Hamburg, 6 May 2025

Topas Therapeutics' TPM502 Achieves Gluten-specific Tolerance Induction, Positive Safety Profile in Phase 2a Trial in Celiac Disease Patients

- **TPM502 achieved significant and dose-dependent reduction in IL-2 and IFN-γ release by gluten-specific T cells and durable immunomodulation of gluten-specific CD4+ T cells**
- **Patient-reported outcomes indicated dose-dependent reduction of symptoms following a gluten challenge**
- **TPM502 maintained a favorable safety profile throughout the study**

Hamburg, Germany, May 6, 2025 – Topas Therapeutics presented positive clinical proof-of-concept data demonstrating gluten-specific tolerance induction in celiac disease (CeD) patients. Data from a Phase 2a clinical trial evaluating TPM502, the company's lead candidate, demonstrated a positive safety and tolerability profile, a significant reduction of the inflammatory responses to gluten and long-lasting phenotypic changes to gliadin-specific T cells. In addition, TPM502-treated patients reported a beneficial impact on symptoms post a gluten challenge. Developed using Topas' proprietary platform, TPM502 consists of nanoparticles coupled with CeD disease-relevant antigens. The study findings were presented at Digestive Disease Week® (DDW) 2025 on Monday, May 5, 2025, in an oral presentation and were selected for the American Gastroenterological Association Presidential Plenary

"The data presented at DDW represent a significant validation of TPM502 as a potential treatment for celiac disease. The observed safety profile, combined with the clear, dose-dependent reduction of IL-2 and IFN-γ release by gluten-specific T cells as well as phenotypic changes in antigen-specific CD4+ T cells, reinforces TPM502's ability to

precisely and durably modulate the underlying autoimmune response to gluten," stated **Knut E. A. Lundin, MD, PhD, Principal Investigator of the Phase 2a study and Professor and Head of Clinical Education at the Institute of Clinical Medicine, University of Oslo.**

"By directly addressing the pathogenic T-cell activation central to celiac disease, TPM502 could redefine the treatment paradigm and provide a much-needed therapeutic option for patients who currently have no approved alternatives to a lifelong gluten-free diet. Indeed, the gluten-free diet does not meet the medical needs of many celiac disease patients," added **Cristina de Min, MD, CMO of Topas Therapeutics**. *"Our Phase 2a trial data also support the application of our nanoparticle platform for a range of autoimmune disease indications for which tolerance induction could be a transformative therapeutic approach."*

The multi-center, double-blind, randomized, placebo-controlled Phase 2a study evaluated TPM502 in HLA-DQ2.5 positive adults with confirmed CeD on a gluten-free diet (NCT05660109). HLA-DQ2.5 is a very common genetic variant among CeD patients, representing approximately 90% of the total disease population.[1] A total of 38 patients that achieved a predefined IL-2 response to bolus gluten challenge (6 g gluten) were randomized and assigned to placebo or 1 of 4 dose cohorts, receiving 2 intravenous infusions of TPM502 (from 0.72 µmol to 7.2 µmol total peptide dose) on day 1 and day 15. A total of 26 patients received TPM502 and 12 received placebo. The gluten challenge was repeated 7 days after the second administration of TPM502 or placebo. As reported in the DDW presentation, TPM502 demonstrated a favorable safety profile. Treatment-related adverse events (TAEs) were reported in 27 patients, including 8 on placebo, with the majority being Grade 1 or 2 events such as nausea, headache, and vomiting; only a single patient experienced four Grade 3 TAEs.

Importantly, a significant and dose-related reduction of IL-2 and IFN-γ release by gluten-specific T cells was observed after TPM502 treatment at the highest dose, which was maintained throughout the study period of 1 month following the last TPM502 administration. In addition, immunomodulation was demonstrated by post-treatment phenotypic changes in gluten-specific CD4+ T cells consistent with T cell anergy or exhaustion and a significant increase in gluten-specific regulatory CD4+ T cells at the highest TPM502 dose, suggesting the induction of regulatory status in these T cells. Patient-reported outcomes using a Celiac Disease Patient-Reported Outcome (CeD PRO®) tool, indicated a dose-dependent reduction in gastrointestinal symptoms in TPM502-treated patients compared to placebo, following the post treatment gluten challenge.

“Topas Therapeutics is committed to advancing TPM502 as a much-needed treatment option for celiac disease patients, building on data that represent a breakthrough for this and potentially other immune-mediated diseases,” said **Hugo Fry, CEO of Topas Therapeutics**. ***“****With this validation of our technology and its ability to modulate immune responses in a precise and durable manner, we look forward to the next clinical steps for TPM502 and our pipeline.”*

About Celiac Disease

Celiac disease is an autoimmune disorder characterized by an aberrant immune reaction to ingested gluten that results in damage to the small intestine. It affects 1% of the population and manifests through a wide range of digestive as well as non-digestive symptoms. Diagnosed patients are limited to a gluten-free diet, nevertheless, in a third of cases, severe symptoms persist despite gluten avoidance. There is currently no available medical treatment for celiac disease.

About Topas Particle Conjugates

Topas Particle Conjugates are polymer-coated iron oxide nanoparticles comprising a proprietary biocompatible polymer and conjugated disease-relevant antigens. They are designed to deliver antigens to liver sinusoidal endothelial cells, which have potent immune-tolerogenic capabilities including triggering antigen presentation to T cells and tolerance induction. In clinical and preclinical studies, TPCs have elicited an excellent safety profile and rapid clearance. The TPC platform has generated two clinical-staged drug candidates, TPM502 for celiac disease and TPM203 for pemphigus vulgaris, and has the potential to address multiple indications across the spectrum of autoimmune and inflammatory diseases.

About Topas Therapeutics

Topas Therapeutics, a clinical-stage biotech company, is advancing a highly differentiated and versatile approach to establish immune tolerance in autoimmune and immune-mediated diseases. Topas’ proprietary platform comprises antigen-coupled nanoparticles which target liver sinusoidal endothelial cells to drive T cells toward tolerance. The topline readout from our Phase 2a clinical trial in celiac disease validates the potential of this new drug modality and its potential to address a broad range of immune-mediated indications, positioning us to deliver significant therapeutic benefits to patients.

About Digestive Disease Week®

Digestive Disease Week® (DDW) is the largest international gathering of physicians, researchers and academics in the fields of gastroenterology, hepatology, endoscopy and gastrointestinal surgery. Jointly sponsored by the American Association for the Study of Liver Diseases (AASLD), the American Gastroenterological Association (AGA), the American Society for Gastrointestinal Endoscopy (ASGE) and the Society for Surgery of the Alimentary Tract (SSAT), DDW is an in-person and online meeting from May 3-6, 2025. The meeting showcases more than 5,600 abstracts and hundreds of lectures on the latest advances in GI research, medicine and technology. More information can be found at www.ddw.org

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For further information: https://topas-therapeutics.com/

[1] Espino L, Núñez C. The HLA complex and coeliac disease. Int Rev Cell Mol Biol. 2021;358:47-83. doi: 10.1016/bs.ircmb.2020.09.009. Epub 2020 Nov 11. PMID:33707057

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