BioMarin Announces Decision to Start Phase 3 Program for PEG-PAL in 2Q 2013

Preliminary Phase 2 Results Indicate Convenient and Accelerated Dosing Regimen Identified
Conference Call and Webcast to be Held Today at 5:00 p.m. ET

NOVATO, Calif., Sept. 26, 2012 (GLOBE NEWSWIRE) -- BioMarin Pharmaceutical Inc. (Nasdaq:BMRN) announced today preliminary results from the Phase 2 program of PEG-PAL (PEGylated recombinant Phenylalanine Ammonia Lyase) for the treatment of phenylketonuria (PKU) demonstrating long-term retention, tolerability and providing evidence of efficacy. Based on these results, the company expects to start a pivotal Phase 3 study in the second quarter of 2013, following an anticipated end of Phase 2 meeting with the FDA in the first quarter of 2013.

A total of 56 patients older than 16 years have been enrolled into the four main studies that compose the Phase 2 program. During the studies, patients were not required to adhere to restricted dietary intake of phenylalanine (Phe). Mean baseline blood Phe levels were 1,360 umol/L, consistent with a diagnosis of severe PKU. Of the 25 patients who have been treated with PEG-PAL for at least one year, blood Phe measures were on average 68% lower than pre-treatment baseline levels. While the NIH guideline for control of blood Phe in adults recommends patients maintain a blood Phe of less than 900 umol/L, all 25 patients had blood Phe measurements below 600 umol/L. In contrast, only 20% of patients treated with Kuvan in the Kuvan clinical program were considered responders, and the average reduction in blood Phe for these patients was 29%. Average reduction of blood Phe levels is anticipated to be the primary endpoint of the Phase 3 program. Twenty patients in the Phase 2 program had experience with self-administration, some for over 200 days. They were able to effectively dose PEG-PAL at home, maintain efficacy and had a similar safety profile to other patients in the program.

"This Phase 2 study has shown that PEG-PAL appears to control Phe levels independent of the Phe-restricted diet and can produce a sustained response," stated Dr. Nicola Longo, Professor of Pediatrics and Adjunct Professor of Pathology at the University of Utah and Clinical Investigator in the PEG-PAL Phase 2 trial. "Most adult PKU patients are unable to adhere to a Phe-restricted diet and as a result, they can suffer from decreased mental, social and behavioral functioning. PEG-PAL may offer these patients the possibility of freedom from the Phe-restricted diet."

During the Phase 2 program, PEG-PAL was generally well-tolerated. Only two patients discontinued PEG-PAL due to adverse reactions, neither of which was reported to be severe. Twelve other patients discontinued participation in the program primarily due to logistical reasons. Forty-two patients remain on PEG-PAL in the open-label extension study. Of these, 25 patients have been treated longer than one year, including 15 patients who have been treated longer than two years. In total, there have been more than 800 patient months of treatment with PEG-PAL. The principal adverse reaction believed to be related to PEG-PAL occurs during initial dosing of the drug and appears to be hypersensitivity-type reactions consisting of injection-site reaction, disseminated skin reaction or joint pain. While these reactions were observed in nearly all PEG-PAL patients during their initial introduction to the drug, the reactions are generally mild to moderate and self-limited. Importantly, patients who have these types of reactions have all been successfully re-treated with PEG-PAL. During long-term exposure to PEG-PAL, injection-site and hypersensitivity reaction rates decreased dramatically and there was no laboratory evidence of liver or kidney injury.

Most recently, in the Phase 2 Part D study, BioMarin has investigated an accelerated personalized dosing regimen for introduction of PEG-PAL to get patients to active doses as quickly as possible while minimizing hypersensitivity-type reactions. Patients started with a fixed induction dose of 2.5 mg for four weeks. The dose escalated to 75 mg/week based on individual patient tolerability, at which point patients switched to a daily maintenance dose. In this part of the Phase 2 program, the earliest a patient was able to reach the maintenance dose was nine weeks, and half were able to achieve efficacy at or prior to reaching maintenance dosing in less than 13 weeks.

"At the conclusion of the Phase 2 study, we have achieved our goal of identifying a dosing regimen that allows us to advance to the pivotal Phase 3 trial," said Hank Fuchs, M.D., Chief Medical Officer of BioMarin. "Based on the Phase 2 experience, we expect that while most patients will experience hypersensitity-type side effects during introduction to the drug, the side effects will be transient and will allow most patients to achieve safe, long-term Phe control. We look forward to meeting with the FDA in the first quarter of 2013 and reviewing the Phase 2 data and our preliminary Phase 3 study design."

Jean-Jacques Bienaimé, Chief Executive Officer of BioMarin added, "We believe PEG-PAL has a strong value proposition in treating adult severe PKU patients, especially in light of the expected ease of self, at-home

administration. The initial target market for PEG-PAL is adult PKU patients in our database who are Kuvan non-responders, about 1,500 patients in the U.S. Eventually, we should be able to treat other adult patients and current pediatric patients on Kuvan as they get older."

The preliminary Phase 3 study design includes (1) an open-label study to evaluate safety and blood Phe levels in naive patients and (2) a randomized controlled study in the Phase 2 extension study patients to evaluate blood Phe levels and psychiatric and executive function endpoints. All patients in the Phase 3 trial will be offered the opportunity to remain on drug as part of an extension trial. Based on discussions with the FDA, reduction in Phe levels is expected to be the primary endpoint in the Phase 3 trial. The company expects to initiate the Phase 3 program in the second quarter of 2013 following an end of phase 2 meeting with the FDA in the first quarter of 2013.

Conference Call Details

BioMarin will host a conference call and webcast today, Wednesday, September 26, 2012 at 5:00 p.m. ET. This event can be accessed on the investor section of the BioMarin website at www.BMRN.com.

Date: September 26, 2012
Time: 5:00 p.m. ET

U.S. / Canada Dial-in Number: 877.303.6313

International Dial-in Number: 631.813.4734

Conference ID: 30936364

Replay Dial-in Number: 855.859.2056

Replay International Dial-in Number: 404.537.3406

Conference ID: 30936364

About BioMarin

BioMarin develops and commercializes innovative biopharmaceuticals for serious diseases and medical conditions. The company's product portfolio comprises four approved products and multiple clinical and pre-clinical product candidates. Approved products include Naglazyme® (galsulfase) for mucopolysaccharidosis VI (MPS VI), a product wholly developed and commercialized by BioMarin; Aldurazyme® (laronidase) for mucopolysaccharidosis I (MPS I), a product which BioMarin developed through a 50/50 joint venture with Genzyme Corporation; Kuvan® (sapropterin dihydrochloride) Tablets, for phenylketonuria (PKU), developed in partnership with Merck Serono, a division of Merck KGaA of Darmstadt, Germany; and Firdapse™ (amifampridine), which has been approved by the European Commission for the treatment of Lambert Eaton Myasthenic Syndrome (LEMS). Product candidates include GALNS (N-acetylgalactosamine 6-sulfatase), which is currently in Phase III clinical development for the treatment of MPS IVA, amifampridine phosphate (3,4-diaminopyridine phosphate), which is currently in Phase III clinical development for the treatment of LEMS in the U.S., PEG-PAL (PEGylated recombinant phenylalanine ammonia lyase), which is currently in Phase II clinical development for the treatment of PKU, BMN-701, a novel fusion protein of insulin-like growth factor 2 and acid alpha glucosidase (IGF2-GAA), which is currently in Phase I/II clinical development for the treatment of Pompe disease, BMN-673, a poly ADP-ribose polymerase (PARP) inhibitor, which is currently in Phase I/II clinical development for the treatment of genetically-defined cancers, and BMN-111, a modified C-nutriuretic peptide, which is currently in Phase I clinical development for the treatment of achondroplasia. For additional information, please visit www.BMRN.com. Information on BioMarin's website is not incorporated by reference into this press release.

The BioMarin Pharmaceutical Inc. logo is available at http://www.globenewswire.com/newsroom/prs/?pkgid=11419

Forward-Looking Statement

This press release contains forward-looking statements about the business prospects of BioMarin Pharmaceutical Inc., including, without limitation, statements about: the development of BioMarin's PEG-PAL

program generally, the timing and design of the planed Phase 3 trial of PEG-PAL, and expectations regarding the final results of the Phase 2 trial following final statistical analysis. 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: differences in the final analysis of the data from the PEG-PAL Phase 2 trial, results and timing of current and planned preclinical studies and clinical trials of PEG-PAL; the content and timing of decisions by the U.S. Food and Drug Administration, the European Commission and other regulatory authorities; BioMarin's ability to secure clinical trial sites to perform the Phase 3 trial and the ability to enroll patients into those trials; 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 Quarterly Report on Form 10-Q for the Quarter ended June 30, 2012. 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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