Net sales	$ 11,092	$ (3,697)	$ 622,599	$ 578,028
Operating and expenses:				
Salaries	1,618,299	1,993,589	2,772,874	3,626,504
Consulting	226,532	377,451	637,051	543,046
General & administrative	906,161	1,422,737	1,525,167	1,251,293
Research & development	1,368,252	3,411,416	13,024,517	3,179,639
Patents amortization	103,991	103,991	103,991	103,500
Total operating expenses	4,223,235	7,309,184	18,063,600	8,703,982
Operating loss	(4,212,143)	(7,312,881)	(17,441,001)	(8,125,954)
Other income (expenses), net	756,360	1,360,081	5,168,871	706,540
Loss from continuing operations	(3,455,783)	(5,952,800)	(12,272,130)	(7,419,414)
Loss from discontinued operations, net	(251,387)	(221,009)	(205,418)	(153,177)
Net income (loss)	$ (3,707,170)	$ (6,173,809)	$(12,477,548)	$ (7,572,591)
Amounts per common share:				
Income (loss), continuing operations undiluted	$ (0.10)	$ (0.17)	$ (0.33)	$ (0.19)
Income (loss), discontinued operations	$ (0.01)	$ (0.01)	$ (0.01)	$ (0.01)
Net loss per share, undiluted	$ (0.11)	$ (0.18)	$ (0.34)	$ (0.20)
Weighted-average shares, undiluted	34,181,399	34,232,149	36,422,464	38,602,847

Exhibit 10.41

UNIDYM, INC.

SUBSCRIPTION AGREEMENT

SERIES C-1 PREFERRED STOCK

SUBSCRIPTION AGREEMENT

THIS SUBSCRIPTION AGREEMENT (this "***Agreement***") is made as of the last date indicated on the signature pages hereto between Unidym, Inc., a Delaware corporation (the "***Company***"), and the undersigned investor party hereto ("***Investor***").

RECITALS

WHEREAS, the Company wishes to sell up to an aggregate of 1,111,112 shares of the Company's Series C-1 Preferred Stock ("***Shares***") to the Investor, at a purchase price of $1.80 per Share, and the Investor wishes to purchase Shares from the Company.

NOW, THEREFORE, in consideration of the mutual covenants, agreements and conditions, and upon acknowledgement of each of the parties of the receipt of valuable consideration, the parties herein agree as follows:

1. Purchase and Sale of Shares.

1.1 The Closing. At the Closing (as defined below), the Company shall issue and sell to Investor such number of Shares as is set forth immediately below Investor's name on the signature pages hereto. Investor shall pay an amount equal to $1.80 times the number of Shares to be purchased by the Investor (the "***Purchase Price***") in cash (by check or wire transfer) or by cancellation of indebtedness in United States Dollars to the Company to be held in escrow until the Closing, for release to the Company thereafter. Promptly after the Closing, the Company shall deliver to Investor a duly executed certificate representing the Shares which Investor is purchasing hereunder. The purchase and sale transaction contemplated hereby will close on the first business day immediately following the satisfaction of the Closing conditions set forth herein, which is targeted to be no later than 5:00 p.m., Pacific Time on November __, 2008, as such date and time may be modified by the Company in its sole discretion (such day, the "***Closing***").

1.2 Additional Closing(s).

(a) Conditions of Additional Closing(s). At any time and from time to time following the Closing, the Company may, at one or more additional closings (each an "***Additional Closing***"), without obtaining the signature, consent or permission of Investor, offer and sell to other investors (the "***New Investors***"), at a price of $1.80 per Share, up to that number of Shares that is equal to 1,111,112 Shares less the number of Shares previously issued and sold by the Company. New Investors may include persons or entities who are already owners of shares of the Company's Series C-1 Preferred Stock or other capital stock.

(b) Amendments. The Company and the New Investors purchasing Shares at each Additional Closing will execute a Subscription Agreement in substantially the same form hereof, and the New Investors will, to the extent not already a party thereto, execute counterpart signature pages to: (i) the Amended and Restated Investors' Rights Agreement in the form attached to this Agreement as Exhibit A, as amended (the "***Investors' Rights Agreement***"), (ii) the Amended and Restated Right of First Refusal and Co-Sale Agreement in the form attached to this Agreement as Exhibit B, as amended (the "***ROFR Agreement***"), and (iii) the Amended and Restated Voting Agreement in the form attached to this Agreement as Exhibit C, as amended (the "***Voting Agreement***") (the Investors' Rights Agreement, ROFR Agreement and Voting Agreement, as such agreements may be amended, collectively, the "***Related Agreements***"). Such New Investors will, upon delivery to the Company of such signature pages, become parties to, and bound by, the Related Agreements, each to the same extent as if they had been an Investor at the time of issuance of the first share of Series C-1 Preferred Stock.

(c) Status of New Investors. Upon the completion of each Additional Closing as provided in this Section 1.2, each New Investor will be deemed to be an "Investor" for all purposes of the Related Agreements.

2. Representations and Warranties of the Company. The Company hereby represents and warrants to Investor, that the statements in the following paragraphs of this Section 2 are all true and complete as of the date hereof:

2.1 Organization, Good Standing and Qualification. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware. The Company is duly qualified to transact business and is in good standing in each jurisdiction in which the failure to so qualify would reasonably be expected to have a material adverse effect on (a) the present or future business, assets, or operations, of the Company, taken as a whole or (b) the Company's ability to perform this Agreement or the Related Agreements (as defined below) (a "***Material Adverse Effect***").

2.2 Capitalization and Voting Rights.

(a) Authorized Stock. There are authorized for issuance 40,000,000 shares of common stock, par value $0.0001 (the "***Common Stock***") and 20,284,364 shares of preferred stock, par value $0.0001 (the "***Preferred Stock***"), of which 5,000,000 shares are designated as Series A Convertible Preferred Stock ("***Series A Preferred Stock***"), 5,673,252 shares are designated as Series B Senior Convertible Preferred Stock ("***Series B Preferred Stock***"), 8,500,000 shares are designated as Series C Senior Convertible Preferred Stock ("***Series C Preferred Stock***") and 1,111,112 shares are designated as Series C-1 Preferred Stock ("***Series C-1 Preferred Stock***"). Immediately prior to the Closing, the outstanding stock of the Company consists of the following:

(i) Common Stock. Three Million Seven Hundred Fifty Five Thousand (3,755,000) shares of issued and outstanding Common Stock.

(ii) Five Million (5,000,000) shares of issued and outstanding Series A Preferred Stock, which shares of Series A Preferred Stock are convertible into 1.680096462 shares of Common Stock upon (x) an involuntary or voluntary liquidation, dissolution and winding up of the Company, (y) a Deemed Liquidation Event (as such term is defined in the Restated Certificate (as defined below)) or (z) a Qualified IPO (as such term is defined in the Restated Certificate).

(iii) Five Million Six Hundred Seventy Three Thousand Two Hundred and Fifty Two (5,673,252) shares of issued and outstanding Series B Preferred Stock, which shares of Series B Preferred Stock are convertible into 1.000042304 shares of Common Stock.

(iv) Eight Million One Hundred Twenty Five Thousand Eight Hundred Eighty-Nine (8,125,889) shares of issued and outstanding Series C Preferred Stock.

(v) No shares of issued and outstanding Series C-1 Preferred Stock.

Upon the Closing, the rights, preferences and privileges of each series of Preferred Stock will be as stated in the Restated Certificate and as provided by law.

(b) Valid Issuance. The outstanding shares of Common Stock and Preferred Stock are all duly and validly authorized and issued, fully paid and nonassessable.

(c) Rights to Acquire. Except for (i) the conversion privileges of the Preferred Stock, (ii) the rights of first refusal provided in Section 4 of the Investors' Rights Agreement, (iii) the Five Million (5,000,000) shares of Common Stock reserved for issuance to employees, consultants and/or directors pursuant to the Company's 2006 Stock Option/Stock Issuance Plan (the "***Option Plan***"), of which options to purchase an aggregate of Three Million Nine Hundred Forty-Four Thousand Sixty-Nine (3,944,069) shares of Common Stock are currently outstanding, (iv) outstanding warrants to purchase Sixty Four Thousand (64,000) shares of Common Stock and (vi) outstanding restricted stock units for the issuance of One Million One Hundred and Four Thousand and Ten (1,104,010) shares of Common Stock, there are not outstanding any options, warrants, rights (including conversion or preemptive rights) or agreements for the purchase or acquisition from the Company of any shares of its capital stock.

(d) Voting of Shares. Other than the Voting Agreement, the Company is not a party or subject to any agreement or understanding and, to the Company's knowledge, there is no agreement or understanding between any persons and/or entities which affects or relates to the voting or giving of written consents with respect to any security or by a director of the Company.

(e) Market Stand-Off. To the Company's best knowledge, all outstanding shares of preferred stock of the Company and all capital stock of the Company issuable upon the exercise of outstanding employee incentive stock options are subject to a one hundred eighty (180) day "market stand-off" restriction upon an initial public offering by the Company resulting in at least $20 Million in gross proceeds pursuant to a registration statement filed with the Securities and Exchange Commission ("***SEC***") pursuant to the Securities Act of 1933, as amended (the "***Act***").

2.3 Subsidiaries. Except for (i) the minority ownership position in Nexeon MedSystems pursuant to the license agreement with Nanotech Catheter Solutions, (ii) the 50% ownership position in Ensysce Biosciences pursuant to the spin off of Ensysce Biosciences and license agreement with Ensysce Biosciences, and (iii) the 100% ownership position in Nanoconduction, Inc. as a result of a recently completed acquisition, the Company does not presently own or control, directly or indirectly, any interest in any other corporation, association, or other business entity. The Company is not a participant in any joint venture, partnership, or similar arrangement.

2.4 Authorization. All corporate action on the part of the Company, its officers, directors and stockholders necessary for the authorization, execution and delivery of this Agreement, the Related Agreements, the performance of all obligations of the Company hereunder and thereunder, and the authorization, sale and issuance of the Shares being sold hereunder, and the Common Stock issuable upon conversion of the Shares, has been taken or will be taken prior to the Closing. As of the Closing, this Agreement and the Related Agreements constitute valid and legally binding obligations of the Company, enforceable in accordance with their respective terms, except (i) as limited by applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies, and (iii) to the extent the indemnification provisions contained in the Related Agreements may be limited by applicable federal or state securities laws.

2.5 Valid Issuance of Preferred and Common Stock. The Shares that are being purchased by Investor hereunder, when issued, sold and delivered in accordance with the terms of this Agreement for the consideration expressed herein, will be duly and validly issued, fully paid and nonassessable and will be free of restrictions on transfer, other than restrictions on transfer, if any, (i) under this Agreement, the Investor's Rights Agreement and the ROFR Agreement, (ii) under applicable state and federal securities laws and (iii) otherwise imposed as a result of actions taken by Investor. The Common Stock issuable upon conversion of the Shares purchased under this Agreement has been duly and validly reserved for issuance and, upon issuance in accordance with the terms of the Company's Restated Certificate of Incorporation in the form attached hereto as Exhibit D-1 as amended by the Company's Certificate of

Amendment of Restated Certificate of Incorporation in the form attached hereto as Exhibit D-2 (the Restated Certificate of Incorporation, as amended, the "***Restated Certificate***"), will be duly and validly issued, fully paid and nonassessable and will be free of restrictions on transfer, other than restrictions on transfer, if any (i) under this Agreement, the Investor's Rights Agreement and the ROFR Agreement, (ii) under applicable state and federal securities laws and (iii) otherwise imposed as a result of actions taken by Investor.

2.6 Governmental Consents. No consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any federal, state or local governmental authority on the part of the Company is required in connection with the consummation of the transactions contemplated by this Agreement and the Related Agreements, except for such consents, approvals, orders, authorizations, registrations, qualifications, designations, declarations or filings which are not required to be obtained prior to the Closing, and such filings as are required pursuant to applicable federal and state securities laws and blue sky laws, which filings will be effected within the required statutory period.

2.7 Offering. Subject in part to the truth and accuracy of Investor's representations set forth in Section 3 of this Agreement, the offer, sale and issuance of the Shares as contemplated by this Agreement are exempt from the registration requirements of the Act, and the qualification or registration requirements of applicable state blue sky laws, as such registration requirements and laws currently exist.

2.8 Litigation. There is no action, suit, proceeding or investigation pending or, to the Company's knowledge, currently threatened in writing against the Company that questions the validity of this Agreement or the Related Agreements, or the right of the Company to enter into such agreements or to consummate the transactions contemplated hereby and thereby, or that would reasonably be expected to result in a Material Adverse Effect. The Company is not a party or subject to the provisions of any order, writ, injunction, judgment or decree of any court or government agency or instrumentality. There is no action, suit, proceeding or investigation by the Company currently pending or that the Company currently intends to initiate.

2.9 Proprietary Information Agreements. Each current employee of the Company has executed a Proprietary Information and Inventions Agreement in substantially the form provided to Investor upon request by Investor. The Company is not aware that any such employee is in violation thereof.

2.10 Compliance with Other Instruments. The Company is not in violation of any provision of its Restated Certificate or Bylaws nor, to its knowledge, of any instrument, judgment, order, writ, decree or contract, statute, rule or regulation to which the Company is subject and a violation of which would reasonably be expected to have a Material Adverse Effect. The execution, delivery and performance of this Agreement and the Related Agreements, and the consummation of the transactions contemplated hereby and thereby will not result in any such violation, or be in conflict with or constitute, with or without the passage of time and giving of notice, either a default under any such provision or an event that results in the creation of any lien, charge or encumbrance upon any assets of the Company or the suspension, revocation, impairment, forfeiture or nonrenewal of any material permit, license, authorization or approval applicable to the Company, its business or operations or any of its assets or properties.

2.11 Agreements; Action. Except for agreements explicitly contemplated hereby, there are no agreements or understandings between the Company and any of its officers, directors, affiliates or any affiliate thereof (except for quarterly allocations for services performed by Arrowhead) and except as set forth on Schedule 2.11,

(a) there are no agreements, understandings, instruments, contracts, judgments, orders, writs or decrees to which the Company is a party or by which it is bound that may involve

(i) obligations (contingent or otherwise) of, or payments to the Company, in excess of $10,000, other than obligations of, or payments to, the Company arising from purchase or sale agreements entered into in the ordinary course of business, or (ii) provisions materially restricting the development, manufacture or distribution of the Company's products or services, and

(b) The Company has not (i) declared or paid any dividends or authorized or made any distribution upon or with respect to any class or series of its capital stock, (ii) made any loans or advances to any person, other than ordinary advances for travel expenses, or (iii) sold, exchanged or otherwise disposed of any of its assets or rights.

For the purposes of subsections (a) and (b) above, all indebtedness, liabilities, agreements, understandings, instruments and contracts involving the same person or entity (including persons or entities the Company has reason to believe are affiliated therewith) shall be aggregated for the purpose of meeting the individual minimum dollar amounts of such subsections.

2.12 Financial Statements. Attached hereto in Schedule 2.12 is the Company's unaudited financial statements (balance sheet, income statement and statement of cash flows) dated June 30, 2008 ("Financial Statements"). The Financial Statements have been prepared in accordance with U.S. generally accepted accounting principles applied on a consistent basis throughout the periods indicated and with each other. The Financial Statements are true, correct and complete and fairly present the financial condition and operating results of the Company as of the dates, and for the periods, indicated therein, subject to normal year-end audit adjustments.

2.13 Related-Party Transactions. No employee, officer or director of the Company or member of his or her immediate family is indebted to the Company, nor is the Company indebted (or committed to make loans or extend or guarantee credit) to any of them. To the best of the Company's knowledge, other than in Arrowhead Research Corporation, a Delaware corporation ("***Arrowhead***") or in any of Arrowhead's subsidiaries, none of such persons has any direct or indirect ownership interest in any firm or corporation with which the Company is affiliated or with which the Company has a business relationship, or any firm or corporation that competes with the Company, except that employees, officers or directors of the Company and members of their immediate families may own stock in publicly traded companies that may compete with the Company. No member of the immediate family of any officer or director of the Company is directly or indirectly interested in any material contract with the Company.

2.14 No Undisclosed Liabilities. Except as set forth in the Financial Statements and the recently accrued liabilities associated with the acquisition of Nanoconduction, Inc., the Company does not have any liabilities (whether accrued, absolute, unliquidated, contingent or otherwise, whether or not known to the Company, whether due or to become due and regardless of when asserted) arising out of transactions entered into at or prior to the Closing, or any action or inaction at or prior to the Closing or any state of facts existing at or prior to the Closing other than (i) liabilities and obligations that have arisen after June 30, 2008 in the ordinary course of business (none of which is material and none of which is a liability resulting from breach of contract, breach of warranty, tort, infringement, claim or lawsuit), or (ii) obligations under contracts and commitments incurred in the ordinary course of business that would not be required to be reflected in financial statements prepared in accordance with generally accepted accounting principles. The Company is not a guarantor or indemnitor of any indebtedness of any other person, firm or corporation.

2.15 Permits. The Company has all franchises, permits, licenses and any similar authority necessary for the conduct of its business as now being conducted by it, except to the extent the lack of which would not reasonably be expected to have a Material Adversely Effect. The Company is not in default under any of such franchises, permits, licenses or other similar authority which would be reasonably expected to have a Material Adverse Effect.

2.16 Environmental and Safety Laws.

(a) Except as set forth in Section 2.15(b), to its knowledge, the Company is not in violation of any applicable statute, law or regulation relating to the environment or occupational health and safety, and, to its knowledge, no material expenditures are or will be required in order to comply with any such existing statute, law or regulation.

(b) The US Environmental Protection Agency (the "***EPA***") has issued recent guidance regarding the classification of carbon nanotubes under the Toxic Substances Control Act. The EPA has stated that it now considers carbon nanotubes to be "new chemicals" rather than materials previously listed on the TSCA Inventory, such as synthetic graphite or other carbon compounds. The Company is in the process of reviewing its compliance with this guidance and has filed paperwork with the EPA. Accordingly, the Company withholds any representation or warranty regarding the matters disclosed in this Section 2.15(b), including its compliance with the new EPA guidance.

2.17 Disclosure. The Company has fully provided Investor with all the information that Investor has requested in writing for deciding whether to purchase the Shares. Neither this Agreement (including all the exhibits and schedules hereto) nor any other statements or certificates made or delivered in connection herewith contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements herein or therein not misleading in light of the circumstances under which they were made.

2.18 Registration Rights. Except as provided in the Investors' Rights Agreement, the Company has not granted or agreed to grant any registration rights, including piggyback rights, to any person or entity.

2.19 Title to Property and Assets. The property and assets used by the Company in its business are owned by the Company free and clear of all mortgages, liens, loans and encumbrances, except for (i) statutory liens for the payment of current taxes that are not yet delinquent and (ii) for liens, encumbrances and security interests that arise in the ordinary course of business and/or pursuant to applicable law, and minor defects in title, none of which, individually or in the aggregate, would reasonably be expected to have a Material Adverse Effect. With respect to the property and assets it leases, the Company is in compliance with such leases and, to its knowledge, holds a valid leasehold interest free of any liens, claims or encumbrances, subject to clauses (i)-(ii) of the foregoing sentence, except to the extent the failure to be in compliance or hold a valid leasehold interest would not reasonably be expected to have a Material Adverse Effect.

2.20 Labor Agreements and Actions. The Company is not bound by or subject to any contract, commitment or arrangement with any labor union, and no labor union has requested or, to the Company's knowledge, has sought to represent any of the employees, representatives or agents of the Company. There is no strike or other labor dispute involving the Company pending, or to the Company's knowledge, threatened in writing, that would reasonably be expected to have a Material Adverse Effect, nor is the Company aware of any labor organization activity involving its employees. The Company is not aware that any officer or key employee, or that any group of key employees, intends to terminate their employment with the Company, nor does the Company have a present intention to terminate the employment of any of the foregoing. The employment of each officer and employee of the Company is terminable at the will of the Company. The Company is not a party to or bound by any currently effective employment contract, deferred compensation agreement, bonus plan, incentive plan, profit sharing plan, retirement agreement or other employee compensation agreement, except that pursuant to his employment arrangement, the Chief

Executive Officer of the Company is entitled to certain severance payments and acceleration of options if he is terminated or constructively terminated without cause. To its knowledge, the Company has complied in all material respects with all applicable state and federal equal employment opportunity and other laws related to employment.

2.21 Brokers Fees. The Company expects to pay third-party finders or advisors finder's fees (in cash and/or equity) for Shares placed by such third party. For the sake of clarity, no finder's fees will be paid for Shares not placed by a third-party finder or advisor.

2.22 Intellectual Property. To its knowledge, the Company has rights to all patents, patent applications, trademarks, service marks, trade names, copyrights, trade secrets, licenses, inventions, information and proprietary rights and processes (collectively, "Intellectual Property") it needs to operate its business as currently conducted, other than Intellectual Property that it reasonable believes is invalid or it can obtain rights to through a license or cross-licensing arrangement. The Company has not received any communications alleging that the Company has violated or, by conducting its business as presently proposed, would violate any of the Intellectual Property of any other person or entity. The Company is not aware that any of its employees is obligated under any contract (including licenses, covenants or commitments of any nature) or other agreement, or subject to any judgment, decree or order of any court or administrative agency, that would interfere with the use of his or her best efforts to promote the interests of the Company or that would conflict with the Company's business as presently proposed to be conducted. Neither the execution nor delivery of this Agreement or the Investors' Rights Agreement, nor the carrying on of the Company's business by the employees of the Company, nor the conduct of the Company's business as presently proposed, will, to the Company's knowledge, conflict with or result in a breach of the terms, conditions or provisions of, or constitute a default under, any contract, covenant or instrument under which any of such employees is now obligated. The Company does not believe it is or will be necessary to utilize any inventions of any of its employees (or people it currently intends to hire) made prior to their employment by the Company.

2.23 Tax Returns and Payments. There are no federal, state, county, local or foreign taxes dues and payable by the Company which have not been timely paid. There are no accrued and unpaid federal, state, country, local or foreign taxes of the Company which are due, whether or not assessed or disputed. There have been no examinations or audits of any tax returns or reports by any applicable federal, state, local or foreign governmental agency. The Company has duly and timely filed all federal, state, county, local and foreign tax returns required to have been filed by it and there are in effect no waivers of applicable statutes of limitations with respect to taxes for any year.

2.24 Insurance. The Company has in full force and effect fire and casualty insurance policies with extended coverage, sufficient in amount (subject to reasonable deductions) to allow it to replace any of its properties that might be damaged or destroyed.

2.25 Changes. Since June 30, 2008, and at all times up to the Closing, except to the extent arising out of the Company's acquisition of Nanoconduction, Inc., there have not been:

a. any material change in the assets, liabilities, financial condition or operating results of the Company from that reflected in the Financial Statements, except changes in the ordinary course of business that have not been, in the aggregate, materially adverse;
b. any damage, destruction or loss, whether or not covered by insurance, materially and adversely affecting the assets, properties, financial condition, operating results, prospects or business of the Company (as such business is presently conducted and as it is proposed to be conducted);

c. any material change or amendment to a material contract or arrangement by which the Company or any of its assets or properties is bound or subject;
d. any declaration, setting aside or payment or other distribution in respect of any of the Company's capital stock, or any direct or indirect redemption, purchase or other acquisition of any of such stock by the Company;
e. any sale, assignment or transfer of any patents, trademarks, copyrights, trade secrets or other intangible assets;
f. to the Company's knowledge, any other event or condition of any character that might materially and adversely affect the assets, properties, financial condition, operating results or business of the Company (as such business is presently conducted and as it is proposed to be conducted); or
g. any agreement or commitment by the Company to do any of the things described in this Section 2.25.

2.26 ERISA. The Company has made all required contributions and has no liability to any such employee benefit plan, other than liability for health plan continuation coverage described in Part 6 of Title I(B) of Employee Retirement Income Security Act of 1974, as amended, and has complied in all material respects with all applicable laws for any such employee benefit plan.

3. Representations and Warranties of Investor. Investor hereby, severally and not jointly, represents, warrants and covenants to the Company that:

3.1 Authorization. Investor has full power and authority to enter into this Agreement and the Related Agreements to which it is a party, and each such agreement constitutes its valid and legally binding obligation, enforceable in accordance with its terms except (i) as limited by applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies, and (iii) to the extent the indemnification provisions contained in the Related Agreements may be limited by applicable federal or state securities laws.

3.2 Purchase Entirely for Own Account. This Agreement is made with Investor in reliance upon Investor's representation to the Company, which by Investor's execution of this Agreement, Investor hereby confirms that the Shares will be acquired for investment for Investor's own account, not as a nominee or agent, and not with a view to the resale or distribution of any part thereof, and that Investor has no present intention of selling, granting any participation in or otherwise distributing the same. By executing this Agreement, Investor further represents that Investor does not have any contract, undertaking, agreement or arrangement with any person to sell, transfer or grant participations to such person or to any third person, with respect to any of the Shares.

3.3 Disclosure of Information. Investor believes it has received all the information it considers necessary or appropriate for deciding whether to purchase the Shares. Investor further represents that it has had an opportunity to ask questions and receive answers from the Company regarding the terms and conditions of the offering of the Shares and the business, properties, prospects and financial condition of the Company. The foregoing, however, does not limit or modify the representations and warranties of the Company in Section 2 of this Agreement or the right of Investor to rely thereon.

3.4 Investment Experience. Investor is an investor in securities of companies in the development stage and acknowledges that he/she/it is able to bear the economic risk of its investment, and has such knowledge and experience in financial or business matters that it is capable of evaluating the merits and risks of the investment in the Shares. If other than an individual, Investor also represents it has not been organized for the purpose of acquiring the Shares.

3.5 Accredited Investor. Investor is an "accredited investor" within the meaning of SEC Rule 501 of Regulation D and has reviewed Schedule 3.5 before making this representation to the Company. All of the information in the Investor Questionnaire delivered by Investor to the Company in connection with Investor's purchase of the Shares remains complete, true and correct as of the Closing or the Additional Closing, as applicable.

3.6 Restricted Securities. Investor understands that the Shares it is purchasing are characterized as "restricted securities" under the federal securities laws inasmuch as they are being acquired from the Company in a transaction not involving a public offering, and that under such laws and applicable regulations, such Shares may be resold without registration under the Act only in certain limited circumstances. In the absence of an effective registration statement covering the Shares or an available exemption from registration under the Act, the Shares (and any Common Stock issued on conversion of the Shares) must be held indefinitely.

3.7 No Brokers. Investor has not taken any action which would give rise to any claim by any person for brokerage commissions, finder's fees or similar payments relating to this Agreement or the transactions contemplated hereby.

3.8 Legends. It is understood that the certificates evidencing the Shares may bear one or all of the following legends:

(a) "These securities have not been registered under the Securities Act of 1933, as amended. They may not be sold, offered for sale, pledged or hypothecated in the absence of a registration statement in effect with respect to the securities under such Act or an opinion of counsel satisfactory to the Company that such registration is not required or unless sold pursuant to Rule 144 of such Act."

(b) Legends required to indicate that the Shares are subject to the terms of the Investors Rights Agreement and ROFR Agreement.

(c) Any legend required by applicable laws.

4. Optional Conversion of the Shares.

4.1 Optional Conversion. Each Investor shall have the right, by giving notice thereof to the Company pursuant to this Section 4, to convert all (but not less than all) of the outstanding Shares held by the Investor (and purchased under this Agreement) into shares of the Company's Qualified Stock (as defined below), pursuant to the provisions of this Section 4 concurrently with the closing of a Qualified Transaction (as defined below)(or the first closing in a series of closings).

4.2 Qualified Transaction. A "***Qualified Transaction***" shall mean the Company's receipt of at least $7,000,000 in proceeds from: (i) a sale by the Company, in one or more related transactions, of a new series of preferred stock (the "***Qualified Stock***") in a financing event (the "***Qualified Financing***"); or (ii) a combination of (a) a sale of Qualified Stock as described in Section 4.2(i), and (b) the sale by the Company of some or all of its assets and/or business operations in materials for anti-static polymers.

4.3 Notice. The Company shall provide the Investor with a notice no later than 15 business days prior to the closing of the Qualified Transaction indicating the proposed closing date, together with the terms and conditions of the Qualified Transactions, the rights, preferences and privileges of the Qualified Stock and

the conversion calculation determined in accordance with Section 4.4 below. Each Investor shall have the right to exercise its rights to convert its Shares into the Qualified Stock under Section 4.1 by giving notice thereof to the Company no later than 5 business days prior to the proposed closing date.

4.4 Conversion Calculation. In connection with a Qualified Transaction, the Shares shall be converted into Qualified Stock in accordance with the following formula:

A = B * [(C ÷ D) * E]

A = the number of shares of Qualified Stock issuable to Investor in connection with the Qualified Transaction;

B = the number of Shares purchased by Investor pursuant to this Agreement;

C = $1.80;

D = the price per share at which the Qualified Stock is sold to investors in the Qualified Financing; and

E = a variable number between 1.00 and 1.10, which will adjust depending on the month that the closing of the Qualified Financing occurs (or the month that the first closing in a series of related closings occurs). If the closing of the Qualified Financing occurs in November 2008, this number shall be 1.00; if the closing of the Qualified Financing occurs in December 2008, this number shall be 1.02; if the closing of the Qualified Financing occurs in January 2009, this number shall be 1.04; if the closing of the Qualified Financing occurs in February 2009, this number shall be 1.06; if the closing of the Qualified Financing occurs in March 2009, this number shall be 1.08; if the closing of the Qualified Financing occurs in April 2009, or at any time after April 2009, this number shall be 1.10. In no event shall this number exceed 1.10.

For the avoidance of doubt, the calculation in this Section 4.3 shall be performed in the following order: (i) divide C by D, (ii) multiply the amount in (i) by E, and (iii) multiply the amount in (ii) by B.

4.5 Deliverables. Upon any conversion of Shares under this Section 4, the Investor will execute and deliver to the Company, at the closing of such Qualified Financing, such stock purchase agreement, investors' rights agreement, co-sale agreement, voting and/or other agreements as are entered into by the investors in the Qualified Financing generally. The Company shall not be obligated to issue certificates evidencing the shares of Qualified Stock issuable upon conversion unless the certificates evidencing the Shares are either delivered to the Company or its transfer agent, or the Investor notifies the Company or its transfer agent that such certificates have been lost, stolen or destroyed and executes an agreement satisfactory to the Company to indemnify the Company from any loss incurred by it in connection with such certificates. Upon the occurrence of such conversion of the Shares, the Investor shall surrender the certificates representing such Shares at the office of the Company or any transfer agent for the Company's capital stock. Thereupon, there shall be issued and delivered to the Investor promptly at such office and in its name as shown on such surrendered certificate or certificates, a certificate or certificates for the number of shares of Qualified Stock into which the Shares surrendered were convertible on the date on which such automatic conversion occurred.

5. Optional Put Rights. The Investor shall have optional put rights as set forth in this Section 5.

5.1 Failure to Enter into Joint Development Agreement (Put A Right).

(a) Notice. In the event that the Company and the Investor do not enter into a joint development agreement by June 30, 2009, the Investor shall have until 5:00 p.m. (California Time) on July 31, 2009 (such time, the "***Put A Deadline***"), to deliver a

written notice to the Company (the "***Put A Notice***"), requesting that the Company repurchase all (but no less than all) of the Shares purchased under this Agreement or issued under Section 4 hereof, as applicable. The Investor shall have no rights under this Section 5.1 in the event that (i) the Company and the Investor enter into a joint development agreement by June 30, 2009, or (ii) the Investor fails to deliver a Put A Notice to the Company by the Put A Deadline.

(b) Put A Right. Upon timely receipt of a Put A Notice in accordance with Section 5.1(a), the Company shall purchase, within 270 days of receipt of the Put A Notice:

(i) 100% of the outstanding Shares held by the Investor that were purchased pursuant to this Agreement, at a purchase price of (a) $1.80 multiplied by (b) the number of Shares being repurchased, or

(ii) 100% of the Qualified Stock held by the Investor and acquired in accordance with the provisions of Section 4, at a purchase price of (a) the price per share at which the Qualified Stock is sold to investors in the Qualified Financing, multiplied by (b) the number of shares of Qualified Stock being repurchased.

(c) Additional Terms. Notwithstanding anything to the contrary, in no event shall the aggregate purchase price paid under Section 5.1 exceed $2,000,000. Following the purchase of shares under Section 5.1, this Agreement shall terminate, and the Company shall have no further obligations to Investor under this Agreement.

5.2 Failure to Achieve Cash Flow Requirement (Put B Right).

(a) Notice. In the event that the Company has failed to achieve the Cash Flow Requirement (as defined below) by June 30, 2009, the Investor shall have until 5:00 p.m. (California Time) on July 31, 2009 (such time, the "***Put B Deadline***"), to deliver a written notice to the Company (the "***Put B Notice***"), requesting that the Company repurchase all (but no less than all) of the Shares purchased under this Agreement. The Investor shall have no rights under this Section 5.2 in the event that (i) the Company has achieved the Cash Flow Requirement by June 30, 2009, or (ii) the Investor fails to deliver a Put B Notice to the Company by the Put B Deadline. "Cash Flow Requirement" shall mean the receipt by the Company of cash proceeds of at least $7,000,000 during the period from the date of this Agreement through June 30, 2009 from any combination of (i) the sale by the Company of any equity securities of the Company (other than the sale of the Shares); (ii) the sale or license by the Company of some or all of its assets and/or business operations in materials for anti-static polymers and other applications such as carbon fibers; (iii) the sale by the Company of its shares in Nanoconduction, Ensysce Biosciences, or Nexeon MedSystems; or (iv) net cash flow from the Company's operations during such period (it being understood that if such net cash flow is negative, then the amount for purposes of this clause (iv) shall be zero).

(b) Put B Right. Upon timely receipt of a Put B Notice in accordance with Section 5.2(a), the Company shall purchase, within 10 days of receipt of the Put B Notice, 100% of the outstanding Shares held by the Investor that were purchased pursuant to this Agreement, at a purchase price of (a) $2.16 multiplied by (b) the number of Shares being repurchased.

(c) Additional Terms. Notwithstanding anything to the contrary, in no event shall the aggregate purchase price paid under Section 5.2 exceed $2,400,000. Following the purchase of shares under Section 5.2, this Agreement shall terminate, and the Company shall have no further obligations to Investor under this Agreement.

5.3 Security. The Company agrees that the obligation of the Company to repurchase the Shares purchased under this Agreement or issued under Section 4 hereof, as applicable, pursuant to this Section 5 shall be secured by a security interest in favor of Investor in all of the assets of the Company (subject to certain exclusions), as set forth in the Security Agreement in the form of Exhibit E hereof.

6. Conditions to Investor's Obligations at Closing. The following conditions must be satisfied by the Company, unless waived by Investor, in Investor's sole and absolute discretion.

6.1 Representations and Warranties. The representations and warranties of the Company contained in Section 2 shall be true on and as of the Closing with the same effect as though such representations and warranties had been made on and as of the date of the Closing.

6.2 Performance. The Company shall have performed and complied with all agreements, obligations and conditions contained in this Agreement that are required to be performed or complied with by it on or before the Closing.

6.3 Qualifications. All authorizations, approvals or permits, if any, of any governmental authority or regulatory body of the United States or of any state that are required in connection with the lawful issuance and sale of the Shares pursuant to this Agreement shall be duly obtained and effective, other than such authorizations, approvals or permits or other filings which may be timely made after such issuance and sale of the Shares.

6.4 Amendment to Restated Certificate. The Company shall have filed the Certificate of Amendment of Restated Certificate of Incorporation in the form attached hereto as Exhibit D-2 with the Delaware Secretary of State.

6.5 Proceedings and Documents. All corporate and other proceedings in connection with the transactions contemplated at the Closing and all documents incident thereto shall be reasonably satisfactory in form and substance to Investor, and Investor shall have received all such counterpart original and certified or other copies of such documents as may be reasonably requested.

6.6 Amendment to Investors' Rights Agreement. The Company and certain of the Company's existing shareholders shall have executed and delivered the Amendment No. 1 to the Amended and Restated Investors' Rights Agreement in the form attached to this Agreement as Exhibit A-2.

6.7 Amendment to ROFR Agreement. The Company and certain of the Company's existing shareholders shall have executed and delivered the Amendment No. 1 to the Amended and Restated Right of First Refusal and Co-Sale Agreement in the form attached to this Agreement as Exhibit B-2.

6.8 Amendment to Voting Agreement. The Company and certain of the Company's existing shareholders shall have executed and delivered the Amendment No. 1 to the Amended and Restated Investors' Rights Agreement in the form attached to this Agreement as Exhibit C-2.

6.9 Security Agreement. The Company shall have executed and delivered the Security Agreement in the form attached to this Agreement as Exhibit E, and all UCC-1 financing statements and other documents which the Investor may reasonably request to perfect its security interest in the collateral described therein.

6.10 General. The holders of Common Stock and/or Preferred Stock shall have amended any other agreement or arrangement, or given any further consent required to allow the Company to execute and perform this Agreement and the Related Agreements.

7. Conditions to the Company's Obligations at Closing. The following conditions must be satisfied by Investor, unless waived in writing by the Company, in the Company's sole and absolute discretion.

7.1 Representations and Warranties. The representations and warranties of the Investor contained in Section 3 shall be true on and as of the Closing or the Additional Closing (as applicable) with the same effect as though such representations and warranties had been made on and as of the date of such closing.

7.2 Payment of the Purchase Price. Investor shall have delivered to the Company the purchase price for the Shares.

7.3 Amendment to Restated Certificate. The Company shall have filed the Certificate of Amendment of Restated Certificate of Incorporation in the form attached hereto as Exhibit D-2 with the Delaware Secretary of State.

7.4 Securities Exemptions. The offer and sale of the Shares to Investor pursuant to this Agreement shall be exempt from the registration requirements of the Act, the qualification requirements of the California General Corporation Law and the registration and/or qualification requirements of all other applicable state securities laws.

7.5 Proceedings and Documents. All corporate and other proceedings in connection with the transactions contemplated at the Closing or the Additional Closing (as applicable) and all documents incident thereto shall be reasonably satisfactory in form and substance to the Company, and the Company shall have received all such counterpart original and certified or other copies of such documents as may be reasonably requested.

7.6 Investors' Rights Agreement. The Investor shall have executed and delivered a counterpart signature page to the Investors' Rights Agreement, and certain of the Company's existing shareholders and Investor shall have executed and delivered the Amendment No. 1 to the Amended and Restated Investors' Rights Agreement in the form attached to this Agreement as Exhibit A-2.

7.7 ROFR Agreement. The Investor shall have executed and delivered a counterpart signature page to the ROFR Agreement, and certain of the Company's existing shareholders and Investor shall have executed and delivered the Amendment No. 1 to the Amended and Restated Right of First Refusal and Co-Sale Agreement in the form attached to this Agreement as Exhibit B-2.

7.8 Voting Agreement. The Investor shall have executed and delivered a counterpart signature page to the Voting Agreement, and certain of the Company's existing shareholders and Investor shall have executed and delivered the Amendment No. 1 to the Amended and Restated Investors' Rights Agreement in the form attached to this Agreement as Exhibit C-2.

7.9 General. The Investor shall have amended any other agreement or arrangement, or given any further consent required to allow the Company to execute and perform this Agreement and the Related Agreements.

8. Miscellaneous.

8.1 Survival. The warranties, representations and covenants of the Company and Investor contained in or made pursuant to this Agreement shall survive the execution and delivery of this Agreement and the Closing or the Additional Closing (as applicable) and shall in no way be affected by any investigation of the subject matter thereof made by or on behalf of Investor or the Company.

8.2 Successors and Assigns. Except as otherwise provided herein, the terms and conditions of this Agreement shall inure to the benefit of, and be binding upon, the respective successors and assigns of the parties (including transferees of any Shares). Nothing in this Agreement, express or implied, is intended to confer upon any party, other than the parties hereto or their respective successors and assigns, any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement.

8.3 Governing Law. This Agreement shall be governed by and construed under the laws of the State of California as applied to agreements among California residents entered into and to be performed entirely within California, except with respect to conflict of laws.

8.4 Titles and Subtitles. The titles and subtitles used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

8.5 Notices. All notices required or permitted hereunder shall be in writing and shall be deemed effectively given: (i) upon personal delivery to the party to be notified, (ii) when sent by confirmed telex or facsimile if sent during normal business hours of the recipient, if not, then on the next business day; (iii) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid; or (iv) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the address as set forth on the signature page hereof or at such other address as such party may designate by ten (10) days' advance written notice to the other parties hereto.

8.6 Responsibility for Brokers Fees. Investor indemnifies and holds harmless the Company from any liability for any commission or compensation in the nature of a finders' fee (and the costs and expenses of defending against such liability or asserted liability) for which Investor or any of its officers, partners, employees or representatives is responsible. The Company indemnifies and holds harmless Investor from any liability for any commission or compensation in the nature of a finders' fee (and the costs and expenses of defending against such liability or asserted liability) for which the Company or any of its officers, employees or representatives is responsible.

8.7 Aggregation of Stock. All issued and outstanding shares of the Series C-1 Preferred Stock and Common Stock issued upon conversion thereof held or acquired by affiliated entities or persons shall be aggregated together for the purpose of determining the availability of any rights under this Agreement.

8.8 Amendments and Waivers. Any term of this Agreement may be amended, and the observance of any term of this Agreement may be waived (either generally or in a particular instance and either retroactively or prospectively), only with the written consent of the Company and Investor.

8.9 Severability. If one or more provisions of this Agreement are held to be unenforceable under applicable law, such provision shall be excluded from this Agreement and the balance of the Agreement shall be interpreted as if such provision were so excluded and shall be enforceable in accordance with its terms.

8.10 Entire Agreement. This Agreement and the documents referred to herein constitute the entire agreement among the parties, and this Agreement supersedes all prior and contemporaneous written and oral agreements, relating to the subject matter hereof.

8.11 Counterparts; Facsimile/PDF Signatures. This Agreement may be executed in two or more counterparts, and by facsimile signatures or portable document format (.pdf or similar format), each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[SIGNATURE PAGE FOLLOWS]

[Company Signature Page to Subscription Agreement]

Dated: NOVEMBER 13, 2008

COMPANY:

UNIDYM, INC.
a Delaware corporation

By: /S/ ARTHUR L. SWIFT
Arthur L. Swift
CEO & President

Address: 1430 Obrien Drive
Menlo Park, CA 94025

I HEREBY REPRESENT THAT I HAVE READ AND UNDERSTOOD THE SUBSCRIPTION AGREEMENT.

Dated: November 13, 2008

Subscription: I hereby subscribe for the following number of Shares at the Purchase Price indicated:

Total Number of Shares: 1,111,112

Total Purchase Price ($1.80 Per Share): $2,000,000

Tokyo Electron Ventures
Please print the exact name(s) in which the Shares will be issued

Print Name of Signer:	M. Yamaguchi
Signature:	/s/ Mike Yamaguchi
Title of Signer (if purchaser is an entity):	President

SECURITY AGREEMENT

THIS SECURITY AGREEMENT (this "Agreement"), dated as of November __, 2008, is made between Unidym, Inc., a Delaware corporation ("Debtor") and TEL Venture Capital, Inc., a Delaware corporation ("Secured Party").

Debtor and Secured Party hereby agree as follows:

SECTION 1 Definitions; Interpretation.

(a) As used in this Agreement, the following terms shall have the following meanings:

"Collateral" has the meaning set forth in Section 2.

"Contingent Obligations" means the obligations of Debtor to pay Secured Party under or in connection with the exercise of Secured Party's put rights (the "Put Rights") pursuant to Section 5.1 and 5.2 of the Subscription Agreement, including interest that accrues after the commencement by or against Debtor of any bankruptcy or insolvency proceeding naming such Person as the debtor in such proceeding.

"Event of Default" has the meaning set forth in Section 7.

"Lien" means any mortgage, deed of trust, pledge, security interest, assignment, deposit arrangement, charge or encumbrance, lien, or other type of preferential arrangement.

"Partnership and LLC Collateral" has the meaning set forth in Section 5.

"Permitted Lien" means (i) any Lien in favor of Secured Party; (ii) any Lien that is subordinate to the Lien on the Collateral created by this Agreement; (iii) any Liens existing as of the date hereof and disclosed in writing to Secured Party; (iv) Liens (A) upon or in any property acquired or held by Debtor to secure the purchase price of such property or indebtedness incurred solely for the purpose of financing the acquisition of such property, or (B) existing on such property at the time of its acquisition, provided that the Lien is confined solely to the property so acquired and improvements thereon; and (v) other Liens which arise in the ordinary course of business and do not materially impair Debtor's ownership or use of the Collateral or the value thereof.

"Person" means an individual, corporation, partnership, joint venture, trust, unincorporated organization, governmental agency or authority, or any other entity of whatever nature.

"Pledged Collateral" means Debtor's (i) investment property and (ii) Partnership and LLC Collateral, including any ownership interests in any subsidiaries of Debtor.

"Pledged Collateral Agreements" means any shareholders agreement, operating agreement, partnership agreement, voting trust, proxy agreement or other agreement or understanding with respect to any Pledged Collateral.

"Subscription Agreement" means the Subscription Agreement dated November __, 2008 between Debtor and Secured Party.

"UCC" means the Uniform Commercial Code as the same may, from time to time, be in effect in the State of California.

(b) Where applicable and except as otherwise defined herein, terms used in this Agreement shall have the meanings assigned to them in the UCC.

(c) In this Agreement, (i) the meaning of defined terms shall be equally applicable to both the singular and plural forms of the terms defined; and (ii) the captions and headings are for convenience of reference only and shall not affect the construction of this Agreement.

SECTION 2 Security Interest. As security for the payment and performance of the Contingent Obligations, Debtor hereby grants to Secured Party a security interest in all of Debtor's right, title and interest in, to and under all of its personal property, wherever located and whether now existing or owned or hereafter acquired or arising, including all accounts, chattel paper, commercial tort claims, deposit accounts, documents, equipment (including all fixtures), general intangibles, instruments, inventory, investment property, letter-of-credit rights, other goods, money and all products, proceeds and supporting obligations of any and all of the foregoing (collectively, the "Collateral"); provided that Collateral does not include Debtor's shares in Ensysce Biosciences and the Debtor's License Agreement dated April 17, 2007 with William Marsh Rice University (the "Rice University Agreement"). This Agreement shall create a continuing security interest in the Collateral which shall remain in effect until terminated in accordance with Section 18 hereof.

SECTION 3 Financing Statements and other Action.

(a) Debtor hereby authorizes Secured Party to file at any time and from time to time any financing statements describing the Collateral, and Debtor shall execute and deliver to Secured Party, and Debtor hereby authorizes Secured Party to file (with or without Debtor's signature), at any time and from time to time, all amendments to financing statements, assignments, continuation financing statements, termination statements, account control agreements, and other documents and instruments, in form reasonably satisfactory to Secured Party, as Secured Party may reasonably request, to perfect and continue perfected, maintain the priority of or provide notice of the security interest of Secured Party in the Collateral and to accomplish the purposes of this Agreement. Without limiting the generality of the foregoing, Debtor ratifies and authorizes the filing by Secured Party of any financing statements filed prior to the date hereof.

(b) Upon request of Secured Party, Debtor will join with Secured Party in notifying any third party who has possession of any Collateral of Secured Party's security interest therein and obtaining an acknowledgment from the third party that it is holding the Collateral for the benefit of Secured Party.

(c) Upon request of Secured Party, Debtor (i) shall cause certificates to be issued in respect of any uncertificated Pledged Collateral, (ii) shall exchange certificated Pledged Collateral for certificates of larger or smaller denominations, and (iii) shall cause any securities intermediaries to show on their books that Secured Party is the entitlement holder with respect to any Pledged Collateral.

(d) Debtor will not create any chattel paper without placing a legend on the chattel paper acceptable to Secured Party indicating that Secured Party has a security interest in the chattel paper.

SECTION 4 Representations and Warranties. Debtor represents and warrants to Secured Party that:

(a) Debtor is duly organized, validly existing and in good standing under the law of the jurisdiction of its organization and has all requisite power and authority to execute, deliver and perform its obligations under this Agreement.

(b) The execution, delivery and performance by Debtor of this Agreement have been duly authorized by all necessary action of Debtor, and this Agreement constitutes the legal, valid and binding obligation of Debtor, enforceable against Debtor in accordance with its terms.

(c) No authorization, consent, approval, license, exemption of, or filing or registration with, any governmental authority or agency, or approval or consent of any other Person, is required for the due execution, delivery or performance by Debtor of this Agreement, except for any filings necessary to perfect any Liens on any Collateral.

(d) Debtor's chief executive office and principal place of business (as of the date of this Agreement) is located at the address set forth in Schedule 1; Debtor's jurisdiction of organization and organizational identification number are set forth in Schedule 1; Debtor's exact legal name is as set forth in the first paragraph of this Agreement; and all other locations where Debtor conducts business or Collateral is kept (as of the date of this Agreement) are set forth in Schedule 2.

(e) Debtor has rights in or the power to transfer the Collateral, and Debtor is the sole and complete owner of the Collateral, free from any Lien other than Permitted Liens.

(f) All of Debtor's U.S. and foreign patents and patent applications, copyrights (whether or not registered), applications for copyright, trademarks, service marks and trade names (whether registered or unregistered), and applications for registration of such trademarks, service marks and trade names, that are considered "Collateral" hereunder are set forth in Schedule 1.

(g) To the Debtor's knowledge, no control agreements exist with respect to any Collateral other than control agreements in favor of Secured Party.

(h) Schedule 3 lists Debtor's ownership interests in each of its subsidiaries as of the date hereof. Debtor asserts and Secured Party expressly acknowledges that Ensysce Biosciences and Nexeon Medsystems are not subsidiaries.

(i) Debtor is and will be the legal record and beneficial owner of all Pledged Collateral, and has and will have good and marketable title thereto.

(j) Except as disclosed in writing to Secured Party, there are no Pledged Collateral Agreements which affect or relate to the voting or giving of written consents with respect to any of the Pledged Collateral. To the Debtor's knowledge, each Pledged Collateral

Agreement contains the entire agreement between the parties thereto with respect to the subject matter thereof, has not been amended or modified, and is in full force and effect in accordance with its terms. To the best knowledge of Debtor, there exists no material violation or material default under any Pledged Collateral Agreement by Debtor or the other parties thereto. Debtor has not knowingly waived or released any of its material rights under or otherwise consented to a material departure from the terms and provisions of any Pledged Collateral Agreement.

SECTION 5 Covenants. So long as any of the Contingent Obligations remain unsatisfied, Debtor agrees that:

(a) Debtor shall appear in and defend any action, suit or proceeding which may affect to a material extent its title to, or right or interest in, or Secured Party's right or interest in, the Collateral, and shall do and perform all reasonable acts that may be necessary and appropriate to maintain, preserve and protect the Collateral.

(b) Debtor shall comply in all material respects with all laws, regulations and ordinances, and all policies of insurance, relating in a material way to the possession, operation, maintenance and control of the Collateral.

(c) Debtor shall give prompt written notice to Secured Party (and in any event not later than 30 days following any change described below in this subsection) of: (i) any change in the location of Debtor's chief executive office or principal place of business; (ii) any change in the locations set forth in Schedule 1; (iii) any change in its name; (iv) any changes in its identity or structure in any manner which might make any financing statement filed hereunder incorrect or misleading; (v) any change in its registration as an organization (or any new such registration); or (vi) any change in its jurisdiction of organization; provided that Debtor shall not locate any Collateral outside of the United States nor shall Debtor change its jurisdiction of organization to a jurisdiction outside of the United States.

(d) Debtor shall carry and maintain in full force and effect, at its own expense and with financially sound and reputable insurance companies, insurance with respect to the Collateral in such amounts, with such deductibles and covering such risks as is customarily carried by companies engaged in the same or similar businesses and owning similar properties in the localities where Debtor operates.

(e) Debtor shall keep the Collateral free of all Liens except Permitted Liens.

(f) Debtor shall pay and discharge all taxes, fees, assessments and governmental charges or levies imposed upon it with respect to the Collateral prior to the date on which penalties attach thereto, except to the extent such taxes, fees, assessments or governmental charges or levies are being contested in good faith by appropriate proceedings.

(g) Debtor shall maintain and preserve its legal existence, its rights to transact business and all other rights, franchises and privileges necessary or desirable in the normal course of its business and operations and the ownership of the Collateral.

(h) If and when Debtor shall obtain rights to any new patents (other than rights to patents under the Rice University Agreement), trademarks, service marks, trade names or copyrights, or otherwise acquire or become entitled to the benefit of, or apply for registration of, any of the foregoing, Debtor (i) shall promptly notify Secured Party thereof and (ii) hereby authorizes Secured Party to modify, amend, or supplement Schedule 2 and from time to time to include any of the foregoing and make all necessary or appropriate filings with respect thereto.

(i) Without limiting the generality of subsection (i), Debtor shall not register with the U.S. Copyright Office any unregistered copyrights (whether in existence on the date hereof or thereafter acquired, arising, or developed) unless Debtor provides Secured Party with written notice of its intent to register such copyrights not less than 30 days prior to the date of the proposed registration.

(j) At Secured Party's request, Debtor will use commercially reasonable efforts to obtain from each Person from whom Debtor leases any premises, and from each other Person at whose premises any Collateral is at any time present (including any bailee, warehouseman or similar Person), any such collateral access, subordination, landlord waiver, bailment, consent and estoppel agreements as Secured Party may require, in form and substance satisfactory to Secured Party.

(k) Debtor shall comply with all of its obligations under any Pledged Collateral Agreements to which it is a party and shall enforce all of its rights thereunder. In the event that Debtor acquires rights in any subsidiary after the date hereof, it shall deliver to Secured Party a completed supplement to Schedule 3, reflecting such new subsidiary. Notwithstanding the foregoing, it is understood and agreed that the security interest of Secured Party shall attach to any such subsidiary immediately upon Debtor's acquisition of rights therein and shall not be affected by the failure of Debtor to deliver any such supplement to Schedule 3.

SECTION 6 Rights of Secured Party; Authorization; Appointment.

(a) At the request of Secured Party, upon the occurrence and during the continuance of any Event of Default, all remittances received by Debtor in respect of its accounts and other rights to payment shall be held in trust for Secured Party and, in accordance with Secured Party's instructions, remitted to Secured Party or deposited to an account of Secured Party in the form received (with any necessary endorsements or instruments of assignment or transfer).

(b) At the request of Secured Party, upon the occurrence and during the continuance of any Event of Default, Secured Party shall be entitled to receive all distributions and payments of any nature with respect to any Pledged Collateral or instrument Collateral, and all such distributions or payments received by the Debtor shall be held in trust for Secured Party and, in accordance with Secured Party's instructions, remitted to Secured Party or deposited to an account designated by Secured Party in the form received (with any necessary endorsements or instruments of assignment or transfer). Further, upon the occurrence and during the continuance of any Event of Default any such distributions and payments with respect to any Pledged Collateral held in any securities account shall be held and retained in such securities account, in each case as part of the Collateral hereunder, and Secured Party shall have the right, following prior written notice to the Debtor, to vote and to give consents, ratifications and waivers with respect to any Pledged Collateral and instruments, and to exercise all rights of conversion, exchange, subscription or any other rights, privileges or options pertaining thereto, as if Secured Party were the absolute owner thereof; provided that Secured Party shall have no duty to exercise any of the foregoing rights afforded to it and shall not be responsible to the Debtor or any other Person for any failure to do so or delay in doing so.

(c) Secured Party shall have the right to, in the name of Debtor, or in the name of Secured Party or otherwise, upon notice to but without the requirement of assent by Debtor, and Debtor hereby constitutes and appoints Secured Party (and any of Secured Party's officers, employees or agents designated by Secured Party) as Debtor's true and lawful attorney-in-fact, with full power and authority to: (i) sign and file any of the financing statements and other documents and instruments which must be executed or filed to perfect or continue perfected, maintain the priority of or provide notice of Secured Party's security interest in the Collateral; (ii) assert, adjust, sue for, compromise or release any claims under any policies of insurance; (iii) give notices of control, default or exclusivity (or similar notices) under any account control agreement or similar agreement with respect to exercising control over deposit accounts or securities accounts; and (iv) execute any and all such other documents and instruments, and do any and all acts and things for and on behalf of Debtor, which Secured Party may deem reasonably necessary or advisable to maintain, protect, realize upon and preserve the Collateral and Secured Party's security interest therein and to accomplish the purposes of this Agreement. Secured Party agrees that, except upon and during the continuance of an Event of Default, it shall not exercise the power of attorney, or any rights granted to Secured Party, pursuant to clauses (ii), (iii) and (iv). The foregoing power of attorney is coupled with an interest and irrevocable so long as the Contingent Obligations have not been paid and performed in full. Debtor hereby ratifies, to the extent permitted by law, all that Secured Party shall lawfully and in good faith do or cause to be done by virtue of and in compliance with this Section 6.

SECTION 7 Events of Default. Any of the following events which shall occur and be continuing shall constitute an "Event of Default":

(a) Debtor shall fail to pay when due any amount payable under the Subscription Agreement following the exercise by the Secured Party of its Put Right.

(b) Any representation or warranty by Debtor under or in connection with this Agreement shall prove to have been incorrect in any material respect when made or deemed made.

(c) Debtor shall fail to perform or observe in any material respect any other term, covenant or agreement contained in this Agreement on its part to be performed or observed and any such failure shall remain unremedied for a period of 30 days from the occurrence thereof.

(d) Debtor shall admit in writing its inability to, or shall fail generally or be generally unable to, pay its debts (including its payrolls) as such debts become due, or shall make a general assignment for the benefit of creditors; or Debtor shall file a voluntary petition in bankruptcy or a petition or answer seeking reorganization, to effect a plan or other arrangement with creditors or any other relief under the Bankruptcy Reform Act of 1978, as amended or recodified from time to time (the "Bankruptcy Code") or under any other state or federal law relating to bankruptcy or reorganization granting relief to debtors, whether now or hereafter in effect, or shall file an answer admitting the jurisdiction of the court and the material allegations of any involuntary petition filed against Debtor pursuant to the Bankruptcy Code or any such other state or federal law; or Debtor shall be adjudicated a bankrupt, or shall apply for or consent to the appointment of any custodian, receiver or trustee for all or any substantial part of Debtor's property, or shall take any action to authorize any of the actions set forth above in this paragraph; or an involuntary petition seeking any of the relief specified in this paragraph shall be filed

against Debtor; or any order for relief shall be entered against Debtor in any involuntary proceeding under the Bankruptcy Code or any such other state or federal law referred to in this subsection (d).

(e) Debtor shall (i) liquidate, wind up or dissolve (or suffer any liquidation, wind-up or dissolution), except to the extent expressly permitted by the Note, (ii) suspend its operations other than in the ordinary course of business, or (iii) take any action to authorize any of the actions or events set forth above in this subsection (e).

(f) Any material impairment in the value of the Collateral or the priority of Secured Party's Lien hereunder.

(g) Any levy upon, seizure or attachment of any of the Collateral which shall not have been rescinded or withdrawn.

(h) Any loss, theft or substantial damage to, or destruction of, any material portion of the Collateral (unless within 10 days after the occurrence of any such event, Debtor furnishes to Secured Party evidence satisfactory to Secured Party that the amount of any such loss, theft, damage to or destruction of the Collateral is fully insured under policies naming Secured Party as an additional named insured or loss payee).

SECTION 8 Remedies.

(a) Upon the occurrence and during the continuance of any Event of Default, Secured Party may declare any of the Contingent Obligations to be immediately due and payable and shall have, in addition to all other rights and remedies granted to it in this Agreement, all rights and remedies of a secured party under the UCC and other applicable laws. Without limiting the generality of the foregoing, (i) Secured Party may peaceably and without notice enter any premises of Debtor, take possession of any the Collateral, remove or dispose of all or part of the Collateral on any premises of such Debtor or elsewhere, or, in the case of equipment, render it nonfunctional, and otherwise collect, receive, appropriate and realize upon all or any part of the Collateral, and demand, give receipt for, settle, renew, extend, exchange, compromise, adjust, or sue for all or any part of the Collateral, as Secured Party may determine; (ii) Secured Party may require any Debtor to assemble all or any part of the Collateral and make it available to Secured Party at any place and time designated by Secured Party; (iii) Secured Party may secure the appointment of a receiver of the Collateral or any part thereof (to the extent and in the manner provided by applicable law); (iv) Secured Party may sell, resell, lease, use, assign, license, sublicense, transfer or otherwise dispose of any or all of the Collateral in its then condition or following any commercially reasonable preparation or processing (utilizing in connection therewith any of Debtor's assets, without charge or liability to Secured Party therefor) at public or private sale, by one or more contracts, in one or more parcels, at the same or different times, for cash or credit, or for future delivery without assumption of any credit risk, all as Secured Party deems advisable; provided, however, that Debtor shall be credited with the net proceeds of sale only when such proceeds are finally collected by Secured Party. Debtor recognizes that Secured Party may be unable to make a public sale of any or all of the Pledged Collateral, by reason of prohibitions contained in applicable securities laws or otherwise, and expressly agrees that a private sale to a restricted group of purchasers for investment and not with a view to any distribution thereof shall be considered a commercially reasonable sale. Secured Party shall have the right upon any such public sale, and, to the extent permitted by law, upon any such private sale, to purchase the whole or any part of the Collateral so sold, free of

any right or equity of redemption, which right or equity of redemption Debtor hereby releases, to the extent permitted by law. Secured Party shall give Debtor such notice of any private or public sales as may be required by the UCC or other applicable law.

(b) For the purpose, and solely for the purpose, of enabling Secured Party to exercise its rights and remedies under this Section 8 or otherwise upon the occurrence and during the continuation of any Event of Default under this Agreement, Debtor hereby grants to Secured Party an irrevocable, non-exclusive and assignable license (exercisable without payment or royalty or other compensation to Debtor) to use, license or sublicense any intellectual property Collateral; provided, however, that unless and until there has been an Event of Default, the license granted hereby shall not include any intellectual property Collateral that is owned by a third party and licensed to Debtor, the license of which hereunder would require the approval of or notice to such third party. Upon the occurrence and during the continuation of any Event of Default under this Agreement, Debtor will use commercially reasonable efforts to obtain the approval of such third party or to take any other action reasonable necessary to include such intellectual property Collateral in the license hereunder.

(c) Secured Party shall not have any obligation to clean up or otherwise prepare the Collateral for sale. Secured Party has no obligation to attempt to satisfy the Contingent Obligations by collecting them from any other Person liable for them, and Secured Party may release, modify or waive any Collateral provided by any other Person to secure any of the Contingent Obligations, all without affecting Secured Party's rights against Debtor. Debtor waives any right it may have to require Secured Party to pursue any third Person for any of the Contingent Obligations. Secured Party may comply with any applicable state or federal law requirements in connection with a disposition of the Collateral and compliance will not be considered adversely to affect the commercial reasonableness of any sale of the Collateral. Secured Party may sell the Collateral without giving any warranties as to the Collateral. Secured Party may specifically disclaim any warranties of title or the like. This procedure will not be considered adversely to affect the commercial reasonableness of any sale of the Collateral. If Secured Party sells any of the Collateral upon credit, Debtor will be credited only with payments actually made by the purchaser, received by Secured Party and applied to the indebtedness of the purchaser. In the event the purchaser fails to pay for the Collateral, Secured Party may resell the Collateral and Debtor shall be credited with the proceeds of the sale.

(d) To the extent Debtor uses the proceeds of any of the Contingent Obligations to purchase Collateral, Debtor's repayment of the Contingent Obligations shall apply on a "first-in, first-out" basis so that the portion of the Contingent Obligations used to purchase a particular item of Collateral shall be paid in the chronological order the Debtor purchased the Collateral.

(e) The cash proceeds actually received from the sale or other disposition or collection of Collateral, and any other amounts received in respect of the Collateral the application of which is not otherwise provided for herein, shall be applied first, to the payment of the reasonable costs and expenses of Secured Party in exercising or enforcing its rights hereunder and in collecting or attempting to collect any of the Collateral, and to the payment of all other amounts payable to Secured Party pursuant to Section 12 hereof; and second, to the payment of the Contingent Obligations. Any surplus thereof which exists after payment and performance in full of the Contingent Obligations shall be promptly paid over to Debtor or otherwise disposed of in accordance with the UCC or other applicable law. Debtor shall remain liable to Secured Party for any deficiency which exists after any sale or other disposition or collection of Collateral.

SECTION 9 Certain Waivers. Debtor waives, to the fullest extent permitted by law, (i) any right of redemption with respect to the Collateral, whether before or after sale hereunder, and all rights, if any, of marshalling of the Collateral or other collateral or security for the Contingent Obligations; (ii) any right to require Secured Party (A) to proceed against any Person, (B) to exhaust any other collateral or security for any of the Contingent Obligations, (C) to pursue any remedy in Secured Party's power, or (D) to make or give any presentments, demands for performance, notices of nonperformance, protests, notices of protests or notices of dishonor in connection with any of the Collateral; and (iii) all claims, damages, and demands against Secured Party arising out of the repossession, retention, sale or application of the proceeds of any sale of the Collateral.

SECTION 10 Notices. All notices or other communications hereunder shall be in writing (including by facsimile transmission or by email) and mailed (by certified or registered mail), sent or delivered to the respective parties hereto at or to their respective addresses, facsimile numbers or email addresses set forth below their names on the signature pages hereof, or at or to such other address, facsimile number or email address as shall be designated by any party in a written notice to the other parties hereto. All such notices and communications shall be effective (i) if delivered by hand, sent by certified or registered mail or sent by an overnight courier service, when received; and (ii) if sent by facsimile transmission or electronic mail, when sent. Electronic mail may be used only for routine communications, such as distribution of informational documents or documents for execution by the parties thereto, and may not be used for any other purpose.

SECTION 11 No Waiver; Cumulative Remedies. No failure on the part of Secured Party to exercise, and no delay in exercising, any right, remedy, power or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any such right, remedy, power or privilege preclude any other or further exercise thereof or the exercise of any other right, remedy, power or privilege. The rights and remedies under this Agreement are cumulative and not exclusive of any rights, remedies, powers and privileges that may otherwise be available to Secured Party.

SECTION 12 Costs and Expenses; Indemnification.

(a) Debtor agrees to pay on demand all costs and expenses of Secured Party, and the fees and disbursements of counsel, in connection with the enforcement or attempted enforcement of, and preservation of any rights or interests under, this Agreement and the Note, including in any out-of-court workout or other refinancing or restructuring or in any bankruptcy case, and the protection, sale or collection of, or other realization upon, any of the Collateral, including all expenses of taking, collecting, holding, sorting, handling, preparing for sale, selling, or the like, and other such expenses of sales and collections of Collateral.

(b) Debtor hereby agrees to indemnify Secured Party, any affiliate thereof, and their respective directors, officers, employees, agents, counsel and other advisors (each an "Indemnified Person") against, and hold each of them harmless from, any and all liabilities, obligations, losses, claims, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind or nature whatsoever, including the reasonable fees and disbursements of counsel to an Indemnified Person, which may be imposed on or incurred by any Indemnified

Person, or asserted against any Indemnified Person by any third party or by Debtor, in any way relating to or arising out of, in connection with, or as a result of (i) the execution or delivery of this Agreement or any agreement or instrument contemplated hereby, the performance by the parties hereto of their respective obligations hereunder or thereunder, the transactions contemplated hereby or the Collateral, or (ii) any actual or prospective claim, litigation, investigation or proceeding relating to any of the foregoing, whether based on contract, tort or any other theory, whether brought by a third party or by Debtor (the "Indemnified Liabilities"); provided that Debtor shall not be liable to any Indemnified Person for any portion of such Indemnified Liabilities to the extent they are found by a final decision of a court of competent jurisdiction to have resulted from such Indemnified Person's gross negligence or willful misconduct. If and to the extent that the foregoing indemnification is for any reason held unenforceable, Debtor agrees to make the maximum contribution to the payment and satisfaction of each of the Indemnified Liabilities which is permissible under applicable law.

(c) Any amounts payable to Secured Party under this Section 12 or otherwise under this Agreement if not paid upon demand shall bear interest from the date of such demand until paid in full, at the rate of 9% per annum or the highest rate permitted by law, if less.

SECTION 13 Binding Effect. This Agreement shall be binding upon, inure to the benefit of and be enforceable by Debtor, Secured Party and their respective successors and assigns and shall bind any Person who becomes bound as a debtor to this Agreement.

SECTION 14 Governing Law. This Agreement shall be governed by, and construed in accordance with, the law of the State of California, except as required by mandatory provisions of law and to the extent the validity or perfection of the security interests hereunder, or the remedies hereunder, in respect of any Collateral are governed by the law of a jurisdiction other than California.

SECTION 15 Entire Agreement; Amendment. This Agreement contains the entire agreement of the parties with respect to the subject matter hereof and shall not be amended except by the written agreement of the parties.

SECTION 16 Severability. Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under all applicable laws and regulations. If, however, any provision of this Agreement shall be prohibited by or invalid under any such law or regulation in any jurisdiction, it shall, as to such jurisdiction, be deemed modified to conform to the minimum requirements of such law or regulation, or, if for any reason it is not deemed so modified, it shall be ineffective and invalid only to the extent of such prohibition or invalidity without affecting the remaining provisions of this Agreement, or the validity or effectiveness of such provision in any other jurisdiction.

SECTION 17 Counterparts. This Agreement may be executed in any number of counterparts and by different parties hereto in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute but one and the same agreement.

SECTION 18 Termination. Upon payment and performance in full of all Contingent Obligations, the security interest created under this Agreement shall terminate and Secured Party shall promptly execute and deliver to Debtor such documents and instruments reasonably requested by Debtor as shall be necessary to evidence termination of all security interests given by Debtor to Secured Party hereunder.

[remainder of page intentionally left blank]

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

Unidym, Inc.

By /s/ Arthur L. Swift
CEO and President

1430 O'Brien Drive, Suite G
Menlo Park, CA 94025

TEL Venture Capital, Inc.

By /s/ M. Yamaguchi
Title: President

2953 Bunker Hill Lane, Suite 300
Santa Clara, CA 95054

Exhibit 21.1

List of Subsidiaries

Calando Pharmaceuticals, Inc.
Unidym, Inc.
Tego Biosciences Corporation
Agonn Systems, Inc.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statements (Form S-8 Nos. 333-124066 and 333-120072 and Form S-3 Nos. 333-113065, 333-124065, 333-132310, 333-137329, 333-144109 and 333-148218) of Arrowhead Research Corporation of our reports dated December 15, 2008, with respect to: (1) the consolidated financial statements of Arrowhead Research Corporation, and (2) the effectiveness of internal control over financial reporting of Arrowhead Research Corporation, included in this Annual Report (Form 10-K) for the year ended September 30, 2008.

/s/ Rose, Snyder & Jacobs
A Corporation of Certified Public Accountants
Encino, California
December 15, 2008

Exhibit 31.1

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

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

1. I have reviewed this Annual Report on Form 10-K of Arrowhead Research Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated Subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: December 15, 2008

/s/ CHRISTOPHER ANZALONE

Christopher Anzalone
Chief Executive Officer & Principal Executive Officer

Exhibit 31.2

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

I, Paul C. McDonnel, Chief Financial Officer of Arrowhead Research Corporation, certify that:

1. I have reviewed this Annual Report on Form 10-K of Arrowhead Research Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated Subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: December 15, 2008

/s/ Paul C. McDonnel

Paul C. McDonnel,
Chief Financial Officer
(Principal Accounting Officer)

Exhibit 32.1

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

I, Christopher Anzalone, Chief Executive Officer of Arrowhead Research Corporation (the "Company"), certify, pursuant to Rule 13(a)-14(b) or Rule 15(d)-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, that (i) the Annual Report on Form 10-K of the Company for the fiscal year ended September 30, 2008, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and (ii) the information contained in such Annual Report on Form 10-K fairly presents in all material respects the financial condition and results of operations of the Company.

Date: December 15, 2008

/s/ CHRISTOPHER ANZALONE

Christopher Anzalone
Chief Executive Officer & Principal Executive Officer

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

Exhibit 32.2

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

I, Paul C. McDonnel, Chief Financial Officer of Arrowhead Research Corporation (the "Company"), certify, pursuant to Rule 13(a)-14(b) or Rule 15(d)-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, that (i) the Annual Report on Form 10-K of the Company for the fiscal year ended September 30, 2008, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and (ii) the information contained in such Annual Report on Form 10-K fairly presents in all material respects the financial condition and results of operations of the Company.

Date: December 15, 2008

/s/ Paul C. McDonnel

Paul C. McDonnel
Chief Financial Officer
(Principal Accounting Officer)

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