Results from ZINBRYTA™ (Daclizumab High-Yield Process) Phase 3 DECIDE Study Highlighting Efficacy Compared to Interferon Beta-1a Published in the New England Journal of Medicine and Presented at ECTRIMS

October 8, 2015

− Post-Hoc Analyses Presented at ECTRIMS Demonstrate Effect on Disability and Cognitive Outcomes –

− Additional Analyses Reinforce Safety Profile of ZINBRYTA −

CAMBRIDGE, Mass. & NORTH CHICAGO, Ill.--(BUSINESS WIRE)--Full results from the Phase 3 DECIDE study published this week in the *New England Journal of Medicine* (*NEJM*), as well as new post-hoc analyses of Phase 3 clinical data presented at an international congress, show once-monthly, investigational ZINBRYTA™ (daclizumab high-yield process [HYP]) improved results on key measures of multiple sclerosis (MS) disease activity in patients with relapsing-remitting MS (RRMS) compared to interferon beta-1a 30 mcg intramuscular (IM) injection. In the new post-hoc analyses, ZINBRYTA was shown to increase the percentage of patients achieving no evidence of clinical and MRI disease activity, improve cognitive processing speed and reduce 24-week confirmed disability progression across a broad range of subgroups at two years compared to interferon beta-1a IM. Lead investigators on behalf of Biogen (NASDAQ: BIIB) and AbbVie (NYSE: ABBV) presented these new findings today at the 31st Congress of the European Committee for Treatment and Research in MS (ECTRIMS) in Barcelona, Spain (7-10 October).

“The new DECIDE data presented at ECTRIMS provide further insight into the potential of daclizumab HYP to reduce MS disease activity, including the efficacy it has demonstrated in reducing MS relapse rates, disability progression and brain lesion development,” said Ludwig Kappos, M.D., chair, Department of Neurology and head, MS-Research Group, University Hospital, Basel, Switzerland, and lead investigator for DECIDE. “Over the two years of data we analyzed, nearly twice as many patients treated with daclizumab HYP had no evidence of MS disease activity compared to those taking an approved MS treatment.”

Efficacy Compared to Interferon Beta-1a IM
New post-hoc analyses of data from DECIDE presented at ECTRIMS assessed multiple measures of MS disease activity and showed that compared to interferon beta-1a IM over two years (p values are nominal):

- More ZINBRYTA-treated patients exhibited no evidence of disease activity (NEDA) (24.6% versus 14.2%; p<0.0001; n=1,841). These results were based on a greater number of ZINBRYTA patients achieving both clinical NEDA (no relapses and no disability progression) and MRI NEDA (no new/newly enlarging T2-hyperintense lesions and no gadolinium-enhanced lesions).
- ZINBRYTA-treated patients showed improvement in cognitive processing speed and prevention of clinically meaningful cognitive decline, as measured by greater mean improvements from baseline on the Symbol Digit Modalities Test (SDMT; +4.08 [12.4] versus +2.89 [12.7]; p=0.0274). Higher percentages of ZINBRYTA patients had a ≥3-point (60.0% versus 54.1%; p=0.0153) or ≥4-point (55.4% versus 50.1%; p=0.0366) improvement in SDMT scores at week 96 (n=1,402).
- ZINBRYTA treatment resulted in reductions in the risk of 24-week confirmed disability progression across a wide range of pre-specified patient subgroups based on baseline characteristics.

“These new analyses advance our understanding of ZINBRYTA and its ability to slow the progression of MS compared to a widely used, approved therapy,” said Gilmore O’Neill, M.D., vice president of Multiple Sclerosis Research and Development at Biogen. “In addition, we are encouraged by the positive results of the analyses of ZINBRYTA on measures of cognitive function, which is also at risk as MS progresses.”

The full results from the pivotal Phase 3 DECIDE study were published in the 8 October 2015 issue of the *NEJM.* The DECIDE trial enrolled more than 1,800 patients with RRMS in 28 countries. The full manuscript, titled, “Daclizumab HYP Versus Interferon Beta-1a in Relapsing Multiple Sclerosis,” can be found on the *NEJM* website at http://www.nejm.org.

“There is still significant unmet medical need for patients with relapsing-remitting multiple sclerosis. We are encouraged by these results and the potential ZINBRYTA may have for people living with MS,” said Michael Severino, M.D., executive vice president, research and development and chief scientific officer, AbbVie.

Analysis of Safety Results
An integrated analysis of the safety and tolerability data from six clinical studies involving 2,236 RRMS patients treated with ZINBRYTA, including some patients treated for more than five years, was presented at ECTRIMS (888 patients were treated for ≥3 years, 211 patients were treated for ≥5 years). These results support the known benefit-risk profile of ZINBRYTA and indicate that adverse events (AEs) did not appear to increase over time.

Over a median of 30 months of exposure, the incidence of infections (59%), cutaneous events (33%), and hepatic events (16%) did not increase over time. The most common AEs (incidence ≥10%) associated with ZINBRYTA were MS relapse (31%), nasopharyngitis (20%), upper respiratory infection (15%), headache (13%) and urinary tract infection (10%).

A separate post-hoc analysis of cutaneous AEs occurring in the DECIDE study showed that cutaneous events were more common with ZINBRYTA treatment (37%) than with interferon beta-1a (19%). Most patients treated with ZINBRYTA who reported mild (81%) or moderate (73%) cutaneous events were not treated with a corticosteroid or were treated with topical corticosteroids. Serious cutaneous AEs (2%) were commonly managed in patients with systemic corticosteroids.

ZINBRYTA ECTRIMS Data Presentations:

- Effect of Daclizumab HYP Versus Intramuscular Interferon Beta-1a on No Evidence of Disease Activity in Patients with Relapsing-Remitting Multiple Sclerosis: Analysis of the DECIDE Study– *Parallel Session 2:89 – Thursday, 8 October – 12:00 CEST*
- Benefits on Brain MRI Lesion Activity with Daclizumab HYP Compared with Interferon Beta-1a are Stable Through 144 Weeks' Treatment: Results from the DECIDE Study – *Poster P556 – Thursday, 8 October – 15:45-17:00 CEST*
- Daclizumab High-Yield Process (DAC HYP) Versus Intramuscular Interferon Beta-1a in Subgroups Predictive of Active Disease: Results from the DECIDE Study – *Poster P523 – Thursday, 8 October – 15:45-17:00 CEST*
- Daclizumab HYP Provided Clinically Meaningful Benefits on Cognitive Outcomes Versus Intramuscular Interferon Beta-1a Over Two Years: Results from the DECIDE Study – *Poster P535 – Thursday, 8 October – 15:45-17:00 CEST*
- Daclizumab HYP Reduced Psychological Impact of Multiple Sclerosis Versus Intramuscular Interferon Beta-1a in the DECIDE Trial – *Poster P685 – Thursday, 8 October – 15:45-17:00 CEST*
- Effects of Daclizumab HYP on Accumulation of Disability Exclusive of Acute Relapse in Moderate/Severe Relapsing-Remitting Multiple Sclerosis Patients: A Composite Disability Outcome from the DECIDE Study – *Poster P524 – Thursday, 8 October – 15:45-17:00 CEST*
- Efficacy of Daclizumab HYP Versus Intramuscular Interferon Beta-1a on Disability Progression Across Patient Demographic and Disease Activity Subgroups in DECIDE – *Poster P561– Thursday, 8 October – 15:45-17:00 CEST*
- Immune Response to Seasonal Influenza Vaccine in Patients with Relapsing-Remitting Multiple Sclerosis on Long-Term Daclizumab HYP Treatment – *Poster P526 – Thursday, 8 October – 15:45-17:00 CEST*
- Incidence, Severity, Duration, and Treatment of Cutaneous Adverse Events in the DECIDE Study of Daclizumab HYP Versus Intramuscular Interferon Beta-1a in Patients with Relapsing-Remitting Multiple Sclerosis – *Poster P550 – Thursday, 8 October – 15:45-17:00 CEST*
- Lymphocyte Counts and Their Relationship with Infections in Patients Receiving Daclizumab HYP in DECIDE – *Poster P569 – Thursday, 8 October – 15:45-17:00 CEST*
- Pregnancy Experience: Preclinical Data and Pregnancy Outcomes in the Daclizumab High-Yield Process Clinical Program – *Poster P536 – Thursday, 8 October – 15:45-17:00 CEST*
- Reduction in Brain Volume Loss in Patients Receiving Daclizumab HYP Versus Intramuscular Interferon Beta-1a: Results of the DECIDE study – *Poster P558 – Thursday, 8 October – 15:45-17:00 CEST*
- Safety and Tolerability of Daclizumab HYP in Patients with Relapsing-Remitting Multiple Sclerosis: An Integrated Analysis of Six Clinical Studies – *Poster P554 – Thursday, 8 October – 15:45-17:00 CEST*

About DECIDE
DECIDE was a two- to three-year, Phase 3, global, randomized, double-blind, multicenter study designed to determine if ZINBRYTA would provide superior outcomes for certain clinical endpoints compared to treatment with interferon beta-1a 30 mcg IM injection. DECIDE was an active comparator study with two groups: 150 mg of subcutaneous ZINBRYTA every four weeks was compared to interferon beta-1a 30 mcg IM once weekly.

In DECIDE statistical significance was achieved on the primary endpoint of reduction in annualized relapse rate (ARR), as well as on the first secondary endpoint, the number of new or newly enlarging T2-hyperintense lesions. However, based on the primary prespecified analysis, statistical significance was not achieved on the secondary endpoint evaluating the proportion of patients with sustained disability progression as measured by the Expanded Disability Status Scale (EDSS) at 12 weeks. Additional secondary endpoints included the proportion of relapse-free patients and the proportion of patients who experienced a worsening physical impact score on the Multiple Sclerosis Impact Scale (MSIS-29).

The overall incidence of AEs was similar in the ZINBRYTA and interferon beta-1a IM groups. In patients treated with ZINBRYTA compared to interferon beta-1a IM, there was an increased incidence of serious infections (4% versus 2%), serious cutaneous reactions (2% versus <1%), and elevations of liver transaminases greater than five times the upper limit of normal (6% versus 3%).

About ZINBRYTA™ (daclizumab high-yield process)
ZINBRYTA (daclizumab high-yield process) is an investigational compound being developed for the treatment of relapsing forms of MS. ZINBRYTA is a new form of a humanized monoclonal antibody that selectively binds to the high-affinity interleukin-2 (IL-2) receptor subunit (CD25) that is expressed at high levels on T-cells that become abnormally activated in MS. ZINBRYTA modulates IL-2 signaling without causing general immune cell depletion. Biogen and AbbVie are jointly developing ZINBRYTA.

ZINBRYTA is believed to work by decreasing abnormally-activated T-cells and pro-inflammatory lymphoid tissue inducer cells, and increasing $CD56^{bright}$ natural killer (NK) cells, important cells that help regulate the immune system.

ZINBRYTA is currently under regulatory review in the United States, Australia and the European Union.

About Biogen
Through cutting-edge science and medicine, Biogen discovers, develops and delivers to patients worldwide innovative therapies for the treatment of neurodegenerative diseases, hematologic conditions and autoimmune disorders. Founded in 1978, Biogen is one of the world's oldest independent biotechnology companies and patients worldwide benefit from its leading multiple sclerosis and innovative hemophilia therapies. For product labeling, press releases and additional information about the company, please visit http://www.biogen.com.

Biogen Safe Harbor

This press release contains forward-looking statements, including statements about the clinical potential of ZINBRYTA, if approved. These statements may be identified by words such as "believe," "expect," "may," "potential," "will" and similar expressions, and are based on our current beliefs and expectations. Drug development and commercialization involve a high degree of risk. Factors which could cause actual results to differ materially from our current expectations include the risk that unexpected concerns may arise from additional data or analysis, regulatory authorities may require additional information or further studies, or may fail to approve or may delay approval of our drug candidates, or we may encounter other unexpected hurdles. For more detailed information on the risks and uncertainties associated with our drug development and commercialization activities and risks relating to our collaborations with third parties, please review the Risk Factors section of our most recent annual or quarterly report filed with the Securities and Exchange Commission. Any forward-looking statements speak only as of the date of this press release and we assume no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

About AbbVie
AbbVie is a global, research-based biopharmaceutical company formed in 2013 following separation from Abbott Laboratories. The company's mission is to use its expertise, dedicated people and unique approach to innovation to develop and market advanced therapies that address some of the world's most complex and serious diseases. Together with its wholly-owned subsidiary, Pharmacyclics, AbbVie employs more than 28,000 people worldwide and markets medicines in more than 170 countries. For further information on the company and its people, portfolio and commitments, please visit www.abbvie.com. Follow @abbvie on Twitter or view careers on our Facebook or LinkedIn page.

Forward-Looking Statements
Some statements in this news release may be forward-looking statements for purposes of the Private Securities Litigation Reform Act of 1995. The words "believe," "expect," "anticipate," "project" and similar expressions, among others, generally identify forward-looking statements. AbbVie cautions that these forward-looking statements are subject to risks and uncertainties that may cause actual results to differ materially from those indicated in the forward-looking statements. Such risks and uncertainties include, but are not limited to, challenges to intellectual property, competition from other products, difficulties inherent in the research and development process, adverse litigation or government action, and changes to laws and regulations applicable to our industry.

Additional information about the economic, competitive, governmental, technological and other factors that may affect AbbVie's operations is set forth in Item 1A, "Risk Factors," in AbbVie's 2014 Annual Report on Form 10-K, which has been filed with the Securities and Exchange Commission. AbbVie undertakes no obligation to release publicly any revisions to forward-looking statements as a result of subsequent events or developments, except as required by law.

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