Majority of Patients Treated with Lebrikizumab Achieved Skin Clearance in Lilly's Pivotal Phase 3 Atopic Dermatitis Studies

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Lebrikizumab rapidly improved skin and itch symptoms in four weeks

INDIANAPOLIS, March 26, 2022 /PRNewswire/ -- More than 50 percent of patients with moderate-to-severe atopic dermatitis (AD) experienced at least 75 percent reduction in disease severity (EASI-75*) at 16 weeks when receiving lebrikizumab monotherapy in the ADvocate program, Eli Lilly and Company (NYSE: LLY) announced today at the American Academy of Dermatology (AAD) Annual Meeting. Lebrikizumab, an investigational IL-13 inhibitor, also led to clinically meaningful improvements in itch and other important patient-reported outcomes compared to placebo.

"Patients with atopic dermatitis experience persistent itch, dry skin, severe pain and inflammation, which can be unpredictable and affect their work, social relationships, mental and emotional health," said Emma Guttman-Yassky, M.D., Ph.D., Waldman professor and system chair of Dermatology at the Icahn School of Medicine at Mount Sinai in New York, and senior author of the ADvocate analyses. "Lebrikizumab is a novel treatment targeting the IL-13 pathway, which is the main cytokine driver of inflammation that is involved in AD. I'm encouraged by today's data showing rapid improvements in skin, itch and quality-of-life measures."

Lebrikizumab is a monoclonal antibody (mAb) that binds to the interleukin 13 (IL-13) protein with high affinity to specifically prevent the formation of IL-13Rα1/IL-4Rα (Type 2 receptor) which blocks downstream signaling through the IL-13 pathway. [1-5] IL-13 plays the central role in Type 2 inflammation.[6] In AD, IL-13 underlies the signs and symptoms including skin barrier dysfunction, itch, infection and hard, thickened areas of skin.[7]

In ADvocate 1, 43 percent of patients receiving lebrikizumab achieved clear or almost clear skin (IGA) at 16 weeks compared to 13 percent of patients taking placebo. Among those receiving lebrikizumab, 59 percent achieved an EASI-75 response, compared to 16 percent with placebo.

In ADvocate 2, 33 percent of patients taking lebrikizumab achieved clear or almost clear skin (IGA) at 16 weeks, compared to 11 percent of patients on placebo. Among those receiving lebrikizumab, 51 percent achieved an EASI-75 response, compared to 18 percent taking placebo.

Within four weeks, patients receiving lebrikizumab experienced statistically significant improvements in skin clearance and itching, as well as improvements in interference of itch on sleep, and quality of life, as measured by key secondary endpoints.

The safety profile of the 16-week period was consistent with prior lebrikizumab studies in AD. Patients taking lebrikizumab, compared to placebo, reported a lower frequency of adverse events in ADvocate 1 (lebrikizumab: 45%, placebo: 52%) and ADvocate 2 (lebrikizumab: 53%, placebo: 66%). Most adverse events across the two studies were mild or moderate in severity and nonserious and did not lead to treatment discontinuation. The most common adverse events in ADvocate 1 and 2 for those on lebrikizumab were conjunctivitis (7% and 8%, respectively), common cold (nasopharyngitis) (4% and 5%, respectively) and headache (3% and 5%, respectively).

"People's experiences and struggles with autoimmune diseases, such as atopic dermatitis, drive us at Lilly to pursue novel science and meaningful treatments that make life better, especially in areas where there is urgent unmet need," said Lotus Mallbris, M.D., Ph.D., vice president of global immunology development and medical affairs at Lilly. "These data reinforce the positive results in our broader Phase 3 development program, and we believe lebrikizumab represents a new generation of biologics for AD."

Detailed 52-week results from ADvocate 1 and 2, as well as 16-week data from ADhere, the Phase 3 AD study of lebrikizumab with topical steroids, will be disclosed in coming months. Lilly and Almirall S.A. plan to submit filings to regulatory authorities around the world by the end of 2022 following completion of the ADvocate studies.

"Patients need new treatment options that provide high efficacy and tolerability. These positive data demonstrate that lebrikizumab has the potential to be a leading treatment in AD," said Karl Ziegelbauer, Ph.D., Almirall's Chief Scientific Officer.

Lilly has exclusive rights for development and commercialization of lebrikizumab in the United States and the rest of the world outside Europe. Almirall has licensed the rights to develop and commercialize lebrikizumab for the treatment of dermatology indications, including AD, in Europe.

*EASI=Eczema Area and Severity Index, EASI75=75 percent reduction in EASI from baseline to Week 16

About ADvocate 1 and ADvocate 2 and the Phase 3 Program
ADvocate 1 and ADvocate 2 are ongoing 52-week randomized, double-blind, placebo-controlled, parallel-group, global, Phase 3 studies designed to evaluate lebrikizumab as monotherapy in adult and adolescent patients (aged 12 to less than 18 years of age and weighing at least 40 kg) with moderate-to-severe AD. During the 16-week treatment period, patients received lebrikizumab 500-mg initially and at two weeks, followed by lebrikizumab 250-mg or placebo every two weeks. The primary endpoints were measured by an Investigator Global Assessment (IGA) score of clear (0) or almost clear (1) skin with a reduction of at least two points from baseline and at least 75 percent change in baseline in the Eczema Area and Severity Index (EASI-75) score at 16 weeks. EASI measures extent and severity of the disease. Key secondary endpoints were measured by IGA, EASI, the Pruritus Numeric Rating Scale, Sleep-Loss due to Pruritus and the Dermatology Life Quality Index.

The U.S. Food and Drug Administration (FDA) granted lebrikizumab Fast Track designation in AD in December 2019. The lebrikizumab Phase 3 program consists of five key global studies including two monotherapy studies, a combination study (ADhere), as well as long-term extension (ADjoin) and adolescent open label (ADore) studies.

About Atopic Dermatitis
Atopic dermatitis (AD), or atopic eczema, is a chronic, relapsing skin disease characterized by intense itching, dry skin and inflammation that can be present on any part of the body.[8] AD is a heterogeneous disease both biologically and clinically and may be characterized by a highly variable appearance in which flares occur in an unpredictable manner.[9]

Moderate-to-severe AD is characterized by intense itching, which leads to an itch-scratch cycle that further damages the skin.[10] Like other chronic inflammatory diseases, AD is immune-mediated and involves a complex interplay of immune cells and inflammatory cytokines.[8] People living with AD often report symptoms of intense, persistent itch which can be so uncomfortable that it can affect sleep, daily activities and social relationships.

About Lebrikizumab
Lebrikizumab is a novel, investigational, monoclonal antibody designed to bind IL-13 with high affinity to specifically prevent the formation of the IL-13Rα1/IL-4Rα heterodimer complex and subsequent signaling, thereby inhibiting the biological effects of IL-13 in a targeted and efficient fashion. IL-13 is the central pathogenic mediator of AD, promoting type 2 inflammation that drives skin barrier dysfunction, itch, skin thickening and infection.[6,7]

About Eli Lilly and Company
Lilly is a global health care leader that unites caring with discovery to create medicines that make life better for people around the world. We were founded more than a century ago by a man committed to creating high-quality medicines that meet real needs, and today we remain true to that mission in all our work. Across the globe, Lilly employees work to discover and bring life-changing medicines to those who need them, improve the understanding and management of disease, and give back to communities through philanthropy and volunteerism. To learn more about Lilly, please visit us at lilly.com and lilly.com/newsroom. P-LLY

This press release contains forward-looking statements (as that term is defined in the Private Securities Litigation Reform Act of 1995) about lebrikizumab as a potential treatment for patients with atopic dermatitis and reflects Lilly's current beliefs and expectations. However, as with any pharmaceutical product, there are substantial risks and uncertainties in the process of research, development and commercialization. Among other things, there can be no guarantee that planned or ongoing studies will be completed as planned, that future study results will be consistent with the results to date, or that lebrikizumab will receive regulatory approvals, or be commercially successful. For further discussion of these and other risks and uncertainties, see Lilly's most recent Form 10-K and Form 10-Q filings with the United States Securities and Exchange Commission. Except as required by law, Lilly undertakes no duty to update forward-looking statements to reflect events after the date of this release.

[1] Moyle M, et al. *Exp Dermatol.* 2019;28(7):756-768.
[2] Ultsch M, et al. *J Mol Biol.* 2013;425(8):1330-1339.
[3] Zhu R, et al. *Pulm Pharmacol Ther*. 2017;46:88-98.
[4] Simpson EL, et al. *J Am Acad Dermatol*. 2018;78(5):863-871.e11.
[5] Okragly A, et al. *Comparison of the Affinity and in vitro Activity of Lebrikizumab, Tralokinumab, and Cendakimab*. Presented at the Inflammatory Skin Disease Summit, New York, November 3-6, 2021.
[6] Tsoi L, et al. *Journal of Investigative Dermatology*. 2019;139(7):1480-1489.
[7] Bieber T. *Allergy*. 2020;75(1):54-62.
[8] Weidinger S, Novak N. *Lancet*. 2016;387:1109-1122.
[9] Langan SM, et al. *Arch Dermatol*. 2008;142:1109.
[10] Yosipovitch G, et al. *Curr Allergy Rep*. 2008;8:306-311.

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