CHMP Recommends VUMERITY® (diroximel fumarate) for Approval in the European Union as a Treatment for Relapsing-Remitting Multiple Sclerosis

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- *VUMERITY is a next-generation oral fumarate with a well-characterized efficacy and safety profile*
- *Data from the Phase 3 EVOLVE-MS-2 study have demonstrated that treatment with VUMERITY results in low discontinuation rates due to its gastrointestinal (GI) tolerability profile*
- *Upon approval, VUMERITY will offer a new oral option for MS patients as they consider treatment initiation in the context of the COVID-19 environment*

CAMBRIDGE, Mass., Sept. 17, 2021 (GLOBE NEWSWIRE) -- Biogen Inc. (Nasdaq: BIIB) today announced that the Committee for Medicinal Products for Human Use (CHMP), part of the European Medicines Agency (EMA), issued a positive opinion and has recommended granting marketing authorization for VUMERITY® (diroximel fumarate) in the European Union (EU). VUMERITY is a next-generation oral fumarate for the treatment of adults with relapsing-remitting multiple sclerosis (RRMS). An estimated 2.8 million people live with MS across the globe, with some European countries demonstrating the highest prevalence of MS in the world.[1]

"With MS, finding the right treatment option is as much about managing the clinical aspects of the disease as it is about how treatment fits into a person's life," said Simon Faissner, M.D., PhD, Assistant Professor at the Department of Neurology, Ruhr-University Bochum. "Today's CHMP opinion is a crucial step forward in providing an oral therapeutic option that is easy to integrate into a patient's daily life, which helps with ongoing care management."

The CHMP's positive opinion will now be referred to the European Commission (EC), which grants marketing authorizations for medicines in Europe.

"We look forward to advancing Biogen's portfolio and continuing to work with the MS community to address critical treatment challenges, including those that affect persistence and adherence to medication for this chronic and life-long disease," said Alfred Sandrock, Jr., M.D., Ph.D., Head of Research and Development at Biogen. "VUMERITY builds on our experience in MS and the established profile of TECFIDERA to bring a new oral option at a time when people with MS are making treatment decisions while considering other factors related to their ongoing care during the pandemic."

The positive CHMP opinion was based on data from pharmacokinetic bridging studies comparing VUMERITY and TECFIDERA® (dimethyl fumarate) to establish bioequivalent exposure of monomethyl fumarate, the active metabolite, and relied in part on the well-established long-term safety and efficacy profile of TECFIDERA. The CHMP also assessed findings from EVOLVE-MS-2, a large, randomized, double-blind, five-week, multi-center Phase 3 study to evaluate the gastrointestinal (GI) tolerability of VUMERITY compared to TECFIDERA in patients with RRMS. In EVOLVE-MS-2, the rate of overall treatment discontinuation was lower in participants treated with VUMERITY compared to those treated with TECFIDERA (1.6% compared to 6%, respectively). The difference in the discontinuation rates due to GI tolerability was 0.8% for VUMERITY compared to 4.8% for TECFIDERA.

VUMERITY was first approved by the U.S. Food and Drug Administration in October 2019 and is currently the number one prescribed oral MS therapy in the country. Since its launch in the U.S., real-world data have reinforced the positive GI tolerability profile of VUMERITY and confirmed that the experience demonstrated in clinical trials is consistent with clinical practice.[2] Biogen continues to file regulatory submissions in other countries.

About VUMERITY® (diroximel fumarate)
VUMERITY is an oral fumarate with a distinct chemical structure from TECFIDERA® (dimethyl fumarate), approved in the U.S. for the treatment of relapsing forms of multiple sclerosis in adults, to include clinically isolated syndrome, relapsing-remitting disease and active secondary progressive disease. Once in the body, VUMERITY rapidly converts to monomethyl fumarate, the same active metabolite of dimethyl fumarate providing similar efficacy and safety profiles.

VUMERITY is contraindicated in patients with known hypersensitivity to diroximel fumarate, dimethyl fumarate or to any of the excipients of VUMERITY; and in patients taking dimethyl fumarate. Serious side effects for VUMERITY are based on data from dimethyl fumarate (which has the same active metabolite as VUMERITY) and include anaphylaxis and angioedema, progressive multifocal leukoencephalopathy, which is a rare opportunistic viral infection of the brain that has been associated with death or severe disability, a decrease in mean lymphocyte counts during the first year of treatment, herpes zoster and other serious infections, liver injury and flushing. The most common adverse events, obtained using data from dimethyl fumarate (which has the same active metabolite as VUMERITY), were flushing, abdominal pain, diarrhea and nausea.

Please click here for Important Safety Information and full Prescribing Information, including Patient Information for VUMERITY in the U.S.

About TECFIDERA® (dimethyl fumarate)
TECFIDERA, a treatment for relapsing forms of multiple sclerosis (MS) in adults, is the most prescribed oral medication for relapsing MS in the world and has been shown to reduce the rate of MS relapses, slow the progression of disability and impact the number of MS brain lesions, while demonstrating a well-characterized safety profile in people with relapsing forms of MS. TECFIDERA is approved in 69 countries, and more than 500,000 patients have been treated with it, representing more than 1,000,000 patient-years of exposure across clinical trial use and patients prescribed TECFIDERA. Of these, 6,335 patients (14,241 patient-years) were from clinical trials.[3]

TECFIDERA is contraindicated in patients with a known hypersensitivity to dimethyl fumarate or any of the excipients of TECFIDERA. Serious side effects include anaphylaxis and angioedema, and cases of progressive multifocal leukoencephalopathy, a rare opportunistic viral infection of the brain which has been associated with death or severe disability, have been seen with TECFIDERA patients in the setting of lymphopenia. Other serious side

effects include a decrease in mean lymphocyte counts during the first year of treatment, herpes zoster and other serious infections, liver injury and flushing. In clinical trials, the most common adverse events associated with TECFIDERA were flushing, abdominal pain, diarrhea and nausea.

For information on TECFIDERA prescribing information in the EU, please visit: https://www.ema.europa.eu/en/medicines/human/EPAR/tecfidera. Please click here for Important Safety Information and full Prescribing Information, including Patient Information for TECFIDERA in the U.S., or visit your respective country's product website.

About Biogen
At Biogen, our mission is clear: we are pioneers in neuroscience. Biogen discovers, develops and delivers worldwide innovative therapies for people living with serious neurological and neurodegenerative diseases as well as related therapeutic adjacencies. One of the world's first global biotechnology companies, Biogen was founded in 1978 by Charles Weissmann, Heinz Schaller, Kenneth Murray and Nobel Prize winners Walter Gilbert and Phillip Sharp. Today Biogen has the leading portfolio of medicines to treat multiple sclerosis, has introduced the first approved treatment for spinal muscular atrophy, commercializes biosimilars of advanced biologics and is focused on advancing research programs in multiple sclerosis and neuroimmunology, Alzheimer's disease and dementia, neuromuscular disorders, movement disorders, ophthalmology, neuropsychiatry, immunology, acute neurology and neuropathic pain.

We routinely post information that may be important to investors on our website at www.biogen.com.
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Biogen Safe Harbor
This news release contains forward-looking statements, including statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, about potential regulatory discussions, submissions and approvals and the timing thereof; the potential benefits, safety and efficacy of VUMERITY; the potential benefits, safety and efficacy of TECFIDERA; the results of certain real-world data; and the potential of Biogen's commercial business, including VUMERITY and TECFIDERA. These forward-looking statements may be identified by words such as "aim," "anticipate," "believe," "could," "estimate," "expect," "forecast," "goal," "intend," "may," "plan," "possible," "potential," "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 these statements or the scientific data presented.

These statements involve risks and uncertainties that could cause actual results to differ materially from those reflected in such statements, including without limitation actual timing and content of submissions to and decisions made by the regulatory authorities; regulatory submissions may take longer or be more difficult to complete than expected; regulatory authorities may require additional information or further studies, or may fail or refuse to approve or may delay approval of our drug candidates or expansion of product labeling; failure to obtain regulatory approvals in other jurisdictions; the occurrence of adverse safety events; risks of unexpected 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; and the direct and indirect impacts of the ongoing COVID-19 pandemic on our business, 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 are based on our current beliefs and expectations and speak only as of the date of this news release. We do not undertake any obligation to publicly update any forward-looking statements, whether as a result of new information, future developments or otherwise.

References:

1. Walton, Clare. "Rising Prevalence of Multiple SCLEROSIS Worldwide: Insights from the Atlas of Ms, Third Edition." *Multiple Sclerosis (Houndmills, Basingstoke, England)*, U.S. National Library of Medicine, 11 Nov. 2020, pubmed.ncbi.nlm.nih.gov/33174475/.
2. Liseno J, et al. Multiple Sclerosis Patients Treated with Diroximel Fumarate in the Real-World Setting have High Rates of Persistence and Adherence. Neurology. April 13, 2021; 96 (15 Supplement).
3. Combined post-marketing data based on prescriptions and clinical trials exposure to TECFIDERA as of December 31, 2020.

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