



News Release

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Dicerna Pharmaceuticals Announces Second Close of Series B Financing

SR One Joins as New Investor

WATERTOWN, Mass. – October 21, 2010 – Dicerna Pharmaceuticals, Inc. (Dicerna), a second generation RNA interference (RNAi) company developing novel therapeutics utilizing its proprietary Dicer Substrate Technology™ and Dicer Substrate siRNA (DsiRNA) molecules, today announced a second closing of its Series B equity financing, securing an additional \$4 million and bringing the total capital raised in this round to \$29 million. New investor SR One, the independent corporate healthcare venture capital arm of GlaxoSmithKline, participated in this closing and joins the existing investor syndicate, which includes Oxford Bioscience Partners, Skyline Ventures, Abingworth and Domain Associates, who all previously participated in this round. In conjunction with this investment, Brian M. Gallagher, Jr., Ph.D., a partner at SR One, will become an observer on Dicerna's board of directors.

“We are very pleased to welcome SR One to our syndicate of top tier investors,” said Doug M. Fambrough, Ph.D., chief executive officer of Dicerna. “Following our first close of the Series B in August, we re-opened the round due to significant additional interest from the investment community in our unique Dicer Substrate Technology platform and next generation approach to developing RNAi therapeutics. The SR One team offers a high level of sophistication, success with emerging life sciences companies and a long history of setting the standard for corporate venture capital investing in the biotech sector. We welcome Brian as a board observer and look forward to SR One's input as we continue to advance our pipeline of DsiRNA molecules and delivery systems.”

“We are very excited about the broad potential for RNAi therapeutics to treat diseases caused by a large number of gene targets that are considered ‘undruggable’ with today's pharmacologic treatments,” said Dr. Gallagher. “We are particularly impressed with Dicerna's management team and the superior potency and longer duration of action demonstrated with DsiRNA molecules, as well as the applicability of these next generation RNAi compounds to delivery with a variety of approaches such as targeted delivery and nanoparticles. Dicerna squarely met our strategic investment criteria, as SR One seeks to invest in early stage companies pursuing innovative approaches to developing breakthrough science.”

Proceeds from the Series B financing will be used to advance Dicerna's lead in-house program in oncology towards clinical development and progress its other preclinical programs. The company also plans to use the proceeds to continue to develop its delivery technologies, including its proprietary lipid nanoparticle system and novel lipid platform, and targeted delivery systems which combine Dicerna's DsiRNA molecules with targeting moieties such as peptides, aptamers or antibodies.

About Dicer Substrate RNAi

Dicer is a critical enzyme involved in the RNAi gene silencing cascade and acts as the natural initiation point for this pathway by processing double-stranded RNA so that it can be used for gene silencing. Dicer then delivers these modified small RNA molecules to the mature gene silencing complex. Dicerna's synthetic Dicer Substrate siRNA (DsiRNA) molecules are 25 or more base pairs in length and are processed by Dicer. By utilizing this distinct early entry point into the pathway, DsiRNA molecules have greater potency and longer duration of action than other RNAi approaches. In addition, DsiRNA molecules have enhanced delivery potential because their structure creates a natural conjugation point for cellular targeting agents.

About Dicerna

Dicerna Pharmaceuticals is a private, venture-backed RNAi-focused biopharmaceutical company developing novel therapeutic agents and related drug delivery systems in multiple disease areas based on its proprietary Dicer Substrate Technology™ platform and Dicer Substrate siRNA (DsiRNA) molecules. Dicer Substrate Technology is a second generation RNAi approach that results in greater potency, longer duration of action and enhanced delivery potential, differentiating it from other RNAi approaches. 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 company's portfolio of Dicer Substrate Technology intellectual property. Dicerna has a major alliance with Kyowa Hakko Kirin for DsiRNA pharmaceuticals and drug delivery systems, initially focused on oncology. The company also has a partnership with Ipsen to research and develop novel DsiRNA therapeutics with targeted delivery in oncology and endocrinology. Dicerna is based in Watertown, Massachusetts. For more information, please visit www.dicerna.com.

About SR One

SR One is the corporate venture capital arm of GlaxoSmithKline. The firm invests globally in emerging life science companies that are pursuing innovative science which will significantly impact medical care. Since 1985, SR One has invested approximately \$600 million in more than 130 companies. For more information visit www.srone.com.

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