Biogen Statement Regarding Updated ADUHELM® (aducanumab-avwa) Prescribing Information in US

April 29, 2022

The US Food and Drug Administration (FDA) has approved an updated full Prescribing Information for ADUHELM (aducanumab-avwa) 100 mg/mL injection for intravenous use, which includes further guidance on how to monitor patients and provides additional safety information. Informed by insights from the company's ongoing pharmacovigilance, a group of medical experts and the updated Appropriate Use Guidelines, certain label changes aim to further help doctors in identifying and managing patients, and aid in the earlier detection and management of amyloid-related imaging abnormalities (ARIA), an adverse event observed in clinical trials and in real world use of ADUHELM. These updates provide more precise guidance that can help physicians and patients make informed treatment decisions.

The updates include additional magnetic resonance imaging (MRIs) for ARIA, to enable both earlier detection and clinical management. Two additional MRIs, for a total of four, are now recommended during the first year of treatment, and temporary discontinuation of treatment is advised depending on severity of ARIA.

In addition, based on the company's ongoing pharmacovigilance, the updated labeling includes information in the Warnings and Precautions describing that seizures can be a serious symptom of ARIA. In the Phase 3 clinical studies of ADUHELM, 0.3% of patients treated with the FDA recommended dose reported serious symptoms associated with ARIA. In these trials, seizure occurred in 0.7% of patients with ARIA-E in the 10 mg/kg group; the overall incidence of seizure, independent of ARIA, was 0.5% in the 10 mg/kg group and 0.8% in the placebo group.

A further update to the Prescribing Information is a recommendation for physicians to confirm that amyloid beta pathology is present before starting treatment.

"ADUHELM is the first in a new class of Alzheimer's disease therapies, and we are committed to continuing to inform physicians and patients about how to optimize treatment strategies in real-world clinical practice," said Maha Radhakrishnan, MD, Chief Medical Officer at Biogen. "We believe the labeling updates further clarify how to appropriately manage patients treated with ADUHELM, with the goal of maximizing potential clinical benefits and mitigating adverse event risks."

ADUHELM is indicated for the treatment of Alzheimer's disease. This indication is approved under accelerated approval based on reduction in amyloid beta plaques observed in patients treated with ADUHELM. Continued approval for this indication may be contingent upon verification of clinical benefit in confirmatory trial(s). The accelerated approval was granted based on data from clinical trials demonstrating the effect of ADUHELM on reducing amyloid beta plaques, a biomarker that is reasonably likely to predict clinical benefit, in this case a reduction in clinical decline.

ARIA is a common side effect that does not usually cause symptoms but can be serious in rare cases. It is typically a temporary swelling in areas of the brain that usually resolves over time. Some people may also have small spots of bleeding in or on the surface of the brain along with the swelling, Most people with ARIA do not have symptoms. The additional MRIs will help physicians identify ARIA earlier in the course of treatment and put appropriate ARIA management strategies in place.

Biogen is committed to continuing to closely monitor both clinical trial and real-world use of ADUHELM, including all adverse events and side effects that are reported, and to educating physicians about the benefit/risk profile of ADUHELM.

About ADUHELM® (aducanumab-avwa) 100 mg/mL injection for intravenous use

ADUHELM is indicated for the treatment of Alzheimer's disease. ADUHELM should be started in patients with mild cognitive impairment or mild dementia stage of disease, the population studied in clinical trials. There are no data on risks or benefits for patients in other stages of Alzheimer's. ADUHELM is approved under accelerated approval based on reduction in amyloid plaques as seen in patients treated with ADUHELM. Continued approval of ADUHELM may require verification of clinical benefit in a confirmatory study.

ADUHELM is a monoclonal antibody directed against amyloid beta. The accumulation of amyloid beta plaques in the brain is a defining pathophysiological feature of Alzheimer's disease. The accelerated approval of ADUHELM has been granted based on data from clinical trials showing the effect of ADUHELM on reducing amyloid beta plaques, a surrogate biomarker that is reasonably likely to predict clinical benefit, in this case a reduction in clinical decline.

ADUHELM can cause serious side effects including: Amyloid Related Imaging Abnormalities or "ARIA". ARIA is a common side effect that does not usually cause any symptoms but can be serious. Although most people do not have symptoms, some people may have symptoms such as: headache, confusion, dizziness, vision changes and nausea. The patient's healthcare provider will do magnetic resonance imaging (MRI) scans before and during treatment with ADUHELM to check for ARIA. ADUHELM can also cause serious allergic reactions. The most common side effects of ADUHELM include: swelling in areas of the brain, with or without small spots of bleeding in the brain or on the surface of the brain (ARIA); headache; and fall. Patients should call their healthcare provider for medical advice about side effects.

From 2017 to March 13, 2022, Biogen and Eisai jointly collaborated on the development, commercialization and manufacturing of ADUHELM. Effective March 14, 2022, Biogen has sole decision-making authority over the development, commercialization and manufacturing of ADUHELM. In 2022 the parties will continue in a global profit/loss sharing arrangement subject to a cap on Eisai's expenses for 2022. Eisai will be entitled to a tiered royalty on net sales of ADUHELM as of January 1, 2023.

Please click here for full Prescribing Information, including Medication Guide, for ADUHELM.

About Biogen

As pioneers in neuroscience, Biogen discovers, develops, and delivers worldwide innovative therapies for people living with serious neurological 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, Sir Kenneth Murray, and Nobel Prize winners Walter Gilbert and Phillip Sharp. Today, Biogen has a leading portfolio of medicines to treat multiple sclerosis, has introduced the first approved treatment for spinal muscular atrophy, and is providing the first and only approved treatment to address a defining pathology of Alzheimer's disease. Biogen is also commercializing biosimilars and focusing on advancing the industry's most diversified pipeline in neuroscience that will transform the standard of care for patients in several areas of high unmet need.

In 2020, Biogen launched a bold 20-year, $250 million initiative to address the deeply interrelated issues of climate, health, and equity. Healthy Climate, Healthy Lives™ aims to eliminate fossil fuels across the company's operations, build collaborations with renowned institutions to advance the science to improve human health outcomes, and support underserved communities.

The company routinely posts information that may be important to investors on our website at www.biogen.com. To learn more, please visit www.biogen.com and follow Biogen on social media – Twitter, LinkedIn, Facebook, YouTube.

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 the potential clinical effects of ADUHELM; the potential benefits, safety and efficacy of ADUHELM; the treatment of Alzheimer's disease; clinical development programs, clinical trials and data readouts and presentations; and risks and uncertainties associated with drug development and commercialization. These statements may be identified by words such as "aim," "anticipate," "believe," "could," "estimate," "expect," "forecast," "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 unexpected concerns that may arise from additional data, analysis or results obtained during clinical trials; the occurrence of adverse safety events; risks of unexpected costs or delays; the risk of other unexpected hurdles; failure to protect and enforce Biogen's data, intellectual property and other proprietary rights and uncertainties relating to intellectual property claims and challenges; risks associated with current and potential future healthcare reforms; product liability claims; third party collaboration risks; and the direct and indirect impacts of the ongoing COVID-19 pandemic on Biogen's 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 Biogen's expectations in any forward-looking statement. Investors should consider this cautionary statement as well as the risk factors identified in Biogen's most recent annual or quarterly report and in other reports Biogen has filed with the U.S. Securities and Exchange Commission. These statements are based on Biogen's current beliefs and expectations and speak only as of the date of this news release. Biogen does not undertake any obligation to publicly update any forward-looking statements, whether as a result of new information, future developments or otherwise.

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MEDIA CONTACT(S):	INVESTOR CONTACT(S):
Biogen	**Biogen**
Ashleigh Koss	Mike Hencke
+ 1 908 205 2572	+1 781 464 2442
public.affairs@biogen.com	IR@biogen.com