



July 9, 2013

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

*-- Approximately 250 people in Australia have the G551D mutation in the CFTR gene --*

CAMBRIDGE, Mass.--(BUSINESS WIRE)-- Vertex Pharmaceuticals Incorporated (Nasdaq: VRTX) today announced that the Therapeutic Goods Administration (TGA) of Australia 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 treat the underlying cause of the disease in these patients. Cystic fibrosis is a rare genetic disease caused by a defective or missing CFTR protein resulting from mutations in the *CFTR* gene. In people with the G551D mutation, KALYDECO helps the defective CFTR protein function more normally. An estimated 250 people, or 8 percent of those with CF in Australia, have the G551D mutation. KALYDECO is the first Vertex medicine approved in Australia.

"The approval of KALYDECO in Australia is an important milestone for the cystic fibrosis community," said Simon Bedson, Senior Vice President of International Commercial Operations for Vertex. "The rapid review and approval by the TGA is a major step in making KALYDECO available for eligible Australians."

The approval of KALYDECO was based on data from two global Phase 3 studies of people with CF who have at least one copy of the G551D mutation. Those who were treated with KALYDECO experienced significant and sustained improvements in lung function and weight gain compared to those who received placebo. In one study, adults and adolescents who took KALYDECO were also significantly less likely to experience pulmonary exacerbations, which are periods of worsening respiratory signs and symptoms that require increased treatment with antibiotics and hospital visits.

The most common serious adverse events reported in Phase 3 studies included abdominal pain, increased liver enzymes and low blood sugar, which occurred in less than 1 percent of patients. Adverse events commonly observed in those taking KALYDECO included headache, upper respiratory tract infection (common cold), stomach pain and diarrhea. Fewer people in the KALYDECO treatment groups discontinued treatment due to adverse events than in the placebo group. The majority of adverse events associated with KALYDECO were mild to moderate.

KALYDECO was discovered by Vertex as part of a collaboration with Cystic Fibrosis Foundation Therapeutics, Inc., the non-profit drug discovery and development affiliate of the Cystic Fibrosis Foundation in the U.S.

### **About the Australian Funding Process**

Australian approval and reimbursement of a new medicine is a multi-step process. Once a new medicine receives approval from the TGA, it is assessed for effectiveness and cost-effectiveness by the Pharmaceutical Benefits Advisory Committee (PBAC) for listing on the Pharmaceutical Benefits Scheme (PBS). Additional information regarding the reimbursement of KALYDECO in Australia is expected to be available later in 2013 following the publicly announced planned review of KALYDECO at the upcoming PBAC meeting, July 10 to 12, 2013, and subsequent discussions.

PBS Information: KALYDECO is not listed on the PBS

### **About Cystic Fibrosis<sup>1</sup>**

Cystic fibrosis is a rare, life-threatening genetic disease affecting approximately 70,000 people worldwide, including 3,000 people in Australia, 30,000 in the United States, 35,000 in Europe and 4,000 in Canada.

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 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 protein channels at the cell surface. The absence of

working CFTR protein results in poor flow of salt and water into and out of the cell in a number of organs, including the lungs. As a result, thick, sticky mucus builds up and blocks the passages in many organs, particularly in the lungs, leading to a variety of symptoms, including chronic lung inflammation, recurrent infections and progressive lung damage. The most common cause of death among people with CF is lung disease, which results from recurring infections and chronic lung inflammation.

For more than 15 years, Vertex has been working to develop new medicines to treat the underlying cause of CF in as many people as possible.

In Australia, cystic fibrosis is the most common, genetically acquired, life-shortening chronic illness affecting young people. In 2011, the average age of death due to CF in Australia was 27 years, and 20 percent of those who died were under the age of 18.

One in 2,500 babies in Australia, or one baby every four days, is born with CF. Approximately one million Australians, or one in 25 people, carry the CF gene, the majority of whom are unaware they are carriers. Instituted in all Australian States and Territories in 1986, newborn screening drives early diagnosis: more than 80 percent of infant diagnoses are made before three months of age.

Chronic antibiotic treatment is widespread among Australians with CF regardless of age. In 2011, 90 percent of the youngest patients, those under 2 years, received treatment with antibiotics, and at least 94 percent of those in all other age groups also received antibiotic treatment. Nearly half (47 percent) of Australians with CF were hospitalised at least once in 2011. Of these patients, approximately half (49 percent) spent at least 14 days in the hospital.

In Australia, more than half (53 percent) of people with CF have two copies of the most common *CFTR* mutation, known as F508del, and an additional 40 percent of those with CF have only one copy of this mutation. The next most common mutation among Australians with CF is the G551D mutation. An estimated 250 people, or 8 percent of those with CF in Australia, have this mutation.

## **About KALYDECO**

KALYDECO™ (ivacaftor) is the first medicine to treat 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 approved by the U.S. Food and Drug Administration, the European Medicines Agency and Health Canada in 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 commercialise KALYDECO.

## **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. The efficacy and safety of KALYDECO in children younger than 6 years of age have not been evaluated.

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. The dose of KALYDECO must be adjusted when used in patients with moderate or severe hepatic disease.

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.

For more information, please see the Consumer Medical Information and Product Information at <http://bit.ly/18wIMld>.

## About Vertex

Vertex is a global biotechnology company that aims to discover, develop and commercialise innovative new medicines so people with serious diseases can lead better lives. Vertex scientists and the company's collaborators are working on new medicines to cure or significantly advance the treatment of hepatitis C, cystic fibrosis, rheumatoid arthritis and other life-shortening diseases.

Founded in 1989, Vertex now employs more than 2,200 people at sites around the world. Headquartered in Cambridge, Massachusetts, Vertex has research and development sites in San Diego, Calif., U.S.; Coralville, Iowa, U.S.; Abingdon, Oxfordshire, UK; and Laval, Quebec, Canada. In addition, the company's commercial locations include an international headquarters in Switzerland, as well as commercial offices in Rickmansworth, England; Munich, Germany; Paris, France; Sydney, Australia; and Madrid, Spain.

## 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 the Australian approval and reimbursement process. 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, the 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](http://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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<sup>1</sup> Cystic Fibrosis Australia. Cystic Fibrosis in Australia 2011. [http://www.cysticfibrosis.org.au/media/wysiwyg/CF-Australia/medical-documents/ACFDR\\_2011/ACFDR\\_2011\\_Report.pdf](http://www.cysticfibrosis.org.au/media/wysiwyg/CF-Australia/medical-documents/ACFDR_2011/ACFDR_2011_Report.pdf). Accessed March 8, 2013.

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