BioMarin Announces FDA Approval for Kuvan

First Specific Drug Therapy Approved for the Treatment of PKU

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NOVATO, Calif.

BioMarin Pharmaceutical Inc. (Nasdaq and SWX: BMRN) announced today that the U.S. Food and Drug Administration (FDA) has granted marketing approval for Kuvan(TM) (sapropterin dihydrochloride) Tablets, the first specific drug therapy approved for the treatment of phenylketonuria (PKU). Shipments to the distribution channel will commence tomorrow, and BioMarin will begin promotion of Kuvan immediately.

"The approval of Kuvan represents an important milestone for PKU patients and their families and also for BioMarin. We are extremely pleased to bring this promising treatment option to market in just a little over three years since the IND filing, and we are now ready for an immediate launch," said Jean-Jacques Bienaime, Chief Executive Officer of BioMarin. "We would like to thank all the patients, their families and physicians, our corporate partners, the FDA, and BioMarin employees for their hard work and dedication in making Kuvan a reality."

"In clinical trials, Kuvan has been shown to help control blood Phe levels in PKU patients, and I am thrilled that this new therapy is now commercially available to the PKU community," stated Dr. Barbara Burton, Professor of Pediatrics, Northwestern University Feinberg School of Medicine; Director, PKU Clinic at Children's Memorial Hospital; and Clinical Investigator in the Kuvan Phase 2 and Phase 3 trials. "With Kuvan now approved, physicians and patients have, for the first time, a drug therapy option to manage the disease."

Kuvan is indicated to reduce blood phenylalanine (Phe) levels in patients with hyperphenylalaninemia (HPA) due to tetrahydrobiopterin (BH4) responsive PKU and is to be used in conjunction with a Phe-restricted diet. To determine if there is a response to Kuvan, the recommended starting dose of Kuvan is 10 mg/kg/day taken once daily for up to a month. If there is no response, the drug dose may be increased to 20 mg/kg/day for up to a month. The dose may be adjusted within a range of 5 to 20 mg/kg/day in patients who respond to Kuvan. Kuvan is developed in partnership with Merck Serono, a division of Merck KGaA, Darmstadt, Germany.

Clinical Trial Study Results

The efficacy and safety of Kuvan were evaluated in four clinical studies in patients with PKU.

Study 1 -- A multicenter, open-label, uncontrolled clinical trial of 489 patients with PKU, ages 8 to 48 years (mean 22 years), who had baseline blood Phe levels greater than or equal to 450 umol/L and who were not on Phe- restricted diets. All patients received treatment with Kuvan 10 mg/kg/day for 8 days. Response to Kuvan treatment was defined as a greater than or equal to 30% decrease in blood Phe from baseline. Results: At Day 8, 96 patients (20%) were identified as responders.

Study 2 -- A multicenter, double-blind, placebo-controlled study of 88 patients with PKU who responded to Kuvan in Study 1. After a washout period from Study 1, patients were randomized equally to either Kuvan 10 mg/kg/day (N=41) or placebo (N=47) for 6 weeks. Efficacy was assessed by the mean change in blood Phe level from baseline to Week 6 in the Kuvan-treated group as compared to the mean change in the placebo group. Results: At baseline, the mean (+/-SD) blood Phe level was 843 (+/-300) umol/L in the Kuvan-treated group and 888 (+/-323) umol/L in the placebo group. At Week 6, the

Kuvan-treated group had a mean (+/-SD) blood Phe level of 607 (+/-377) umol/L, and the placebo group had a mean blood Phe level of 891 (+/-348) umol/L. At Week 6, the Kuvan- and placebo-treated groups had mean changes in blood Phe level of -239 and 6 umol/L, respectively (mean percent changes of -29% (+/-32) and 3% (+/-33), respectively). The difference between the groups was statistically significant ($p < 0.001$). Change in blood Phe was noted in the Kuvan-treated group at Week 1 and sustained through Week 6.

Study 3 -- A multicenter, open-label, extension study in which 80 patients who responded to Kuvan treatment in Study 1 and completed Study 2 underwent 6 weeks of forced dose-titration with 3 different doses of Kuvan. Treatments consisted of 3 consecutive 2-week courses of Kuvan at doses of 5, then 20, and then 10 mg/kg/day. Blood Phe level was monitored after 2 weeks of treatment at each dose level. Results: At baseline, mean (+/-SD) blood Phe was 844 (+/-398) umol/L. At the end of treatment with 5, 10, and 20 mg/kg/day, mean (+/-SD) blood Phe levels were 744 (+/-384) umol/L, 640 (+/-382) umol/L, and 581 (+/-399) umol/L, respectively.

Study 4 -- A multicenter study of 90 children with PKU, ages 4 to 12 years, who were on Phe-restricted diets and who had blood Phe levels less than or equal to 480 umol/L at screening. All patients were treated with open-label Kuvan 20 mg/kg/day for 8 days. Response to Kuvan was defined as a greater than or equal to 30% decrease in blood Phe from baseline at Day 8. Results: At Day 8, 50 patients (56%) had a greater than or equal to 30% decrease in blood Phe.

Post-marketing commitments include a PKU registry program, a 2-year extension study for pivotal study patients (ending in mid-2008 for U.S. patients), a single-dose QT cardiovascular study in healthy volunteers, and a 7-year open-label clinical study in an estimated 50 PKU patients less than or equal to 8 years of age. The latter study will verify that control of Phe levels with Kuvan

provides a similar benefit on intellectual function as expected with dietary Phe restriction. It will also provide requested safety, efficacy, and pharmacokinetic data in PKU patients less than or equal to 4 years of age.

BioMarin will offer support to PKU patients through its BioMarin Patient and Physician Support (BPPS) program. BPPS currently provides support for MPS VI patients treated with Naglazyme, and a similar support program will be available for PKU patients. For more information about the BioMarin Patient and Physician Support Program, please call 877-MY-KUVAN (877.695.8826). For more information about Kuvan, please visit http://www.kuvan.com/.

Conference Call

BioMarin will host a conference call and webcast to discuss the Kuvan approval today, Thursday, December 13, at 5:00 p.m. ET. This event can be accessed on the investor section of the BioMarin website at http://www.bmrn.com/.

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Date: December 13, 2007
Time: 5:00 p.m. ET
U.S. / Canada Dial-in Number:  800.510.9661
International Dial-in Number:  617.614.3452
Participant Code: 95299072
Replay Dial-in Number: 888.286.8010
Replay International Dial-in Number: 617.801.6888
Replay Code: 61294597


About Kuvan
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Kuvan(TM) (sapropterin dihydrochloride) Tablets is indicated to reduce blood phenylalanine (Phe) levels in patients with hyperphenylalaninemia (HPA) due to tetrahydrobiopterin- (BH4-) responsive phenylketonuria (PKU). Kuvan is to be used in conjunction with a Phe-restricted diet.

The active ingredient in Kuvan, sapropterin dihydrochloride, is the synthetic

form of 6R-BH4 (tetrahydrobiopterin), a naturally occurring enzyme cofactor that works in conjunction with phenylalanine hydroxylase (PAH) to metabolize Phe. BioMarin and Merck Serono estimate that Kuvan could be a potential treatment option for approximately 30 percent to 50 percent of the estimated 50,000 identified PKU patients in the developed world.

Kuvan has received orphan drug designation from both the U.S. Food and Drug Administration (FDA) and the European Medicines Agency (EMEA). Kuvan has received seven years of market exclusivity in the United States. In November 2007, Merck Serono submitted a Marketing Authorization Application (MAA) to the EMEA for sapropterin dihydrochloride as an oral treatment for patients suffering from HPA due to PKU or BH4 deficiency. If approved in the EU, it will receive 10 years of market exclusivity for this indication.

Important Safety Information

Prolonged exposure to elevated blood Phe levels in PKU patients can result in severe neurologic damage. The initiation of Kuvan therapy does not eliminate the need for careful monitoring of blood Phe levels and ongoing dietary management.

Some patients receiving Kuvan can experience significant drops in blood Phe levels. Patients should be monitored closely to ensure that blood Phe levels do not fall too low.

Not all patients with PKU respond to treatment with Kuvan. Response to treatment can only be determined by a therapeutic trial of Kuvan.

Kuvan has not been studied in patients with liver or renal impairment. Patients who have these conditions should be carefully monitored when receiving

Kuvan. Caution should be used with the administration of Kuvan to patients who are receiving levodopa and drugs that affect nitric oxide-mediated vasorelaxation or folate metabolism.

The most serious adverse reactions reported during Kuvan administration (regardless of relationship to treatment) were gastritis, spinal cord injury, streptococcal infection, testicular carcinoma, and urinary tract infection. Mild to moderate neutropenia was also noted. The most common adverse reactions were headache, diarrhea, abdominal pain, upper respiratory tract infection, pharyngolaryngeal pain, vomiting, and nausea.

To learn more about Kuvan and to access a copy of the full prescribing information, please visit http://www.kuvan.com/. Information on this website is not incorporated by reference into this press release.

About PKU

PKU, a genetic disorder affecting approximately 50,000 diagnosed patients in the developed world, is caused by a deficiency of the enzyme phenylalanine hydroxylase. PAH is required for the metabolism of phenylalanine, an essential amino acid found in most protein-containing foods. If the active enzyme is not present in sufficient quantities, Phe accumulates to abnormally high levels in the blood and becomes toxic to the brain, resulting in a variety of complications including severe mental retardation and brain damage, mental illness, seizures, tremors, and limited cognitive ability. As a result of newborn screening efforts implemented in the 1960s and early 1970s, virtually all PKU patients under the age of 40 in developed countries have been diagnosed at birth. Currently, PKU can only be managed by a Phe-restricted diet, which is supplemented by nutritional replacement products, like formulas and specially-manufactured foods; however, the strict diet is difficult for most patients to

adhere to the extent needed for achieving adequate control of blood Phe levels. To learn more about PKU, please visit http://www.pku.com/. Information on this website is not incorporated by reference into this press release.

About BioMarin

BioMarin develops and commercializes innovative biopharmaceuticals for serious diseases and medical conditions. The company's product portfolio comprises three approved products and multiple clinical and preclinical product candidates. Approved products include Naglazyme(R) (galsulfase) for mucopolysaccharidosis VI (MPS VI), a product wholly developed and commercialized by BioMarin; Aldurazyme(R) (laronidase) for mucopolysaccharidosis I (MPS I), a product which BioMarin developed through a 50/50 joint venture with Genzyme Corporation; and Kuvan(TM) (sapropterin dihydrochloride) Tablets, a product for the treatment of phenylketonuria (PKU), developed in partnership with Merck Serono, a division of Merck KGaA of Darmstadt, Germany. Other product candidates include 6R-BH4 for cardiovascular indications, which is currently in Phase 2 clinical development for the treatment of peripheral arterial disease and sickle cell disease, and PEG-PAL (PEGylated recombinant phenylalanine ammonia lyase) for the treatment of PKU. For additional information, please visit http://www.bmrn.com/. Information on BioMarin's website is not incorporated by reference into this press release.

Forward-Looking Statement

This press release contains forward-looking statements about the business prospects of BioMarin Pharmaceutical Inc., including, without limitation, statements about: the use of its product Kuvan; the potential market for Kuvan; expectations regarding filings with regulatory agencies; and the development of 6R-BH4 for other indications. These forward-looking statements are predictions

and involve risks and uncertainties such that actual results may differ materially from these statements. These risks and uncertainties include, among others: the practices of physicians in using Kuvan; the actual response in patients using Kuvan in commercial distribution; the content and timing of decisions by the U.S. Food and Drug Administration, the European Medicines Agency and other regulatory authorities concerning Kuvan; results and timing of current and planned clinical trials of 6R-BH4 for other indications; and those factors detailed in BioMarin's filings with the Securities and Exchange Commission, including, without limitation, the factors contained under the caption "Risk Factors" in BioMarin's 2006 Annual Report on Form 10-K, as amended, and the factors contained in BioMarin's reports on Form 8-K. Stockholders are urged not to place undue reliance on forward-looking statements, which speak only as of the date hereof. BioMarin is under no obligation, and expressly disclaims any obligation to update or alter any forward-looking statement, whether as a result of new information, future events or otherwise.

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