

## **Upstream Bio Presents New Phase 1 Clinical Data on UPB-101 at the American Thoracic Society (ATS) International Conference**

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above the estimated therapeutic threshold*

**WALTHAM, Mass. – May 22, 2023** - [Upstream Bio](#), a clinical-stage biotech company advancing new therapies to treat inflammation, today presented new clinical data from its Phase 1 clinical study of UPB-101, a thymic stromal lymphopoietin receptor (TSLPR) inhibitor, at the American Thoracic Society (ATS) International Conference in Washington, DC. The poster, titled “A Phase 1 First-in-Human Single Ascending-dose Study With a Novel Antibody to the Human Thymic Stromal Lymphopoietin Receptor,” presents the methodology and findings of a randomized, double-blinded, placebo-controlled, single dose-escalation study evaluating the safety, tolerability, pharmacokinetics (PK), and pharmacodynamics (PD) of both intravenous (IV) and subcutaneous (SC) administration of UPB-101 in healthy male and female participants.

Data from the poster presentation show that UPB-101 displayed favorable safety and tolerability following single-dose administration in healthy participants. In addition, simulations for repeated SC administration of UPB-101 show that dosing intervals of at least 12 weeks are predicted to maintain UPB-101 serum concentration above the estimated therapeutic threshold.

“These data support Upstream’s hypothesis that UPB-101, which targets the TSLP receptor, rather than the ligand, may deliver a robust therapeutic impact with a favorably differentiated administration schedule for many patients living with inflammatory conditions like asthma,” said Aaron Deykin, Chief Medical Officer and Head of Research and Development, Upstream Bio. “Continuing the development of UPB-101 in our ongoing Phase 1b trial in patients with asthma and confirming extended dosing intervals is imperative. We look forward to sharing data from that study as soon as possible.”

Additional highlights from the poster presentation include:

- A safety profile fully enabling continued development with no drug-related serious adverse events.
- A PK profile projected to maintain exposure greater than the estimated minimal therapeutic concentration when dosed at 12-week intervals.
- Post-hoc analysis showed a post-treatment decrease of blood eosinophil levels in participants with > 150 cells/ $\mu$ L at baseline. This reduction occurred within 2–4 weeks post-dose and was maintained for  $\geq$  13 weeks.

A digital version of the poster can be found on Upstream’s [website](#). For more information, visit <https://conference.thoracic.org/>.

**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 signaling is one of the first events in the inflammatory cascade stimulated by allergens, viruses, and other triggers. TSLP signaling activates downstream targets such as IL-4, IL-5, IL-13, IL-17 and IgE. Because TSLP is a target upstream in the inflammatory cascade, there is opportunity to address disease at its root, prior to the influence of other disease-related cytokines. Blocking the TSLP receptor presents an opportunity for a single treatment to impact the drivers of multiple pathological inflammatory processes across a broad set of diseases.

### **About UPB-101**

UPB-101 is a novel recombinant fully human immunoglobulin G1 (IgG1) monoclonal antibody (mAb) that binds to the human thymic stromal lymphopoietin (TSLP) receptor (TSLPR) to inhibit signaling. UPB-101 is designed to address allergic and inflammatory diseases including asthma. In pre-clinical studies, UPB-101 demonstrated inhibition of cytokine production from both CD4+ T cells and ILC2, and completely suppressed skin allergic reactions in a monkey model, suggesting that it may be effective against multiple types of inflammation.

### **About Upstream Bio**

At Upstream Bio we strive to reach the source of inflammation and conquer it. Our lead program, UPB-101, is a clinical-stage monoclonal antibody that inhibits the TSLP receptor. TSLP is a validated target positioned upstream of multiple signaling cascades that affect a variety of immune cells pivotal to common and rare diseases. We are leveraging our diverse roots and the team's substantial industry experience to develop therapies that ease the burden of inflammatory and allergic diseases on patients and their loved ones. <https://www.upstreambio.com/>

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