FDA and EMA Accept Applications for Higher Dose Regimen of Nusinersen in SMA

January 23, 2025

Applications are based on data from the DEVOTE study, which demonstrate the potential for the investigational higher dose regimen of nusinersen to advance the treatment of SMA

CAMBRIDGE, Mass., Jan. 23, 2025 (GLOBE NEWSWIRE) -- Biogen Inc. (Nasdaq: BIIB) announced that the U.S. Food and Drug Administration (FDA) has accepted the company's supplemental New Drug Application (sNDA) and the European Medicines Agency (EMA) has validated the application for a higher dose regimen of nusinersen for spinal muscular atrophy (SMA). The higher dose regimen of nusinersen comprises a more rapid loading regimen, two 50 mg doses 14 days apart, and higher maintenance regimen, 28 mg, every 4 months, compared to the approved nusinersen regimen (SPINRAZA®).

"We are pleased to announce that our applications for the higher dose regimen of nusinersen are now under review in the US and Europe," said Stephanie Fradette, Pharm.D., Head of the Neuromuscular Development Unit at Biogen. "This milestone reflects our steadfast commitment to advance treatment options for individuals with SMA, and we expect that this higher dose regimen will offer meaningful benefits to patients and their families. We are deeply thankful for the unwavering support of the trial participants, their families, site staff, and the SMA community without whom these advancements would not have been possible."

Nusinersen is currently commercialized under the brand name SPINRAZA in over 71 countries at the label-approved dose of 12 mg.

"Continued progress to improve upon the remarkable initial successes in SMA necessitates an innovative approach," said Thomas Crawford, M.D., co-director of the Muscular Dystrophy Association Clinic at Johns Hopkins Medicine. "Today's announcement is a significant step forward for the community. Results from the DEVOTE study have shown us that the higher dose regimen of nusinersen can enable meaningful clinical benefits while maintaining a safety profile broadly consistent with the approved 12 mg regimen."

About the DEVOTE Study
DEVOTE was a Phase 2/3 randomized, controlled, dose-escalating study designed to evaluate the safety, tolerability, pharmacokinetics and efficacy of nusinersen when administered at a higher dose (50/28 mg). The study enrolled 145 participants across ages and SMA types at approximately 42 sites around the world. DEVOTE includes an open-label safety evaluation cohort (Part A), a double-blind, active control randomized treatment cohort (Part B), followed by an open-label treatment cohort (Part C) to assess the safety and tolerability of transitioning participants from the currently approved dose of SPINRAZA 12 mg to the higher dose regimen being tested in the study.

Part B was comprised of a pivotal cohort in treatment-naïve patients with infantile-onset SMA (n=75), and a supportive cohort in treatment-naïve patients with later-onset SMA (n=24). The primary endpoint of Part B measured the change from baseline on CHOP-INTEND at six months comparing the higher dose regimen of nusinersen to a matched, untreated sham control group from the Phase 3 ENDEAR study. ENDEAR is one of the two pivotal studies that formed the basis of regulatory approval for SPINRAZA 12 mg.

Part C was an open-label evaluation of the higher dose regimen in children and adults who transitioned from SPINRAZA 12 mg to the 50/28 mg regimen (n=40).

More information about the DEVOTE study (NCT04089566) is available at clinicaltrials.gov.

About SPINRAZA
SPINRAZA is approved in more than 71 countries to treat infants, children and adults with spinal muscular atrophy (SMA). As a foundation of care in SMA, more than 14,000 individuals have been treated with SPINRAZA worldwide.[1] The currently approved 12 mg regimen for SPINRAZA is comprised of four loading doses administered over approximately 60 days, followed by maintenance dosing every four months thereafter.

SPINRAZA is an antisense oligonucleotide (ASO) that targets the underlying cause of motor neuron loss by continuously increasing the amount of full-length survival motor neuron (SMN) protein produced in the body.[2] It is administered directly into the central nervous system, where motor neurons reside, to deliver treatment where the disease starts.[2]

SPINRAZA has shown sustained efficacy across ages and SMA types with a well-established safety profile based on data in patients treated up to 10 years,[3,4] combined with unsurpassed real-world experience. The nusinersen clinical development program encompasses more than 10 clinical studies, which have included more than 460 individuals across a broad spectrum of patient populations, including two randomized controlled studies (ENDEAR and CHERISH). The most common adverse events observed in clinical studies were respiratory infection, fever, constipation, headache, vomiting and back pain. Laboratory tests can monitor for renal toxicity and coagulation abnormalities, including acute severe low platelet counts, which have been observed after administration of some ASOs.

Biogen licensed the global rights to develop, manufacture and commercialize SPINRAZA from Ionis Pharmaceuticals, Inc. (Nasdaq: IONS). Please click here for Important Safety Information and full Prescribing Information for SPINRAZA in the U.S., or visit your respective country's product website.

About Biogen
Founded in 1978, Biogen is a leading biotechnology company that pioneers innovative science to deliver new medicines to transform patients' lives and to create value for shareholders and our communities. We apply deep understanding of human biology and leverage different modalities to advance first-in-class treatments or therapies that deliver superior outcomes. Our approach is to take bold risks, balanced with return on investment to deliver long-term growth.

We routinely post information that may be important to investors on our website at www.biogen.com. Follow us on social media - Facebook, LinkedIn, X, YouTube.

Biogen Safe Harbor
This news release contains forward-looking statements, including related to the potential clinical effects of a higher dose regimen of nusinersen; the potential benefits, safety and efficacy of higher dose regimen of nusinersen; the clinical development program for higher dose regimen of nusinersen; the identification and treatment of SMA; our research and development program for the treatment of SMA; the potential of our commercial business and pipeline programs, including SPINRAZA; and risks and uncertainties associated with drug development and commercialization. These forward-looking statements may be accompanied by words such as "aim," "anticipate," "believe," "could," "estimate," "expect," "forecast," "intend," "may," "plan," "potential," "possible," "will," "would" and other words and terms of similar meaning. Drug development and commercialization involve a high degree of risk, and only a small number of research and development programs result in commercialization of a product. Results in early-stage clinical trials may not be indicative of full results or results from later stage or larger scale clinical trials and do not ensure regulatory approval. You should not place undue reliance on our forward-looking statements.

These statements involve risks and uncertainties that could cause actual results to differ materially from those reflected in such statements, including without limitation, uncertainty of success in the development and potential commercialization of higher dose regimen of nusinersen; the risk that we may not fully enroll our clinical trials or enrollment will take longer than expected; unexpected concerns may arise from additional data, analysis or results obtained during our clinical trials; regulatory authorities may require additional information or further studies, or may fail or refuse to approve or may delay approval of our drug candidates, including SPINRAZA; the occurrence of adverse safety events; the risks of unexpected hurdles, costs or delays; failure to protect and enforce our data, intellectual property and other proprietary rights and uncertainties relating to intellectual property claims and challenges; product liability claims; results of operations and financial condition. The foregoing sets forth many, but not all, of the factors that could cause actual results to differ from our expectations in any forward-looking statement. Investors should consider this cautionary statement, as well as the risk factors identified in our most recent annual or quarterly report and in other reports we have filed with the U.S. Securities and Exchange Commission. These statements speak only as of the date of this news release.

We do not undertake any obligation to publicly update any forward-looking statements.

References:

1. Based on commercial patients, early access patients, and clinical trial participants through December 31, 2022.
2. SPINRAZA U.S. Prescribing Information. Available at: https://www.spinraza.com/content/dam/commercial/specialty/spinraza/caregiver/en_us/pdf/spinraza-prescribing-information.pdf. Accessed: September 2024.
3. Core Data sheet, Version 13, October 2021. SPINRAZA. Biogen Inc, Cambridge, MA.
4. Finkle et al. Cure SMA 2024. "Final Safety and Efficacy Data From the SHINE Study in Participants With Infantile-Onset and Later-Onset SMA."

MEDIA CONTACT:
Biogen
Jack Cox
+ 1 781 464 3260
public.affairs@biogen.com

INVESTOR CONTACT:
Biogen
Tim Power
+1 781 464 2442
IR@biogen.com