Vertex Submits New Drug Application to the U.S. FDA for Triple Combination Regimen of VX-445 (Elexacaftor), Tezacaftor and Ivacaftor in Cystic Fibrosis

July 22, 2019

-Application supported by positive results from two global Phase 3 studies in people with CF ages 12 and older with one F508del mutation and one minimal function mutation and in people with two F508del mutations-

BOSTON--(BUSINESS WIRE)--Jul. 22, 2019-- Vertex Pharmaceuticals Incorporated (Nasdaq: VRTX) today announced the submission of a New Drug Application (NDA) to the U.S. Food and Drug Administration (FDA) for the VX-445 (elexacaftor), tezacaftor and ivacaftor triple combination regimen. The NDA includes a request for Priority Review, which, if granted, would shorten the FDA's review of the NDA to eight months from the time of submission, versus a standard review timeline of 12 months from submission.

The submission is supported by previously disclosed positive results of two global Phase 3 studies: a 24-week Phase 3 study in people with one *F508del* mutation and one minimal function mutation and a 4-week Phase 3 study in people with two *F508del* mutations. Both Phase 3 studies showed statistically significant improvements in lung function (percent predicted forced expiratory volume in one second; $ppFEV_1$), which was the primary endpoint, and in all key secondary endpoints. In these studies, the triple combination regimen was generally well tolerated.

"We have relentlessly focused on the progression of VX-445 (elexacaftor), tezacaftor and ivacaftor from discovery through clinical development and regulatory submission," said Reshma Kewalramani, M.D., Executive Vice President and Chief Medical Officer at Vertex. "The submission of the NDA is a major step toward our goal of bringing this medicine to the largest remaining group of people with CF that still do not have an approved Vertex medicine, as well as toward providing significantly enhanced benefits to patients with two *F508del* mutations. We will continue working with the FDA as they review the NDA and look forward to the potential of this triple combination regimen becoming a new treatment option for people with CF."

In the United States, the VX-445 (elexacaftor), tezacaftor and ivacaftor treatment regimen was granted Breakthrough Therapy designation in May 2018. Breakthrough Therapy designation is a process designed to expedite the development and review of drugs that are intended to treat a serious condition and for which preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over available therapy on a clinically significant endpoint(s).

About Cystic Fibrosis

Cystic Fibrosis (CF) is a rare, life-shortening genetic disease affecting approximately 75,000 people in North America, Europe and Australia.

CF is caused by a defective or missing cystic fibrosis transmembrane conductance regulator (CFTR) protein resulting from mutations in the *CFTR* gene. Children must inherit two defective *CFTR* genes — one from each parent — to have CF. There are approximately 2,000 known mutations in the *CFTR* gene. Some of these mutations, which can be determined by a genetic test, or genotyping test, lead to CF by creating non-working or too few CFTR proteins at the cell surface. The defective function or absence of CFTR protein results in poor flow of salt and water into and out of the cell in a number of organs. In the lungs, this leads to the buildup of abnormally thick, sticky mucus that can cause chronic lung infections and progressive lung damage in many patients that eventually leads to death. The median age of death is in the early 30s.

About Vertex

Vertex is a global biotechnology company that invests in scientific innovation to create transformative medicines for people with serious and life-threatening diseases. In addition to clinical development programs in CF, Vertex has more than a dozen ongoing research programs focused on the underlying mechanisms of other serious diseases.

Founded in 1989 in Cambridge, Mass., Vertex's headquarters is now located in Boston'sInnovation District. Today, the company has research and development sites and commercial offices in the United States, Europe, Canada, Australia and Latin America. Vertex is consistently recognized as one of the industry's top places to work, including being named to Science magazine's Top Employers in the life sciences ranking for nine years in a row. For additional information and the latest updates from the company, please visit www.vrtx.com.

Special Note Regarding Forward-looking Statements

This press release contains forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995, including, without limitation, Dr. Kewalramani's statements in the third paragraph of the press release and information regarding the review process in the United States. While Vertex believes the forward-looking statements contained in this press release are accurate, there are a number of factors that could cause actual events or results to differ materially from those indicated by such forward-looking statements. Those risks and uncertainties include, among other things, that regulatory authorities may not approve, or approve on a timely basis, the NDA, that data from the company's development programs may not support registration or further development of its compounds due to safety, efficacy or other reasons, and other risks listed under Risk Factors in Vertex's annual report and quarterly reports filed with the Securities and Exchange Commission and available through the company's website at www.vrtx.com. Vertex disclaims any obligation to update the information contained in this press release as new information becomes available.

(VRTX-GEN)

View source version on businesswire.com: https://www.businesswire.com/news/home/20190722005202/en/

Source: Vertex Pharmaceuticals Incorporated

Vertex Pharmaceuticals Incorporated
Investors:
Michael Partridge, 617-341-6108
or
Eric Rojas, 617-961-7205
or
Zach Barber, 617-341-6470
or

Media:
617-341-6992
mediainfo@vrtx.com