Alnylam Pharmaceuticals Provides Perspective on Positive Complete Results from ORION-11 Phase 3 Study of Inclisiran

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CAMBRIDGE, Mass.--(BUSINESS WIRE)--Sep. 2, 2019-- Alnylam Pharmaceuticals, Inc. (Nasdaq: ALNY), the leading RNAi therapeutics company, today provided perspective on the positive complete results from the ORION-11 Phase 3 study of inclisiran, an RNAi therapeutic in development for the treatment of hypercholesterolemia. These results were presented earlier todayby Alnylam's partner The Medicines Company and collaborators at the European Society of Cardiology's ESC Congress 2019 in Paris, France.

"The ORION-11 results represent a landmark event for Alnylam and RNAi therapeutics. With over 1,600 patients enrolled, ORION-11 is the largest ever randomized, double-blind, placebo-controlled study of any RNA-based medicine. The results from the study demonstrate significant efficacy for a drug administered subcutaneously once every six months and a very encouraging safety profile, with predominantly mild and transient injection site reactions as the only reported drug-related finding," said John Maraganore, Ph.D., Chief Executive Officer of Alnylam. "These results further support the safety of our RNAi therapeutics platform and provide the largest demonstration to date suggesting that there is no systematic evidence for a platform-specific safety signal. Consequently, these results greatly strengthen our conviction for the future potential of RNAi therapeutics in large population diseases. Moreover, the pharmacology of RNAi therapeutics, as infrequently administered medicines, creates what we believe to be a very attractive profile for the treatment of common diseases. Finally, assuming a positive regulatory review, the significant inclisiran royalties of up to 20 percent will provide yet another source of relatively near-term revenues and will support Alnylam's transition toward a self-sustainable financial profile for continued and future growth."

ORION-11 now becomes the third positive Phase 3 study for an RNAi therapeutic and the second in 2019 alone. Assuming ORION-9 and -10 are similarly positive and following regulatory submissions and review, Alnylam expects inclisiran could reach the market around late 2020.

A video of Dr. Maraganore commenting on the implications of the ORION-11 results can be viewed on the Company's website, www.alnylam.com.

About Inclisiran

Inclisiran, the first cholesterol-lowering therapy in the RNAi therapeutics class, is an investigational therapy in Phase 3 clinical development to evaluate its ability to lower low-density lipoprotein cholesterol (also known as LDL-C) through twice-yearly dosing. Inclisiran harnesses the body's natural process of RNA interference to specifically prevent production of the PCSK9 protein in the liver which enhances the liver's ability to remove LDL-C from the bloodstream, thereby lowering LDL-C levels. In Phase 2 studies, inclisiran provided clinically significant LDL-C reductions greater than 50 percent in addition to the effects of statins and/or ezetimibe, and LDL-C reductions were sustained throughout the six-month dosing interval. The safety and efficacy of inclisiran were evaluated in the ORION-11 Phase 3 study with positive results; these results have not been evaluated by the FDA, the EMA or any other health authority. Inclisiran is not yet approved for use by the FDA or any other regulatory authority. In February 2013 Alnylam granted global rights under a license and collaboration agreement to The Medicines Company to develop, manufacture, and commercialize inclisiran.

About RNAi

RNAi (RNA interference) is a natural cellular process of gene silencing that represents one of the most promising and rapidly advancing frontiers in biology and drug development today. Its discovery has been heralded as "a major scientific breakthrough that happens once every decade or so," and was recognized with the award of the 2006 Nobel Prize for Physiology or Medicine. By harnessing the natural biological process of RNAi occurring in our cells, a new class of medicines, known as RNAi therapeutics, is now a reality. Small interfering RNA (siRNA), the molecules that mediate RNAi and comprise Alnylam's RNAi therapeutic platform, function upstream of today's medicines by potently silencing messenger RNA (mRNA) – the genetic precursors – that encode for disease-causing proteins, thus preventing them from being made. This is a revolutionary approach with the potential to transform the care of patients with genetic and other diseases.

About Alnylam Pharmaceuticals

Alnylam (Nasdaq: ALNY) is leading the translation of RNA interference (RNAi) into a whole new class of innovative medicines with the potential to transform the lives of people afflicted with rare genetic, cardio-metabolic, hepatic infectious, and central nervous system (CNS)/ocular diseases. Based on Nobel Prize-winning science, RNAi therapeutics represent a powerful, clinically validated approach for the treatment of a wide range of severe and debilitating diseases. Founded in 2002, Alnylam is delivering on a bold vision to turn scientific possibility into reality, with a robust discovery platform. Alnylam's first commercial RNAi therapeutic is ONPATTRO ® (patisiran) approved in the U.S., EU, Japan and Canada. Alnylam has a deep pipeline of investigational medicines, including five product candidates that are in late-stage development. Looking forward, Alnylam will continue to execute on its "Alnylam 2020" strategy of building a multi-product, commercial-stage biopharmaceutical company with a sustainable pipeline of RNAi-based medicines to address the needs of patients who have limited or inadequate treatment options. Alnylam employs over 1,200 people worldwide and is headquartered in Cambridge, MA. For more information about our people, science and pipeline, please visit www.alnylam.com and engage with us on Twitter at @Alnylam or on LinkedIn.

Alnylam Forward Looking Statements

Various statements in this release concerning Alnylam's future expectations, plans and prospects, including, without limitation, the potential implications of the ORION-11 results for patients, Alnylam's views with respect to the safety of RNAi therapeutics, its views regarding the future potential of RNAi therapeutics in large population diseases, its expectations regarding the timing of results to be reported by The Medicines Company from the ORION-9 and ORION-10 studies of inclisiran and the regulatory review of an NDA for inclisiran, its expectations regarding the receipt of royalties from The Medicines Company on sales of inclisiran, if approved by regulatory authorities, its plans to achieve a self-sustainable financial

profile for continued and future growth, and expectations regarding its “Alnylam 2020” guidance for the advancement and commercialization of RNAi therapeutics, constitute forward-looking statements for the purposes of the safe harbor provisions under The Private Securities Litigation Reform Act of 1995. Actual results and future plans may differ materially from those indicated by these forward-looking statements as a result of various important risks, uncertainties and other factors, including, without limitation, Alnylam's ability to discover and develop novel drug candidates and delivery approaches, Alnylam’s and its partners’ ability to successfully demonstrate the efficacy and safety of its product candidates, including inclisiran, the pre-clinical and clinical results for its product candidates, which may not be replicated or continue to occur in other subjects or in additional studies or otherwise support further development of product candidates for a specified indication or at all, actions or advice of regulatory agencies, which may affect the design, initiation, timing, continuation and/or progress of clinical trials or result in the need for additional pre-clinical and/or clinical testing, delays, interruptions or failures in the manufacture and supply of its product candidates, obtaining, maintaining and protecting intellectual property, Alnylam's ability to enforce its intellectual property rights against third parties and defend its patent portfolio against challenges from third parties, Alnylam’s and its partners’ ability to obtain and maintain regulatory approval, pricing and reimbursement for products, including inclisiran, progress in establishing a commercial and ex-United States infrastructure, successfully launching, marketing and selling its approved products globally, Alnylam’s ability to successfully expand the indication for ONPATTRO in the future, competition from others using technology similar to Alnylam's and others developing products for similar uses, Alnylam's ability to manage its growth and operating expenses, obtain additional funding to support its business activities, and establish and maintain strategic business alliances and new business initiatives, Alnylam's dependence on third parties for development, manufacture and distribution of products, the outcome of litigation, the risk of government investigations, and unexpected expenditures, as well as those risks more fully discussed in the “Risk Factors” filed with Alnylam's most recent Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission (SEC) and in other filings that Alnylam makes with the SEC. In addition, any forward-looking statements represent Alnylam's views only as of today and should not be relied upon as representing its views as of any subsequent date. Alnylam explicitly disclaims any obligation, except to the extent required by law, to update any forward-looking statements.

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Source: Alnylam Pharmaceuticals, Inc.

Alnylam Pharmaceuticals, Inc.
Christine Regan Lindenboom
(Investors and Media)
617-682-4340

Josh Brodsky
(Investors)
617-551-8276