UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of report (Date of earliest event reported): April 16, 2010

ALEXION PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**000-27756**	**13-3648318**
(State or other jurisdiction of incorporation or organization)	**(Commission File Number)**	**(I.R.S. Employer Identification No.)**

352 Knotter Drive, Cheshire, Connecticut 06410
(Address of Principal Executive Offices) (Zip Code)

Registrant's telephone number, including area code: (203) 272-2596

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 8.01 Other Events.

On April 16, 2010, Alexion Pharmaceuticals, Inc., together with its subsidiary Alexion Pharma International Sàrl, issued a press release announcing that Japan's Ministry of Health, Labour and Welfare approved Alexion's New Drug Application for the use of Soliris® (eculizumab) as a treatment for patients in Japan with paroxysmal nocturnal hemoglobinuria. A copy of the press release is furnished as Exhibit 99.1 to this Form 8-K.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

99.1 Press Release issued by Alexion Pharmaceuticals, Inc. and Alexion Pharma International Sàrl on April 16, 2010 relating to the approval in Japan of Soliris for the treatment of paroxysmal nocturnal hemoglobinuria.

Signature

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ALEXION PHARMACEUTICALS, INC.

By: /s/ Thomas I. H. Dubin
Name: Thomas I. H. Dubin
Title: Senior Vice President and Chief Legal Officer

Date: April 16, 2010

Exhibit 99.1

Alexion's Soliris® (Eculizumab) Receives Marketing Approval in Japan for Patients with Paroxysmal Nocturnal Hemoglobinuria (PNH)

First Therapy Approved for Patients with PNH, a Rare and Life-Threatening Blood Disease

Soliris is a First-in-Class Complement Inhibitor Antibody

CHESHIRE, Conn. & LAUSANNE, Switzerland —April 16, 2010—Alexion Pharmaceuticals, Inc. (Nasdaq: ALXN) and Alexion Pharma International Sàrl today announced that Japan's Ministry of Health, Labour and Welfare (MHLW) has approved the Company's New Drug Application (NDA) for the use of Soliris® (eculizumab) as a treatment for patients in Japan with paroxysmal nocturnal hemoglobinuria (PNH). PNH is an ultra-rare, debilitating and life-threatening blood disorder defined by chronic red blood cell destruction, or hemolysis. Soliris, a first-in-class terminal complement inhibitor, is the first therapy approved in Japan for the treatment of patients with PNH. Soliris received orphan drug designation from the MHLW in 2009 and was approved under the Ministry's priority review process.

"The speedy approval of the Soliris NDA in Japan underscores the severity of PNH in Japanese patients and the significant clinical impact that this treatment provides to patients living with PNH," said Leonard Bell, M.D., Chief Executive Officer of Alexion. "This regulatory approval marks another important step in our global commitment to the objective of providing access to Soliris to all patients who can benefit from it. We now look forward to working closely with the healthcare authorities in Japan to make Soliris available to patients as rapidly as possible."

Soliris was approved as a treatment for patients with PNH by the U.S. Food and Drug Administration and the European Commission in 2007, and has since received similar approvals from the healthcare authorities in other countries, including Australia, Korea and Canada. Governments and private insurance companies have recognized the breakthrough innovation of Soliris and are now providing patients with broad access to Soliris in the United States, the largest European nations, and additional countries around the world. With the approval of the NDA, Alexion is working with the MHLW to facilitate patient access to Soliris. The Company continues to anticipate a commercial launch of Soliris in Japan by the end of 2010.

"PNH is very rare, but has a devastating impact on many of the patients that it affects. After decades of ground-breaking basic scientific research in Japan regarding PNH, it is

particularly noteworthy that clinical studies, including the AEGIS trial in Japan, have shown that Soliris markedly reduces hemolysis, the underlying cause of the serious illness and shortened life-span associated with PNH," said Yuzuru Kanakura, M.D., Ph.D., Professor of Hematology and Oncology at Osaka University Hospital in Suita, Japan, and lead investigator of the AEGIS study. "Japanese patients with PNH will soon have access to the same life-changing medical benefits of Soliris that are available to patients in other nations."

The AEGIS Study in Japan

Alexion's NDA for Soliris included data from AEGIS, an open-label registration study examining Soliris as a treatment for Japanese patients with PNH, (1) as well as data from the previously reported SHEPHERD and TRIUMPH (2,3) PNH registration trials, which were conducted in North America, Europe, and Australia. AEGIS was conducted during 2008 and included 29 patients at nine institutions throughout Japan.

In December 2008, Alexion reported positive results from AEGIS. (4) The prespecified primary efficacy endpoint of change in hemolysis was achieved with an 86 percent reduction ($P<0.001$). Key secondary endpoints including improvement in fatigue ($P<0.001$) and reduction in transfusions ($P<0.001$) were also achieved.

AEGIS Extension Study – Additional Positive Data Regarding Hemolysis and Chronic Kidney Disease

In December 2009, Alexion announced positive data from the 26-week extension of the AEGIS study. (5) Results showed that there was a sustained reduction in intravascular hemolysis, as measured by lactate dehydrogenase (LDH), through the 38 weeks of treatment. LDH decreased 87% from a median of 1,814 U/L at baseline to a median of 232 U/L at 38 weeks of treatment ($p<0.001$).

A significant improvement in chronic kidney disease (CKD) stage was also seen in Japanese patients on long-term Soliris treatment. Two-thirds (19/29) of patients enrolled in the 12-week AEGIS study demonstrated evidence of CKD at baseline prior to eculizumab. Soliris treatment significantly increased the likelihood of improvement in CKD in Japanese patients: at week 38, 53% (9/17) of patients with CKD at baseline demonstrated improvement.

About PNH

PNH is a rare blood disorder that strikes people of all ages, with an average age of onset in the early 30s. (6) Approximately 10 percent of all patients first develop symptoms at 21

years of age or younger. (7) 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 ranging from one to more than 10 years. (8) It is estimated that approximately one-third of patients with PNH do not survive more than five years from the time of diagnosis. (8) PNH has been identified more commonly among patients with disorders of the bone marrow, including aplastic anemia (AA) and myelodysplastic syndromes (MDS). (9,10,11) In patients with thrombosis of unknown origin, PNH may be an underlying cause. (6) More information on PNH is available at www.pnhsource.com.

About Soliris

Soliris (eculizumab) is a first-in-class terminal complement inhibitor developed from the laboratory through regulatory approval by Alexion. Soliris has been approved by the healthcare authorities in the U.S., European Union and other countries as the first treatment for patients with PNH, a rare, debilitating and life-threatening blood disorder defined by hemolysis, or the destruction of red blood cells. Prior to these approvals, there was no therapy specifically available for the treatment of PNH.

Outside of Japan, patients with PNH in more than 20 countries now have access to Soliris therapy through national or private healthcare providers. As the first terminal complement inhibitor to be approved in countries around the world, Soliris represents a long-sought breakthrough in medical innovation. Alexion's innovative approach to complement inhibition has received some of 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 on Soliris is available at www.soliris.net.

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. Meningococcal infection may become rapidly life-threatening or fatal if not recognized and treated early. 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." During clinical studies, two out of 196 vaccinated PNH patients treated with Soliris experienced a serious meningococcal infection. Prior to beginning Soliris therapy, all patients and their prescribing physicians are encouraged to enroll in the PNH 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.

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 and kidney diseases, transplant, other inflammatory disorders, and cancer. Soliris is Alexion's first marketed product. 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: www.alexionpharma.com.

[ALXN-G]

Safe Harbor Statement

This news release contains forward-looking statements, including statements related to potential health and medical benefits from Soliris and the timing of regulatory and commercial milestones for Soliris in Japan. *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 published reports or clinical trials are not predictive of safety and efficacy results of Soliris in broader patient populations, the risk that clinical trials may not be completed successfully, 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 Alexion 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, 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 Annual Report on Form 10-K for the period ended December 31, 2010, and in Alexion's 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.*

(1) Kanakura Y, Ohyashiki K, Shichishima T, et al. Safety and efficacy of the terminal complement inhibitor eculizumab in Japanese patients with paroxysmal nocturnal hemoglobinuria: AEGIS phase II clinical study results [abstract]. Blood. 2008;112:A3438.

(2) Brodsky RA, Young, NS, Antonioli E, et al. Multicenter phase 3 study of the complement inhibitor eculizumab for the treatment of patients with paroxysmal nocturnal hemoglobinuria. Blood. 2008;111:1840-1847.

(3) Hillmen P, Young NS, Schubert J, et al. The complement inhibitor eculizumab in paroxysmal nocturnal hemoglobinuria. N Engl J Med. 2006;355:1233-1243.

(4) Kanakura Y, Ohyashiki K, Shichishima T, et al. Safety and efficacy of the terminal complement inhibitor eculizumab in Japanese patients with paroxysmal nocturnal hemoglobinuria: AEGIS phase II clinical study results [abstract]. Blood. 2008;112:A3438.

(5) Kanakura Y, Ohyashiki K, Shichishima T et al. Chronic Renal Insufficiency in Japanese Patients with Paroxysmal Nocturnal Hemoglobinuria (PNH): Improvement with Eculizumab Treatment in the Long-Term Follow-up of the AEGIS Study. Blood 2009;114:A1980.

(6) Socié G, Mary J Yves, de Gramont A, et al. Paroxysmal nocturnal haemoglobinuria: long-term follow-up and prognostic factors. Lancet. 1996: 348:573-577.

(7) Parker C, Omine M, Richards S, et al. Diagnosis and management of paroxysmal nocturnal hemoglobinuria. Blood. 2005;106 (12):3699-3709.

(8) Hillmen P, Lewis SM, Bessler M, Luzzatto L, Dacie JV. Natural history of paroxysmal nocturnal hemoglobinuria. N Engl J Med. 1995; 333:1253-1258.

(9) Wang H, Chuhjo T, Yasue S, Omine M, Naka S. Clinical significance of a minor population of paroxysmal nocturnal hemoglobinuria-type cells in bone marrow failure syndrome. Blood. 2002;100 (12):3897-3902.

(10) Iwanga M, Furukawa K, Amenomori T, et al. Paroxysmal nocturnal haemoglobinuria clones in patients with myelodysplastic syndromes. Br J Haematol. 1998;102 (2):465-474.

(11) Maciejewski JP, Risitano AM, Sloand EM, et al. Relationship between bone marrow failure syndromes and the presence of glycophosphatidyl inositol-anchored protein-deficient clones. Br J Haematol. 2001;115:1015-1022.

Contacts

Alexion Pharmaceuticals, Inc.
Irving Adler
Sr. Director, Corporate Communications
203-271-8210
or
Makovsky & Company
Mark Marmur (Media)
212-508-9670
or
Rx Communications
Rhonda Chiger (Investors)
917-322-2569