



## Current Agreements

### Dealdoc

#### **Development agreement for miR-208 and miR-15/195 plus additional target**

miRagen Therapeutics  
Servier

Oct 18 2011

## Development agreement for miR-208 and miR-15/195 plus additional target

<b>Companies:</b>	<a href="#">miRagen Therapeutics</a> <a href="#">Servier</a>
<b>Announcement date:</b>	Oct 18 2011
<b>Deal value, US\$m:</b>	1000.0 : sum of upfront, research support and milestone payments
<b>Related contracts:</b>	<a href="#">Research and development agreement for mRNA-target cardiovascular medicines (expanded)</a>

### Details

<b>Announcement date:</b>	Oct 18 2011
<b>Industry sectors:</b>	Bigpharma Pharmaceutical Biotech
<b>Therapy areas:</b>	Cardiovascular Cardiovascular » Congestive heart failure Cardiovascular » Myocardial Infarction
<b>Technology types:</b>	Biological compounds RNA therapeutics
<b>Deal components:</b>	Co-development Co-promotion Collaborative R&D Development Licensing
<b>Stages of development:</b>	Preclinical
<b>Geographic focus:</b>	Worldwide
<b>Excluded geography:</b>	Asia » Japan North America » United States

### Financials

<b>Deal value, US\$m:</b>	1000.0 : sum of upfront, research support and milestone payments
<b>Upfront, US\$m:</b>	n/d : upfront payment
<b>Milestones, US\$m:</b>	45.0 : near term milestone payments 955.0 : clinical and commercial milestones
<b>Royalty rates, %:</b>	n/d : royalties on sales
<b>Funding, US\$m:</b>	n/d : clinical development support for successful development of three compounds

### Termsheet

Agreement for advancing the research, development and commercialization of three drug candidates, including two of miRagen's lead programs (miR-208 and miR-15/195) and one additional target yet to be identified, for cardiovascular disease.

This partnership provides worldwide rights, excluding the U.S. and Japan, to Servier.

Miragen will receive up to \$45 million in total upfront, research support and near-term milestone payments over the next three years, as well as royalties on sales, based on the successful outcome of the collaboration.

Additional clinical and commercial milestones, as well as clinical development support for the successful development of the three compounds, would value the deal at approximately \$1 billion.

Miragen and Servier will collaborate on the research and development effort, while Servier alone will be responsible for all costs associated with the global development, regulatory approval and commercialization of the three product candidates worldwide, excluding the U.S. and Japanese markets.

Miragen retains all rights in the U.S. and Japan, and the option to co-sponsor any Phase III programs in the event that Miragen, alone or together with a partner, should seek marketing approvals for any of the targets in the U.S. and Japan.

### Press Release

23 May 2013

#### miRagen Therapeutics Achieves First Milestone in Strategic Alliance with Servier

Servier selects third cardiovascular target triggering the first milestone under the collaboration

SURESNES, France & BOULDER, Colo.--Servier, a privately-run French research-based pharmaceutical company and a major player in Europe and emerging markets having expertise in the development of treatments for cardiovascular diseases, and miRagen Therapeutics, Inc., a biopharmaceutical company developing innovative microRNA-based therapeutics, announced today that Servier has elected to add a new target as part of its existing agreement for advancing the research, development and commercialization of microRNA-based drug candidates for the treatment of cardiovascular disease. With this selection, Servier and miRagen now have three microRNA programs under development.

"Our selection of a third target is indicative of the strength of our partnership with miRagen, as well as our shared commitment to develop microRNA-based therapies for the treatment of cardiovascular disease" "Our selection of a third target is indicative of the strength of our partnership with miRagen, as well as our shared commitment to develop microRNA-based therapies for the treatment of cardiovascular disease," said Dr. Jean-Paul Vilaine, Head of Servier's Cardiovascular Research Unit. "We look forward to our continued collaboration to advance promising drug candidates."

For Dr. Jean-Philippe Seta, Chief Executive Officer of Servier, "Micro-RNA is now the gateway to acting at the deepest level of gene expression regulation, with exciting prospects of major developments in the treatment of cardiovascular disease."

"The achievement of this milestone further validates the potential of miRagen's platform in the development of disease-modifying drug candidates," said William S. Marshall, Ph.D., President and Chief Executive Officer of miRagen Therapeutics, Inc. "We remain deeply committed to the discovery and advancement of microRNA-based therapeutics, and we anticipate that our partnership with Servier will yield life-changing treatment options for patients in need."

About the miRagen / Servier Cardiovascular Drug Discovery Strategic Alliance In October 2011, miRagen entered into a Strategic Alliance with Servier with the goal of advancing microRNA-based therapies in cardiovascular disease. The Servier Alliance initially included two named targets (miR-208 and miR-15/195) and granted Servier the right to add one additional target. In May 2013, Servier elected to add a third, undisclosed, target. Under the terms of the agreement, miRagen received an upfront payment in 2011, is scheduled to receive a target selection payment in 2013, and additional research and development milestones per target. miRagen is also eligible to receive commercial milestones and royalties on the sale of products under the Strategic Alliance. Servier will finance the research, development, regulatory approval, and commercialization costs of the three product candidates. miRagen retains all commercialization rights in the U.S. and Japan, and the option to co-sponsor any Phase III programs in the event that miRagen, alone or together with a partner, should seek marketing approvals for any of the targets in the U.S. and Japan.

About microRNAs MicroRNAs have emerged as an important class of small RNAs encoded in the genome, acting as master regulators of gene expression. Recent studies have demonstrated that microRNA alterations are associated with many disease processes. Because microRNAs have evolved to modulate the expression of related regulatory pathways, microRNAs represent potential drug targets for intervening in complex disease biology.

About miRagen Therapeutics, Inc. miRagen Therapeutics, Inc., is a biopharmaceutical company focused on the discovery and development of innovative microRNA (miRNA)-based therapeutics in disease areas with high unmet medical need. The company leverages insights from leading laboratories to evaluate and advance high-potential therapies for its own pipeline or in conjunction with strategic partners. With its commercial and academic alliances, miRagen strives to harness the power of microRNA biology and chemistry by translating discoveries into breakthrough therapies that improve human health. For more information, please visit [www.miragenrx.com](http://www.miragenrx.com).

About Servier Servier is a privately-run French research-based pharmaceutical company. Current therapeutic domains for Servier medicines are cardiovascular, metabolic, neurological, psychiatric and bone and joint diseases, as well as oncology. Servier is established in 140 countries worldwide with over 22,000 employees and a 2012 turnover of €3.9 billion. Servier invests 25% of its turnover in R&D.

More information is available at: [www.servier.com](http://www.servier.com).

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18 October 2011

#### miRagen Therapeutics Scores \$352 Million Cardio microRNA Development Deal With Servier

10/18/2011 6:55:34 AM

SURESNES, France, & BOULDER, Colo.--(BUSINESS WIRE)-- Les Laboratoires Servier, a leading European pharmaceutical company with expertise in innovative treatments for cardiovascular diseases, and Miragen Therapeutics, Inc., a preclinical-stage biopharmaceutical company focused on improving patients' lives by developing innovative microRNA (miRNA)-based therapeutics for cardiovascular and muscle disease, announced today an agreement for advancing the research, development and commercialization of three drug candidates, including two of miRagen's lead programs (miR-208 and miR-15/195) and one additional target yet to be identified, for cardiovascular disease. This partnership

provides worldwide rights, excluding the U.S. and Japan, to Servier.

Under the terms of the agreement, Miragen will receive up to \$45 million in total upfront, research support and near-term milestone payments over the next three years, as well as royalties on sales, based on the successful outcome of the collaboration. Additional clinical and commercial milestones, as well as clinical development support for the successful development of the three compounds, would value the deal at approximately \$1 billion. Miragen and Servier will collaborate on the research and development effort, while Servier alone will be responsible for all costs associated with the global development, regulatory approval and commercialization of the three product candidates worldwide, excluding the U.S. and Japanese markets. Miragen retains all rights in the U.S. and Japan, and the option to co-sponsor any Phase III programs in the event that Miragen, alone or together with a partner, should seek marketing approvals for any of the targets in the U.S. and Japan.

"We are very pleased with this new partnership, which demonstrates once again our ability to explore truly innovative treatments for patients suffering from cardiovascular diseases. Indeed, these diseases still represent the number one cause of mortality in most of the world," said Emmanuel Canet, M.D., Ph.D., Head of Servier R&D.

"More and more evidence is gathering to show that some microRNAs are not only cardiovascular biomarkers, but they also play a significant role in the pathogenesis of various diseases from heart failure to coronary disease," added Dr. Jean-Paul Vilaine, Head of Servier's Cardiovascular Unit.

"Our agreement with Servier not only provides validation of our lead programs in cardiac disease, but further underscores the potential of our innovative technology platform to deliver compelling drug candidates," said William S. Marshall, Ph.D., President and Chief Executive Officer of Miragen Therapeutics, Inc. "We are delighted to partner with Servier, whose demonstrated leadership and expertise in the development of cardiovascular drugs are truly impressive. By combining our strengths, we hope to translate the potential of microRNA targeting into life-changing medicines for patients in need."

Miragen's lead programs utilize Santaris Pharma A/S' Locked Nucleic Acid (LNA) Drug Platform. In June 2010, Miragen licensed the rights to utilize Santaris Pharma A/S proprietary LNA Drug Platform to identify and select drug candidates against Miragen's proprietary microRNA targets for the treatment of cardiovascular disease. This agreement has now been expanded to allow Miragen to develop additional targets and provide Servier access to Santaris Pharma's LNA technology.

"We are pleased to expand our alliance with Miragen to include additional cardiovascular targets and provide access to Santaris Pharma's LNA technology in order to help Servier and Miragen to develop LNA-based microRNA-targeted drugs for the treatment of cardiovascular disease," said Søren Tønderup, President and CEO of Santaris Pharma A/S. "This agreement further validates that Santaris Pharma's LNA Drug Platform is the technology-of-choice for developing RNA-targeted medicines."

The agreement includes two of Miragen's lead programs: miR-208, which plays an important role in the pathogenesis and progression of heart failure, and miR-15/195, which plays a role in the survival and proliferative capacity of cardiomyocytes. The agreement also includes one additional cardiovascular microRNA modulator yet to be identified.

- miR-208: Miragen's research has demonstrated that therapeutic inhibition of miR-208 may improve cardiac function and survival rates during heart failure. In addition, chemically-synthesized inhibitors of miR-208 have been shown to suppress pathological cardiac remodeling in a model of heart failure induced by chronic high blood pressure, while enhancing cardiac function and survival.

- miR-15/195: Research has shown that the inhibition of miR-15 may stimulate cardiomyogenesis, the process whereby new heart muscle cells are formed, and that inhibition of miR-15 can spare cardiomyocytes from death during myocardial infarction (MI), resulting in less heart tissue death and an improvement in cardiac function after a heart attack.

About Servier: Servier is the leading independent pharmaceutical company in France with sales worldwide reaching EUR3.7 billion in 2010. Servier is established in 140 countries with its main therapeutic products treating cardiovascular diseases, diabetes, CNS disorders, oncology and rheumatological diseases. More than 25 percent of Servier's turnover is invested in research and development. Servier has more than 20,000 employees worldwide, including nearly 3,000 in R&D. For more information, please visit [www.servier.com](http://www.servier.com).

About Miragen Therapeutics: Miragen Therapeutics, Inc., was founded in 2007 to develop innovative microRNA-based therapeutics for cardiovascular and muscle disease. Only recently discovered, microRNAs are short, single-stranded RNA molecules encoded in the genome that regulate gene expression and play a vital role in influencing cardiovascular and muscle disease. Cardiovascular disease is the leading cause of death globally and represents an enormous burden on global healthcare systems. Principally funded through venture capital investments, miRagen combines world recognized leadership in cardiovascular medicine with unprecedented in-house expertise in microRNA biology and chemistry. For more information, please visit [www.miragentherapeutics.com](http://www.miragentherapeutics.com).

About microRNAs: MicroRNAs have emerged as an important class of small RNAs encoded in the genome. They act to control the expression of sets of genes and entire pathways and are thus thought of as master regulators of gene expression. Recent studies have demonstrated that microRNAs are associated with many disease processes. Because they are single molecular entities that dictate the expression of fundamental regulatory pathways, microRNAs represent potential drug targets for controlling many biologic and disease processes.

About Santaris Pharma A/S' Locked Nucleic Acid (LNA) Drug Platform: The LNA Drug Platform developed by Santaris Pharma A/S leverages the Company's proprietary LNA chemistry to rapidly deliver LNA-based drug candidates against RNA targets, both mRNA and microRNA, for a

range of diseases. LNA-based drugs are a promising new class of therapeutics that are enabling scientists to develop drug candidates to work through previously inaccessible clinical pathways. The unique combination of small size and very high affinity allows this new class of drugs candidates to potently and specifically inhibit RNA targets in many different tissues without the need for complex delivery vehicles.

**Filing Data**

*Not available.*

**Contract**

*Not available.*