AstraZeneca and Moderna Therapeutics Announce New Collaboration to Co-Develop and Co-Commercialize Immuno-Oncology mRNA Therapeutics™

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Moderna to lead preclinical development; AstraZeneca to lead clinical development; Moderna to co-commercialize and share profits on resulting products in the US

CAMBRIDGE, Mass., and LONDON, UK, January 11, 2016 —AstraZeneca, along with its global biologics research and development arm, MedImmune, and Moderna Therapeutics today announced a new collaboration to discover, co-develop and co-commercialize messenger RNA (mRNA) therapeutic candidates for the treatment of a range of cancers. The collaboration is in addition to the agreement announced by the companies in 2013 to develop mRNA Therapeutics™ for the treatment of cardiovascular, metabolic and renal diseases as well as selected targets in oncology.

The collaboration will combine MedImmune's protein engineering and cancer biology expertise with Moderna's mRNA platform. mRNA-based therapies are an innovative treatment approach that enables the body to produce therapeutic protein *in vivo*, opening up new treatment options for a wide range of diseases that cannot be addressed today using existing technologies.

Under the terms of the new agreement, AstraZeneca and Moderna, a pioneer of mRNA Therapeutics™, have agreed to collaborate on two specific immuno-oncology programs, based on promising pre-clinical data, including pharmacology in tumor models. Moderna will fund and be responsible for discovery and preclinical development of product candidates, with the aim of delivering one Investigational New Drug (IND) application-ready molecule for each of the two programs. Moderna's efforts will be led by its oncology-focused venture, Onkaido. AstraZeneca will be responsible for early clinical development, led by MedImmune, and Moderna and AstraZeneca will share the costs of late-stage clinical development. The two companies will co-commercialize resulting products in the US under a 50:50 profit sharing arrangement. AstraZeneca will lead ex-US commercialization efforts, with Moderna receiving tiered royalties up to substantial double digits on ex-US sales.

Pascal Soriot, Chief Executive Officer, AstraZeneca, said: "We're pleased to be expanding our relationship with Moderna with this new collaboration, to advance the potential of pioneering messenger RNA technology in developing game-changing new treatments for cancer patients."

"Since our companies' original strategic agreement in March 2013, Moderna's relationship with AstraZeneca has been very fruitful. This new agreement with AstraZeneca demonstrates the effectiveness of our existing relationship and the power of our mRNA technology," said Stéphane Bancel, Chief Executive Officer of Moderna. "We're gratified to deepen our relationship with AstraZeneca and MedImmune with this major initiative, and we look forward to getting underway immediately with our new joint immuno-oncology programs."

Under the companies' original strategic agreement, AstraZeneca holds exclusive access to select any target of its choice in cardiometabolic diseases, as well as select targets in oncology, over a period of up to five years for subsequent development in mRNA. Several projects are progressing towards clinical development under the arrangement, and a first-in-human study is expected to commence in late 2016.

With its novel technology to enable mRNA as a drug, Moderna is building a fully scaled drug discovery and development platform centered on the rapid and low-cost design, delivery and production of mRNA drug candidates. Moderna is also advancing an innovative business model built on the decentralization of drug development activities. With an ecosystem of in-house concept development, ventures focused on therapeutic areas and a cluster of major pharma and biotech partners, Moderna is enabling more than 90 discovery and preclinical programs today across oncology, infectious diseases, rare diseases and cardiovascular diseases. Moderna's pipeline also covers a broad expanse of novel drug modalities, each representing a distinct approach to using the company's novel mRNA expression platform to encode proteins that achieve a therapeutic benefit.

About MedImmune

MedImmune is the global biologics research and development arm of AstraZeneca, a global, innovation-driven biopharmaceutical business that focuses on the discovery, development and commercialization of small molecule and biologic prescription medicines. MedImmune is pioneering innovative research and exploring novel pathways across key therapeutic areas, including respiratory, inflammation and autoimmunity; cardiovascular and metabolic disease; oncology; neuroscience; and infection and vaccines. The MedImmune headquarters is located in Gaithersburg, Md., one of AstraZeneca's three global R&D centers, with additional sites in Cambridge, UK and Mountain View, CA. For more information, please visit www.medimmune.com.

About AstraZeneca in Oncology

Oncology is a therapy area in which AstraZeneca has deep-rooted heritage. It will be potentially transformational for the company's future, becoming the sixth growth platform. Our vision is to help patients by redefining the cancer treatment paradigm and one day eliminate cancer as a cause of death. By 2020, we are aiming to bring at least six new cancer medicines to patients.

Our broad pipeline of next-generation medicines is focused on four main disease areas – lung, ovarian, breast and haematological cancers. These are being targeted through four key platforms – immuno-oncology, the genetic drivers of cancer and resistance, DNA damage repair and antibody drug conjugates – with a strong focus on combinations. Our recently announced investment in Acerta Pharma also adds the potentially transformational BTK inhibitor class of treatments to our portfolio, subject to closure in the first quarter of 2016, strengthening further our focus on targeted therapies.

About AstraZeneca

AstraZeneca is a global, innovation-driven biopharmaceutical business that focuses on the discovery, development and commercialisation of prescription medicines, primarily for the treatment of diseases in three main therapy areas - respiratory, inflammation, autoimmune disease, cardiovascular and metabolic disease and oncology – as well as in infection and neuroscience. AstraZeneca operates in over 100 countries and its innovative medicines are used by millions of patients worldwide. For more information please visit: www.astrazeneca.com