



New Data Presented at ECTRIMS Reinforce Efficacy of ZINBRYTA™ (Daclizumab) and Support Long-Term Safety Profile

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*New Analysis of “No Evidence of Disease Activity” Data From Phase 3 DECIDE Study Affirms Positive Impact of ZINBRYTA Versus Interferon Beta-1a
Interim Analysis of EXTEND Study Shows Sustained ZINBRYTA Efficacy for Up to Five Years*

CAMBRIDGE, Mass. & NORTH CHICAGO, Ill.--([BUSINESS WIRE](#))--A new post-hoc analysis from the pivotal DECIDE study shows that a significantly greater number of people treated with ZINBRYTA™ (daclizumab) achieved no evidence of disease activity (NEDA) compared to those taking AVONEX® (interferon beta-1a) intramuscular injection. The findings continue to support the positive impact of ZINBRYTA on NEDA status. Additional new interim data from the long-term extension study, EXTEND, further affirm ZINBRYTA's efficacy on clinically meaningful measures of multiple sclerosis (MS) disease activity and provide additional information supporting ZINBRYTA's safety profile. These results were presented by [Biogen](#) (NASDAQ: BIIB) and [AbbVie](#) (NYSE: ABBV) at the 32nd Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) in London.

“ZINBRYTA is a new, once-monthly, self-administered, subcutaneous treatment option for people living with relapsing forms of MS, including those whose disease activity has been insufficiently controlled by their prior therapy,” said Ralph Kern, M.D., senior vice president, Worldwide Medical, Biogen. “These data continue to reinforce ZINBRYTA's robust efficacy in reducing MS relapse rates, disability progression and brain lesion development, and help further define its long-term safety profile. ZINBRYTA is now available in the United States and Germany, and will soon be introduced in additional European countries.”

New NEDA Analysis Shows Significantly Greater Efficacy Versus Interferon Beta-1a

Previously reported findings from a post-hoc analysis of the Phase 3 DECIDE study demonstrated that a significantly greater percentage of patients taking ZINBRYTA achieved NEDA status at 96 weeks compared to those taking an active comparator, AVONEX.¹ A new post-hoc analysis presented at ECTRIMS examined the percentage of patients achieving NEDA status by time interval (including 24–96 weeks) to further evaluate the impact of ZINBRYTA on this measure. NEDA was defined as the composite of no clinical relapses, no 12-week confirmed disability progression, no new/newly enlarging T2 hyperintense lesions and no gadolinium-enhancing (Gd+) lesions.

Results of this new analysis show that significantly more ZINBRYTA-treated patients achieved overall NEDA status compared to AVONEX-treated patients during the first six months of treatment, and that the difference between the treatments was more evident in the 24–96 week time period:

- Baseline to week 24: 41.5 percent of ZINBRYTA patients achieved NEDA status compared to 32.6 percent of AVONEX patients ($p < 0.0001$).
- Weeks 24–96: 44.7 percent of ZINBRYTA patients achieved NEDA status compared to 22.4 percent of AVONEX patients ($p < 0.0001$).

“ZINBRYTA had previously demonstrated significant efficacy in helping patients achieve NEDA status compared to AVONEX at week 96. This new analysis looked at ZINBRYTA's effectiveness on NEDA both during the first six months and the following 18 months of treatment to take into account the potential impact of pre-existing disease activity, and found the efficacy of ZINBRYTA on NEDA to be more evident at the end of the evaluation period,” said Professor Gavin Giovannoni, Chair of Neurology, Blizzard Institute, Barts and The London School of Medicine and Dentistry.

Interim EXTEND Data Reinforce Long-Term Efficacy and Further Define Safety Profile

The first interim results from EXTEND were also presented at ECTRIMS, including up to five years of data from patients previously enrolled in DECIDE. The data show that treatment with ZINBRYTA was associated with long-term benefits in the proportion of patients who remained relapse-free, as well as those who did not experience 24-week confirmed disability progression. EXTEND is an ongoing, Phase 3, open-label extension study assessing the safety and efficacy of ZINBRYTA. Patients who were treated with AVONEX for two to three years (median of 26 months) in the DECIDE study switched to ZINBRYTA when they enrolled in EXTEND, and were compared to ZINBRYTA patients continuously treated in both DECIDE and EXTEND.

The safety profile of ZINBRYTA was similar to that observed in the controlled clinical trial, DECIDE. The overall incidence of serious adverse events (AEs), excluding MS relapses, remained stable over time. Most AEs of special interest, including hepatic (liver) AEs, cutaneous (skin) AEs, infections and lymphadenopathy (abnormal enlargement of lymph nodes), were mild to moderate in severity. The interim EXTEND results provide additional data supporting the long-term safety profile of ZINBRYTA.

The interim efficacy data show:

- The annualized relapse rate (ARR) for patients who took ZINBRYTA continuously in the DECIDE and EXTEND studies remained stable (0.195 vs. 0.156, respectively).
- Patients who switched to ZINBRYTA in the EXTEND study experienced a decrease in ARR from 0.317 during the earlier treatment period with AVONEX, to 0.152 after receiving ZINBRYTA.
- From baseline to week 48 in EXTEND, improvements in MRI data were observed across EXTEND study participants

(based on new T2 hyperintense lesions, new T1 hypointense lesions and the number of Gd+ lesions).

- Patients treated continuously with ZINBRYTA from DECIDE baseline up to week 192 experienced a 21 percent relative risk reduction in 24-week confirmed disability progression, compared with patients who were treated with AVONEX in DECIDE and then switched to ZINBRYTA in EXTEND (hazard ratio: 0.79; 95% confidence interval: 0.62–1.00; p=0.047).

A Complete List of ZINBRYTA ECTRIMS Data Presentations Includes:

- *Poster Session 1 – Thursday, 15 September – 15:45-17:00 PM BST*
 - Accumulation of Disability on the Neurophysical Disability Progression Composite: Daclizumab vs. Interferon Beta-1a in Relapsing-Remitting Multiple Sclerosis Patients from the DECIDE Study (P606)
 - Characterisation of the Lymphadenopathy Events Observed in the Daclizumab Clinical Trials (P632)
 - Cutaneous Events in Daclizumab-Treated Patients Did Not Impact Patient-Reported Outcomes in the DECIDE Study (P612)
 - Efficacy of Daclizumab Versus Intramuscular Interferon Beta-1a in Patients Without Neutralising Antibodies Against Interferon Beta in the DECIDE Study (P618)
 - Efficacy of Daclizumab vs. Intramuscular Interferon Beta-1a on 24-Week Sustained Disability Progression Using a Modified Multiple Sclerosis Functional Composite (P629)
 - Interim Report on the Safety and Efficacy of Long-Term Daclizumab Treatment for Up to Five Years (EXTEND Trial) (P653)
 - Achievement of No Evidence of Disease Activity by Time Interval with Daclizumab vs. Intramuscular Interferon Beta-1a Treatment in DECIDE (P664)
- *ePoster – Available in ECTRIMS Online Library and App*
 - A Pre-Filled Pen for Daclizumab: Safety, Usability, and Patient Satisfaction (EP1482)

About the DECIDE Study

DECIDE was a two- to three-year, Phase 3, global, randomized, double-blind, multicenter study in patients with relapsing forms of multiple sclerosis (RMS) designed to determine if ZINBRYTA would provide superior outcomes for certain clinical endpoints compared to treatment with AVONEX® (interferon beta-1a) 30 mcg intramuscular (IM) injection. DECIDE was an active comparator study with two groups: 150 mg of subcutaneous ZINBRYTA every four weeks (n=919) was compared to AVONEX IM once weekly (n=922).

About the EXTEND Study

EXTEND is an ongoing, multicenter, open-label, Phase 3 extension study that is evaluating the long-term safety and efficacy of ZINBRYTA in patients with relapsing forms of multiple sclerosis (RMS) who completed the DECIDE, SELECTED or OBSERVE studies. The study has enrolled more than 1,500 RMS patients, who will receive 150 mg of subcutaneous ZINBRYTA every four weeks for up to five years.

About ZINBRYTA™ (daclizumab)

ZINBRYTA is approved for the treatment of relapsing forms of multiple sclerosis (RMS) in the United States and the European Union. The recommended dosage of ZINBRYTA is 150 mg, self-administered subcutaneously on a monthly basis. ZINBRYTA is currently under regulatory review in Switzerland, Canada and Australia.

In clinical trials, ZINBRYTA demonstrated superior efficacy in reducing relapses and MRI lesions, compared to AVONEX® (interferon beta-1a) intramuscular injection and placebo.

ZINBRYTA is a humanized IgG1 monoclonal antibody that selectively binds to the high-affinity interleukin-2 (IL-2) receptor subunit (CD25). CD25 is expressed at high levels on T-cells that become activated in people with MS.

ZINBRYTA increases the risk of severe hepatic (liver) injury. It also increases the risk of immune-mediated events including lymphadenopathy (enlargement of the lymph nodes), cutaneous (skin) reactions and non-infectious colitis, acute hypersensitivity (allergic reactions), infections, depression and decreased lymphocyte (type of white blood cell) counts.

The most common adverse reactions that occurred in ZINBRYTA-treated patients were nasopharyngitis (inflammation of the nose and a part of the throat), upper respiratory tract infection, rash, influenza, dermatitis, oropharyngeal (part of the throat) pain, bronchitis, eczema, lymphadenopathy, pharyngitis (inflammation of part of the throat) and increased alanine aminotransferase (ALT; a type of liver enzyme).

ZINBRYTA is only available through a Risk Evaluation and Mitigation Strategy (REMS) Program in the U.S., and is under a Risk Management Plan (RMP) in the EU.

AbbVie and Biogen are co-promoting ZINBRYTA in the U.S. Biogen is responsible for commercialization in Canada, the EU and the rest of the world.

About Biogen

Through cutting-edge science and medicine, Biogen discovers, develops and delivers worldwide innovative therapies for people living with serious neurological, autoimmune and rare diseases. 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 more information, please visit www.biogen.com. Follow us on [Twitter](#).

Biogen Safe Harbor

This press release includes forward-looking statements, including statements about the potential safety, therapeutic effects and benefits of ZINBRYTA. These forward-looking statements may be accompanied by such words as "potential," "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "will," and other words and terms of similar meaning. You should not place undue reliance on these statements. These statements involve risks and uncertainties that could cause actual results to differ materially from those reflected in such statements, including final results from ongoing studies, uncertainty of success in commercialization of ZINBRYTA, which may be impacted by, among other things, slower than anticipated acceptance of ZINBRYTA by patients and the medical community, competition in the MS market, the effectiveness of sales and marketing efforts, problems with the manufacturing process for ZINBRYTA, the occurrence of adverse safety events, difficulties in obtaining or changes in the availability of reimbursement for ZINBRYTA and Biogen's other MS products, failure to obtain regulatory approvals in other jurisdictions, failure to protect intellectual property and other proprietary rights, product liability claims, third party collaboration risks, and the other risks and uncertainties that are described in the Risk Factors section of Biogen's most recent annual or quarterly report and in other reports Biogen has filed with the U.S. Securities and Exchange Commission (SEC). Any forward-looking statements speak only as of the date of this press release and Biogen assumes 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](https://twitter.com/abbvie) on Twitter or view careers on our [Facebook](https://www.facebook.com/abbvie) or [LinkedIn](https://www.linkedin.com/company/abbvie) page.

AbbVie 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," of AbbVie's 2015 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.

¹ Kappos L, Wiendl H, Selmaj K, et al. Daclizumab HYP versus interferon beta-1a in relapsing multiple sclerosis. Supplementary Appendix. N Engl J Med 2015;373:1418-28. DOI: 10.1056/NEJMoa1501481.

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