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News Release

Vertex Receives European Approval for KALYDECO™ (ivacaftor), the First Medicine to Treat the Underlying Cause of Cystic Fibrosis in People With a Specific Genetic Mutation (G551D)

- European Commission approval comes two months after positive CHMP opinion -

GENEVA, Switzerland – July 27, 2012 − Vertex Pharmaceuticals Incorporated (Nasdaq: VRTX) announced today that the European Commission has approved KALYDECO™ (ivacaftor) for people with cystic fibrosis (CF) ages 6 and older who have at least one copy of the G551D mutation in the cystic fibrosis transmembrane conductance regulator (*CFTR*) gene. KALYDECO is the first medicine to target the underlying cause of the disease in these patients. Cystic fibrosis is a rare genetic disease caused by defective or missing CFTR proteins resulting from mutations in the *CFTR* gene. In people with the G551D mutation, KALYDECO helps the defective CFTR protein function more normally. An estimated 1,100 people in Europe have the G551D mutation. The approval of KALYDECO comes two months after the European Committee for Medicinal Products for Human Use (CHMP) issued a positive opinion and is the first European approval for Vertex.

"The European approval of KALYDECO is an important step in our commitment to bring transformative new medicines to people with cystic fibrosis," said Jeffrey Leiden, M.D., Ph.D., Vertex's Chair, President and Chief Executive Officer. "We're preparing to supply pharmacies throughout Europe with KALYDECO and are working closely with national health authorities to make it available to patients as quickly as possible."

The European Commission's decision is based on positive findings from two global Phase 3 studies in which KALYDECO demonstrated significant and sustained improvements in breathing, weight gain and other measures of disease for people ages 6 and older with this specific genetic mutation, compared to placebo. In addition, people who took KALYDECO were 55 percent less likely to have pulmonary exacerbations, or periods of worsening in the signs and symptoms of the disease that often require treatment with antibiotics and hospital visits, than those who received placebo.

Fewer people in the KALYDECO treatment groups discontinued treatment due to adverse events than in the placebo groups. The majority of the adverse events associated with KALYDECO were mild to moderate. Adverse reactions very commonly observed in those taking KALYDECO (≥1/10) included headache; upper respiratory tract infection (common cold) including sore throat and nasal congestion; rash; diarrhoea; and abdominal pain (stomach ache). Two patients in the group receiving KALYDECO reported a serious adverse reaction of abdominal pain.

“Cystic fibrosis is a life-threatening genetic disease that causes devastating effects, particularly in the lungs, including the build up of thick, sticky mucus which becomes infected and severely limits normal breathing,” said Stuart Elborn, M.D., KALYDECO investigator and President of the European Cystic Fibrosis Society. “KALYDECO is one of the most important advances in the treatment of cystic fibrosis since the discovery of the CF gene in 1989. By treating the underlying cause of the disease in people with the G551D mutation, KALYDECO helped them breathe more easily, gain weight and resulted in certain improvements in quality of life.”

“KALYDECO is an exciting new beginning in the treatment of cystic fibrosis, but we’re not finished,” said Peter Mueller, Ph.D., Chief Scientific Officer and Executive Vice President of Global Research and Development at Vertex. “The scientists at Vertex, in collaboration with doctors, patients and advocates around the world, are working hard to develop additional new medicines to treat the underlying cause of the disease in many more people with cystic fibrosis.”

KALYDECO was discovered as part of a collaboration with Cystic Fibrosis Foundation Therapeutics, Inc., the nonprofit drug discovery and development affiliate of the Cystic Fibrosis Foundation.

About KALYDECO

KALYDECO™ (ivacaftor) is the first treatment to target the underlying cause of CF in people with the G551D mutation in the *CFTR* gene. Known as a CFTR potentiator, KALYDECO 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. KALYDECO (150mg, q12h) was

first approved by the U.S. Food and Drug Administration in January 2012, for use in people with CF ages 6 and older who have at least one copy of the G551D mutation in the *CFTR* gene.

Vertex retains worldwide rights to develop and commercialize KALYDECO. KALYDECO is under Priority Review by the Therapeutic Product Directorate (TPD) of Health Canada, and an application for review has been submitted to the Therapeutic Goods Administration (TGA) of Australia.

Indication and Important Safety Information

KALYDECO (ivacaftor) is indicated for the treatment of cystic fibrosis (CF) in patients age 6 and older who have a G551D mutation in the *CFTR* gene.

KALYDECO is not effective in patients with CF who are homozygous for the *F508del* mutation in the CFTR gene. KALYDECO has not been studied in other populations of patients with CF.

Therefore, use of KALYDECO in these patients is not recommended.

KALYDECO is contraindicated in any patient with hypersensitivity to the active substance or to any of the excipients.

Moderate elevations in liver function tests (transaminases) are common in subjects with CF. Overall, the incidence and clinical features of transaminase elevations in clinical trials was similar between subjects in the ivacaftor and placebo treatment groups. In the subset of patients with a medical history of elevated transaminases, increases have been reported more frequently in patients receiving KALYDECO compared to placebo. Therefore, liver function tests are recommended prior to initiating KALYDECO, every 3 months during the first year of treatment, and annually thereafter. Patients who develop unexplained increased transaminase levels during treatment should be closely monitored until the abnormalities resolve and consideration should be given to the continuation of treatment after assessment of the individual benefits and risks.

Ivacaftor is a substrate of CYP3A4 and CYP3A5 isoenzymes. Medicinal products that inhibit or induce CYP3A activity, may impact the pharmacokinetics of ivacaftor. Ivacaftor is a weak CYP3A inhibitor and may modify the pharmacokinetics of medicinal products metabolised through the CYP3A system. *In vitro* studies indicated that ivacaftor has the potential to inhibit P-glycoprotein (P-gp) and CYP2C9. The dose of Kalydeco must be adjusted when concomitantly used with potent and moderate CYP3A inhibitors. Exposure to ivacaftor is reduced by the concomitant use of CYP3A inducers, therefore potentially resulting in loss of efficacy of KALYDECO.

The most common adverse reactions in patients treated with KALYDECO were abdominal pain (stomach ache), diarrhoea, dizziness, rash, upper respiratory tract reactions (including common cold, nasal congestion, redness of the throat, sore throat, runny nose, sinus congestion, and nose and throat inflammation), headache and bacteria in sputum. Two patients reported a serious adverse reaction of abdominal pain.

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

About Cystic Fibrosis

Cystic fibrosis is a rare, life-threatening genetic disease affecting approximately 70,000 people worldwide including 30,000 people in the United States, 35,000 in Europe, 3,800 in Canada and nearly 3,000 in Australia. Today, the median predicted age of survival for a person with CF is approximately 38 years in the United States and 41 years in the United Kingdom, but the median age of death remains in the mid-20s. There are more than 1,800 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 proteins at the cell surface. The absence of working CFTR proteins results in poor flow of salt and water into and out of the cell in a number of organs, including the lungs. This leads to the buildup of abnormally thick, sticky mucus that can cause chronic lung infections and progressive lung damage.

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. This collaboration was expanded to support the accelerated discovery and development of Vertex's CFTR modulators.

About the Cystic Fibrosis Foundation

The Cystic Fibrosis Foundation is the world's leader in the search for a cure for cystic fibrosis. The Foundation funds more CF research than any other organization and nearly every CF drug available today was made possible because of Foundation support. Based in Bethesda, Md., the Foundation also supports and accredits a national care center network that has been recognized by the National Institutes of Health as a model of care for a chronic disease. The CF Foundation is a donor-supported nonprofit organization. For more information, visit www.cff.org.

About Vertex

Vertex creates new possibilities in medicine. Our team discovers, develops and commercializes

innovative therapies so people with serious diseases can lead better lives.

Vertex scientists and our collaborators are working on new medicines to cure or significantly advance the treatment of hepatitis C, cystic fibrosis, rheumatoid arthritis, epilepsy and other life-threatening diseases.

Founded more than 20 years ago in Cambridge, MA, we now have ongoing worldwide research programs and sites in the U.S., U.K. and Canada. Today, Vertex has more than 2,000 employees around the world, and *Science* magazine named Vertex number one on its 2011 list of Top Employers in the life sciences.

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 without limitation, Dr. Leiden's statements in the second paragraph of this press release and Dr. Mueller's statements in sixth paragraph of this press release. Those risks and uncertainties include, among other things, risks related to the commercialization of KALYDECO and the development of additional medicines to treat cystic fibrosis 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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