



April 11, 2012

Arrowhead Research Corporation Acquires Alvos Therapeutics and Proprietary Library of Targeting Peptides

Pioneer in targeting for tumors and tumor vasculature in humans

PASADENA, Calif. — April 11, 2012 — Arrowhead Research Corporation (NASDAQ: ARWR), a nanomedicine company with development programs in RNA therapeutics and obesity, today announced that it has acquired Alvos Therapeutics, Inc. (formerly known as Mercator Therapeutics, Inc.), a privately-held company that licensed a large platform of proprietary human-derived homing peptides from MD Anderson Cancer Center (MDACC) and the method for their discovery. The technology, designed to specifically bind and enter tumor cells and the vasculature supporting tumors, is thought to be the world's largest library of human-derived targeting agents, representing thousands of unique peptide sequences. These targeting sequences can be linked to Arrowhead's siRNA delivery vehicles as well as to traditional small molecule drugs to preferentially shuttle them into target cells. As such, the new platform is a natural addition to Arrowhead from both an operational and strategic standpoint, and it represents a significant leap forward in targeted therapeutics. MDACC has already achieved clinical proof of concept in targeting metastatic prostate cancer with one of the sequences, and Alvos has multiple other anti-cancer development programs in the pipeline.

Alvos was co-founded in 2010 by the MDACC developers of the technology, Drs. Renata Pasqualini and Wadih Arap, along with Mark Leuchtenberger, CEO of Rib-X Pharma, and Dr. Roy Lobb. Dr. Lobb, who became Alvos' CSO, is an experienced biotech executive and entrepreneur who also founded Avila Therapeutics which was sold earlier this year for a total potential payout of nearly \$1bn including \$350m upfront. At MDACC, Drs. Pasqualini and Arap used a technique called phage display to generate a vast library of specific peptides that home to both known and novel receptors. The process has generated powerful data in two primary areas: (1) new receptors were discovered that are present primarily or solely on the surface of specific cell types of interest, including cancer cells; and (2) peptides were identified that specifically bind these and previously known receptors and are rapidly internalized by the cells of interest. Importantly, this has been performed in terminal cancer patients, therefore *the novel receptors and targeting peptides were identified in human patients with spontaneous disease, including metastases*. The acquisition also enables Arrowhead to further expand the library by working with Drs. Pasqualini and Arap to generate additional data with more patient screening at MDACC.

Arrowhead intends to apply the new technology for targeting their proprietary DPC and RONDEL™ siRNA delivery platforms. In addition, the peptides can be linked to small molecule cancer drugs to create a new class of drugs, "Peptide-Drug Conjugates", or PDCs, designed to preferentially accumulate at and inside tumors. This new class has the potential to significantly advance cancer treatment by decreasing side effects, increasing efficacy, and/or decreasing dose of traditional therapies.

"The work that Drs. Pasqualini and Arap have done is truly revolutionary in the sheer number of targeting sequences and new receptors that have been discovered, the exquisite specificity of many of the peptides, and the fact that these were generated in human patients rather than experimental animal models," said Christopher Anzalone, Arrowhead's CEO. "Alvos has identified rapidly internalizing cell surface receptors for over 30 diseased and normal tissue types and peptides that efficiently target them. We do not believe that any other group in the world has generated data in humans that approaches this; therefore it is unique, powerful, and immediately applicable to man. This substantially enhances our existing siRNA programs by providing us with a huge proprietary library of human-derived targeting ligands to couple with our well-established and well-tolerated DPC and RONDEL delivery platforms. In addition, this acquisition allows for the creation of new PDCs against cancer and other indications, thereby expanding our business and capabilities in a cost effective way. The unique potential of this technology offers substantial opportunities to partner with other biotech and pharmaceutical companies."

Arrowhead plans to integrate development of the Alvos technology into its Madison, WI facility. By leveraging existing employees, facilities, and expertise, additional costs assumed as a result of the transaction are expected to be low.

"We were attracted to Arrowhead as an acquirer because of its ability to accelerate development of the platform through its excellent scientific staff and state-of-the-art facilities," commented Alvos' co-founder and CSO Dr. Roy Lobb. "In addition, their work on Adipotide, which was also discovered by Drs. Pasqualini and Arap, creates natural synergies between the obesity and cancer development programs. Direct screening in cancer patients can eliminate some of the uncertainty that has plagued traditional discovery methods. We are delighted that Arrowhead will advance this transformative platform and produce novel differentiated therapies."

In exchange for all the outstanding shares of Alvos Therapeutics, Inc., Arrowhead issued an upfront payment of 315,467 shares in restricted Arrowhead common stock. Alvos stockholders are also eligible to receive additional issuances of stock valued at up to \$23.5m at the time of issuance based on the achievement of clinical and regulatory milestones, which begin with demonstrating statistically significant efficacy in clinical trials. Alvos stockholders could receive additional Arrowhead stock as the first three drugs using the new technology achieve certain sales milestones.

Conference Call

Management will host a conference call today, April 11, 2012 at 4:30 Eastern time (1:30 Pacific time). To participate in the conference call, please dial 877-317-6789 (toll free from the US and Canada), or 412-317-6789 (for international callers). Investors may also access a live audio webcast of this conference call on the Company's website at www.arrowheadresearch.com.

A replay of the webcast will be available approximately two hours after the conclusion of the call. The webcast archive will remain available for 90 days. An audio replay will also be available approximately two hours after the conclusion of the call and will be made available until May 11, 2012. The audio replay can be accessed by dialing 877-344-7529 (toll free from the US and Canada), or 412-317-0088 (for international callers) and entering Event ID 10012841.

About Alvos Therapeutics, Inc.

Alvos Therapeutics is the first biopharmaceutical company to use *in vivo* phage display technology systematically to develop novel cancer drugs. Alvos was founded to translate the research of Drs. Wadih Arap and Renata Pasqualini into effective cancer therapeutics. Drs. Arap and Pasqualini pioneered the use of *in vivo* phage display to identify peptides that are believed to selectively deliver tumor-killing payloads without damaging surrounding tissue. Targeting of drugs selectively to tumors in man has been a goal of basic and translational research for decades. The Arap-Pasqualini Lab is addressing this problem by directly injecting peptide-expressing phage libraries *in vivo* – most recently in end-stage cancer patients under strict ethical guidelines – and identifying a suite of peptides responsible for tumor targeting. Alvos has exclusive rights to translate this research into novel cancer therapeutics.

About Arrowhead Research Corporation

Arrowhead Research Corporation is a clinical stage targeted therapeutics company with development programs in oncology, obesity, and infectious disease. The company leverages its platform technologies to design and develop peptide-drug conjugates (PDCs) which specifically home to cell types of interest while sparing off-target tissues, creates targeted drugs based on the gene silencing RNA interference (RNAi) mechanism, and works with partners to create improved versions of traditional small molecule drugs.

For more information please visit <http://www.arrowheadresearch.com>, or follow us on Twitter [@ArrowRes](https://twitter.com/ArrowRes). To be added to the Company's email list to receive news directly, please send an email to ir@arrowres.com

Safe Harbor Statement under the Private Securities Litigation Reform Act:

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 our ability to finance our operations, the future success of our scientific studies, our ability to successfully develop drug candidates, the timing for starting and completing clinical trials, rapid technological change in our markets, and the enforcement of our intellectual property rights. Arrowhead Research Corporation's most recent Annual Report on Form 10-K and subsequent Quarterly Reports on Form 10-Q discuss some of the important risk factors that may affect our business, results of operations and financial condition. We assume no obligation to update or revise forward-looking statements to reflect new events or circumstances.

Contacts:

Michael Levitan
The Trout Group, LLC
646-378-2920
ir@arrowres.com