FDA grants Breakthrough Therapy Designation for BrainChild Bio's B7-H3 CAR T-cell therapy for incurable pediatric brain tumors

Breakthrough Therapy Designation is based on the encouraging survival data from the Phase 1 BrainChild-03 trial in children and young adults with diffuse intrinsic pontine glioma (DIPG)

BrainChild Bio advancing BCB-276 towards BLA submission with a single pivotal Phase 2 trial planned to commence in Q4 2025

SEATTLE, WA and Cambridge, MA, April 22, 2025 – BrainChild Bio, Inc., a clinical-stage biotechnology company developing CAR T-cell therapies to treat tumors in the central nervous system (CNS), today announced that the investigational B7-H3 targeting autologous CAR T-cell therapy has been granted Breakthrough Therapy designation (BTD) by the U.S Food and Drug Administration (FDA) for the treatment of diffuse intrinsic pontine glioma (DIPG), an incurable pediatric brain tumor. This FDA designation was based on the promising overall survival benefit in patients with brain tumors treated with an autologous B7-H3 CAR T-cell therapy observed in the BrainChild-03 Phase 1 trial (NCT04185038), conducted by BrainChild Bio's academic partner, Seattle Children's, and recently published in *Nature Medicine*.

"Breakthrough Therapy designation gives us the possibility to accelerate the development path for BCB-276 as a CAR T-cell therapy that can potentially transform the treatment of DIPG," stated Michael Jensen, MD, Founder and Chief Scientific Officer of BrainChild Bio. "This designation is a major milestone for the children and families afflicted with these devastating brain tumors and represents a new paradigm for treating CNS brain tumors in children and adults, including a large number of patients suffering with glioblastomas and brain metastases."

FDA grants Breakthrough Therapy designation to investigational medicines that demonstrate the potential to treat a serious or life-threatening condition and show preliminary clinical evidence that the drug may show substantial clinical improvement over available therapies. Investigational medicines with BTD are provided early and more frequent interactions with the FDA to discuss the product candidate's development plan in addition to being eligible for rolling submission and priority review of the marketing application.

"This designation is an important milestone for Seattle Children's and demonstrates our continued momentum in pediatric brain cancer research," said Dr. Jeff Sperring, Chief Executive Officer of Seattle Children's. "We harness the power of research to bring potential cures to kids faster, and we're excited by the early promise shown by our work with BrainChild Bio to advance a potential CAR T therapy."

BrainChild Bio is preparing to advance BCB-276 in a Phase 2 multi-center, pivotal registration trial to support a potential Biologics License Application (BLA) to the FDA for the treatment of children and young adults with DIPG. This clinical plan is based on alignment between BrainChild Bio and FDA at a Type B meeting in late 2024.

About Diffuse Intrinsic Pontine Glioma (DIPG) and Application of CAR T-cell Therapies

Diffuse intrinsic pontine glioma (DIPG) is a primary high-grade brain tumor that arises in the pons and is uniformly fatal. DIPG affects approximately 300 children per year in the U.S. with the majority of diagnoses made in children between 5 and 10 years of age. Current standard-of-care treatment remains limited to palliative focal radiation therapy which results in a median overall survival of only about 11 months from diagnosis.[1] Barriers to effective therapies for DIPG include the precarious location of the tumor in the brainstem, the infiltrative growth of the tumor throughout normal brainstem functional anatomy, and the blood brain barrier that remains relatively intact during tumor progression preventing therapies from gaining access to the cancer.

The barriers to effective therapies for DIPG can be effectively overcome by the locoregional delivery of appropriately targeted CAR T-cells directly into the cerebrospinal fluid via intracerebroventricular (ICV) dosing with an indwelling reservoir-catheter device. This enables the potential for extensive exposure of the pons to cerebrospinal fluid flow from the ventricular system, thus permitting infused CAR T-cells to directly access the tumor bed. This also allows for repetitive infusions of CAR T-cells to replenish the tumor bed, offering the potential for more durable and sustained efficacy. Additionally, with the blood brain barrier intact, this therapeutic approach can also minimize any on-target, off-tumor toxicities resulting from systemic exposure of CAR T cells.

About BrainChild Bio

BrainChild Bio, Inc., is a kids-first, clinical-stage biotechnology company harnessing the power of CAR T-cell technology to treat tumors in the central nervous system, prioritizing pediatric indications with plans to expand into adult CNS tumors, specifically Glioblastoma and brain metastasis. BrainChild Bio was launched out of Seattle Children's Therapeutics program and founded on the work of Dr. Michael Jensen, a pioneer in the cancer immunotherapy field and previous Chief Therapeutics Officer at Seattle Children's. BrainChild Bio is advancing a next-generation CAR T-cell therapy platform for tumors of the CNS that weaves together synthetic technologies, including multiplex targeting and enhanced potency controls, to enable multiple targets in a single CAR T-cell therapy, novel transgenes to increase potency, delivery technology for durable efficacy, and streamlined CAR T-cell design and manufacturing. BrainChild Bio's lead drug candidate is BCB-276, an autologous CAR T-cell therapy that targets the immune checkpoint B7-H3, that is advancing in clinical trials for the treatment of diffuse intrinsic pontine glioma (DIPG), a pediatric cancer that forms in the brainstem which currently has no approved treatments. More information is available at www.brainchildbio.com.

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[1] DIPG Registry.