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Soliris® Significantly Improved Clinical Outcomes in Patients with aHUS in Pivotal Trials Published in New England Journal of Medicine

— Findings Underscore Importance of Earlier Intervention and Chronic Terminal Complement Inhibition with Soliris in Patients with aHUS—

—Improved Clinical Outcomes Include Recovery of Severely Impaired Kidney Function—

CHESHIRE, Conn.--(BUSINESS WIRE)-- Alexion Pharmaceuticals, Inc. (Nasdaq: ALXN) today announced that data published in the June 6 issue of *The New England Journal of Medicine (NEJM)* demonstrate that chronic Soliris® (eculizumab) therapy is effective in the treatment of patients with atypical hemolytic uremic syndrome (aHUS), a genetic, life-long, ultra-rare disease associated with vital organ failure and premature death.[1] In patients with aHUS, uncontrolled terminal complement activation causes thrombotic microangiopathy (TMA), the formation of blood clots in small blood vessels throughout the body.[2,3]

According to results of two pivotal studies published in the *NEJM*, chronic Soliris treatment substantially inhibits systemic complement-mediated TMA, decreases the need for TMA-related intervention, results in significant and sustained improvement in platelet count, increasingly improves renal function across patient groups over time, and is associated with substantial kidney recovery in patients with aHUS. In addition, chronic Soliris treatment leads to reversal of vital organ damage and significant improvements in health-related quality of life (HRQoL). The study data also indicate that earlier intervention with Soliris improves clinical outcomes.[1]

aHUS is a chronic and life-threatening condition that can progressively damage vital organs, leading to stroke, heart attack, kidney failure, and death.[4] The morbidities and premature mortality in aHUS are caused by chronic, uncontrolled activation of the terminal complement system, resulting in systemic TMA.[5,6] Soliris, a first-in-class terminal complement inhibitor, is indicated for the treatment of patients with aHUS to inhibit complement-mediated TMA.

"Soliris represents a substantial advance in the treatment of patients who suffer from aHUS, because it directly targets chronic, uncontrolled complement activation, the underlying cause of the progressive organ failure and shortened life span of patients with aHUS," said lead study author Christophe Legendre, M.D., Professor of Nephrology at the University of Paris Descartes and Hôpital Necker in Paris, France. "With an approved and highly effective treatment supported by strong peer-reviewed data, physicians must be vigilant in differentially diagnosing patients with aHUS, rapidly initiating treatment, and complying with approved dosing regimens to prevent the lifelong risk of systemic clinical complications of TMA, including damage to multiple vital organ systems."

Soliris was approved for the treatment of patients with aHUS in the United States, Europe and other countries based on data from the two prospective studies published today in *NEJM*, together with data from a separate retrospective study.[7] Soliris is the first and only approved treatment for aHUS, and directly addresses the underlying cause of the disease — chronic, uncontrolled terminal complement activation leading to systemic complement-mediated TMA. Prior to the availability of Soliris, up to 65 percent of patients sustained permanent renal damage, progressed to end-stage renal disease (ESRD), or died within a year of aHUS diagnosis.[8]

"We are working with a sense of urgency to bring Soliris to more patients suffering from this life-threatening disease worldwide," said study co-author Camille Bedrosian, M.D., senior vice president and chief medical officer of Alexion Pharmaceuticals, Inc. "In these clinical trials, earlier intervention with Soliris, in order to achieve the complete and chronic inhibition of terminal complement activity, substantially improved the health of a broad population of patients with aHUS."

Clinical Trial Data Published in *NEJM*

The data published in the *NEJM* are based on two prospective, multicenter Phase 2 trials (referred to as Trial 1 and Trial 2) in which aHUS patients aged 12 years or older received Soliris for 26 weeks as well as during long-term extensions of each trial (median durations of 64 and 62 weeks for the combined trial and extensions of Trials 1 and 2, respectively). Trial 1 enrolled 17 patients with low platelet counts and substantial kidney damage with clinical evidence of progressing TMA, and a median time from aHUS diagnosis to screening of 9.7 months. Trial 2 enrolled 20 patients with chronic renal insufficiency, prolonged use of plasma exchange or infusion, and long-term aHUS, with a median time from aHUS diagnosis to screening of 48 months.[1]

In both trials, Soliris significantly reduced complement-mediated TMA, as indicated by normalization of hematologic measures and reduction in TMA intervention. In Trial 1, the increase in platelet count from baseline to week 26 was $73x10^9$ per liter ($P < 0.001$). In Trial 2, 80 percent of the patients achieved TMA event-free status. Soliris significantly reduced terminal complement activity within one hour after treatment initiation in both trials, and all Soliris-treated patients achieved complete terminal complement activity inhibition, which they maintained with ongoing treatment ($P < 0.001$ for both trials through week 26).[1]

Both trials also demonstrated positive results in secondary endpoints. Soliris therapy significantly improved renal outcomes and was associated with continuous, time-dependent increases in estimated glomerular filtration rate (eGFR), a measure of kidney function. In Trial 1, dialysis was discontinued in four of five patients (80 percent) who had required dialysis at the time of initiating Soliris therapy; these patients remained dialysis-free throughout the course of treatment. In addition, 65 and 45 percent of Trial 1 and Trial 2 patients, respectively, experienced an improvement in kidney function by at least one chronic kidney disease (CKD) stage during the study extension period.[1]

In both trials, investigators noted that earlier Soliris initiation was associated with significantly greater improvements in kidney function ($P=0.007$ in Trial 1 and $P < 0.001$ in Trial 2), suggesting that starting Soliris treatment earlier may lead to improved clinical outcomes and reversal of organ damage.[1]

In Trials 1 and 2, 24 and 35 percent, respectively, of patients had no identified complement regulatory factor gene mutation or autoantibody (i.e., to complement factor H [CFH]). Of note, in both trials, similarly positive outcomes were achieved in patients treated with Soliris regardless of the presence or absence of identified genetic mutations or CFH autoantibodies.[5] This finding lends support to the study authors' recommendation that treatment with Soliris in aHUS patients be considered without requiring the results of complement mutation testing.[1]

Deviation from approved Soliris dosing exposes aHUS patients to the ongoing lifelong risk of systemic clinical complications of TMA, including multiple vital organ damage, the study authors reported.[1,9,10,11] Five of 18 patients who missed Soliris doses in the two trials or the retrospective study experienced severe subsequent TMA complications.[1,12,13] These findings are consistent with the pathophysiology of the disease (uncontrolled complement activation) and underscore the importance of continued patient monitoring and sustained Soliris treatment to reduce TMA.[1,13,14]

Soliris appeared to be well tolerated in the two studies. The most common serious adverse events (SAEs) with Soliris treatment were accelerated hypertension, hypertension and influenza. There was no apparent increase in SAEs with ongoing Soliris treatment, as rates of SAEs remained steady or declined from the initial 26-week study period to the subsequent treatment periods. No new SAEs emerged after the initial 26-week study period. SAEs were similar among patient subgroups, including 15 transplant patients who received immunosuppressive therapy during the trials. All patients were alive at the time of the data cut-off in the trial.[1] The trials are registered at www.ClinicalTrials.gov: NCT00844844, NCT00844545, NCT00844428, NCT00838513.

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 United States, European Union (EU) and other countries as the first and only treatment for aHUS patients. Soliris is indicated to inhibit complement-mediated TMA. 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 STEC-HUS.

Soliris also is approved in the US, EU, 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 indicated to reduce hemolysis.

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

The Summary of Product Characteristics (SmPC) for Soliris includes a special warning and precaution for use: Due to its mechanism of action, the use of Soliris increases the patient's susceptibility to meningococcal infection (*Neisseria meningitidis*).

These patients might be at risk of disease by uncommon serogroups (particularly Y, W135 and X), although meningococcal disease due to any serogroup may occur. To reduce the risk of infection, all patients must be vaccinated at least 2 weeks prior to receiving Soliris. PNH patients must be vaccinated 2 weeks prior to Soliris initiation. aHUS patients who are treated with Soliris less than 2 weeks after receiving a meningococcal vaccine must receive treatment with appropriate prophylactic antibiotics until 2 weeks after vaccination. Patients must be re-vaccinated according to current medical guidelines for vaccination use. Tetravalent vaccines against serotypes A, C, Y and W135 are strongly recommended, preferably conjugated ones.

Vaccination may not be sufficient to prevent meningococcal infection. Consideration should be given to official guidance on the appropriate use of antibacterial agents. Cases of serious or fatal meningococcal infections have been reported in Soliris-treated patients. All patients should be monitored for early signs of meningococcal infection, evaluated immediately if infection is suspected, and treated with appropriate antibiotics if necessary. Patients should be informed of these signs and symptoms and steps taken to seek medical care immediately. Physicians must discuss the benefits and risks of Soliris therapy with patients and provide them with a patient information brochure and a patient safety card. The most common or serious adverse reactions were headache (occurred mostly in the initial phase), leukopenia and meningococcal infection. Soliris is not expected to affect the aplastic component of anaemia in patients with PNH.

Please see Summary of Product Characteristics for full prescribing information for Soliris, including all special warnings and precautions.

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.

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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