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Once-daily Exjade® shown to remove iron from the heart, according to data presented at ASH

- *Approximately 78% of beta-thalassemia patients had decreases in cardiac iron and 90% had decreases in liver iron after six months, interim data show*
- *Study in sickle cell disease (SCD) patients with iron overload showed continued safety and efficacy over two years*
- *Safety and efficacy demonstrated in lower-risk myelodysplastic syndromes (MDS) patients*

Atlanta, December 10, 2007 – New data show once-daily Exjade® (deferasirox) reduces iron levels in the heart and liver in beta-thalassemia patients. These interim results from an ongoing trial show that at six months, approximately 78 percent of participants had decreases in cardiac iron and 90 percent of patients had decreases in hepatic iron. These results were reported at the 49th Annual Meeting of the American Society of Hematology (ASH) in Atlanta.

“These preliminary data are encouraging. At a dose of 30 mg/kg, Exjade lowered both heart and liver iron levels in most patients,” said John C. Wood, M.D., Ph.D., Children’s Hospital of Los Angeles. “Removal of heart iron is particularly important because iron cardiotoxicity remains the leading cause of death in thalassemia major patients.”

Chronic iron overload is a potentially life-threatening condition that results from frequent blood transfusions required to treat certain types of chronic blood disorders, including sickle cell disease (SCD), thalassemia, and myelodysplastic syndromes (MDS) and other anemias. If left undiagnosed or untreated, excess iron in the body can become toxic. The body has no inherent mechanism to remove excess iron, so iron chelation is used as an effective treatment for transfusion-related iron overload.

Prior to Exjade, patients in the United States relied on chelation therapy that had to be administered by continuous infusion. Once-daily Exjade oral monotherapy offers patients effective iron reduction without the need for any infused chelation therapy.

Long-term efficacy and safety demonstrated in SCD patients

A separate four-year extension study demonstrates the long-term, dose-dependent efficacy and safety of treatment with Exjade for chronically transfused patients with SCD. Patients treated in the core study with doses of 20 and 30 mg/kg/day showed continued decline in serum ferritin (SF), an indication of iron buildup in the body. For patients initially treated with 5 and 10 mg/kg/day doses in the core study, SF levels gradually declined following a dose increase to approximately 20 mg/kg/day. There were no significant changes in markers of liver or renal function and no cases of progressive increases in serum creatinine (SCr). Additionally, no new adverse events or safety concerns have been reported thus far in the extension study.

Exjade demonstrates safety and efficacy in lower-risk MDS patients

Additional research demonstrates that treatment with Exjade decreased mean SF levels over one year in patients with low- or intermediate-1 IPSS risk MDS. Additionally, 100 percent of patients experienced a stabilized labile plasma iron (LPI), the reactive species of non-transferrin-bound iron, over 12 months, indicating 24-hour sustained suppression of toxic iron with Exjade. Exjade was shown to have a manageable safety profile in this population. Ongoing assessments of this trial, evaluating cardiac, hepatic and endocrine function, will determine the impact of iron reduction with Exjade on morbidity and mortality in MDS.

These data provide further context to a separate study presented at this year's meeting, which demonstrates that chelation therapy provides a significant survival benefit for heavily-transfused patients with low and intermediate MDS. A prospective study of MDS patients found that the median overall survival from diagnosis was 115 months in chelated patients versus 51 months in non-chelated patients ($p < 0.0001$).

Study details

[Abstract #2781]

The first study is a prospective, single-arm, phase II trial of 18 chronically transfused beta-thalassemia patients. During this trial, SF levels are tested monthly and liver and cardiac iron concentration levels are tested every six months. This study will enroll 30 patients at four U.S. centers, with Exjade administered at 30-40 mg/kg/day for the next 12 to 18 months. The ongoing assessments will determine whether Exjade continues to improve cardiac iron burden and maintain or improve cardiac function in severely iron-overloaded patients. Data from other larger studies measuring the effects of Exjade on cardiac iron reduction and cardiac function will be available next year. This study will be presented in a poster session on Sunday, December 9 from 6:00-8:00 PM.

[Abstract # 3395]

The SCD study, an extension phase of an ongoing phase II study comparing Exjade with deferoxamine, evaluated the safety and efficacy of Exjade at 20-30 mg/kg/day in 159 patients over a 2.7-year period. Patients in the deferoxamine arm of the extension trial were allowed to cross over to Exjade for the extension trial. This study will be presented in a poster session on Monday, December 10 at 5:00 PM.

[Abstract #1470]

The third study, US03, is a phase II, open-label, three-year trial in 176 patients with low- or intermediate-1 IPSS risk MDS and transfusional iron overload (SF 1000 g/L and >20 units red blood cell (RBC) transfusions), with SCr within two-fold the upper limit of normal (ULN). Initial Exjade dose was 20 mg/kg/day and could be increased to 40 mg/kg/day based on tolerability and response. SF was monitored monthly and LPI was assessed quarterly. This abstract will be presented during a poster session on Saturday, December 8 at 5:30 PM.

[Abstract #249]

The MDS survival results are from a prospective survey of hematological data in 170 MDS patients from 18 Groupe Francophone des Myelodysplasies Centers who were referred for blood transfusions during a one-month period (May 15-June 15, 2005). Survival was analyzed two years later, at the reference date of May 15, 2007. This study will be presented on Monday, December 10 at 8:00 AM.

About Exjade

Now approved in more than 85 countries, including the US and the EU, Exjade is the first once-daily oral iron chelator approved for use in patients with transfusional iron overload who have a wide range of underlying diseases such as thalassemia, sickle cell disease and myelodysplastic syndromes. Exjade is administered as a drink after the tablets are dispersed in a glass of water, apple, or orange juice.

Important Safety Information

Exjade® (deferasirox) is indicated for the treatment of chronic iron overload due to blood transfusions (transfusional hemosiderosis) in patients two years of age and older. Exjade is not indicated in patients with hypersensitivity to deferasirox or to any other component of Exjade.

Cases of acute renal failure, some with a fatal outcome, have been reported following the postmarketing use of Exjade. Most of the fatalities occurred in patients with multiple comorbidities and who were in advanced stages of their hematologic disorders. Particular attention should be given to monitoring serum creatinine in patients who are at increased risk of complications, have pre-existing renal conditions, are elderly, have comorbid conditions, or are receiving medicinal products that depress renal function.

Serum creatinine should be assessed in duplicate before initiating therapy to establish a reliable pretreatment baseline, due to variations in measurements. Serum creatinine should be monitored monthly thereafter. Patients with additional renal risk factors (those who are at increased risk of complications, have pre-existing renal conditions, are elderly, have comorbid conditions, or are receiving medicinal products that depress renal function) should be monitored weekly during the first month after initiation or modification of therapy, and monthly thereafter. Nonprogressive increases in serum creatinine have been noted in 38% of Exjade -treated patients, compared to 14% of deferoxamine-treated patients, and appear to be dose related. These increases were within the normal range in 94% of patients. EXJADE dosages were adjusted when serum creatinine elevations were detected during the study.

Dose reduction, interruption, or discontinuation should be considered for elevations in serum creatinine. If there is a progressive increase in serum creatinine beyond the age-appropriate upper limit of normal, Exjade should be interrupted. Once the creatinine has returned to within the normal range, therapy with Exjade may be reinitiated at a lower dose followed by gradual dose escalation, if the clinical benefit is expected to outweigh potential risks.

Intermittent proteinuria (urine protein/creatinine ratio >0.6 mg/mg) occurred in 18.6% of EXJADE-treated patients, compared to 7.2% of deferoxamine-treated patients in Study 1, and monthly monitoring is recommended.

There have been postmarketing reports of cytopenias (including agranulocytosis, neutropenia and thrombocytopenia) in patients treated with Exjade. Some of these patients died. The relationship of these episodes to treatment with Exjade is uncertain. Most of these patients had pre-existing hematologic disorders that are frequently associated with bone marrow failure. In line with standard clinical management, blood counts should be monitored regularly and dose interruption considered in patients who develop unexplained cytopenia. Reintroduction of therapy with EXJADE may be considered once the cause of the cytopenia has been elucidated.

There have been postmarketing reports of hepatic failure, some with a fatal outcome, in patients treated with Exjade. Most of these events occurred in patients greater than 55 years of age. Most reports of hepatic failure involved patients with significant comorbidities, including liver cirrhosis and multi-organ failure. Liver function should be monitored monthly, and if there is an unexplained, persistent, or progressive increase in serum transaminase levels, treatment with Exjade should be modified or interrupted. In Study 1, seventeen (5.7%) patients treated with

Exjade developed elevations in SGPT/ALT levels >5 times the upper limit of normal at 2 consecutive visits versus five (1.7%) patients treated with deferoxamine.

Serious hypersensitivity reactions (such as anaphylaxis and angioedema) have been reported in patients receiving Exjade, with the onset of the reaction occurring in the majority of cases within the first month of treatment. If reactions are severe, Exjade should be discontinued and appropriate medical intervention instituted.

Leukocytoclastic vasculitis and urticaria have been spontaneously reported during the post-approval use of Exjade.

Auditory (high-frequency hearing loss, decreased hearing) and ocular (lens opacities, cataracts, elevations in intraocular pressure, and retinal disorders) disturbances have been reported with Exjade therapy in less than 1% of patients in clinical trials. Auditory and ophthalmic testing (including slit lamp examinations and dilated funduscopy) are recommended before the start of Exjade treatment and thereafter at regular intervals (every 12 months). If disturbances are noted, dose reduction or interruption should be considered.

Skin rashes may occur during treatment with Exjade. For rashes of mild to moderate severity, Exjade may be continued without dose adjustment, since the rash often resolves spontaneously. For more severe rashes where interruption of treatment may be necessary, EXJADE may be reintroduced at a lower dose and gradually escalated after resolution of the rash. Reintroduction of Exjade at a lower dose with escalation may be considered in combination with a short period of oral steroid administration.

The most frequently occurring adverse events with Exjade included diarrhea, vomiting, nausea, headache, abdominal pain, pyrexia, cough, and increases in serum creatinine. Maintenance of adequate hydration for patients experiencing diarrhea or vomiting is recommended. Gastrointestinal symptoms, increases in serum creatinine, and skin rash were dose related. These commonly reported adverse events were predominantly mild to moderate in severity with serious adverse events reported in 9.1% of patients in the Exjade arm and 8.6% of patients in the deferoxamine arm.

The foregoing release contains forward-looking statements that can be identified by terminology such as “encouraging,” “potentially,” “can,” “will,” or similar expressions, or by express or implied discussions regarding potential future sales of Exjade, or regarding the long-term impact of a patient’s use of Exjade. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results with Exjade to be materially different from any future results, performance or achievements expressed or implied by such statements. There can be no guarantee that Exjade will reach any particular sales levels. Neither can there be any guarantee regarding the long-term impact of a patient’s use of Exjade. In particular, management's expectations regarding Exjade could be affected by, among other things, unexpected clinical trial results, including unexpected new clinical data, and unexpected additional analysis of existing Exjade clinical data; unexpected regulatory actions or delays or government regulation generally; the company's ability to obtain or maintain patent or other proprietary intellectual property protection; competition in general; increased government, industry, and general public pricing pressures; and other risks and factors referred to in the Company's current Form 20-F on file with the U.S. Securities and Exchange Commission. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those anticipated, believed, estimated or expected. Novartis is providing the information in this press release as of this date and does not undertake any obligation to update any forward-looking statements contained in this press release as a result of new information, future events or otherwise.

More information for health care providers

Some clinical trials with Exjade are ongoing. To learn more about Exjade clinical trials, health care providers can call 1-800-340-6843 in the U.S.

About Novartis

Novartis Pharmaceuticals Corporation researches, develops, manufactures and markets leading innovative prescription drugs used to treat a number of diseases and conditions, including those in the cardiovascular, metabolic, cancer, organ transplantation, central nervous system, dermatological, gastrointestinal and respiratory areas. The company's mission is to improve people's lives by pioneering novel healthcare solutions.

Located in East Hanover, New Jersey, Novartis Pharmaceuticals Corporation is an affiliate of Novartis AG (NYSE: NVS), a world leader in offering medicines to protect health, cure disease and improve well-being. Our goal is to discover, develop and successfully market innovative products to treat patients, ease suffering and enhance the quality of life. We are strengthening our medicine-based portfolio, which is focused on strategic growth platforms in innovation-driven pharmaceuticals, high-quality and low-cost generics, human vaccines and leading self-medication OTC brands. Novartis is the only company with leadership positions in these areas. In 2006, the Group's businesses achieved net sales of USD 37.0 billion and net income of USD 7.2 billion. Approximately USD 5.4 billion was invested in R&D. Headquartered in Basel, Switzerland, Novartis Group companies employ approximately 100,000 associates and operate in over 140 countries around the world. For more information, please visit <http://www.pharma.us.novartis.com>.

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Media contacts

Denise Brashear
Novartis Pharmaceuticals Corporation
862-778-7336 (office)
917-453-2665 (mobile)
denise.brashear@novartis.com