



Moderna Therapeutics and PPD Announce Strategic Collaboration to Support Clinical Development of Novel mRNA Therapeutics

January 8, 2016

Comprehensive agreement to support rapid scale-up and clinical advancement of multiple mRNA-based drug development projects for various modalities and therapeutic areas across Moderna's ventures

CAMBRIDGE, Mass. and Wilmington, N.C., January 8, 2016 — Moderna Therapeutics, a pioneer in the development of messenger RNA (mRNA) Therapeutics™, and Pharmaceutical Product Development, LLC (PPD), a leading global contract research organization (CRO), today announced a strategic collaboration to support Moderna's evolution as a clinical-stage company. Covering a broad expanse of drug modalities and therapeutic areas, Moderna's pipeline has the potential to address the unmet needs of numerous patients worldwide. PPD will be a key partner in advancing Moderna's proprietary pipeline as it rapidly scales up its clinical efforts in the coming months and years.

Under the terms of the agreement, PPD will play a significant role in Moderna's clinical development efforts, including support for investigational new drug (IND) strategic planning, as well as for clinical trial design and execution. The collaboration is built around a unique risk-sharing model that incentivizes both organizations to achieve shared milestones.

"We are excited to partner with PPD as we rapidly progress multiple mRNA candidates toward the clinic across our ventures," said Stéphane Bancel, Chief Executive Officer of Moderna. "We are building a high-quality, scalable clinical development capability to match the accelerated output of our mRNA research, which will require the ability to test many mRNA therapeutics in clinical trials in parallel each year. PPD is an ideal partner for Moderna because of its proven track record of quality and delivery at every phase of clinical development. Further, PPD is uniquely positioned to help us achieve our goals because of its ability to be nimble while scaling to our evolving pipeline needs."

Moderna's pipeline is composed of a series of novel drug modalities, each representing a distinct application of the company's proprietary core expression mRNA platform to encode proteins that achieve a therapeutic benefit. Moderna's current modalities include infectious disease vaccines, personalized cancer vaccines, intracellular/transmembrane liver proteins, intratumoral cancer therapy, and secreted antibodies and proteins. Moderna is leveraging these modalities to advance drugs across a broad spectrum of therapeutic areas via its four ventures, including Valera, focused on infectious diseases; Elpidera, focused on rare diseases; Onkaido, focused on oncology; and Caperna, focused on personalized cancer vaccines.

With more than 30 years of CRO industry leadership, PPD offers a comprehensive portfolio of services featuring integrated development consulting, Phase I-IV delivery, and laboratory services. PPD® Biotech, the company's best-in-class, custom-built offering, provides emerging companies with tailored services that are flexible, innovative and nimble. Through PPD® Biotech, PPD offers biopharma companies high-quality delivery, broad global scale and top-notch therapeutic and medical development expertise.

"We are pleased that Moderna has selected PPD to be its premier clinical development partner," said David Simmons, Chairman and Chief Executive Officer of PPD. "We recognize the breakthrough nature of Moderna's novel mRNA platform and its unique business model. We look forward to applying our deep capabilities and expertise in the emerging biopharma space to help Moderna progress its pipeline through the clinic with the ultimate goal of delivering novel drugs to address unmet medical needs."

About PPD

PPD is a leading global contract research organization providing drug discovery, development, lifecycle management and laboratory services. PPD's clients and partners include pharmaceutical, biotechnology, medical device, academic and government organizations. With offices in 46 countries and more than 14,500 professionals worldwide, PPD applies innovative technologies, therapeutic expertise and a commitment to quality to help clients and partners accelerate the delivery of safe and effective therapeutics and maximize the returns on their R&D investments. For more information, visit www.ppd.com.

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PPD Forward-Looking Statement

Except for historical information, all of the statements, expectations and assumptions, including statements, expectations and assumptions about the strategic collaboration between PPD and Moderna, contained in this news release are forward-looking statements that involve a number of risks and uncertainties. Although PPD attempts to be accurate in making these forward-looking statements, it is possible that future circumstances might differ from the assumptions on which such statements are based and could cause actual results to differ materially from the forward-looking statements.

Other important factors that could cause future results to differ materially include the following: risks associated with and dependence on strategic relationships; loss, delay or modification of large contracts; higher-than-expected cancellation rates; the rate of conversion of backlog into revenue; actual operating performance; the ability to attract, integrate, retain and train key personnel; competition in the outsourcing industry; PPD's ability to win new business; overall global economic conditions; economic conditions, research and development spending, and outsourcing trends in the pharmaceutical, biotechnology and government-sponsored research sectors; risks associated with acquisitions, investments and joint ventures; rapid technological advances that make our services or capabilities less competitive; compliance with drug development regulations; changes in the regulation of the drug development process; consolidation in the pharmaceutical and biotechnology industries; and the ability to control SG&A spending. PPD assumes no obligation and expressly disclaims any duty to update these forward-looking statements in the future, except as required by applicable law. These forward-looking statements should not be relied upon as representing PPD's estimates or views as of any date subsequent to the date hereof.

About Moderna Therapeutics

Moderna Therapeutics is a clinical stage pioneer of messenger RNA Therapeutics™, an entirely new in vivo drug technology that produces human proteins, antibodies and entirely novel protein constructs 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 diseases and conditions. Moderna is developing and plans to commercialize its innovative mRNA medicines through its own ventures and its strategic relationships with established pharmaceutical and biotech companies. Its current ventures include Valera (infectious diseases), Onkaido (immuno-oncology), Caperna (personalized cancer vaccines) and Elpidera (rare diseases). Founded by Flagship VentureLabs®, Cambridge-based Moderna is privately held and currently has strategic agreements with [AstraZeneca](#), [Alexion Pharmaceuticals](#), [Merck](#) and [Vertex Pharmaceuticals](#). To learn more, visit www.modernatx.com.