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Vertex Receives Two EU Approvals for KALYDECO® (ivacaftor) for People with Cystic Fibrosis

-European Commission approves expanded use of ivacaftor in children with cystic fibrosis ages 2 to 5 who have one of 9 gating mutations; approximately 125 children ages 2 to 5 have one of the approved gating mutations in Europe-

-European Commission approves expanded use of ivacaftor in people with cystic fibrosis ages 18 and older who have an R117H mutation; approximately 350 adults have an R117H mutation in Europe-

-Country-by-country reimbursement processes will now begin-

LONDON--(BUSINESS WIRE)-- Vertex Pharmaceuticals Incorporated (Nasdaq: VRTX) today announced that the European Commission has approved expansion of the indication for KALYDECO® (ivacaftor) to include children ages 2 to 5 with cystic fibrosis (CF) who have one of nine gating mutations in the cystic fibrosis transmembrane conductance regulator (*CFTR*) gene (G551D, G1244E, G1349D, G178R, G551S, S1251N, S1255P, S549N and S549R) and to include people with CF ages 18 and older who have an R117H mutation. Ivacaftor was previously approved in the European Union (EU) for use in people with CF ages 6 and older who have one of nine gating mutations. In Europe, approximately 125 children with CF ages 2 to 5 have one of the nine gating mutations included in today's approval and approximately 350 adults with CF have an R117H mutation. Vertex will now begin the country-by-country reimbursement approval processes for each new indication.

"These approvals bring us closer to our goal of developing new medicines to treat the underlying cause of cystic fibrosis for as many people as possible," said Jeffrey Chodakewitz, M.D., Executive Vice President and Chief Medical Officer at Vertex.

CF is caused by a defective or missing CFTR protein resulting from mutations in the *CFTR* gene. In people with gating mutations, or an R117H mutation, the CFTR protein reaches the cell surface but does not work properly. Known as a CFTR potentiator, ivacaftor is an oral medicine designed to help CFTR proteins at the cell surface open more often to improve the transport of salt and water across the cell membrane, which helps hydrate and clear mucus from the airways.

Ivacaftor in Children Ages 2 to 5 with Gating Mutations

"We know that the progressive damage caused by cystic fibrosis can start at birth, so early treatment is critical to offering the best chance of improving long-term outcomes," said Professor Jane Davies, M.D., of the Royal Brompton Hospital and Imperial College, London, and a lead Principal Investigator on the ivacaftor Phase 3 study in children ages 2 to 5. "Today's approval means that, for the first time, we'll be able to treat the underlying cause of the disease in very young children, possibly even before they experience severe signs and symptoms of CF."

The European Commission's Decision is based on previously announced results of a 24-week open-label Phase 3 study that was designed to evaluate the safety and pharmacokinetics of weight-based dosing of ivacaftor (50 mg or 75 mg twice daily) in children ages 2 to 5. A weight-based oral granule formulation of ivacaftor that is mixed in soft foods or liquids was created for these younger children and is available in two strengths, 50 mg and 75 mg. The approval also includes an extension of weight-based dosing of ivacaftor to children ages 6 to 11 who weigh less than 25 kg, using the new oral granule formulation.

"Expanding the use of ivacaftor will allow younger children with cystic fibrosis to benefit from earlier treatment of the underlying cause of their disease," continued Dr. Chodakewitz.

Ivacaftor in Adults with an R117H Mutation

"While people with an R117H mutation can exhibit a wide range of severity in their CF, once their disease begins to progress, lung function decline can be severe," continued Dr. Chodakewitz. "This approval is an important advance for adults with an R117H mutation who will now have a medicine to treat the underlying cause of their disease for the first time."

The European Commission's Decision is based on previously announced data from a Phase 3 study of ivacaftor that enrolled 69 people with CF who had an R117H mutation.

About Cystic Fibrosis

Cystic fibrosis is a rare, life-threatening 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, or genotyping test, lead to CF by creating non-working or too few CFTR protein at the cell surface. The defective function or absence of CFTR proteins in people with CF 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 mid-to-late 20s.

About Ivacaftor

Ivacaftor is the first medicine to treat the underlying cause of CF in people with specific mutations in the *CFTR* gene. Known as a CFTR potentiator, ivacaftor is an oral medicine that aims to help the CFTR protein function more normally once it reaches the cell surface, to help hydrate and clear mucus from the airways.

For complete product information, please see the Summary of Product Characteristics that can be found on www.ema.europa.eu once posted.

Collaborative History with Cystic Fibrosis Foundation Therapeutics, Inc. (CFFT)

Vertex initiated its CF research program in 1998 as part of a collaboration with CFFT, the nonprofit drug discovery and development affiliate of the Cystic Fibrosis Foundation. Ivacaftor and lumacaftor were discovered by Vertex as part of this collaboration.

About Vertex

Vertex is a global biotechnology company that aims to discover, develop and commercialize innovative medicines so people with serious diseases can lead better lives. In addition to our clinical development programs focused on cystic fibrosis, Vertex has more than a dozen ongoing research programs aimed at other serious and life-threatening diseases.

Founded in 1989 in Cambridge, Mass., Vertex today has research and development sites and commercial offices in the United States, Europe, Canada and Australia. For six years in a row, *Science* magazine has named Vertex one of its Top Employers in the life sciences. 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, as amended, including the quotes in the second, fourth, sixth and seventh paragraphs of this press release and statements regarding the country-by-country reimbursement approval process. While the company 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, risks related to commercializing ivacaftor in these patient populations and the other risks listed under Risk Factors in Vertex's annual report and quarterly reports filed with the Securities and Exchange Commission and available through Vertex's website at www.vrtx.com. Vertex disclaims any obligation to update the information contained in this press release as new information becomes available.

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