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FDA Approves Strensiq™ (asfotase alfa) for Treatment of Patients with Perinatal-, Infantile- and Juvenile-Onset Hypophosphatasia (HPP)

- Strensiq is the First Approved Treatment in the United States for Patients Suffering from HPP, a Life-Threatening and Ultra-Rare Metabolic Disorder -

- Conference Call Scheduled for Monday, October 26 at 8:30 a.m. ET -

CHESHIRE, Conn.--(BUSINESS WIRE)-- Alexion Pharmaceuticals, Inc. (NASDAQ: ALXN) announced today that the U.S. Food and Drug Administration (FDA) has approved Strensiq™ (asfotase alfa) for the treatment of patients with perinatal-, infantile- and juvenile-onset hypophosphatasia (HPP). Strensiq, an innovative enzyme replacement therapy (ERT), is the first therapy approved in the U.S. for the treatment of patients with HPP, a genetic, chronic, and progressive ultra-rare metabolic disease in which patients experience devastating effects on multiple systems of the body, leading to debilitating or life-threatening complications.[1]

This Smart News Release features an interactive multimedia capsule. View the full release here: http://www.businesswire.com/news/home/20151023005892/en/

"The FDA approval of Strensiq brings a highly innovative treatment to patients who, until now, have had no effective therapy to treat this ultra-rare genetic metabolic disease that causes premature death in infants and devastating consequences in those who survive," said David Hallal, Chief Executive Officer of Alexion. "We are pleased that the label includes a survival benefit in infants, substantial bone healing, and improvements in growth and mobility in patients with HPP who had symptoms prior to the age of 18 and were treated with Strensiq. We look forward to rapidly bringing this life-transforming therapy to patients with HPP and their physicians in the United States."

"Asfotase alfa is an important advance for many patients with HPP, their families, and the medical community because it can effectively replace in the skeleton the deficient enzyme called tissue non-specific alkaline phosphatase," said Michael Whyte, M.D., lead clinical trial investigator and Medical-Scientific Director of the Center for Metabolic Bone Disease and Molecular Research at Shriners Hospital for Children in St. Louis. "Without treatment, many newborns and infants with HPP fail to develop a normal rib cage and die from respiratory failure, and young children with HPP can suffer from rickets and muscle weakness. In clinical studies, 97 percent of severely affected newborns or infants were alive at age 1 year with asfotase alfa treatment compared to 42 percent of historical control patients. Treatment with asfotase alfa, now for up to seven years, often markedly improved overall health. In young children with HPP, now treated for five years with asfotase alfa, significant corrections of the skeletal complications were documented, and all had better mobility and function -- most achieving the normal range for healthy peers. I am more than gratified by this progress."

HPP is characterized by low alkaline phosphatase (ALP) activity and defective bone mineralization that can lead to deformity of bones and other skeletal abnormalities, as well as systemic complications such as profound muscle weakness, seizures, pain, and respiratory failure leading to premature death in infants.[1-5] HPP is an ultra-rare disease, which is defined as a disease that affects fewer than 20 patients per one million in the general population.[6]

"Today is a defining moment for the HPP community, which now has an approved therapy for the first time. It is my hope that patients and their families will benefit from improved awareness of HPP, faster diagnosis, and better outcomes now that there is an approved and effective treatment," said Deborah Sittig, President and Founder of Soft Bones.

Alexion will offer support to patients with HPP through its OneSource™ program. OneSource provides each patient and family with personalized support from a dedicated Alexion nurse case manager, who can help patients understand their insurance benefits, receive reimbursement assistance, and provide education support such as in-home injection training. Through OneSource, patients and families can obtain further information regarding third-party foundations and co-pay assistance programs, which help patients meet out-of-pocket expenses related to the treatment of HPP. For uninsured patients who have no access to insurance, the Alexion Access Foundation, a charitable entity, provides Strensiq free of charge for patients. Patients, caregivers, and healthcare providers in the U.S. can now call 1-888-765-4747 to speak with a OneSource nurse case manager.

Alexion will now begin serving patients with HPP in the U.S., with Strensiq becoming available commercially by October 27, 2015.

The FDA approved Strensiq under Priority Review, and had granted Breakthrough Therapy designation for Strensiq. With this approval, the FDA also issued a Rare Pediatric Disease Priority Review Voucher, which confers priority review to a subsequent drug application that would not otherwise qualify for priority review. The rare pediatric disease review voucher program is designed to encourage development of new drugs and biologics for the prevention or treatment of rare pediatric diseases. Strensiq is also approved in the European Union, Japan, and Canada.

Clinical Data[7]

The approval of Strensiq in the U.S. was based on data from four clinical trials and supporting extension trials comprising patients with perinatal-, infantile- and juvenile-onset HPP who received treatment with Strensiq for up to 6.5 years.

In patients (ages 1 day to 6.5 years) with perinatal/infantile-onset HPP, treatment with Strensiq resulted in a significant survival benefit compared to historical control patients with similar clinical characteristics. At week 48, the Kaplan-Meier estimate of overall survival was 97 percent for treated patients (n=68) compared to 42 percent for historical control patients (n=48). In addition, estimated invasive ventilator-free survival was 96 percent for treated patients (n=54) compared to 31 percent for historical control patients (n=48). Study results also demonstrated substantial improvements in the skeletal manifestations of HPP, as assessed by the Radiographic Global Impression of Change (RGI-C) scale, and improvements in height and weight, as measured by z-scores, in patients treated with Strensiq.

In patients (ages 6 to 12 years) with juvenile-onset HPP, treatment with Strensiq resulted in significant improvements in the skeletal manifestations of HPP at 24 weeks, as measured by RGI-C, compared to historical controls. Importantly, by month 54, 100 percent of Strensiq-treated juvenile-onset patients were responders to treatment (n=8), as measured by substantial bone healing, compared to 6 percent of patients in the historial control group (n=32) at last assessment. In addition, patients treated with Strensiq had improvements in height and weight, as measured by z-scores, compared with untreated historical controls, as well as improvements in gait and mobility. By 4 years of treatment, 100 percent of patients assessed (n=6) achieved the 6 Minute Walk Test within the normal range for age-, sex- and height-matched peers, whereas no patients were in the normal range at baseline.

The most commonly reported adverse events observed in clinical trials were injection site reactions. Other common adverse reactions included lipodystrophy, ectopic calcifications, and hypersensitivity reactions.

Conference Call

Alexion will host a conference call/webcast on Monday, October 26, 2015, at 8:30 a.m. ET to discuss the FDA approval. To participate in this call, dial (866) 433-3833 (USA) or (704) 908-0448 (international), confirmation code 60248704, shortly before 8:30 a.m. ET. A replay of the call will be available for a limited period following the call, beginning at 7:30 p.m. ET. The replay number is (855) 859-2056 (USA) or (404) 537-3406 (international), confirmation code 60248704. The audio webcast can be found on the Investor page of Alexion's website at: http://ir.alexionpharm.com.

About Hypophosphatasia (HPP)

HPP is a genetic, chronic, progressive, and life-threatening ultra-rare metabolic disease characterized by low alkaline phosphatase (ALP) activity and defective bone mineralization that can lead to destruction and deformity of bones and other skeletal abnormalities, as well as systemic complications such as profound muscle weakness, seizures, pain, and respiratory failure leading to premature death in infants.[1-5]

HPP is caused by mutations in the gene encoding an enzyme known as tissue non-specific alkaline phosphatase (TNSALP).[1,2] The genetic deficiency in HPP can affect people of all ages.[1] HPP is traditionally classified by the age of the patient at the onset of symptoms of the disease, with perinatal-, infantile- and juvenile-onset HPP defined as patients who have their first symptom prior to 18 years of age.

HPP can have devastating consequences for patients at any stage of life.[1] In a natural history study, infants who had their first symptom of HPP within the first 6 months of life had high mortality, with an overall mortality rate of 73 percent at 5 years.[8] In these patients, mortality is primarily due to respiratory failure.[1,5,9] In patients surviving and those with juvenile-onset HPP, long-term clinical sequelae include recurrent and non-healing fractures, profound muscle weakness, debilitating pain, and the requirement for ambulatory assistive devices such as wheelchairs, wheeled walkers, and canes.[1,4]

About Strensiq™ (asfotase alfa)

Strensiq™ (asfotase alfa) is a highly innovative bone-targeted enzyme replacement therapy that treats the underlying cause of

HPP by replacing the missing TNSALP enzyme. In clinical studies of patients with HPP who had their first symptom prior to the age of 18, treatment with Strensiq improved overall survival in infants, enhanced bone mineralization, and improved height, weight, and mobility.

Strensiq is approved in the United States, European Union, Japan, and Canada.

Important Safety Information

Hypersensitivity reactions have been reported in STRENSIQ-treated patients. In clinical trials, 1 out of 99 treated patients (1%) experienced signs and symptoms consistent with anaphylaxis.

Localized lipodystrophy, including lipoatrophy and lipohypertrophy, has been reported at injection sites after several months in patients treated with STRENSIQ.

Patients with HPP are at increased risk for developing ectopic calcifications. In clinical trials, 14 cases (14%) of ectopic calcification of the eye including the cornea and conjunctiva, and the kidneys (nephrocalcinosis) were reported. There was insufficient information to determine whether or not the reported events were consistent with the disease or due to STRENSIQ. No visual changes or changes in renal function were reported.

The most common adverse reactions reported were injection site reactions, lipodystrophy, ectopic calcifications, and hypersensitivity reactions.

Please click here for the full Prescribing Information.

About Alexion

Alexion is a global biopharmaceutical company focused on developing and delivering life-transforming therapies for patients with devastating and rare disorders. Alexion developed and commercializes Soliris® (eculizumab), the first and only approved complement inhibitor to treat patients with paroxysmal nocturnal hemoglobinuria (PNH) and atypical hemolytic uremic syndrome (aHUS), two life-threatening ultra-rare disorders. As the global leader in complement inhibition, Alexion is strengthening and broadening its portfolio of complement inhibitors, including evaluating potential indications for eculizumab in additional severe and ultra-rare disorders. Alexion's metabolic franchise includes two highly innovative enzyme replacement therapies for patients with life-threatening and ultra-rare disorders, Strensiq™ (asfotase alfa) to treat patients with hypophosphatasia (HPP) and Kanuma™ (sebelipase alfa) to treat patients with lysosomal acid lipase deficiency (LAD). In addition, Alexion is advancing the most robust rare disease pipeline in the biotech industry, with highly innovative product candidates in multiple therapeutic areas. This press release and further information about Alexion can be found at: www.alexion.com.

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Forward-Looking Statements

This news release contains forward-looking statements, including statements related to potential medical benefits of Strensiq™ (asfotase alfa) for hypophosphatasia (HPP). Forward-looking statements are subject to factors that may cause Alexion's results and plans to differ from those expected, including for example, decisions of regulatory authorities regarding marketing approval or material limitations on the marketing of Strensiq for HPP, delays in arranging satisfactory manufacturing capabilities and establishing commercial infrastructure for Strensiq for HPP, the possibility that results of clinical trials are not predictive of safety and efficacy results of Strensiq in broader or different patient populations, the risk that third party payors (including governmental agencies) will not reimburse for the use of Strensiq at acceptable rates or at all, the risk that estimates regarding the number of patients with Strensiq and observations regarding the natural history of patients with Strensiq are inaccurate, and a variety of other risks set forth from time to time in Alexion's filings with the Securities and Exchange Commission, including but not limited to the risks discussed in Alexion's Quarterly Report on Form 10-Q for the period ended June 30, 2015. Alexion does not intend to update any of these forward-looking statements to reflect events or circumstances after the date hereof, except when a duty arises under law.

References

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6. REGULATION (EU) No 536/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 April 2014 on clinical trials on medicinal products for human use, and repealing Directive 2001/20/EC. http://eur-lex.europa.eu/legal content/EN/TXT/PDF/?uri=CELEX:32014R0536&qid=1421232837997&from=EN.

7. Strensiq™ U.S. Prescribing Information, 2015.

8. Whyte MP, Leung E, Wilcox W, et al. Hypophosphatasia: a retrospective natural history study of the severe perinatal and infantile forms. Poster presented at the 2014 Pediatric Academic Societies and Asian Society for Pediatric Research Joint Meeting, Vancouver, B.C., Canada, May 5, 2014. Abstract 752416.

9. Whyte MP, Rockman-Greenberg C, Hofmann C, et al. Improved survival with asfotase alfa treatment in pediatric patients with hypophosphatasia at high risk of death. Poster presented at the American Society for Bone and Mineral Research (ASBMR) 2014 Annual Meeting, Houston, September 14, 2014. Abstract 1097.

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