Curtana Pharmaceuticals' CT-179 Overcomes Immunotherapy Resistance in Glioblastoma

Preclinical Study Reveals that CT-179 Remodels the Tumor Microenvironment – Turning "Cold" Tumors "Hot" – and Significantly Enhancing the Efficacy of Immune Checkpoint Inhibitors.

Austin, TX – February 2, 2026 – Curtana Pharmaceuticals, a clinical-stage biotechnology company focused on improving outcomes for brain cancer patients, today announced the publication of a pivotal new study in *The Journal of Clinical Investigation (JCI)*. The research, titled "Oligodendrocyte transcription factor 2 orchestrates glioblastoma immune evasion by suppressing CXCL10 and CD8+ T cell activation," elucidates a novel mechanism by which glioblastoma (GBM) evades the immune system and demonstrates how CT-179 can reverse this process to sensitize tumors to immunotherapy.

According to the National Brain Tumor Society, GBM is the most common and lethal primary brain tumor in adults. While immune checkpoint inhibitors (ICIs), such as anti-PD-L1 therapies, have revolutionized the treatment of cancers like melanoma and lung cancer, they have historically failed in GBM. This resistance is largely attributed to the "cold," immunosuppressive tumor microenvironment (TME) of GBM, which excludes cancer-killing T cells.

Breakthrough Science

The study, led by researchers at Chongqing Medical University, identifies the transcription factor OLIG2 as a master regulator of this immune evasion. The researchers discovered that OLIG2 recruits the protein HDAC7 to actively suppress the production of CXCL10, a critical signaling molecule responsible for attracting T cells.

Key findings from the publication include:

- **Mechanism of Evasion:** OLIG2-positive glioblastoma stem cells create an immune-suppressed niche by silencing CXCL10, thereby preventing CD8+ T cell infiltration and promoting pro-tumor macrophage activity.
- **Restoring Immunity:** Treatment with CT-179, Curtana's first-in-class OLIG2 inhibitor, disrupts the OLIG2/HDAC7 complex. This reactivates CXCL10 expression, effectively turning the tumor "hot" by recruiting cytotoxic T cells and reprogramming macrophages to an anti-tumor phenotype.
- **Synergistic Efficacy:** In preclinical models, the combination of CT-179 and anti-PD-L1 therapy significantly prolonged survival compared to either treatment alone, demonstrating that CT-179 can overcome the tumor's inherent resistance to checkpoint blockade.

Leadership Perspectives

"This publication in *The Journal of Clinical Investigation* represents a paradigm shift in our understanding of how glioblastoma protects itself from the immune system," said Gregory Stein, M.D., CEO of Curtana Pharmaceuticals. "We have long known that CT-179 targets the cancer stem cells that drive tumor recurrence. However, this study identifies the 'missing link' – the OLIG2/HDAC7/CXCL10 axis – that explains why these tumors are so resistant to immunotherapy. By unlocking CXCL10 expression, CT-179 effectively transforms a 'cold' tumor into a 'hot' target. These results provide a compelling scientific rationale for

combining CT-179 with checkpoint inhibitors, offering a promising new strategy for patients who currently have few alternatives."

Building on Clinical Momentum

These findings arrive as Curtana prepares for a significant milestone, the launch of the OPAL study – a multi-site Phase 1 trial of CT-179 in recurrent glioblastoma being conducted in Australia in partnership with the Cooperative Trials Group for Neuro-Oncology (COGNO) and the Australian Brain Cancer Research Alliance (ABCARA). The company anticipates enrolling the first patient in June of 2026.

This new data also complements pivotal studies published last year in *Nature Communications* regarding CT-179's efficacy in medulloblastoma and earlier this month in *Nature Communications* regarding CT-179's efficacy when combined with an EGFR inhibitor in glioblastoma. Collectively, these milestones reinforce OLIG2 as a high-value therapeutic target across multiple aggressive brain cancer indications.

About Curtana Pharmaceuticals

Curtana Pharmaceuticals, founded in 2013, is a privately held, clinical-stage biopharmaceutical company headquartered in Austin, Texas. Current investors include Thynk Capital, angelMD, Biosense Global, DEFTA Partners, and other anonymous investors. The company was also awarded a $7.6 million grant from the Cancer Prevention and Research Institute of Texas (CPRIT). Curtana focuses on the development of novel first-in-class, small molecule therapeutics targeting cancer stem cells in the central nervous system for the treatment of glioblastoma, low grade glioma, medulloblastoma, diffuse midline glioma, and other brain cancers. For more information, visit https://www.curtanapharma.com/.

About Chongqing Medical University

Founded in 1956, Chongqing Medical University (CQMU) is a premier medical university located in Chongqing, China. Originally established by a core group of faculty from the prestigious Shanghai First Medical College, CQMU has grown into a comprehensive medical institution renowned for its excellence in medical education and scientific research. The university acts as a major hub for healthcare in the region, operating a robust network of schools and affiliated hospitals—including The First Affiliated Hospital and The Second Affiliated Hospital—that integrate clinical care, teaching, and advanced biomedical research. CQMU is dedicated to tackling critical global health challenges, with specific strengths in oncology, immunology, and neuroscience. For more information, visit https://english.cqmu.edu.cn/.

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