Celldex Reports Results from Phase 2 Study of Barzolvolimab in Eosinophilic Esophagitis (EoE)

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- *Study met primary endpoint demonstrating barzolvolimab's ability to potently deplete mast cells in the gastrointestinal tract*
- *Profound mast cell depletion did not result in improved clinical outcomes providing direct evidence that mast cells are not a primary driver in EoE*
- *Favorable safety profile demonstrated for barzolvolimab 300 mg Q4 weekly dosing regimen*
- *Company to host webcast today at 4:30 pm ET*

HAMPTON, N.J., Aug. 19, 2025 (GLOBE NEWSWIRE) -- Celldex Therapeutics, Inc. (NASDAQ:CLDX) today reported topline results from the Company's ongoing Phase 2 study of barzolvolimab in eosinophilic esophagitis (EoE), a chronic inflammatory disease of the esophagus. Identifying the key drivers of EoE has challenged the field and research has suggested that mast cells could play an important role in the disease pathogenesis. Celldex designed this study to determine if barzolvolimab could deplete mucosal (intraepithelial) mast cells and, in turn, improve clinical outcomes in EoE. The primary endpoint of the study, absolute change from baseline to Week 12 in peak esophageal intraepithelial mast cell count was met, but the profound mast cell depletion observed did not result in improvement in EoE symptoms or endoscopic assessment of disease activity compared to placebo. Consistent with previously reported studies, barzolvolimab demonstrated a favorable safety and tolerability profile. Based on these results, Celldex will not advance development in EoE. The results do support future development with KIT- or SCF-targeted therapies in other GI indications where mucosal mast cells are believed to play an important role.

"As we explore barzolvolimab's full potential as a mast cell depleting agent, we are ultimately defining which diseases are mast cell driven," said Anthony Marucci, President and Chief Executive Officer of Celldex Therapeutics. "While we are disappointed in the clinical outcome in EoE, we are proud of our role in advancing the science for patients who need more effective treatment options."

"We remain focused on advancing the deep pipeline for barzolvolimab, with enrollment ongoing across four studies, including two Phase 3 studies in chronic spontaneous urticaria and Phase 2 studies in atopic dermatitis and prurigo nodularis, while we also finalize plans to initiate a Phase 3 program in inducible urticaria that will include both cold urticaria and symptomatic dermographism," continued Marucci. "We are deeply committed to driving innovation in mast cell science and delivering life-changing therapies for patients and look forward to advancing barzolvolimab and our growing pipeline of KIT- and SCF-targeting candidates into additional indications in the future."

Summary of Key Findings

- Profound reduction in CD117+(KIT) and tryptase+ intraepithelial mast cells
  - Primary endpoint met with high statistical significance. Peak mast cell counts (CD117 positive cells) per high power field (hpf) at baseline were 50.3 in the placebo arm and 55.4 in the barzolvolimab 300mg Q4W arm. At Week 12 the absolute change from baseline was -2.7 for placebo compared to -36.0 for barzolvolimab [Diff (95%CI): -33.3 (-44.1, -22.6); p=<0.0001)].
  - Mast cells defined by tryptase staining also showed profound decreases at week 12 in barzolvolimab treated patients with sustained and deepening decreases observed at Week 28.
- Despite profound mast cell depletion, no definitive evidence of clinical improvement in EoE symptoms, as measured by the Dysphagia Symptom Questionnaire (DSQ) (p=0.33), or endoscopic scoring of EoE-related inflammation & fibrosis (EREFS) (p=0.95) were observed compared to placebo. There was also no difference observed in histological reduction in esophageal intraepithelial infiltration of eosinophils (p=0.57).
- Barzolvolimab demonstrated a favorable safety profile at the 300 mg Q4 weekly dosing regimen, consistent with prior studies where barzolvolimab was dosed less frequently.
- An unblinded review of all available data through the full treatment period (28 weeks) and full study (44 weeks) was conducted and clinical and safety outcomes were consistent at these timepoints.

Phase 2 Study Design

This randomized, double-blind, placebo-controlled, parallel group Phase 2 study is evaluating the efficacy and safety profile of subcutaneous barzolvolimab in patients with active EoE. Patients on study were highly symptomatic and had moderate to severe EoE. Demographics and baseline disease characteristics were generally well balanced across treatment groups. 65 patients were randomly assigned on a 1:1 ratio to receive subcutaneous injections of barzolvolimab at 300 mg every 4 weeks or placebo during a 16-week placebo-controlled treatment phase. Following completion of the placebo-controlled treatment phase, all patients

entered a 12-week active treatment phase and received barzolvolimab 300 mg every 4 weeks. Patients then entered a follow-up phase for an additional 16 weeks. The primary endpoint of the study is the reduction of esophageal intraepithelial infiltration of mast cells as assessed by peak esophageal intraepithelial mast cell count at 12 weeks. Secondary endpoints include the reduction of symptoms of dysphagia and esophageal intraepithelial infiltration of eosinophils and safety.

For additional information on this trial (NCT05774184), please visit www.clinicaltrials.gov

Webcast and Conference Call
The Company will host a conference call/webcast today to discuss the results at 4:30 p.m. ET. To access the live and archived webcast, please visit the Events section on the Investor Relations page of Celldex's website . Parties interested in participating via telephone may register here to receive the dial-in numbers and unique PIN to seamlessly access the call. Otherwise please access the listen-only webcast link. The archived webcast will be available for a limited time on the Company's website.

About Barzolvolimab
Barzolvolimab is a humanized monoclonal antibody that binds the receptor tyrosine kinase KIT with high specificity and potently inhibits its activity. KIT is expressed in a variety of cells, including mast cells, which mediate inflammatory responses such as hypersensitivity and allergic reactions. KIT signaling controls the differentiation, tissue recruitment, survival and activity of mast cells. In certain inflammatory diseases, such as chronic urticaria, mast cell activation plays a central role in the onset and progression of the disease. Barzolvolimab is currently being studied in chronic spontaneous urticaria (CSU), two forms of chronic inducible urticaria (CIndU) – cold urticaria (ColdU) and symptomatic dermographism (SD), prurigo nodularis (PN) and atopic dermatitis (AD), with additional indications planned for the future.

About Celldex
Celldex is pioneering new horizons in immunology to deliver life-changing therapies. We are relentless in our pursuit of novel antibody-based treatments that engage the human immune system and directly affect critical pathways to improve the lives of patients with allergic, inflammatory and autoimmune disorders. Visit www.celldex.com.

Forward-Looking Statement
This release contains "forward-looking statements" made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These statements are typically preceded by words such as "believes," "expects," "anticipates," "intends," "will," "may," "should," or similar expressions. These forward-looking statements reflect management's current knowledge, assumptions, judgment and expectations regarding future performance or events. Although management believes that the expectations reflected in such statements are reasonable, they give no assurance that such expectations will prove to be correct or that those goals will be achieved, and you should be aware that actual results could differ materially from those contained in the forward-looking statements. Forward-looking statements are subject to a number of risks and uncertainties, including, but not limited to, our ability to successfully complete research and further development and commercialization of Company drug candidates, including barzolvolimab (also referred to as CDX-0159), in current or future indications; the uncertainties inherent in clinical testing and accruing patients for clinical trials; our limited experience in bringing programs through Phase 3 clinical trials; our ability to manage and successfully complete multiple clinical trials and the research and development efforts for our multiple products at varying stages of development; the availability, cost, delivery and quality of clinical materials produced by our own manufacturing facility or supplied by contract manufacturers, who may be our sole source of supply; the timing, cost and uncertainty of obtaining regulatory approvals; the failure of the market for the Company's programs to continue to develop; our ability to protect the Company's intellectual property; the loss of any executive officers or key personnel or consultants; competition; changes in the regulatory landscape or the imposition of regulations that affect the Company's products; our ability to continue to obtain capital to meet our long-term liquidity needs on acceptable terms, or at all, including the additional capital which will be necessary to complete the clinical trials that we have initiated or plan to initiate; and other factors listed under "Risk Factors" in our annual report on Form 10-K and quarterly reports on Form 10-Q.

All forward-looking statements are expressly qualified in their entirety by this cautionary notice. You are cautioned not to place undue reliance on any forward-looking statements, which speak only as of the date of this release. We have no obligation, and expressly disclaim any obligation, to update, revise or correct any of the forward-looking statements, whether as a result of new information, future events or otherwise.

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