



# News Release

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**Dicerna Pharmaceuticals Scientific Founder To Present Data Demonstrating Dual Inhibitory Function of Aptamer-Dicer Substrate siRNA Conjugates at Oligonucleotide Therapeutics Conference**

*Data Supportive of Dicerna's Collaboration with Archemix to Combine the Companies' Proprietary Delivery and Gene Silencing Technologies for Optimal Therapeutic Benefit*

**WATERTOWN, Mass., August 3, 2009** – 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, today announced the presentation of data at the “Oligonucleotide Therapeutics – From Concept to Implementation” Conference, as part of IBC USA’s Drug Discovery & Development Week, being held in Boston from August 3 – 6, 2009. On Tuesday, August 4, at 11:45 a.m., a presentation titled “A Novel Dual Inhibitory Function Anti-HIV Envelop Aptamer-siRNA Chimera,” will be presented by John J. Rossi, Ph.D., Lidow Family Research Chair and Professor in the Division of Molecular Biology, and Dean of the Graduate School of Biological Sciences at City of Hope's Beckman Research Institute, and scientific co-founder of Dicerna.

Dr. Rossi will discuss RNA interference (RNAi) as a powerful mechanism that can be used to inhibit replication of the human immunodeficiency virus (HIV). He will highlight dual inhibitory function aptamer-siRNA chimeras, developed such that both the aptamer and the DsiRNA have potent and long-lasting anti-HIV activity. Dr. Rossi will also introduce a modular aptamer-DsiRNA strategy allowing “mixing and matching” of different DsiRNAs with a given aptamer.

“These data are relevant to Dicerna, as they speak to the adaptability of our Dicer Substrate Technology and also support our “double hit” rationale for maximizing the therapeutic potential of our proprietary oligonucleotide drug candidates. While HIV is not a disease area we intend to pursue internally, the data is important; first – to showcase the ability of DsiRNA molecules to achieve superior potency and duration of action against specific disease targets; and second – to demonstrate cell-specific targeting and intracellular uptake of DsiRNA molecules conjugated to highly selective targeting moieties such as aptamers,” said James C. Jenson, Ph.D., chief executive officer and co-founder of Dicerna. He added, “Per our recently announced

collaboration with Archemix, we are further exploring the therapeutic advantages of DsiRNA-aptamer conjugates against important cellular targets. ”

### **About 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 second generation 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 resulting in the knockdown of expression of a targeted gene in a way that is highly selective and specific. In collaboration with Archemix Corp., Dicerna is developing DsiRNA-aptamer conjugates to leverage both the potent gene silencing of Dicerna's DsiRNA molecules and the targeted delivery capabilities of Archemix's aptamers. Dicerna 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](http://www.dicerna.com).

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