



PRESS RELEASE
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CALANDO PHARMACEUTICALS PUBLISHES NEW RESULTS OF siRNA DELIVERY USING ITS RONDEL™ TECHNOLOGY IN SEPSIS

*Paper published online in Shock demonstrates efficacious use of RONDEL™-
formulated siRNA in murine model of sepsis*

PASADENA, Calif.— December 8, 2008—Calando Pharmaceuticals (“Calando”), a majority-owned subsidiary of Arrowhead Research Corporation (NASDAQ: ARWR), announced today the online publication in the journal *Shock* of the first investigation of siRNA formulated with Calando’s RONDEL™ nucleic acid delivery technology for the treatment of sepsis in mice. This work was done in collaboration with Dr. Richard Hotchkiss and colleagues in the School of Medicine at Washington University in St. Louis. RONDEL™-mediated delivery of anti-apoptotic siRNA to lymphocytes of septic mice is shown to reverse the depletion of immune cells that is a hallmark of this disease.

“The publication demonstrates that the utility of Calando’s RONDEL™ nucleic acid delivery technology can extend beyond oncology to other therapeutics areas, such as sepsis,” said Dr. Heidel, Calando’s Chief Scientific Officer for Nucleic Acid Delivery. “We will continue to evaluate RONDEL™-formulated nucleic acids in a variety of therapeutic applications to complement our ongoing clinical and pre-clinical programs in oncology.”

Calando currently has two RNAi therapeutic candidates, CALAA-01 and CALAA-02, both in oncology. CALAA-01 is being investigated in an ongoing Phase I clinical trial, and CALAA-02 is currently in pre-clinical development with intended advancement into the clinic in 2009.

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About Calando Pharmaceuticals Inc.

Calando Pharmaceuticals Inc. (www.calandopharma.com), a majority-owned subsidiary of Arrowhead Research Corporation (NASDAQ: ARWR), is a biopharmaceuticals company using proprietary technologies developed at Caltech to create targeted siRNA-based therapeutics and small molecule nanoparticle drug conjugates. Calando uses its innovative CycloSert™ and RONDEL™ nanoparticle systems to solve the long-standing obstacle of effective delivery and targeting for oligonucleotide and small molecule therapeutics.

Calando’s CycloSert™ technology uses cyclodextrins as building blocks to create an entirely new class of biocompatible materials - linear cyclodextrin-containing polymers that are non-toxic and non-immunogenic at therapeutic doses. The Company leverages CycloSert™ to design, develop and

commercialize drug-delivery-enhanced small-molecule therapeutics. IT-101 is Calando's lead small molecule Cycloset conjugate, which recently completed a phase I study in solid tumors at City of Hope Comprehensive Cancer Center.

Calando's RONDEL™ technology involves the use of cyclodextrin-containing polymers that form the foundation for its two-part siRNA delivery system. The first component is a linear, cyclodextrin-containing polycation that, when mixed with small interfering RNA (siRNA), binds to the anionic "backbone" of the siRNA. The polymer and siRNA self-assemble into nanoparticles smaller than 100 nm in diameter that fully protect the siRNA from nuclease degradation in serum. The siRNA delivery system has been designed to allow 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, chemistry built into the polymer functions to unpackage the siRNA from the delivery vehicle. Based upon this breakthrough in siRNA delivery enabled by the RONDEL™ system, the promise of using siRNA in new systemic therapies may finally be realized.

Forward-Looking Statements

This news release, and any oral statements made with respect to the information contained in this news release, contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements include statements which express plans, anticipation, intent, contingency, goals, targets, future development and are otherwise not statements of historical fact. These statements are based on Calando's management current expectations and are subject to risks and uncertainties that could cause actual results or developments to be materially different from historical results or from any future results expressed or implied by such forward-looking statements. Factors that may cause actual results or developments to differ materially include, among others: the risk that CALAA-01 or IT-101 may appear promising in early research and clinical trials but may not demonstrate safety and/or efficacy in larger-scale or later stage clinical trials, the risks that the regulatory approvals may not be obtained, the risks associated with dependence upon key personnel, the risks associated with reliance on collaborative partners and others for further clinical trials, development, manufacturing and commercialization of our product candidates; the cost, delays and uncertainties associated with our scientific research, product development, clinical trials and regulatory approval process; our history of operating losses since our inception; competition; litigation; and risks associated with our ability to protect our intellectual property and raise the necessary financing to fund our operations and research activities. You are cautioned not to place undue reliance on any forward-looking statements, any of which could turn out to be wrong due to inaccurate assumptions, unknown risks or uncertainties or other risk factors.

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