September 8, 2014

Vertex Announces Upcoming Presentations of Data at North American Cystic Fibrosis Conference - October 9 to 11, 2014

-Data from Phase 3 TRAFFIC and TRANSPORT studies of lumacaftor in combination with ivacaftor and from Phase 3 rollover study of patients who completed TRAFFIC and TRANSPORT to be presented-

-Other presentations include studies of ivacaftor in people with cystic fibrosis who have the R117H mutation, in people with residual function mutations and in children ages 2 to 5-

BOSTON--(BUSINESS WIRE)-- Vertex Pharmaceuticals Incorporated (Nasdaq: VRTX) today announced that 15 abstracts from its cystic fibrosis (CF) research and development program will be presented at the 28th Annual North American Cystic Fibrosis Conference (NACFC) in Atlanta, October 9 to 11, 2014. Data from the Phase 3 TRAFFIC and TRANSPORT studies of lumacaftor in combination with ivacaftor in people with CF who have two copies of the F508del mutation will be presented, as well as data from other Phase 2 and 3 studies of ivacaftor and of VX-661 in combination with ivacaftor. Additionally, the first interim data from a Phase 3 rollover study of patients who completed treatment in the Phase 3 TRAFFIC and TRANSPORT studies will be presented. The accepted abstracts and related invited talks and symposium sessions are listed below and are now available in the online edition of *Pediatric Pulmonology*.

Lumacaftor in Combination with Ivacaftor Presentations at NACFC

Results from the Phase 3 TRAFFIC and TRANSPORT studies were accepted for presentation at NACFC and will also be delivered as part of an invited talk in Symposium Session II, as noted below:

- "Effect of lumacaftor in combination with ivacaftor in patients with cystic fibrosis who are homozygous for *F508del-CFTR*: Phase 3 TRAFFIC & TRANSPORT studies." An oral presentation of these data will be delivered as part of an invited talk during Symposium Session II on October 10 at 11:30 a.m. ET.
- "Effect of lumacaftor in combination with ivacaftor in patients with cystic fibrosis who are homozygous for *F508del-CFTR:* TRAFFIC Study." Poster 249.
- "Effect of lumacaftor in combination with ivacaftor in patients with cystic fibrosis who are homozygous for *F508del-CFTR*: TRANSPORT Study." Poster 250.

The presentations on the Phase 3 TRAFFIC and TRANSPORT studies are expected to include previously announced data on lumacaftor in combination with ivacaftor following 24 weeks of treatment as well as new interim data from a Phase 3 rollover study in patients who completed 24 weeks of treatment in either TRAFFIC or TRANSPORT.

Additional abstracts related to the combination of lumacaftor and ivacaftor accepted for presentation at NACFC include:

- "The effect of ciprofloxacin, itraconazole, and rifampin on the pharmacokinetics of lumacaftor in combination with ivacaftor in healthy individuals." Poster 201.
- "Effect of lumacaftor in combination with ivacaftor on FEV1 and safety measures in patients aged 6-11 years with CF who are homozygous for *F508del-CFTR*." Poster 203.
- "Effect of 8 weeks of lumacaftor in combination with ivacaftor in patients with CF and heterozygous for the *F508del-CFTR* Mutation." Poster 254.
- "Effect of bronchodilators in healthy individuals receiving lumacaftor in combination with ivacaftor." Poster 256.

Ivacaftor Presentations at NACFC

Multiple Phase 2 and Phase 3 studies of ivacaftor will be presented at NACFC, including the first presentation of the Phase 3 results of ivacaftor treatment in children ages 2 to 5. Presentations related to ivacaftor include:

- "R117H is a residual function mutation that is potentiated by ivacaftor." Poster 2. An oral presentation of these data will

also be delivered during Workshop Session I on October 9 at 10:25 a.m. ET.

- "Patient-reported treatment effects of ivacaftor beyond respiratory symptoms in patients with cystic fibrosis." Poster 98. An oral presentation of these data will also be delivered during Workshop Session II on October 10 at 3:10 p.m. ET.
- "Effects of ivacaftor in CF patients with *R117H-CFTR*." Poster 17. An oral presentation of these data will also be delivered during Workshop Session II on October 10 at 3:25 p.m. ET.
- "Utilization of an 'n-of-1' study design to test the effect of ivacaftor in cystic fibrosis patients with residual CFTR function and FEV_1 ≥ 40% of predicted." An oral presentation of these data will be delivered as part of an invited talk during Symposium Session III on October 11 at 11:55 a.m. ET.
- "Effect of ivacaftor in patients with cystic fibrosis, residual CFTR function and FEV_1 ≥ 40% of predicted, N-of-1 study." Poster 196. An oral presentation of these data will also be delivered during Workshop Session III on October 11 at 3:00 p.m. ET.
- "An open-label study of the safety, pharmacokinetics & pharmacodynamics of ivacaftor in patients aged 2 to 5 years with CF & a CFTR Gating Mutation: The KIWI Study." Poster 200. An oral presentation of these data will also be delivered during Workshop Session III on October 11 at 4:00 p.m. ET.
- "Health resource utilization among patients with cystic fibrosis who initiate ivacaftor treatment." Poster 202.
- "The Effect of Ivacaftor on Weight Over Three Years in Patients with CF and a *G551D-CFTR* Mutation." Poster 207.

VX-661 in Combination with Ivacaftor Presentations at NACFC

- "Phase 2 studies reveal additive effects of VX-661, an investigational CFTR corrector, and ivacaftor, a CFTR potentiator, in patients with CF who carry the F508del-CFTR mutation." An oral presentation of these data will be delivered as part of an invited talk during Symposium Session II on October 10 at 11:55 a.m. ET.
- "Addition of VX-661, an investigational CFTR corrector, to ivacaftor, a CFTR potentiator, in patients with CF and heterozygous for *F508del/G551D-CFTR*." Poster 260.

Additional NACFC Presentations

- "Sodium Bromide Pulse as a Biomarker of Multi-organ CFTR Function in Human Subjects." Poster 275.

INDICATION AND IMPORTANT SAFETY INFORMATION FOR KALYDECO™ (ivacaftor)

Ivacaftor (150 mg 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.

In the United States and the European Union, ivacaftor is also indicated for the treatment of CF in patients age 6 and older who have one of the following mutations in the *CFTR* gene: *G1244E, G1349D, G178R, G551S, S1251N, S1255P, S549N,* or *S549R*. In Canada, ivacaftor is indicated for these same mutations and additionally for *G970R*.

Ivacaftor is not effective in patients with CF with 2 copies of the *F508del* mutation (*F508del/F508del*) in the *CFTR* gene. The safety and efficacy of ivacaftor in children with CF younger than 6 years of age have not been established.

Elevated liver enzymes (transaminases; ALT and AST) have been reported in patients receiving ivacaftor. It is recommended that ALT and AST be assessed prior to initiating ivacaftor, 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 ivacaftor dosing.

Use of ivacaftor 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 ivacaftor and may diminish effectiveness. Therefore, co-administration is not recommended.

The dose of ivacaftor must be adjusted when used concomitantly with strong and moderate CYP3A inhibitors or when used in patients with moderate or severe hepatic disease.

Ivacaftor can cause serious adverse reactions including abdominal pain and high liver enzymes in the blood. The most common side effects associated with ivacaftor 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 ivacaftor. A list of the adverse reactions can be found in the product labeling for each country where ivacaftor is approved. Patients should tell their healthcare providers about any side effect that bothers them or does not go away.

Please see KALYDECO U.S. Prescribing Information, EU Summary of Product Characteristics, Canadian Product Monograph, Australian Consumer Medicine Information and Product Information, Swiss Prescribing Information and Patient Information, and the New Zealand Datasheet and Consumer Medicine Information.

About KALYDECO™ (ivacaftor)

KALYDECO (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, 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.

Vertex retains worldwide rights to develop and commercialize KALYDECO.

About Cystic Fibrosis

Cystic fibrosis is a rare, life-threatening genetic disease affecting approximately 75,000 people in North America, Europe and Australia. Today, the median predicted age of survival for a person with CF is between 34 and 47 years, but the median age of death remains in the mid-20s.

CF is caused by a defective or missing 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 more than 1,900 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, 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 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 four 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, including, without limitation, statements regarding data that will be presented at NACFC. 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 Vertex could experience unforeseen delays in submitting regulatory filings, that regulatory authorities may not approve, or approve on a timely basis, lumacaftor in combination with ivacaftor 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)

Vertex Pharmaceuticals Incorporated
Investors:

Michael Partridge, 617-341-6108
or
Kelly Lewis, 617-961-7530
or
Media:
Zach Barber, 617-341-6470
mediainfo@vrtx.com

Source: Vertex Pharmaceuticals Incorporated