BioMarin to Share Updated Data at 2023 American College of Medical Genetics and Genomics (ACMG) Meeting Demonstrating Commitment to Understanding Long-Term Benefit of VOXZOGO® in Children with Achondroplasia

New Analyses from Phase 2 and Phase 3 Extension Studies Continue to Demonstrate Sustained Improvement in Growth with no Change in Safety Profile

SAN RAFAEL, Calif., March 14, 2023 /PRNewswire/ -- BioMarin Pharmaceutical Inc. (Nasdaq: BMRN), a global biotechnology company dedicated to transforming lives through genetic discovery, will present updated data demonstrating the long-term benefit of treatment with VOXZOGO® (vosoritide) and new observational data on disease burden in children with achondroplasia. These data will be shared this week in an oral presentation and five posters at the 2023 American College of Medical Genetics and Genomics (ACMG) Annual Clinical Genetics Meeting in Salt Lake City, Utah.

The data will include seven-year results from the open-label, Phase 2 extension study in children with achondroplasia, providing further evidence that improvement in growth velocity with VOXZOGO is sustained as children grow older. Mean age- and sex-specific Annualized Growth Velocities (AGVs) in children treated with VOXZOGO were greater than corresponding mean AGVs in untreated children of the same age and sex and at all ages. When looking across all ages for the entire seven-year period, the mean (SD) difference in AGV versus untreated children was 1.90 (0.51) cm/year for boys and 1.36 (0.63) cm/year for girls in this analysis. A trend toward improvement in body proportion (upper:lower body segment ratio) over time continued to be apparent

as children grew older.

Results from up to 3.5 years of the open-label extension of BioMarin's Phase 3 pivotal study of VOXZOGO also will be presented. Earlier data from this study supported the drug's approval in the United States, Europe, Brazil, Australia and Japan. In children on VOXZOGO, the mean (standard deviation [SD]) AGV improved from 4.26 (1.54) cm/year at baseline to 5.57 (0.76) cm/year after three years of treatment.

In both studies VOXZOGO remained well tolerated with no change in its adverse event profile.

"We are encouraged to see that as children remain on treatment, the growth promoting effect continues. We are observing sustained increases in growth velocity year on year," said Dr. Melita Irving, MBBS, consultant clinical geneticist at Guy's and St. Thomas' NHS Foundation Trust in London. "The trend toward improving proportionality also has the potential to have an impact on the lives of children with achondroplasia and we look forward to further follow up to better understand that data as they evolve."

"We are grateful to the children and families who continue to participate in the VOXZOGO achondroplasia clinical trials, as we gather longer term data and work toward our goal of providing this therapeutic option to children of all ages," said Hank Fuchs, M.D., president of Worldwide Research and Development at BioMarin.

VOXZOGO addresses the root cause of achondroplasia, the most common form of disproportionate short stature. It is the first U.S. Food and Drug Administration (FDA) and European Medicines Agency (EMA) approved treatment for children with achondroplasia with open epiphyses (bone growth plates). In January, the EMA validated BioMarin's application for extension of

indication for VOXZOGO to treat children with achondroplasia under the age of 2 and earlier this month, the FDA accepted the company's Supplemental New Drug Application for children under 5, setting a PDUFA target action date of October 21, 2023.

BioMarin's presentations at ACMG include:

Oral Presentation:

A Randomized Controlled Trial of Vosoritide in Infants and Toddlers with Achondroplasia
Abstract No. O22

Posters:

Persistent Growth-Promoting Effects of Vosoritide in Children with Achondroplasia for up to 3.5 years: Update from Phase 3 Extension Study
Abstract No. P193

Health-Related Quality of Life (HRQoL) in Achondroplasia: Findings from LISA (Life Impact Study on Achondroplasia), a Multinational and Observational Study in Latin America
Abstract No. P233

Vosoritide Therapy in Patients with Achondroplasia: Early Experience and Practical Considerations for Clinical Practice
Abstract No. P339

Persistence of Growth Promoting Effects in Children with Achondroplasia Over Seven Years: Update from Phase 2 Extension Study with Vosoritide

Abstract No. P194

Objectives and Design of the Acorn Study: A Non-Interventional Study Evaluating Long-term Safety in Achondroplasia Patients Treated with Vosoritide
Abstract No. P338

About VOXZOGO® (vosoritide) for Injection

In patients with achondroplasia, endochondral bone growth, an essential process by which bone tissue is created, is negatively regulated due to a gain of function mutation in fibroblast growth factor receptor 3 gene (*FGFR3*). VOXZOGO, a C-type natriuretic peptide (CNP) analog, represents a new class of therapy, which acts as a positive regulator of the signaling pathway downstream of FGFR3 to promote endochondral bone growth.

Through BioMarin's broad clinical development program, the company has enrolled 250 children with achondroplasia from eight countries in seven clinical studies evaluating the safety and efficacy of VOXZOGO.

VOXZOGO is approved in the U.S. and indicated to increase linear growth in pediatric patients with achondroplasia who are 5 years of age and older with open epiphyses. This indication is approved under accelerated approval based on an improvement in annualized growth velocity. Continued approval for this indication may be contingent upon verification and description of clinical benefit in confirmatory trial(s). To fulfill this post-marketing requirement, BioMarin intends to use the ongoing open-label extension studies compared to available natural history.

VOXZOGO is also approved in the EU, Brazil, and Australia in children with

achondroplasia who are 2 years of age and older with open growth plates. It is also approved in Japan in children from birth who have achondroplasia with open growth plates.

About Achondroplasia

Achondroplasia, the most common form of skeletal dysplasia leading to disproportionate short stature in humans, is characterized by slowing of endochondral ossification, which results in disproportionate short stature and disordered architecture in the long bones, spine, face, and base of the skull. This condition is caused by a change in the fibroblast growth factor receptor 3 gene (FGFR3), a negative regulator of bone growth.

More than 80% of children with achondroplasia have parents of average stature and have the condition as the result of a spontaneous gene mutation. The worldwide incidence rate of achondroplasia is about one in 25,000 live births. VOXZOGO is being tested in children whose growth plates are still "open," typically those under 18 years of age. Approximately 25% of people with achondroplasia fall into this category.

VOXZOGO U.S. Important Safety Information

What is VOXZOGO used for?

- VOXZOGO is a prescription medicine used to increase linear growth in children with achondroplasia who are 5 years of age and older with open growth plates (epiphyses).
- It is not known if VOXZOGO is safe and effective in children with achondroplasia under 5 years of age.
- VOXZOGO is approved under accelerated approval based on an

improvement in annualized growth velocity. Continued approval may be contingent upon verification and description of clinical benefit in confirmatory trials.

What is the most important safety information about VOXZOGO?

- VOXZOGO may cause serious side effects including a temporary decrease in blood pressure in some patients. To reduce the risk of a decrease in blood pressure and associated symptoms (dizziness, feeling tired, or nausea), patients should eat a meal and drink 8 to 10 ounces of fluid within 1 hour before receiving VOXZOGO.

What are the most common side effects of VOXZOGO?

- The most common side effects of VOXZOGO include injection site reactions (including redness, itching, swelling, bruising, rash, hives, and injection site pain), vomiting, joint pain, decreased blood pressure, and stomachache. These are not all the possible side effects of VOXZOGO. Ask your healthcare provider for medical advice about side effects, and about any side effects that bother the patient or that do not go away.

How is VOXZOGO taken?

- VOXZOGO is taken daily as an injection given under the skin, administered by a caregiver after a healthcare provider determines the caregiver is able to administer VOXZOGO. Do not try to inject VOXZOGO until you have been shown the right way by your healthcare provider. VOXZOGO is supplied with Instructions for Use that describe the steps for preparing, injecting, and disposing VOXZOGO. Caregivers should review the Instructions for Use for guidance and any

time they receive a refill of VOXZOGO in case any changes have been made.

- Inject VOXZOGO 1 time every day, at about the same time each day. If a dose of VOXZOGO is missed, it can be given within 12 hours from the missed dose. After 12 hours, skip the missed dose and administer the next daily dose as usual.
- The dose of VOXZOGO is based on body weight. Your healthcare provider will adjust the dose based on changes in weight following regular check-ups.
- Your healthcare provider will monitor the patient's growth and tell you when to stop taking VOXZOGO if they determine the patient is no longer able to grow. Stop administering VOXZOGO if instructed by your healthcare provider.

What should you tell the doctor before or during taking VOXZOGO?

- Tell your doctor about all of the patient's medical conditions including
    - If the patient has heart disease (cardiac or vascular disease), or if the patient is on blood pressure medicine (anti-hypertensive medicine).
    - If the patient has kidney problems or renal impairment.
    - If the patient is pregnant or plans to become pregnant. It is not known if VOXZOGO will harm the unborn baby.
    - If the patient is breastfeeding or plans to breastfeed. It is not known if VOXZOGO passes into breast milk.

- Tell your doctor about all of the medicines the patient takes, including prescription and over-the-counter medicines, vitamins, and herbal

supplements.

You may report side effects to BioMarin at 1-866-906-6100. You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

Please see additional safety information in the full Prescribing Information and Patient Information.

About BioMarin

Founded in 1997, BioMarin is a global biotechnology company dedicated to transforming lives through genetic discovery. The company develops and commercializes targeted therapies that address the root cause of the genetic conditions. BioMarin's unparalleled research and development capabilities have resulted in eight transformational commercial therapies for patients with rare genetic disorders. The company's distinctive approach to drug discovery has produced a diverse pipeline of commercial, clinical, and pre-clinical candidates that address a significant unmet medical need, have well-understood biology, and provide an opportunity to be first-to-market or offer a substantial benefit over existing treatment options. For additional information, please visit www.biomarin.com.

Forward-Looking Statements

This press release contains forward-looking statements about the business prospects of BioMarin Pharmaceutical Inc. (BioMarin), including without limitation, statements about: the development of BioMarin's VOXZOGO® (vosoritide) program generally; the potential benefits of VOXZOGO for children with achondroplasia, including the duration of such benefits and potential

improvement in proportionality; the continued clinical development of VOXZOGO; and potential approvals in the U.S. and EU of BioMarin's supplemental marketing applications for VOXZOGO. 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 of VOXZOGO; any potential adverse events observed in the continuing monitoring of the patients in the clinical trials; the content and timing of decisions by the FDA, the EMA and other regulatory authorities; and those factors detailed in BioMarin's filings with the Securities and Exchange Commission (SEC), including, without limitation, the factors contained under the caption "Risk Factors" in BioMarin's Annual Report on Form 10-K for the quarter ended December 31, 2022 as such factors may be updated by any subsequent reports. 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.

Contacts:

Investors	Media
Traci McCarty	*Marni Kottle*
BioMarin Pharmaceutical Inc.	*BioMarin Pharmaceutical Inc.*
(415) 455-7558	*(415) 218-7111*

SOURCE BioMarin Pharmaceutical Inc.

---

https://investors.biomarin.com/2023-03-14-BioMarin-to-Share-Updated-Data-at-2023-American-College-of-Medical-Genetics-and-Genomics-ACMG-Meeting-Demonstrating-Commitment-to-Understanding-Long-Term-Benefit-of-VOXZOGO-R-in-Children-with-Achondroplasia