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Alexion's Soliris® (eculizumab) Receives Orphan Drug Designation for the Treatment of Neuromyelitis Optica (NMO)

CHESHIRE, Conn.--(BUSINESS WIRE)-- Alexion Pharmaceuticals, Inc. (Nasdaq: ALXN) today announced that Soliris® (eculizumab), the company's first-in-class terminal complement inhibitor, has been granted an orphan drug designation by the U.S. Food and Drug Administration (FDA) for the treatment of neuromyelitis optica (NMO), a life-threatening, ultra-rare neurological disorder. In a Phase 2 study presented at the 2012 annual meeting of the American Neurological Association (ANA), Soliris treatment was associated with a significant reduction in the frequency of relapses (recurring attacks) in patients with severe, relapsing NMO.[1] Soliris is not approved for the treatment of patients with NMO.

The FDA, through its Office of Orphan Products Development (OOPD), grants orphan status to drugs and biologic products that are intended for the safe and effective treatment, diagnosis, or prevention of rare diseases or disorders that affect fewer than 200,000 people in the U.S. Orphan drug designation provides a drug developer with certain benefits and incentives, including a period of marketing exclusivity if regulatory approval is ultimately received for the designated indication.

"There are no approved therapies for patients with NMO, an extremely rare and debilitating disease that can lead to paralysis, blindness and death," said Martin Mackay, Ph.D., executive vice president and global head of R&D at Alexion. "This orphan drug designation is a positive step toward understanding and meeting the needs of this underserved patient population. In clinical trials to date, terminal complement inhibition with Soliris appeared to significantly reduce the attack rate in patients with severe, refractory relapsing NMO."

About NMO

In patients with NMO, uncontrolled complement activation causes destruction of myelin-producing cells, leading to severe damage to the central nervous system (CNS), including the spinal cord and optic nerve.[2-4] The disease leads to severe weakness, paralysis, respiratory failure, loss of bowel and bladder function, blindness and premature death.[5-7] Patients with NMO have a life-long exposure to the uncontrolled complement activation due to chronic autoimmune attack, and most patients experience an unpredictable, relapsing course of disease with cumulative disability, as each attack adds to the neurologic disability.[6,8,9] Fifty percent of relapsing NMO patients have been reported to sustain permanent severe disability, including paralysis and blindness, within five years of disease onset.[10] Most NMO-related deaths result from respiratory complications from NMO attacks.[10,11] The disease primarily affects women, with a female to male ratio as high as a 9:1.[12]

Phase 2 Data in Patients with NMO

The Phase 2 study reported at the ANA 2012 annual meeting and subsequently published in *The Lancet Neurology*[13] was a single-arm, open-label, investigator-initiated trial in 14 women with severe, relapsing NMO who were treated for one year. The study met its primary efficacy endpoint, reduction in annualized relapse rate, with high degrees of clinical and statistical significance: a decline in the median annualized attack rate from 3.0 attacks per year pre-Soliris treatment to 0 attacks per year during 12 months of chronic Soliris treatment ($p < 0.0001$). After 12 months of treatment, 86% (12 of 14) of these severely affected patients were completely attack-free.[1]

Additionally, Soliris was associated with significant improvements in key secondary endpoints. The median expanded disability status scale (EDSS) score improved from 4.3 pre-treatment to 3.5 after 12 months of treatment with Soliris ($p < 0.01$). Importantly, all patients experienced either improvement or stability in all key outcome measures, including EDSS, ambulatory function as measured by the Hauser Ambulation Index, and visual function as measured by visual acuity. Soliris was generally well-tolerated, with the three most common adverse events being headache, nausea, and dizziness. One case of meningococcal sepsis occurred. The patient made an uneventful recovery and restarted treatment with eculizumab to complete the study.[1]

About Soliris

Soliris is a first-in-class terminal complement inhibitor developed from the laboratory through regulatory approval and commercialization by Alexion. Soliris is approved in the U.S., E.U., Japan and other countries as the first and only treatment for patients with paroxysmal nocturnal hemoglobinuria (PNH), a debilitating, ultra-rare and life-threatening blood disorder

characterized by complement-mediated hemolysis (destruction of red blood cells). Soliris is also approved in the U.S., E.U., and other countries as the first and only treatment for patients with atypical hemolytic uremic syndrome (aHUS), a genetic, life-threatening, ultra-rare disease characterized by complement-mediated thrombotic microangiopathy (TMA, the formation of blood clots in small vessels).

Soliris is not approved for the treatment of NMO in any country. Soliris is not indicated for the treatment of patients with Shiga toxin E. coli-related hemolytic uremic syndrome (STEC-HUS). Alexion is evaluating the safety and efficacy of Soliris for the treatment of patients with NMO, STEC-HUS, and other complement-mediated diseases.

Alexion's breakthrough approach in terminal complement inhibition has received the pharmaceutical industry's highest honors: the 2008 Prix Galien USA Award for Best Biotechnology Product with broad implications for future biomedical research and the 2009 Prix Galien France Award in the category of Drugs for Rare Diseases.

More information, including the full prescribing information on Soliris, is available at www.soliris.net.

Important Safety Information

Soliris is generally well tolerated in patients with PNH and aHUS. In patients with PNH, the most frequently reported adverse events observed with Soliris treatment in clinical studies were headache, nasopharyngitis (runny nose), and back pain. Soliris treatment of patients with PNH should not alter anticoagulant management because the effect of withdrawal of anticoagulant therapy during Soliris treatment has not been established. In patients with aHUS, the most frequently reported adverse events observed with Soliris treatment in clinical studies were hypertension, upper respiratory tract infection, and diarrhea.

The U.S. product label for Soliris also includes a boxed warning: "Life-threatening and fatal meningococcal infections have occurred in patients treated with Soliris. Meningococcal infection may become rapidly life-threatening or fatal if not recognized and treated early. Comply with the most current Advisory Committee on Immunization Practices (ACIP) recommendations for meningococcal vaccination in patients with complement deficiencies. Immunize patients with a meningococcal vaccine at least 2 weeks prior to administering the first dose of Soliris, unless the risks of delaying Soliris therapy outweigh the risk of developing a meningococcal infection. (See Serious Meningococcal Infections (5.1) for additional guidance on the management of meningococcal infection.) Monitor patients for early signs of meningococcal infections and evaluate immediately if infection is suspected. Soliris is available only through a restricted program under a Risk Evaluation and Mitigation Strategy (REMS). Under the Soliris REMS, prescribers must enroll in the program (5.2). Enrollment in the Soliris REMS program and additional information are available by telephone: 1-888-soliris (1-888-765-4747)."

Please see full prescribing information for Soliris, including boxed WARNING regarding risk of serious meningococcal infection.

About Alexion

Alexion Pharmaceuticals, Inc. is a biopharmaceutical company focused on serving patients with severe and ultra-rare disorders through the innovation, development and commercialization of life-transforming therapeutic products. Alexion is the global leader in complement inhibition and has developed and markets a treatment for patients with PNH and aHUS, two debilitating, ultra-rare and life-threatening disorders caused by chronic uncontrolled complement activation. The treatment is currently approved in more than 40 countries for the treatment of PNH, and in the United States and the European Union for the treatment of aHUS. Alexion is evaluating other potential indications for its marketed drug and is developing four other highly innovative biotechnology product candidates, which are being investigated across nine severe and ultra-rare disorders beyond PNH and aHUS. This press release and further information about Alexion Pharmaceuticals, Inc. can be found at: www.alexionpharma.com.

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Safe Harbor Statement

This news release contains forward-looking statements, including statements related to anticipated clinical development, regulatory and commercial milestones and potential health and medical benefits of Soliris® (eculizumab) for the potential treatment of patients with PNH and aHUS. 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 Soliris for its current or potential new indications, 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 March 31, 2013. 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.

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