# Upstream Bio to Present Mechanistic Insights into Verekitug's Enhanced Potency via TSLP Receptor Targeting at European Academy of Allergy and Clinical Immunology (EAACI) Congress 2025

June 5, 2025

WALTHAM, Mass., June 05, 2025 (GLOBE NEWSWIRE) -- Upstream Bio, Inc. (Nasdaq: UPB), a clinical-stage company developing treatments for inflammatory diseases, with an initial focus on severe respiratory disorders, today announced an upcoming presentation at the European Academy of Allergy and Clinical Immunology (EAACI) Congress 2025 in Glasgow, UK, on Sunday, June 15, 2025. The presentation features translational pharmacology modeling data that supports Thymic Stromal Lymphopoietin (TSLP) receptor targeting with verekitug as a mechanism for greater potency when compared to treatment approaches that target the TSLP ligand.

**Presentation details:**

**Presentation Title:** In silico system pharmacology modeling provides insights into a mechanism for greater potency of TSLP/TSLPR pathway inhibition with verekitug, a novel antibody antagonist of the TSLP receptor, as compared with tezepelumab

**Presenting Author:** Ashish Kalra, PhD, Vice President, Translational Research, Upstream Bio

**Poster Number:** D3.113

**Session:** TPS55 – Asthma 06

**Presentation Date and Time:** Sunday, June 15, 2025 – 12:45 - 13:45 BST

**About TSLP and TSLPR Blockade**
Thymic Stromal Lymphopoietin (TSLP) is a cytokine that is a key driver of the inflammatory response in major allergic and inflammatory diseases, such as asthma, where disruption of TSLP signaling has been clinically validated as an effective therapeutic strategy.

TSLP activation is one of the first events in the inflammatory cascade stimulated by allergens, viruses and other triggers, initiating the activation of downstream targets such as IL-4, IL-5, IL-13, IL-17 and IgE. Because TSLP is a target upstream in the inflammatory cascade, blocking the TSLP receptor (TSLPR) presents an opportunity for a single treatment to impact the drivers of multiple pathological inflammatory processes across a broad set of diseases.

**About Verekitug**
Verekitug is a novel recombinant fully human immunoglobulin G1 (IgG1) monoclonal antibody (mAb) that binds to the TSLP receptor and inhibits proinflammatory signaling initiated by TSLP. It is the only monoclonal antibody currently in clinical development that targets and inhibits the TSLP receptor. Verekitug is currently being evaluated in two separate multi-national, placebo-controlled, randomized Phase 2 clinical trials, the VALIANT trial in patients with severe asthma (NCT06196879) and the VIBRANT trial in patients with chronic rhinosinusitis with nasal polyps (CRSwNP) (NCT06164704). Upstream Bio is also initiating a Phase 2 clinical trial (NCT06981078) of verekitug in patients with moderate-to-severe chronic obstructive pulmonary disease (COPD).

In preclinical studies, verekitug demonstrated high occupancy of the TSLP receptor and potent inhibition of TSLP signaling. Additionally, verekitug inhibited cytokine production from both CD4+ T cells and ILC2 cells and completely suppressed skin allergic reactions in a non-human primate model, suggesting that it may be effective against multiple types of inflammation.

Three clinical trials have been completed for verekitug, including a Phase 1 single-ascending dose (SAD) clinical trial and a Phase 1b multiple-ascending dose (MAD) clinical trial. In these trials, verekitug was well tolerated, had no clinically meaningful immunogenicity, and showed a predictable and consistent pharmacokinetic profile and high subcutaneous bioavailability.

**About Upstream Bio**
Upstream Bio is a clinical-stage biotechnology company developing treatments for inflammatory diseases, with an initial focus on severe respiratory disorders. The Company is developing verekitug, the only known antagonist currently in clinical development that targets the receptor for thymic stromal lymphopoietin (TSLP), a cytokine which is a clinically validated driver of inflammatory response positioned upstream of multiple signaling cascades that affect a variety of immune mediated diseases. The Company has advanced this highly potent monoclonal antibody into separate Phase 2 trials for the treatment of severe asthma and chronic rhinosinusitis with nasal polyps and is initiating development in chronic obstructive pulmonary disease. Upstream Bio's team is committed to maximizing verekitug's unique attributes to address the substantial unmet needs for patients underserved by today's

standard of care. To learn more, please visit www.upstreambio.com.

**Forward-Looking Statements**

This press release contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, each as amended. These statements may be identified by words such as "aims," "anticipates," "believes," "continue," "could," "estimates," "expects," "forecasts," "goal," "intends," "may," "plans," "possible," "potential," "predict," "project," "seeks," "should," "target," "will" and variations of these words or similar expressions. Any statements in this press release that are not statements of historical fact may be deemed to be forward-looking statements. These forward-looking statements include, without limitation, express or implied statements regarding: the global development of verekitug for the treatment of severe asthma, CRSwNP and COPD, including the initiation, timing, progress and results of ongoing and planned clinical trials; and expectations regarding the differentiation, safety, efficacy, tolerability, and/or extended dosing interval of verekitug. Any forward-looking statements in this press release are based on the Company's current expectations, estimates and projections only as of the date of this release and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. Readers are cautioned that actual results, levels of activity, safety, efficacy, performance or events and circumstances could differ materially from those expressed or implied in the Company's forward-looking statements due to a variety of risks and uncertainties, which include, without limitation, risks and uncertainties related to: Upstream Bio's ability to advance verekitug through clinical development, and to obtain regulatory approval of and ultimately commercialize verekitug on the expected timeline, if at all; the initiation, timing, progress and results of clinical trials; Upstream Bio's ability to fund its development activities and achieve development goals; Upstream Bio's dependence on third parties to conduct clinical trials and manufacture verekitug, and commercialize verekitug, if approved; Upstream Bio's ability to attract, hire and retain key personnel, and protect its intellectual property; Upstream Bio's financial condition and need for substantial additional funds in order to complete development activities and commercialize verekitug, if approved; regulatory developments and approval processes of the U.S. Food and Drug Administration and comparable foreign regulatory authorities; Upstream Bio's competitors and industry; and other risks and uncertainties described in greater detail under the caption "Risk Factors" in Upstream Bio's most recent Annual Report on Form 10-K and Quarterly Report on Form 10-Q, as well as any subsequent filings with the SEC. Any forward-looking statements represent Upstream Bio's views only as of today and should not be relied upon as representing its views as of any subsequent date. Upstream Bio explicitly disclaims any obligation or undertaking to update any forward-looking statements contained herein to reflect any change in its expectations or any changes in events, conditions or circumstances on which any such statement is based except to the extent required by law, and claims the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995.

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