Results From Phase 2 Clinical Study of 6R-BH4 in Peripheral Arterial Disease Not Statistically Significant

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BioMarin Pharmaceutical Inc. today announced results from its Phase 2 multi-center, randomized, double-blind, placebo-controlled clinical study of 6R-BH4 in patients with symptomatic peripheral arterial disease (PAD). There was no statistical significance observed between the 6R-BH4 treatment and placebo groups.

The primary endpoint of the study, peak walking time (PWT), did not show a significant difference between 6R-BH4 and placebo, and the secondary endpoint, claudication onset time, also did not show a difference. Addition of Vitamin C to 6R-BH4 did not improve efficacy on PWT. Endothelial dysfunction evaluated by peripheral arterial tonometry in a subset of patients did not show a significant benefit with 6R-BH4. Urinary protein excretion did not decrease with 6R-BH4 treatment, though there may have been some effect in the subset of patients with microalbuminuria at baseline. 6R-BH4 was well-tolerated in peripheral arterial disease patients and had a safety profile similar to previous studies.

Emil Kakkis, M.D., Ph.D., Chief Medical Officer of BioMarin stated, "We are disappointed that the results of 6R-BH4 in peripheral arterial disease were not statistically significant. We have upcoming data in several BioMarin and investigator-sponsored studies of 6R-BH4 including proteinuria, pulmonary arterial hypertension and 6R-BH4 plus Vitamin C in patients with endothelial dysfunction. Along with the prior results in sickle cell disease, these data will determine the future of the 6R-BH4 cardiovascular program once all the studies are complete."

Study Design

The Phase 2 multi-center, randomized, double-blind, placebo-controlled study enrolled 190 subjects and was conducted at 31 sites in the U.S. and Argentina. 161 patients completed the study. Study patients in the treatment group received a total of 400 mg/day of 6R-BH4 twice per day. Approximately 50% of patients in both the placebo and treatment groups were co-administered Vitamin C at 500 mg/day twice daily.

The primary objective of the study was to evaluate mean change in peak walking time from baseline to week 24. The secondary objective of the study was to evaluate the mean change in claudication onset time from baseline to week 24.

About 6R-BH4

6R-BH4, commonly known as BH4 or tetrahydrobiopterin, is a naturally occurring enzyme cofactor that is required for numerous biochemical and physiologic processes, including the synthesis of nitric oxide (NO). NO has been shown to play a key protective role throughout the cardiovascular system and produces multiple positive effects, such as relaxing smooth muscle, reducing blood pressure, controlling inflammation and reducing platelet aggregation. Researchers have demonstrated that a deficiency of BH4 can disrupt NO synthesis, resulting in a loss of normal endothelial NO production. This loss of endothelial NO production, commonly referred to as endothelial dysfunction, has been associated with many cardiovascular diseases, including hypertension, diabetic vascular disease, peripheral arterial disease, coronary arterial disease and pulmonary hypertension, and has been shown to be a strong predictor of cardiovascular adverse events in a number of clinical studies.

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 pre-clinical 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(R) (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 sickle cell disease, and PEG-PAL (PEGylated recombinant phenylalanine ammonia lyase), which is currently in Phase 1 clinical development for the treatment of PKU. For additional information, please visit 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: expectations related to BioMarin's clinical trials of 6R-BH4 for proteinuria, pulmonary arterial hypertension and other indications, actions by regulatory authorities and the general development of BH4 for sickle cell. 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: results and timing of current and planned preclinical studies and clinical trials; the content and timing of decisions by the U.S. Food and Drug Administration, the European Commission and other regulatory authorities concerning each of the described products and product candidates; the market for each of these products; 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 2007 Annual Report on Form 10-K, and the factors contained in BioMarin's reports on Form 10-Q. 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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