BioMarin Receives Positive CHMP Opinion in Europe for Brineura™ (cerliponase alfa) for First Treatment of CLN2 Disease, a Form of Batten Disease and Ultra-Rare and Fatal Brain Disorder in Children

One of the First Therapies to Receive Positive CHMP Opinion Using New Accelerated Assessment Process
Decision on Marketing Authorization Application Expected Q2 for Potential First Treatment for any Form of Batten Disease
Conference Call and Webcast to be Held Friday, April 21 at 4:05 pm ET

SAN RAFAEL, Calif., April 21, 2017 /PRNewswire/ -- BioMarin Pharmaceutical Inc. (Nasdaq:BMRN) announced today that the Committee for Medicinal Products for Human Use (CHMP), the scientific committee of the European Medicines Agency (EMA), has adopted a positive opinion for the company's Marketing Authorization Application (MAA) for Brineura™ (cerliponase alfa) to treat children with Neuronal Ceroid Lipofuscinosis Type 2 (CLN2) disease, a form of Batten disease, which is also known as tripeptidyl peptidase 1 (TPP1) deficiency.

The CHMP's recommendation is now referred to the European Commission (EC), which is expected to render its final decision by the second quarter of 2017. The EC typically adheres to the recommendation of the CHMP, but is not obligated to do so. If approved by the EC, BioMarin will receive marketing authorization for Brineura in all 28 countries of the European Union, Norway, Iceland and Liechtenstein.

The CHMP positive opinion was adopted following an accelerated review procedure, reserved for medicinal products expected to be of major public health interest. The EMA revised process for accelerated assessment came into effect June 1, 2016, and Brineura is one of the first therapies to go through this process.

"A little less than four years ago, the first child was treated in a clinical trial, and today marks another important step forward in providing the first treatment option for children affected by CLN2 disease, a rapidly progressing and fatal pediatric brain disorder. We thank the CHMP and the CLN2 community for their continued support, including the children and families who gave their time to participate in the clinical trials with the goal of making treatment a reality for patients," said Hank Fuchs, M.D., President of Worldwide Research and Development at BioMarin. "It is a privilege and an honor to pioneer the successful delivery of an enzyme replacement therapy delivered directly to the brain and to show that the treatment can slow or stabilize the progression of this degenerative brain disease."

"I have dedicated my career to studying Batten disease and participated in an ongoing effort to collect natural history data in the hope of being able to use that information to study potential treatments. To be the principal investigator in these clinical trials using that natural history data, which has led to a potential therapy, is both personally and professionally fulfilling," said Angela Schulz, M.D. Ph.D., Department of Paediatrics, Children's Hospital, University Medical Center Hamburg-Eppendorf. "I am hopeful that soon physicians will be able to offer to children an approved medicine that has the potential to change the course of this relentless disease."

Regulatory Submissions

The Brineura MAA was based on an open-label, dose-escalation study for Brineura in 24 patients with CLN2 disease between 3 and 8 years of age, as well as an open-label extension study. The primary objectives were to evaluate the safety and tolerability of intracerebroventricular-administered Brineura and to evaluate effectiveness using a CLN2 disease-specific rating scale score in comparison with natural history data after 48 and 72 weeks of treatment.

In 2016, the CHMP accepted BioMarin's request for accelerated assessment. The EMA previously granted Brineura Orphan Drug Designation.

The CHMP is a scientific committee composed of representatives from the 28-member states of the EU, and Iceland, Norway and Liechtenstein. The committee reviews medical product applications on their scientific and clinical merit and provides advice to the EC, which has the authority to approve medicines for the EU. The EC, which typically adheres to the recommendation of the CHMP, is expected to make its final decision in about 67 days.

Brineura is also currently under review by the U.S. Food and Drug Administration (FDA) as a treatment for children three years and older with Neuronal Ceroid Lipofuscinosis Type 2 (CLN2) disease, a form of Batten disease, which is also known as tripeptidyl peptidase 1 (TPP1) deficiency. The FDA's Prescription Drug User Fee Act (PDUFA) goal date for a decision is April 27, 2017.

About Brineura

Brineura is a recombinant form of human tripeptidyl peptidase 1 (TPP1), the enzyme deficient in patients with CLN2

disease. It is an enzyme replacement therapy designed to restore TPP1 enzyme activity and break down the storage materials that cause CLN2 disease. In order to reach the cells of the brain and central nervous system, the treatment is delivered directly into the fluid surrounding the brain (cerebrospinal fluid) using BioMarin's patented technology. Brineura is an investigational enzyme replacement therapy that has been shown to help stabilize or slow the progression of CLN2 disease.

Brineura administered via intracerebroventricular infusion every 14 days was well tolerated, and no patients discontinued treatment due to adverse events (AEs). Most AEs were Grade 1 or 2, and the majority are consistent with severe, chronic neurologic disease in pediatric patients. The most common events associated with treatment included: pyrexia, hypersensitivity, seizure, epilepsy, vomiting and headache.

For additional information regarding this investigational product, please contact BioMarin Medical Information at medinfo@bmrn.com.

About CLN2 Disease

Children with CLN2 disease typically begin experiencing seizures between the ages of 2 and 4 years old, preceded in the majority of cases by language development delay. The disease progresses rapidly with most affected children losing the ability to walk and talk by approximately 6 years of age. Initial symptoms are followed by movement disorders, motor deterioration, dementia, blindness, and death usually occurring between the ages of 8 and 12 years of age. During the later stages of the disease, feeding and tending to everyday needs become very difficult. BioMarin estimates the incidence of CLN2 disease is approximately one in 200,000 with up to 1,200 to 1,600 children in the regions of the world where BioMarin operates, many of whom are undiagnosed.

The neuronal ceroid lipofuscinoses (NCLs) are a heterogeneous group of lysosomal storage disorders that includes the autosomal recessive neurodegenerative disorder CLN2 disease. CLN2 disease is caused by mutations in the TPP1 gene resulting in deficient activity of the enzyme tripeptidyl peptidase 1 (TPP1). In the absence of TPP1, lysosomal storage materials normally metabolized by this enzyme accumulate in many organs, particularly in the brain and retina. Buildup of these storage materials in the cells of the nervous system contributes to the progressive and relentless neurodegeneration which manifests as loss of cognitive, motor, and visual functions.

Currently, there is no approved therapy to treat CLN2 disease. Symptomatic care to treat the symptoms of the disease, prevent and treat complications, and attempt to preserve quality of life is the only available treatment options for patients with this rare disease.

Conference Call and Webcast to be Held Friday, April 21 at 4:05 pm ET

Interested parties may access a live webcast that will accompany the conference call by going here. A replay of the call will be archived on the site for one week following the call.

U.S. / Canada Dial-in Number: (866) 502-9859
International Dial-in Number: (574) 990-1362
Conference ID: 3969755

Replay Dial-in Number: (855) 859-2056
Replay International Dial-in Number: (404) 537-3406
Conference ID: 3969755

About BioMarin

BioMarin is a global biotechnology company that develops and commercializes innovative therapies for patients with serious and life-threatening rare and ultra-rare genetic diseases. The company's portfolio consists of five commercialized products and multiple clinical and pre-clinical product candidates. For additional information, please visit www.BioMarin.com.

Forward-Looking Statement

This press release contains forward-looking statements about the business prospects of BioMarin Pharmaceutical Inc., including, without limitation, statements about: regulatory filings for the commercial approval of Brineura, including the expected timing of the EC's final decision on Brineura. 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 risk that the EC or other regulatory agencies, including the FDA, may not approve Brineura for the treatment of children with Neuronal Ceroid Lipofuscinosis Type 2 (CLN2) disease; the results and timing of current and future clinical trials related to Brineura; the risks related to commercialization of Brineura and our ability to manufacture sufficient quantities of Brineura for the commercial launch and other preapproval requirements; and those other risks detailed from time to time under the caption "Risk Factors" and elsewhere in the Company's Securities and Exchange Commission (SEC) filings including the Annual Report on Form 10-K for the year ended December 31, 2016, and future filings and reports by the Company. The Company undertakes no duty or obligation to update any forward-looking statements contained in this Current Report on Form 8-K as a result of new information, future events or changes in its expectations.

BioMarin® is a registered trademark and Brineura™ is a trademark of BioMarin Pharmaceutical Inc.

Contacts:

Investors	Media
Traci McCarty	*Debra Charlesworth*
BioMarin Pharmaceutical Inc.	*BioMarin Pharmaceutical Inc.*
(415) 455-7558	*(415) 455-7451*

SOURCE BioMarin Pharmaceutical Inc.
