October 11, 2012

Data from Phase 2 Combination Study of VX-809 and Ivacaftor in People with Cystic Fibrosis Who Have the Most Common Genetic Mutation (F508del) Presented at North American Cystic Fibrosis Conference

-- Additional KALYDECO™ (ivacaftor) and CF pipeline presentations highlight Vertex's commitment to advancing CF treatmer by targeting the underlying cause of the disease --

ORLANDO, Fla.--(BUSINESS WIRE)-- Vertex Pharmaceuticals Incorporated (Nasdaq: VRTX) today announced that data from a Phase 2 study of VX-809 combined with ivacaftor in people with the most common mutation in the cystic fibrosis transmembrane conductance regulator (*CFTR*) gene, F508del, will be presented by lead study investigator Michael P. Boyle, M.D., F.C.C.P., Associate Professor, Director of the Johns Hopkins Adult Cystic Fibrosis Center, at the 26th Annual North American Cystic Fibrosis Conference (NACFC), in Orlando, Fla., October 11 to 13, 2012. The oral presentation will take place today at 11:40 a.m. EDT. Final study results, announced in June 2012, support Vertex's plans to initiate a pivotal program in early 2013, which is expected to evaluate VX-809 in combination with ivacaftor in people with cystic fibrosis (CF) who have two copies (homozygous) of the F508del mutation, pending discussions with regulatory agencies.

"These study results are an exciting step for the cystic fibrosis community, and we look forward to the start of this pivotal program early next year," said Dr. Boyle. "We are particularly encouraged to make such important progress in efforts to treat the underlying cause of the disease in people with two copies of the F508del mutation, who account for the single largest group of people with CF."

Shortly after Dr. Boyle's presentation, the slides will be available on the NACFC-Handout Hub website at: http://nacfcdl.cff.org/Pages/library.aspx. Vertex will also host a webcast today, October 11, 2012 at 6:30 p.m. EDT, to discuss these data and additional updates to the company's CF research and development program.

Updates to Vertex's Ongoing CF Research and Development Program

For more than 14 years, Vertex has been working to develop new medicines to treat the underlying cause of CF in as many people as possible. CF is caused by defective or missing CFTR proteins resulting from mutations in the *CFTR* gene. Earlier this year, Vertex received regulatory approval in the United States and in Europe for KALYDECO™ (ivacaftor), the first medicine to treat the underlying cause of CF in people with the G551D mutation. Approximately 2,200 people with cystic fibrosis in the United States and Europe have this mutation, representing 3 to 4 percent of CF patients in these regions. In addition, KALYDECO is under Priority Review by the Therapeutic Product Directorate (TPD) of Health Canada and a KALYDECO Marketing Authorization application is also under review by the Therapeutic Goods Administration (TGA) of Australia.

Vertex's ongoing work in CF includes additional studies of ivacaftor monotherapy in patients who may benefit from improved CFTR protein function; the evaluation of a combination of a CFTR corrector and the CFTR potentiator, ivacaftor, in patients with the F508del mutation; and continued research aimed at discovering additional potential medicines that could be evaluated as part of future combination treatments. Vertex has multiple studies planned and underway to support these goals, and the company today provided the following updates:

Ivacaftor Monotherapy Studies

- **Study of Ivacaftor in People with the R117H Mutation:** In July 2012, Vertex initiated a Phase 3 study of ivacaftor in people with CF ages 6 and older who have at least one copy of the R117H mutation. Approximately 3 percent of people with CF in the United States have at least one R117H mutation.
- **Study of Ivacaftor in People with Gating Mutations:** In July 2012, Vertex initiated a Phase 3 study of ivacaftor in people with CF ages 6 and older who have at least one non-G551D *CFTR* gating mutation. Approximately 1 percent of people with CF in the United States have at least one non-G551D gating mutation.
- **Study of Ivacaftor in People with Residual CFTR Function:** Vertex recently initiated a Phase 2 proof-of-concept study of ivacaftor in people with clinical evidence of residual CFTR function. This is the first study to evaluate the efficacy of ivacaftor based on a person's clinical symptoms and characteristics, or phenotype, rather than solely on their *CFTR* mutation, or genotype. Between 5 percent and 10 percent of people with CF in the United States have residual CFTR

function.

- **Study of Ivacaftor in Children Ages 2 to 5:** Vertex recently initiated a Phase 3 study of ivacaftor in children with CF ages 2 to 5 who have a gating mutation.

"KALYDECO was approved less than ten months ago in the U.S., and since then, the majority of eligible patients have started treatment. We also recently received approval in Europe and are working with individual countries to make KALYDECO available to eligible patients as soon as possible," said Peter Mueller, Ph.D., Executive Vice President, Global Research and Development, and Chief Scientific Officer at Vertex. "We're continuing our efforts to help more people with cystic fibrosis through additional ivacaftor studies and the development of more new medicines to treat the underlying cause of the disease."

Combination Treatment for People with the Most Common Mutation, F508del

- **Study of VX-661 and Ivacaftor in People with the F508del Mutation:** A Phase 2 study of VX-661 in combination with ivacaftor is underway in people with two copies of the F508del mutation. Final data from this study are expected in 2013.
- **Part 3 (Cohort 3) of VX-809 and Ivacaftor Study:** Enrollment is complete in the third part of the Phase 2 study of VX-809 alone and in combination with ivacaftor. Part 3 of this study is evaluating the pharmacokinetics, safety and tolerability of a twice-daily (q12h) combination of VX-809 (400mg) and ivacaftor (250mg). Vertex expects to use data from this part of the study to support the pivotal program for VX-809 and ivacaftor.

Continued Productivity in CF Research

Multiple Vertex and other scientific presentations at NACFC are focused on the use of CFTR correctors to treat the underlying cause of CF. Vertex has an active and ongoing research program that has identified next-generation correctors. This research is being conducted as part of the company's collaboration with Cystic Fibrosis Foundation Therapeutics, Inc., and is focused on the accelerated discovery and development of correctors that could play a role in a variety of future combination treatments, including a dual corrector approach, among others.

Webcast Information

Vertex will conduct a webcast today, October 11, 2012 at 6:30 p.m. EDT, to review the VX-809 and ivacaftor combination study data and to discuss the company's ongoing work in CF. The webcast may be accessed from 'Vertex Events' on the home page of Vertex's website at www.vrtx.com. A replay of the webcast will also be available on the Company's website for two weeks following the presentation. To ensure a timely connection, it is recommended that users register at least 15 minutes prior to the scheduled webcast.

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 and by the European Medicines Agency in July 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 a KALYDECO Marketing Authorization application is also under review by the Therapeutic Goods Administration (TGA) of Australia.

Indication and Important Safety Information for KALYDECO™ (ivacaftor)

KALYDECO (150mg tablets) is indicated for the treatment of cystic fibrosis (CF) in patients age 6 years and older who have a G551D mutation in the *CFTR* gene.

KALYDECO is not for use in people with CF due to other mutations in the CFTR gene. It is not effective in CF patients with two copies of the F508del mutation (F508del/F508del) in the *CFTR* gene.

High liver enzymes (transaminases, ALT and AST) have been reported in patients receiving KALYDECO. It is recommended that ALT and AST be assessed prior to initiating KALYDECO, every 3 months during the first year of treatment, and annually thereafter. Patients who develop increased transaminase levels should be closely monitored until the abnormalities resolve. Dosing should be interrupted in patients with ALT or AST of greater than 5 times the upper limit of normal. Following resolution of transaminase elevations, consider the benefits and risks of resuming KALYDECO dosing. Moderate transaminase elevations are common in subjects with CF. Overall, the incidence and clinical features of transaminase elevations in clinical trials was similar between subjects in the KALYDECO and placebo treatment groups. In the subset of patients with a medical history of

elevated transaminases, increased ALT or AST have been reported more frequently in patients receiving KALYDECO compared to placebo.

Use of KALYDECO with medicines that are strong CYP3A inducers such as the antibiotics rifampin and rifabutin; seizure medications (phenobarbital, carbamazepine, or phenytoin); and the herbal supplement St. John's Wort substantially decreases exposure of KALYDECO, which may diminish effectiveness. Therefore, co-administration is not recommended.

The dose of KALYDECO must be adjusted when concomitantly used with potent and moderate CYP3A inhibitors.

KALYDECO can cause serious adverse reactions including abdominal pain and high liver enzymes in the blood. The most common side effects associated with KALYDECO include headache; upper respiratory tract infection (the common cold), including sore throat, nasal or sinus congestion, and runny nose; stomach (abdominal) pain; diarrhea; rash; and dizziness. These are not all the possible side effects of KALYDECO. A list of the adverse reactions can be found in the full product labeling for each country where KALYDECO is approved. Patients should tell their healthcare providers about any side effect that bothers them or doesn't go away.

Please see full U.S. Prescribing Information for KALYDECO at www.KALYDECO.com and the EU Summary of Product Characteristics for KALYDECO at http://goo.gl/N3Tz4.

About Cystic Fibrosis

Cystic fibrosis is a rare, life-threatening genetic disease affecting approximately 30,000 people in the United States and 70,000 people worldwide. Today, the median predicted age of survival for a person with CF is approximately 38 years in the United States, but the median age of death remains in the mid-20s.

CF is caused by defective or missing CFTR proteins resulting from mutations in the *CFTR* gene. Children must inherit two defective *CFTR* genes — one from each parent — to have CF. 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.

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 and other life-threatening diseases.

Founded more than 20 years ago in Cambridge, Mass., 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 for three years in a row, *Science* magazine has named Vertex one of its 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, including, without limitation, Dr. Boyle's statements in the second paragraph of this press release, Dr. Mueller's statements in the tenth paragraph of this press release and statements regarding (i) Vertex's commitment to advancing CF treatment by

targeting the underlying cause of the disease, (ii) Vertex's ongoing and planned clinical trials of ivacaftor alone and in combination with its CFTR corrector compounds, including its plans to initiate a pivotal program in early 2013 that is expected to evaluate VX-809 in combination with ivacaftor and (iii) Vertex's ongoing research program for the discovery and development of CFTR corrector compounds. 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 outcomes of ongoing or planned clinical trials may not be favorable; that the initiation of a pivotal program to evaluate VX-809 in combination with ivacaftor may be prevented or delayed; that the company may not be able to successfully develop new treatments for CF; 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.

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