



Moderna Opens New Manufacturing Site in Norwood, MA

July 18, 2018

200,000 Square Foot State-of-the-Art Plant Built to Support Development of mRNA Medicines

NORWOOD, Mass., July 17, 2018 — Moderna Therapeutics, a clinical-stage biotechnology company pioneering messenger RNA (mRNA) therapeutics and vaccines to create a new generation of transformative medicines for patients, today announced the opening of its state-of-the-art manufacturing facility in Norwood, Massachusetts.

The digitally-enabled and environmentally sustainable 200,000 square foot clinical development manufacturing plant was built to advance Moderna's pipeline of mRNA-based medicines. Designed to Current Good Manufacturing Practices (cGMP) specifications, the site gives the company the capacity to develop materials for preclinical toxicology studies as well as Phase 1 and 2 clinical development programs, and to manufacture, test and run fill/finish operations for its portfolio of mRNA development candidates.

Today, Moderna has 21 programs in its mRNA pipeline, including potential treatments for different forms of cancer, rare diseases, infectious diseases and heart failure.

The new site also houses the company's Personalized Cancer Vaccine (PCV) Unit for individualized supply batches of mRNA for potential personalized cancer vaccines. By making this direct investment in PCV next-generation manufacturing, the company can reduce the time it takes to manufacture a dedicated cancer vaccine for individual patients in clinical trials.

"The Norwood site is core to our long-term strategy, enabling us to leverage the potential of our mRNA platform, control our supply chain, and provide the necessary scale and flexibility to support the development of high-quality mRNA medicines for patients in the decades ahead," said Stephane Bancel, CEO of Moderna. "Opening this new manufacturing facility in Massachusetts was also important as it enables close collaboration with our development and research teams in Cambridge as we advance our mRNA platform and science. We are excited to continue to work with state and local partners, leverage the remarkable innovation and talent from the Massachusetts life sciences and technology sectors, and create new biopharma manufacturing roles as we work to develop new medicines for people with serious and life-threatening diseases."

"Our administration has reinforced our commitment to life sciences, health care and the digital health ecosystem by investing over \$500 million for strategic investments to support companies in innovation and technology," said Massachusetts Governor Charlie Baker. "Thanks to companies like Moderna, Massachusetts continues to be a global leader in the industry and we welcome their growth and investment in Norwood to support the manufacturing market here in the Commonwealth."

Norwood Site Highlights

Workforce

More than 200 employees will work at the Norwood facility in a wide range of roles including production operations, manufacturing science and technology, quality control, engineering services, supply chain management and process development. Moderna has hired more than 150 people (full time and contractors) for Norwood-based positions since the end of 2016, and plans to add close to 50 additional manufacturing roles in 2018.

Digital Integration

The digitally-enabled site connects information systems, robotics and machinery to enable the continuous exchange of data and provide information on all manufacturing activities. Using advanced algorithms and analytics, over 7,000 events are monitored in real-time to help increase efficiency, ensure quality and maintain data integrity. Moderna has also created a paperless manufacturing environment, eliminating many manual and redundant processes.

Environmental Sustainability

As part of Moderna's [commitment to sustainability](#), the manufacturing facility was designed to achieve Leadership in Energy and Environmental Design (LEED) certification. Moderna is limiting energy use with advanced energy metering, LED lighting, and systems designed to reduce water usage by up to 25 percent. The site will have charging stations for nearly two dozen electric vehicles, and deploy air quality and efficient waste management systems. Next year, the Company will also add solar panels to provide renewable energy to the building.

"Our investment in Norwood brings us even closer to the industrialization of our mRNA platform," said Juan Andres, Senior Vice President of Manufacturing for Moderna. "Norwood will allow us to own the end-to-end production of materials, run multiple programs simultaneously, and produce more than 100 cGMP batches annually in an automated and digitally-integrated environment. We believe this provides us with an important advantage as we work to develop multiple pipeline candidates for patients and to scale capacity to meet individual program demands."

About Moderna Therapeutics

Moderna is a leader in the discovery and development of messenger RNA (mRNA) therapeutics and vaccines, an entirely new class of medicines that directs the body's cells to produce intracellular or secreted proteins that can have a therapeutic or preventive benefit for both patients and healthy individuals. With its breakthrough platform, Moderna is creating mRNA medicines for a wide range of diseases and conditions, in many cases by addressing currently undruggable targets or underserved areas of medical need. Moderna is developing its innovative mRNA medicines for infectious diseases, immuno-oncology, rare diseases, and cardiovascular diseases, through solely controlled programs and collaborations with strategic partners.

Headquartered in Cambridge, Mass., privately held Moderna currently has strategic relationships with AstraZeneca, Plc. (AZ), Merck, Inc (MRK) and

Vertex Pharmaceuticals (VRTX), as well as the Defense Advanced Research Projects Agency (DARPA), an agency of the U.S. Department of Defense; the Biomedical Advanced Research and Development Authority (BARDA), a division of the Office of the Assistant Secretary for Preparedness and Response (ASPR) within the U.S. Department of Health and Human Services (HHS); and the Bill & Melinda Gates Foundation. In 2017 Moderna was ranked a top biopharma industry employer by [Science Magazine](#) and a Top Place to Work by the [Boston Globe](#). To learn more, visit www.modernatx.com.

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