



January 21, 2014

## **FDA Grants Orphan Drug Designation to Soliris® (eculizumab) for Prevention of Delayed Graft Function (DGF) in Renal Transplant Patients**

CHESHIRE, Conn.--(BUSINESS WIRE)-- Alexion Pharmaceuticals (Nasdaq:ALXN) today announced that the U.S. Food and Drug Administration (FDA) has granted an orphan drug designation (ODD) to Soliris® (eculizumab), a first-in-class terminal complement inhibitor, for the prevention of delayed graft function (DGF) in renal transplant patients. DGF is an early and serious complication of organ transplantation that is characterized by the failure of a transplanted organ to function normally immediately following transplantation. In patients undergoing a kidney transplant, DGF leads to the patient requiring dialysis in order to survive.<sup>1-3</sup>

Soliris is currently approved for the treatment of patients with paroxysmal nocturnal hemoglobinuria (PNH) and atypical hemolytic uremic syndrome (aHUS), two debilitating, ultra-rare and life-threatening disorders caused by chronic uncontrolled complement activation. Soliris is not approved in any country to prevent or treat DGF following kidney or other solid organ transplantation.

"For kidney transplant patients with increased risk, there is a serious unmet medical need for a treatment to prevent delayed graft function and its harmful consequences," said Martin Mackay, Ph.D., Executive Vice President, Global Head of R&D at Alexion. "By specifically inhibiting the terminal complement pathway, which is believed to play a critical role in the development of DGF, Soliris has the potential to lower the risk of DGF, a benefit that may have positive implications for longer-term kidney function and clinical outcomes for patients. In addition, a significant number of donor kidneys are reportedly never used and thus discarded each year due to the risk of poor outcomes associated with DGF, therefore reducing the risk of DGF may enable more patients to receive a kidney transplant."

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.

Alexion plans to initiate a single multinational DGF registration study with Soliris later this year. Alexion looks forward to working closely with the FDA to gather the clinical evidence needed to support approval for this indication.

### **About Delayed Graft Function (DGF)**

DGF is an early and serious complication of organ transplantation that is characterized by the failure of a transplanted organ to function normally immediately following transplantation. In the case of DGF in the setting of kidney transplantation, the patient requires dialysis after the transplantation procedure.<sup>1-3</sup> Most often, DGF results from organ injury caused by reduction and/or restoration of blood flow, and the associated inflammation, including complement activation.<sup>1-4</sup> DGF has a substantial negative impact on graft function both in the short and long term, which can result in premature graft loss, prolonged hospitalization or patient death.<sup>5,6</sup> In addition, as kidney donors are in short supply, reducing the risk of DGF may allow more donor kidneys to be transplanted. At present, 15-20 percent of donor kidneys are reportedly never used and thus discarded each year in the U.S. and Europe due to the risk of poor outcomes associated with DGF,<sup>7,8</sup> denying many patients the benefit of solid organ transplantation.

### **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. (2007), European Union (2007), Japan (2010) 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. Soliris is also approved in the U.S. (2011), the European Union (2011), Japan (2013) and other countries as the first and only treatment for patients with atypical hemolytic uremic syndrome (aHUS), a debilitating, ultra-rare and life-threatening genetic disorder characterized by complement-mediated thrombotic microangiopathy, or TMA (blood clots in small vessels). Soliris is indicated to inhibit complement-mediated TMA. The effectiveness of Soliris in aHUS is based on its effects on TMA and renal function. Prospective clinical trials in additional patients, the preliminary results of which were reported at international nephrology and hematology conferences in 2013, are ongoing to confirm the benefit of Soliris in patients with aHUS. Soliris is not indicated for the treatment of patients with Shiga-toxin E. coli-related hemolytic uremic syndrome (STEC-

HUS). For the breakthrough innovation in complement inhibition, Alexion and Soliris have 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 U.S. prescribing information on Soliris is available at [www.soliris.net](http://www.soliris.net).

### **Important Safety Information**

The U.S. product label for Soliris 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 two 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. Enrollment in the Soliris REMS program and additional information are available by telephone: 1-888-soliris (1-888-765-4747)."

In patients with PNH, the most frequently reported adverse events observed with Soliris treatment in clinical studies were headache, nasopharyngitis (runny nose), back pain and nausea. 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, diarrhea, headache, anemia, vomiting, nausea, urinary tract infection, and leukopenia. Please see full prescribing information for Soliris, including boxed WARNING regarding risk of serious meningococcal infection.

### **About Alexion**

Alexion is a biopharmaceutical company focused on serving patients with severe and 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 Soliris® (eculizumab) as a treatment for patients with PNH and aHUS, two debilitating, ultra-rare and life-threatening disorders caused by chronic uncontrolled complement activation. Soliris is currently approved in nearly 50 countries for the treatment of PNH, and in the United States, European Union, Japan and other countries for the treatment of aHUS. Alexion is evaluating other potential indications for Soliris in additional severe and ultra-rare disorders beyond PNH and aHUS, and is developing other highly innovative biotechnology product candidates across multiple therapeutic areas. This press release and further information about Alexion can be found at: [www.alexionpharma.com](http://www.alexionpharma.com).

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### **Safe Harbor Statement**

*This news release contains forward-looking statements, including statements related to potential medical benefits of Soliris® (eculizumab) for the prevention of delayed graft function (DGF) in renal transplant patients. 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 DGF, delays in arranging satisfactory manufacturing capabilities and establishing commercial infrastructure for Soliris for DGF, the possibility that results of clinical trials are not predictive of safety and efficacy results of Soliris for DGF in broader or different patient populations, the risk that third party payors (including governmental agencies) will not reimburse for the use of Soliris for DGF (if approved) at acceptable rates or at all, the risk that estimates regarding the number of patients with Soliris for DGF and observations regarding the natural history of patients with Soliris for DGF 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 Sept. 30, 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.*

### **References**

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Source: Alexion Pharmaceuticals

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