Marengo Presents Initial Phase 2 Results Demonstrating Broad Single-Agent Activity of Invikafusp Alfa Across Multiple PD-1-Refractory or -Resistant Solid Tumors as a Late-Breaking Oral Presentation at ESMO 2025

- ***20.5% ORR and 79% DCR observed in heavily pretreated TMB-H or MSI-H/dMMR tumors across six major solid tumor types, including colorectal, lung, breast, gastric, GEJ, and head and neck cancers***
- ***52% of patients experienced target-lesion tumor shrinkage, suggesting strong PD-1 independent single-agent activity***
- ***Phase 2 monotherapy expansion ongoing in patients with tissue-agnostic TMB-H or MSI-H/dMMR tumors across sites in North America and Europe, including France and Spain***

Cambridge, Mass., October 17, 2025 – Marengo Therapeutics, Inc., a clinical-stage biotechnology company pioneering precision immunotherapies for oncology and inflammation & immunology (I&I), today presented the first disclosure of interim data from the ongoing Phase 2 trial of its lead program, invikafusp alfa, during a late-breaking oral session at the European Society for Medical Oncology (ESMO) 2025 Annual Meeting, taking place October 17-21, 2025, in Berlin, Germany.

These highly anticipated results continue to validate Marengo's first-in-class precision T cell activation platform – a novel approach aimed at fully addressing the significant unmet need for both PD-1 resistant and refractory patients, as well as those for whom PD-1 therapy is not currently indicated.

"The compelling single-agent activity and tumor regression we're observing across multiple tumor types, particularly in PD-1-resistant tumors, underscore the potential of invikafusp alfa as a new pan-tumor backbone immunotherapy," said Zhen Su, M.D., MBA, Chief Executive Officer of Marengo Therapeutics. "By selectively activating Vβ6/Vβ10 T-cell subsets, we are unlocking distinct immune biology that can reprogram the tumor microenvironment and reinvigorate anti-tumor T cell responses in patient populations who have exhausted current immunotherapies."

As of the July 29, 2025 data cutoff, 55 patients with advanced solid tumors harboring high mutational burden (TMB-H or MSI-H/dMMR) were enrolled across 21 histologies; 44 were efficacy-evaluable. Additional outcomes from the Phase 2 study are outlined below.

- Tumor shrinkage: 52% of patients experienced target-lesion regression.
- In the TMB-H patients, there was a 20.5% overall response rate (ORR) (9/44) and a 79.5% disease control rate (DCR) (35/44) across six tumor types, including colorectal, gastric, lung, breast, GEJ, and head and neck cancers.
- In the MSI-H/dMMR patients, there was a 30% ORR (3/10) and 70% DCR (7/10).
- Clinical efficacy was observed in PD-1-resistant/refractory tumors and PD-1 naive tumors where PD-1 was not approved as standard of care, confirming PD-1-independent activity.

- The safety profile was consistent with selective T cell activation mechanism of action, and treatment-related AEs were transient and manageable with supportive care.

Building on these clinical data, Marengo is advancing a post-PD-1, biomarker-enriched strategy for invikafusp alfa – continuing the Phase 2 monotherapy expansion in TMB-H or MSI-H/dMMR solid tumors to further characterize the depth and durability of responses across priority indications. In parallel, Marengo is pursuing ongoing regulatory interactions, including recently securing U.S. FDA Fast Track designation in TMB-H mCRC.

To reach broader, frontline populations beyond biomarker TMB-H in large indications, the company is also progressing a Phase 2 combination with Trodelvy® (TROP2-directed ADC) in TNBC and HR+/HER2– breast cancer to evaluate synergy in ADC and IO settings.

Invikafusp alfa is a first-in-class, bispecific dual T-cell agonist designed to selectively activate and expand Vβ6/Vβ10 T-cell subsets, which represent ~10% of tumor-infiltrating lymphocytes (TILs). Marengo's lead asset was designed to restore and amplify anti-tumor immunity in patients who have progressed on or are insensitive to prior immune checkpoint blockade, and it has demonstrated rapid progress to date. Phase 1/2 results of the STARt-001 clinical trial evaluating invikafusp alfa in antigen-rich solid tumors were first presented at SITC 2024, followed by disclosure of the recommended Phase 2 dose (RP2D) selection rationale and early clinical activity at AACR 2025.

About Marengo Therapeutics

Marengo Therapeutics, Inc., a clinical-stage biotech company, develops novel TCR-targeting antibodies that selectively modulate common and disease-specific T cell subsets of the germline TCR repertoire to provide lifelong protection against cancer and autoimmune diseases. With a passionate team of dedicated scientists experienced in immunology and oncology, and three proprietary platforms: Selective T Cell Activation Repertoire (STAR), Trispecific T Cell Engager (Tri-STAR) and T cell Depletor (MSTAR), Marengo is working to selectively target the right T cells in the right patients to create a world in which everyone's immune system can defeat cancer and autoimmune diseases. To learn more, visit marengotx.com.

About the STAR™ Platform

Marengo's STAR™ Platform is a multi-specific antibody-fusion platform derived from Marengo's proprietary library of antibodies targeting germline-encoded variable Vβ regions of the TCR fused to different T cell co-stimulatory moieties. Combining a novel non-clonal mode of TCR activation with a T cell co-stimulator in the same molecule promotes a distinct mechanism of action that promotes durable anti-tumor Vβ T cell responses

About Invikafusp alfa (STAR0602)

Invikafusp alfa (STAR0602) is the lead candidate from Marengo's STAR™ platform. It is designed to selectively activate a common Vβ T cell subset found in all cancers by combining a non-clonal mode of TCR activation with a T cell co-stimulatory signal in a single molecule. This innovative approach promotes the expansion of clonally diverse, effector memory Vβ T cells, enhancing anti-tumor immunity and enabling durable tumor clearance. Extensive preclinical studies demonstrate STAR0602's potent anti-tumor activity in both mouse and human ex vivo models via a novel mechanism of action.

About the STARt-001 Clinical Study

STARt-001 is a global Phase 1/2 clinical trial evaluating the safety, tolerability, and preliminary efficacy of invikafusp alfa as a monotherapy in biomarker-selected patients with advanced antigen-rich solid tumors, including PD-1 refractory and rare tumor types. The trial consists of two parts: Phase 1 dose escalation and Phase 2 dose expansion. For more information, visit clinicaltrials.gov (Identifier: NCT05592626).

Patients interested in participating in this study at the National Cancer Institute (NCI) can contact NCI's toll-free number: 1-800-4-CANCER (1-800-422-6237) (TTY: 1-800-332-8615), visit the website at https://trials.cancer.gov, or email NCIMO_referrals@mail.nih.gov.

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