News Release

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Archemix and Dicerna to Collaborate on Conjugated Aptamer-Dicer Substrate RNAi Therapeutics

- Companies Combine Proprietary Aptamer and Gene Silencing Technologies to Maximize Therapeutic Potential of Oligonucleotide Drug Candidates -

CAMBRIDGE and WATERTOWN, Mass. – July 21, 2009 – Archemix Corp., a biotechnology company focused on discovering, developing and commercializing aptamer therapeutics, and Dicerna Pharmaceuticals, Inc., a second generation RNA interference (RNAi) company developing novel therapeutics utilizing its proprietary Dicer Substrate Technology™ and dicer substrate RNA (DsiRNA) molecules, announced today that the two companies have entered into an agreement to collaborate on aptamer-DsiRNA therapeutics that leverage both the intracellular delivery capabilities of Archemix's aptamers, and the potent gene silencing of Dicerna's DsiRNA molecules. Both companies are making an investment of resources to develop the aptamer-DsiRNA therapeutics, and will work collaboratively on the R&D activities. The agreement includes an option for Dicerna to obtain exclusive rights to further develop and commercialize aptamer-DsiRNA therapeutics generated during the collaboration. Additional terms of the agreement were not disclosed.

"This collaboration showcases how our proprietary aptamer technology can be used in conjunction with other therapeutic modalities and we look forward to beginning this exciting work with Dicerna," said Kenneth M. Bate, president and chief executive officer of Archemix. "While Archemix remains dedicated to continuing the development of therapeutic aptamers we believe that our proprietary aptamer technology is broadly applicable outside of

our core strategic focus. This agreement leverages our aptamer expertise and intellectual property estate with Dicerna's expertise in RNAi therapeutics to develop a technology with the potential to mediate targeted delivery, intracellular uptake and gene silencing."

"With our second generation Dicer Substrate Technology, we have demonstrated superior potency and extended duration of action," said James C. Jenson, Ph.D., chief executive officer and co-founder of Dicerna. "Now, through this agreement with Archemix, we aim to explore these therapeutic advantages against certain important cellular targets. This collaboration points to the unique adaptability of Dicerna's DsiRNA molecules to a number of targeting and delivery approaches, including aptamers, to facilitate tissue- and cell-specific delivery, which we believe to be an important benefit for RNAi therapeutics."

"This partnership allows us to explore the potential for targeted delivery of a DsiRNA payload, with its catalytic gene silencing activity, by using Archemix's novel aptamers," added Martin D. Williams, chief business officer of Dicerna. "We look forward to exploring and identifying a number of therapeutic programs best pursued by combining our Dicer Substrate Technology and intellectual property portfolio with Archemix's aptamer expertise."

About Aptamers

Aptamers are synthetically-derived oligonucleotides, or short nucleic acid sequences, that bind to protein targets with high affinity and specificity and can be designed to have a specified duration of action. Aptamers represent an emerging class of potential therapeutic agents that Archemix believes may have broad application to treat a variety of human diseases.

About Archemix

Archemix is a biotechnology company focused on discovering, developing and commercializing aptamer therapeutics. Using Archemix's processes for discovering aptamers, which are protected by its broad patent portfolio, Archemix is developing aptamer product candidates for rare hematological diseases. In addition, Archemix has licensed its intellectual property to third parties to develop their own aptamer product candidates in other areas. Currently, Archemix's licensees are evaluating five different aptamer product candidates in human clinical trials; two in Phase 2 and three in Phase 1. Archemix has additional partnerships with several pharmaceutical and biotechnology companies, including GlaxoSmithKline, Merck Serono, Pfizer, Takeda, Eli Lilly and Isis Pharmaceuticals. For more information, please visit www.archemix.com.

About Dicer Substrate RNAi

First described in plants and then in worms, flies and higher organisms, RNA interference (RNAi) is a key cellular mechanism regulating gene expression in both normal and disease processes. Dicer is a critical enzyme involved in the gene-silencing cascade. Dicer processing of double-stranded RNA oligonucleotides of 25 or more base pairs and hand-off to the gene-silencing complex (RISC) results in a five-to-10-fold more potent activity and longer duration of action.

About Dicerna

Dicerna Pharmaceuticals is a private, venture-backed RNAi-focused biopharmaceutical company developing novel therapeutic agents in multiple disease areas based on its proprietary Dicer Substrate Technology™ platform. Dicerna is developing novel RNAi-based therapies, and related drug delivery systems, that use the engagement of the enzyme Dicer, which is an earlier step in the gene silencing process and a natural initiation point for the RNAi cascade. This distinct biological pathway demonstrates greater potency and a longer duration of action differentiating it from other RNAi approaches and results in the knockdown of expression of a targeted gene in a way that is highly selective and specific. The company believes that its Dicer Substrate Technology is based on intellectual property that is both broadly enabling and distinct from other IP in the field. Dicerna has exclusive, worldwide rights to the Dicer Substrate Technology and has the sole right to grant sublicenses to the full portfolio of Dicer Substrate intellectual property. Dicerna is based in Watertown, Massachusetts. For more information, please visit www.dicerna.com.

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