



Moderna to Collaborate with Karolinska Institutet and Karolinska University Hospital on Discovery of New Messenger RNA Therapeutics™

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Strategic research and clinical partnership will advance state-of-the-art discoveries on the use of messenger RNA (mRNA) Therapeutics™ to treat serious diseases

CAMBRIDGE, Mass. and STOCKHOLM, Sweden, October 16, 2014 —Moderna Therapeutics today announced a strategic, long-term collaboration with Karolinska Institutet (KI) and Karolinska University Hospital (KUH) for the discovery and development of innovative drugs using Moderna's messenger RNA (mRNA) Therapeutics™ technology. mRNA Therapeutics™ enable the *in vivo* production of both intracellular proteins and secreted proteins. As a result, Moderna's platform has the potential to speed the development and manufacture of treatments for many diseases that are currently untreatable with existing pharmaceutical approaches.

"This project is an important step in advancing medical science," said Professor Hans-Gustaf Ljunggren, Dean of Research at Karolinska Institutet. "It will help achieve our common goal of rapidly advancing new drug candidates into the clinic."

Under the terms of the partnership, Moderna will sponsor research grants for scientists at both institutions to conduct preclinical research with novel mRNA Therapeutics™. As this pre-clinical work is successfully completed, Moderna will conduct clinical trials of new drug candidates at Karolinska University Hospital.

"As a leading medical center, we continually strive to improve the treatment of serious diseases," said Professor Mats Eriksson, Karolinska University Hospital. "Our clinical researchers are excited to work with Moderna's groundbreaking mRNA Therapeutics platform and speed the advancement of new treatments to patients."

To solidify the scientific and clinical collaboration between the organizations, and to optimize the output of this important partnership, Moderna is creating a new laboratory in Stockholm, Sweden, located in the Novum building next to the Karolinska University Hospital Huddinge campus.

"Moderna is investing heavily to bring mRNA Therapeutics to patients, and our science is accelerating rapidly," said Stéphane Bancel, President and founding CEO of Moderna. "This partnership puts our mRNA Therapeutics platform in the hands of Karolinska's world-class scientists and clinical researchers to develop new drugs and therapeutic approaches that cannot be done with small molecules or biologics – bringing new hope to patients with serious diseases."

"Strategically, we view this, our first academic partnership, as highly complementary to our existing drug discovery and development efforts, both with our pharmaceutical partners AstraZeneca and Alexion and with Moderna ventures such as Onkaido," added Bancel. "Given the broad potential of this revolutionary drug technology, it was critical to us to work closely with a leading academic medical institution. We are honored to be partnering with one of the best academic medical research institutions in the world."

For more information on Karolinska Institutet and Karolinska University Hospital, please visit ki.se and karolinska.se.

For more information on Moderna Therapeutics please visit modernatx.com.

About Karolinska Institutet

Onkaido Therapeutics, a venture company formed, funded and wholly-owned by Moderna, is focused exclusively on the advancement of oncology products for previously undruggable targets and as a superior alternative to existing drug modalities. Leveraging Moderna's messenger RNA Therapeutics™ platform, an entirely new *in vivo* drug modality that produces human proteins or antibodies inside patient cells, Onkaido plans to rapidly turn scientific innovation into cancer therapies that can make a real difference for patients. onkaido.com

About Karolinska University Hospital

Karolinska University Hospital is one of Europe's largest university hospitals and together with Karolinska Institutet has a leading role within the field of medical breakthroughs. The hospital aims to always put the patient first by providing the best possible medical expertise, treatment and care. Through innovation and active collaboration with industry and academia, it is committed to being internationally prominent in medicine, research and education.

About Moderna Therapeutics

Moderna is pioneering [messenger RNA Therapeutics™](http://messengerRNATherapeutics.com), an entirely new *in vivo* drug modality that produces human proteins or antibodies inside patient cells, which are in turn secreted or active intracellularly. This breakthrough platform addresses currently undruggable targets and offers a superior alternative to existing drug modalities for a wide range of disease conditions. Moderna has developed a broad intellectual property estate, including more than 320 patent applications covering novel nucleotide chemistries and drug compositions. The company plans to develop and commercialize its innovative mRNA drugs through a combination of strategic relationships as well as new formed ventures, like [Onkaido LLC](http://Onkaido.LLC), its oncology Drug Development Company. Founded by [Flagship Venture Labs™](http://Flagship.VentureLabs.com), Cambridge-based Moderna is privately held and currently has strategic agreements with AstraZeneca and [Alexion Pharmaceuticals](http://Alexion.Pharmaceuticals). To learn more, visit www.modernatx.com.