

Dicerna Raises \$25M Series B to Fund RNAi Cancer Program

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Dicerna Pharmaceuticals Inc. raised \$25 million in Series B financing to advance its preclinical RNAi oncology program into clinical trials.

Dicerna calls its Dicer substrate siRNA molecules the next generation of RNAi therapeutics and aims to be the "partner of choice" in that space for pharmaceutical companies.

Watertown, Mass.-based Dicerna considers itself a "platform-to-product" company with a strategy to partner with pharmaceutical companies to develop custom siRNA products, while also advancing its own internal oncology programs.

Dicerna has not disclosed the identity of its preclinical lead siRNAs, nor the targets it is pursuing, but CEO Douglas Fambrough told *BioWorld Today* that it is a "Pretty famous target with high unmet need."

Earlier this year, Dicerna entered into partnerships with Paris-based Ipsen SA and Tokyo's Kyowa Hakko Kirin Co. Ltd.

Under terms of the agreement with Kyowa Hakko Kirin, Dicerna will receive \$4 million up front and up to \$120 million in milestone payments for the development of siRNAs for an oncology target, with an option for as many as 10 targets under an expanded agreement that could be worth as much as \$1.4 billion. (See *BioWorld Today*, Jan. 5, 2010.)

In the deal with Ipsen, whose financial terms are undisclosed, the two companies will work together to develop conjugates of Dicerna's Dicer substrate siRNAs and Ipsen's peptide targeting vectors.

According to Fambrough, the company will seek future funding in the form of additional partnerships. "It's a platform-based business model where part of our plan is to get funding and expertise from these partners," Fambrough told *BioWorld Today*.

Dicerna's siRNAs, which it calls Dicer Substrate siRNA or DsiRNA, are 27-mer small RNA molecules, as opposed to the 21-mer molecules being developed by competitors.

The company claims that these longer siRNAs enter the pathway at an earlier point and undergo processing by the

enzyme Dicer.

"It provides higher potency and makes the molecule substantially easier to deliver by targeted delivery mechanisms," he noted.

Fambrough said that first-generation siRNAs were introduced by Sirna Therapeutics Inc., now owned by Merck and Co Inc., and Alnylam Pharmaceuticals.

All pharmaceutical companies will want to pursue siRNA therapeutics in the future, he added, and Dicerna is positioning itself as the most attractive partner.

"We and our investors believe that the pharmaceutical industry is going to adopt the platform as a way to bring forward a new generation of drugs," Fambrough pointed out.

siRNAs can target proteins that are not accessible by small molecules or antibody therapies, Fambrough explained, because these strategies target only cell surface proteins or proteins that have convenient binding pockets.

Many clinically significant proteins exist inside of the cell, including transcription factors, cell signaling proteins and intracellular signaling pathway proteins.

Going forward, Dicerna will use the \$25 million Series B financing to support clinical studies of its oncology therapeutics, and will rely on further nondilutive funding from pharma partners to develop and mature its technology.

Dicerna remains open to all exit options ranging from acquisition to a public offering.

Domain Associates LLC led the Series B round with existing investors Oxford Bioscience Partners, Skyline Ventures and Abingworth LLP rounding out the field. It follows a Series A in 2007 of \$21.4 million, rolled in with the company's seed financing. (See *BioWorld Today*, Aug. 15, 2008.)

"It's a tough financing environment out there," Fambrough said, "And we could have raised a lot more money than we did. I was very pleased with the reception we got."

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