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Contacts:

Martin Williams, SVP & Chief Business Officer
Dicerna Pharmaceuticals
(617) 621-8097

Michele Rozen
Pure Communications, Inc.
(617) 730-8284

Dicerna Pharmaceuticals to Present at Upcoming RNAi-Focused Scientific Conferences

*Dicer Substrate Technology™ Subject of June Presentations at
CHI's RNA Interference Summit, SMi's RNAi, siRNA & miRNA Conference and Keystone
Symposium on Molecular and Cell Biology*

WATERTOWN, Mass., June 4, 2009 – Dicerna Pharmaceuticals, Inc., a second generation RNA interference company developing novel therapeutics utilizing its proprietary Dicer Substrate Technology™, today announced presentations at three upcoming conferences in June:

- The Cambridge Healthtech Institute (CHI) RNA Interference Summit, June 8-10, in San Francisco;
- The SMi Group RNAi, siRNA & miRNA Conference, June 10-11, in London, England; and,
- The Keystone Symposium on Molecular and Cellular Biology - Deregulation of Transcription in Cancer Controlling Cell Fate Decisions, June 21-26, in Killarney, Ireland.

CHI's RNA Interference Summit, San Francisco:

In a conference track titled "Tackling RNAi Delivery," 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, as well as a co-founder of Dicerna, will discuss dual inhibitory function anti-gp120 aptamer-siRNA chimeras, developed such that both the aptamer and the Dicer Substrate RNA (DsiRNA) portion have potent anti-HIV activity. The DsiRNA delivery system is specifically internalized into cells expressing gp120, and once internalized, Dicer processing of DsiRNAs from chimeric aptamer-DsiRNA constructs results in RNAi mediated knockdown of target gene expression. Dr. Rossi will demonstrate how these dual inhibitory aptamer-DsiRNA chimeras strongly suppressed HIV-1 infection in a RAGhu mouse model infected with HIV. This session is scheduled to begin at 8:30 a.m. (PDT) on Monday, June 8, 2009.

In a conference track titled "Making RNAi Therapies a Reality," Bob D. Brown, Ph.D., Dicerna's

senior vice president of research, will give a presentation titled, “Potent *In Vivo* Activity of Dicer Substrate siRNAs (DsiRNA) Targeting KRAS.” Dr. Brown will highlight preclinical findings demonstrating highly selective, specific and potent inhibition using novel DsiRNAs against KRAS, a gene that plays a central role in the growth, differentiation, and survival of cells. KRAS gene mutations are associated with multiple cancers, including leukemias, and lung, colorectal and pancreatic tumors. Dr. Brown will highlight the potent *in vivo* activity and pharmaceutical properties of DsiRNAs that lead to their enhanced drug delivery potential. This presentation is scheduled for 11:15 a.m. on Wednesday, June 10, 2009.

Also during the RNA Interference Summit, Dr. Brown will moderate the meeting’s Executive Forum, comprised of two segments: “Surveying RNAi Opportunities: From Tools to Therapies” and “Navigating the Intellectual Property Landscape.” This forum is scheduled to begin at 2:00 p.m. (PDT) on Tuesday, June 9, 2009.

SMi’s RNAi, siRNA & miRNA Conference, London, England:

In a podium presentation titled “Dicer Substrate RNAs as Novel Therapeutics,” Robert Guerciolini, M.D., Dicerna’s senior vice president of pharmaceutical development, will highlight Dicerna’s unique approach to RNA interference, expanding on the topics of: natural entry to the RNAi pathway; chemical configuration for optimized RISC loading and picomolar potency; chemical optimization for prolonged effect and evasion of immunostimulation; and therapeutic applications. This presentation is scheduled for 11:40 a.m. (BST) on Thursday, June 11, 2009.

Keystone Symposium on Molecular and Cellular Biology – Deregulation of Transcription in Cancer Controlling Cell Fate Decisions, Killarney, Ireland:

In a session titled, “Modifying Transcription and Transcription Targeted Therapeutics,” Dr. 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, as well as a co-founder of Dicerna, will present on the topic of “Small RNA Mediated Post-Transcriptional and Transcriptional Gene Silencing Mechanisms in Human Cells.” This session is scheduled to begin at 9:00 a.m. (IST) on Thursday, June 25, 2009.

At the same Keystone event, Dr. Rossi will participate in a workshop titled, “Panel Discussion, Perspectives on Transcription as a Therapeutic Target,” which is scheduled to begin at 3:00 p.m. (IST) on Wednesday, June 24, 2009.

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 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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