Long-Term Soliris(R) Therapy Improved or Stabilized Kidney Function in Patients With PNH

Study Shows that Long-Term Soliris Therapy Continued to Be Associated with Reductions in Thrombosis and Improvements in Fatigue, Quality of Life, and Anemia in PNH Patients Data Presented at the American Society of Hematology (ASH) Annual Meeting Posters: 897-III & 891-III

CHESHIRE, Conn., Dec 10, 2007 /PRNewswire-FirstCall via COMTEX News Network/ -- Patients with a rare blood disorder called paroxysmal nocturnal hemoglobinuria (PNH) were found to be six times more likely than the general public to have chronic kidney disease (CKD), as shown in an ongoing open-label clinical study of patients with PNH. Additionally, results from clinical studies in patients with PNH presented today at the American Society of Hematology (ASH) Meeting in Atlanta indicated that long-term treatment with Soliris(R) (eculizumab) was associated with significant improvement and stabilization of kidney function. In a separate presentation of results from the same clinical studies, the long-term reduction in hemolysis with Soliris therapy was associated with sustained reduction in thrombosis and improvements in fatigue, overall quality of life, as well as anemia as measured by reductions in transfusions in a diverse population of patients with PNH. Soliris continued to be safe and well- tolerated throughout this open-label study.

The data were presented in two poster presentations titled, "High Incidence of Progression to Chronic Renal Insufficiency in Patients with Paroxysmal Nocturnal Hemoglobinuria (PNH)" and "Sustained Improvements in Transfusion Requirements, Fatigue and Thrombosis with Eculizumab Treatment in Paroxysmal Nocturnal Hemoglobinuria."

Soliris, Hemolysis and PNH

Soliris, developed by Alexion Pharmaceuticals, Inc. (Nasdaq: ALXN), is the first therapy approved for PNH, a rare, debilitating and life-threatening blood disorder defined by the destruction of red blood cells, or hemolysis. Soliris is a complement inhibitor indicated for the treatment of patients with PNH to reduce hemolysis. In patients with PNH, hemolysis can cause thromboses, kidney disease, liver dysfunction, disabling fatigue, impaired quality of life, recurrent pain, shortness of breath, pulmonary hypertension, intermittent episodes of dark colored urine (hemoglobinuria), and anemia.(1-3)

Impaired kidney function is common among patients with PNH, (4-8) and kidney failure is the cause of death in 8 to 18 percent of PNH patients. (9) Kidney damage in PNH patients is likely due to repetitive exposure of renal tissue to cell-free plasma hemoglobin that is released during hemolysis. (10)

High Incidence of Progression to Chronic Renal Insufficiency in Patients with PNH and Impact of Long-Term Soliris Therapy

Among 195 patients enrolled in three multinational clinical trials of Soliris for the treatment of PNH, 65 percent presented at baseline with some degree of Chronic Kidney Disease (CKD) at baseline as determined from screening visit samples using criteria from the National Kidney Foundation; CKD was severe in 21 percent of patients. The analysis of patient data prior to study entry showed that the probability of progression of this overall untreated population of PNH patients to a major clinical kidney event, including severe renal damage, renal insufficiency, renal impairment, dialysis and later-stage CKD, was approximately 87 percent.

In an analysis of the overall PNH study population, long-term Soliris therapy of up to 18 months was associated with a significant improvement or stabilization of kidney function in PNH patients, irrespective of stage of baseline CKD. Of 166 patients who had completed 18 months of treatment, 65 percent had CKD at baseline. In these 166 patients, CKD stage improved in 57 (or 34 percent), worsened in 9 (or 5 percent), and stabilized in 100 (or 60 percent) ($P<0.001$). Patients with earlier stage CKD who received long-term Soliris therapy had the greatest likelihood of improvement. Among PNH patients diagnosed with CKD prior to Soliris therapy, 21 percent became free of CKD during treatment. Similarly, the rate of major clinical kidney events per 100 patient years was reduced by 50 percent among patients with PNH who received Soliris therapy, compared to the rate observed prior to treatment (2.10 vs. 4.22, $P<0.001$).

"PNH is a progressive disease that damages vital organs, increases the risk of dangerous blood clots and can lead to premature death. Chronic kidney disease is a significant concern in these patients because it often goes undetected, and kidney function can decline gradually over time," noted Peter Hillmen, MD, lead investigator of the eculizumab PNH clinical trials study and Consultant Haematologist of the General Infirmary at Leeds, Leeds, UK. "This underscores the importance of monitoring kidney function in patients with PNH. The analysis presented today demonstrates that kidney disease is a common occurrence in PNH, and that treatment with eculizumab stabilizes or improves kidney function in nearly all patients."

"The clinical trial data presented at ASH indicates that sustained reduction in hemolysis with Soliris therapy is associated with stabilization or improvement in kidney function in patients with PNH. In addition, Soliris provides sustained improvements in fatigue, overall quality of life, and anemia in this diverse population of PNH patients," said Leonard Bell, MD, Chief Executive Officer of Alexion Pharmaceuticals. "As we understand more about the insidious and damaging aspects of hemolysis in patients with PNH, we also continue our focus on reaching our goal that every PNH patient who can benefit from Soliris will have access to it."

Long-Term Soliris Therapy Reduces Thrombosis and Transfusion Requirements; Improves Fatigue and Quality of Life in PNH Patients

At the ASH annual meeting today, researchers also presented data from an ongoing open-label extension study examining the long-term efficacy of Soliris in 187 PNH patients. Long-term clinical efficacy measures included hemolysis, fatigue, quality of life, thrombotic events and transfusion requirements during a median 22-month treatment period. The long-term safety profile of Soliris was also assessed.

The study findings show that Soliris therapy provided significant long- term clinical improvements for patients with PNH:

- Soliris significantly and consistently reduced hemolysis, as assessed by levels of lactate dehydrogenase, from a mean of 2286 +/- 87 U/L at baseline to 300 +/- 15 U/L in patients after 2 years of therapy (P<0.001; N = 68).
- Soliris significantly improved the fatigue score by 6.8 +/- 0.67 points during the first six months of therapy and by 8.5 +/- 0.83 points during the most recent six months of therapy using the FACIT-Fatigue instrument (P<0.001); an increase of 3 or more points is clinically meaningful in this instrument. A similar improvement in fatigue was demonstrated with the EORTC instrument (P<0.001). Results obtained from both fatigue scales showed more improvement in the latter time period.
- Other quality of life parameters also significantly improved both during the first and the most recent six months of Soliris therapy including five measures of patient functioning, global health status and dyspnea (P<0.001 for each measure at both the first six and most recent six months).
- When comparing matched time periods prior to and during Soliris therapy, thrombotic events were reduced 89 percent (from 45 events before treatment to 5 events during Soliris; P<0.001).
- Soliris significantly reduced transfusion requirements during the first six months of therapy and during the most recent six months of therapy; transfusion units of packed red blood cells were reduced from a median of 8.0 units/month prior to Soliris therapy to 0.0 units/month in both the first six months and the most recent six months of treatment (P<0.001).

In addition to these findings related to efficacy, long-term administration of Soliris continued to be safe and well tolerated by PNH patients; adverse event rates during the most recent six months of treatment were similar to rates reported during the first six months of Soliris therapy. The most common adverse events were headache, nasopharyngitis (runny nose) and upper respiratory tract infection. The presentation noted that there were two cases of meningococcal sepsis during 382 patient years of therapy (0.52 per 100 patient yrs), consistent with earlier clinical trial experience, which were promptly treated and both patients recovered without sequelae.

"This long-term data demonstrates the sustained reduction in hemolysis achieved in all patients treated with eculizumab," said Prof. Gerard Socie, M.D., Ph.D., Head, Department of Bone Marrow Transplant, St. Louis Hospital, Paris. "In our experience across hundreds of patients with PNH, thrombosis is the most feared complication often leading to death. Importantly, the current study shows that the substantial reduction in thrombosis is maintained with long-term eculizumab treatment. Additionally, the data show that long-term eculizumab is well tolerated, and patients continue to experience significant improvements in fatigue, quality of life and anemia."

About PNH

PNH is an acquired genetic blood disorder defined by hemolysis, in which patients' red blood cells are destroyed by

complement, a component of the body's immune system. PNH is a rare disease that affects an estimated 8,000 to 10,000 people in North America and Europe. (11) PNH often strikes people in the prime of their lives, with an average age of onset in the early 30's. (12) Approximately 10 percent of all patients first develop symptoms at 21 years of age or younger. (2) PNH develops without warning and can occur in men and women of all races, backgrounds and ages. PNH often goes unrecognized, with delays in diagnosis often ranging from one to more than 10 years. (3) The estimated median survival for PNH patients is between 10 and 15 years from the time of diagnosis. (3,12)

PNH has been identified more commonly among patients with disorders of the bone marrow, including aplastic anemia (AA) and myelodysplastic syndrome (MDS). (13,14,15,16) In patients with thrombosis of unknown origin, PNH may be an underlying cause. (2,17)

Prior to approval of Soliris, there were no therapies specifically available for the treatment of PNH. PNH treatment was limited to symptom management through periodic blood transfusions, non-specific immunosuppressive therapy and, infrequently, bone marrow transplantations - a procedure that carries considerable mortality risk. (2,17)

About Soliris

Soliris was approved in March 2007 by the U.S. Food and Drug Administration (FDA) as the first treatment for PNH, a rare, debilitating and life-threatening blood disorder defined by hemolysis, or the destruction of red blood cells. In June 2007, the European Commission (EC) also approved the use of Soliris for the treatment of patients with PNH. Soliris is the first therapy approved in Europe for the treatment of PNH and was the first medicinal product to receive EC approval under the EMEA Accelerated Assessment Procedure.

Important Safety Information

Soliris is generally well tolerated. The most frequent adverse events observed in clinical studies were headache, nasopharyngitis (a runny nose), back pain and nausea. Treatment with Soliris should not alter anticoagulant management because the effect of withdrawal of anticoagulant therapy during Soliris treatment has not been established.

The U.S. product label for Soliris also includes a boxed warning: "Soliris increases the risk of meningococcal infections. Vaccinate patients with a meningococcal vaccine at least two weeks prior to receiving the first dose of Soliris; revaccinate according to current medical guidelines for vaccine use. Monitor patients for early signs of meningococcal infections, evaluate immediately if infection is suspected, and treat with antibiotics if necessary." Two out of 196 vaccinated PNH patients treated with Soliris in clinical trials experienced a serious meningococcal infection.

Prior to beginning Soliris therapy, all patients and their prescribing physicians will be enrolled in the Soliris Safety Registry which is part of a special risk management program that involves initial and continuing education and long-term monitoring for detection of new safety findings.

Please see full prescribing information at www.soliris.net.

About Alexion

Alexion Pharmaceuticals, Inc. is a biopharmaceutical company working to develop and deliver life-changing drug therapies for patients with serious and life-threatening medical conditions. Alexion is engaged in the discovery, development and commercialization of therapeutic products aimed at treating patients with a wide array of severe disease states, including hematologic diseases, cancer, and autoimmune disorders. In March 2007, the FDA granted marketing approval for Alexion's first product, Soliris, for all patients with PNH and Alexion began commercial sale of Soliris in the U.S. during April 2007. In June 2007, the EC granted marketing approval for Soliris in the European Union for all patients with PNH. Alexion is evaluating other potential indications for Soliris as well as other formulations of eculizumab for additional clinical indications, and is pursuing development of other antibody product candidates in early stages of development. This press release and further information about Alexion Pharmaceuticals, Inc. can be found at: http://www.alexionpharm.com.

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Safe Harbor Statement

This news release contains forward-looking statements, including statements related to potential health and medical benefits from Soliris. 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, delays in arranging satisfactory manufacturing capability and establishing commercial infrastructure, delays in developing or adverse changes in commercial relationships, the possibility that results of clinical trials are not predictive of safety and efficacy results of Soliris in broader patient populations, the possibility that initial results of

commercialization are not predictive of future rates of adoption of Soliris, the risk that third parties won't agree to license any necessary intellectual property to us on reasonable terms or at all, the risk that third party payors will not reimburse for the use of Soliris at acceptable rates or at all, the risk that Soliris will not generate interest among physicians, the risk that estimates regarding the number of PNH patients are inaccurate, the risk that pending litigation may be resolved adversely, 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 September 30, 2007 and in our other filings with the Securities and Exchange Commission. 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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