UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of Report (Date of earliest event reported): October 21, 2008

Arrowhead Research Corporation

(Exact name of registrant as specified in its charter)

0-21898	
(Commission File Number)	
Delaware	**46-0408024**
(State or other jurisdiction of incorporation)	**(IRS Employer Identification No.)**

201 South Lake Avenue, Suite 703, Pasadena, CA 91101
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code (626) 304-3400

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b)

☐ Pre-commencement communications pursuant to Rule 13e-4 (c) under the Exchange Act (17 CFR 240.13e-4(c)

Item 8.01. Other Events.

On October 21, 2008, Arrowhead Research Corporation (the "Company") issued a new release in which the Chief Executive Officer of the Company updated stockholders on the Company's majority owned subsidiary, Calando Pharmaceuticals, Inc. The release is one of several planned weekly updates. A copy of the news release is attached as Exhibit 99.1 to this Form 8-K.

Item 9.01. Financial Statements and Exhibits.

(c) Exhibits.

Exhibit No.	Description
99.1	News Release dated October 21, 2008

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Date: October 27, 2008

ARROWHEAD RESEARCH CORPORATION

By: /s/ Paul C. McDonnel
Paul C. McDonnel
Chief Financial Officer

Exhibit 99.1

PRESS RELEASE
October 21, 2008
7:00 am

Contact: Virginia Dadey
Telephone: 212-541-3707
vdadey@arrowres.com

ARROWHEAD CEO PROVIDES UPDATE ON MAJORITY OWNED SUBSIDIARY CALANDO PHARMACEUTICALS INC.

PASADENA, Calif.—Arrowhead Research Corporation (NASDAQ: ARWR) announced today that the Company's CEO has provided an update letter to stockholders on its majority owned subsidiary, Calando Pharmaceuticals:

Dear Arrowhead Stockholders,

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 has been optimized 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.

RNA interference or RNAi is a naturally-occurring mechanism within cells that selectively silences and regulates the expression of specific genes. Many diseases are caused by the inappropriate expression of certain genes and there is significant interest within the pharmaceutical industry in using RNAi to effectively "turn down" such target genes. This would represent a potentially revolutionary new class of medicines to treat a wide range of human diseases. RNAi can be activated by delivering small interfering RNAs (siRNAs) to the cells and tissues in which gene-silencing is desired. However, given the poor pharmacokinetics and instability of naked siRNA in the bloodstream, effectively delivering siRNA molecules to a target site has been a significant technical bottleneck to the promise of RNAi therapeutics.

Calando's RONDEL system has the potential to circumvent the impasse to siRNA systemic delivery. RONDEL has been shown to protect siRNA molecules in the bloodstream, prevent significant immune response to siRNA molecules, and to effectively mediate siRNA delivery to target tissues when intravenously administered. Given the combination of the well-documented technical hurdles associated with systemic delivery of siRNA-based therapeutics, and Calando's enabling delivery technology, we believe Calando is an attractive near term acquisition target.

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 so far. 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 therapeutic small molecule drugs and peptides. IT-101 is a combination of Cyclosert and Camptothecin, a potent anti-cancer therapeutic. IT-101 recently completed a phase Ia/Ib trial at City of Hope in Duarte, California. Interim phase I data was published at the 2007 Annual Meeting of the

American Society for Clinical Oncology Proceedings (ASCO) (Abstract ID 32638). The interim data showed levels of progression free disease with a promising preliminary efficacy profile. The interim data also showed IT-101 to be well tolerated. An overview of the concluded complete phase Ia/Ib trial is expected be released shortly. A peer-reviewed publication describing the trial results is expected in early 2009.

Based on encouraging phase I safety and preliminary efficacy data, IT-101 has entered into a phase II study in ovarian cancer patients. Of women who receive a second course of chemotherapy, nearly 75% will achieve some degree of disease stabilization. However, most will ultimately experience a recurrence of their cancer within 9 to 12 months after treatment. For these women, the current standard care is to “watch and wait” until disease progression occurs.

The IT-101 Phase II study utilizes a unique design intended to demonstrate prolonged time until disease progression in patients who achieved a response or stabilization in their disease following a second line course of platinum-based chemotherapy. This study is the first of its kind: there are no approved maintenance treatments following second line chemotherapy for ovarian cancer. The study expects to enroll 150 patients in the United States. Clinical sites are currently open for enrollment and have initiated the patient recruitment process. According to the World Health Organization, ovarian cancer currently affects over 90,000 women in the U.S. and other developed nations, with approximately 25,000 new cases annually in the U.S. Based on costs of other oncology maintenance therapies, we believe IT-101 represents a multi-billion dollar market opportunity.

We also believe there remains more value yet to be unlocked in the Cyclosert and RONDEL systems, as they have been demonstrated to enhance and enable the delivery of multiple pharmaceutical entities, including peptides, small molecules as well as other RNA and DNA-based oligonucleotides. For example, 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, we believe Calando is a true platform opportunity that may enable the creation of multiple new compounds.

Sincerely,

Christopher Anzalone
Chief Executive Officer

About Arrowhead Research Corporation

Arrowhead Research Corporation (www.arrowheadresearch.com) (NASDAQ:ARWR) is a publicly-traded nanotechnology company commercializing new technologies in the areas of life sciences, electronics, and energy. Arrowhead is building value for shareholders through the progress of majority owned subsidiaries. Currently, Arrowhead has four subsidiaries commercializing nanotech products and applications and investments in two minority-owned subsidiaries.

Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995:

This news release contains forward-looking statements within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995. These statements are based upon our current expectations and speak only as of the date hereof. Our actual results may differ materially and adversely from those expressed in any forward-looking statements as a result of various factors and uncertainties, including the future success of our scientific studies, our ability to successfully develop products, rapid technological change in our markets, changes in demand for our future products, legislative, regulatory and competitive developments, the financial resources available to us, and general economic conditions. Arrowhead Research Corporation’s Annual Report on Form 10-K and 10-K/A, recent and forthcoming Quarterly Reports on Form 10-Q and 10-Q/A, recent Current Reports on Forms 8-K and 8-K/A, our Registration Statements on Form S-3, and other SEC filings discuss some of the important risk factors that may affect our business, results of operations and financial condition. We undertake no obligation to revise or update publicly any forward-looking statements for any reason.