LogicBio Therapeutics Announces FDA Lifts Clinical Hold on SUNRISE Trial in Pediatric Patients with Methylmalonic Acidemia

May 9, 2022

–Company initiates activities to resume dosing

–Interim clinical data from Phase 1/2 trial expected to be presented by end of second quarter 2022

LEXINGTON, Mass., May 9, 2022 /PRNewswire/ -- LogicBio® Therapeutics, Inc. (Nasdaq: LOGC), a clinical-stage company advancing a diversified pipeline of genetic medicines addressing rare disorders from infancy through adulthood, today announced that the U.S. Food and Drug Administration (FDA) has lifted the clinical hold on the company's LB-001 Investigational New Drug Application (IND), allowing patient enrollment to resume in the Phase 1/2 SUNRISE trial for pediatric patients with methylmalonic acidemia. In its letter, the FDA acknowledged that the company satisfactorily addressed all clinical hold issues. The company has initiated activities to resume dosing as soon as possible.

"We are pleased that the FDA has completed its review of the information we provided and that the hold on our LB-001 IND has been lifted," said Frederic Chereau, president and chief executive officer of LogicBio. "We look forward to dosing the next patient in our SUNRISE trial, which we expect will occur in the third quarter of 2022."

As previously disclosed, the FDA placed the IND for LB-001 on clinical hold following the occurrence of two serious adverse events, categorized as cases of thrombotic microangiopathy (TMA), in the company's SUNRISE trial. Both cases of TMA resolved within weeks.

In connection with the lifting of the clinical hold, LogicBio amended the SUNRISE protocol in a manner that reflected its dialogue with the FDA. LogicBio expects to proceed with dosing after it implements the changes to the SUNRISE protocol, which include enhanced monitoring measures, such as frequent testing for complement activation, a characteristic of TMA, as well as the use of a complement inhibitor in the event there are laboratory findings indicating a potential TMA. LogicBio plans to treat the next patients, who may be as young as six months old, at the 5e13 vg/kg dose and continually assess safety outcomes.

Following the lifting of the clinical hold, the company announced that it is reinstating its previous guidance and expects to present interim clinical data from the SUNRISE trial by the end of the second quarter of 2022.

About LogicBio Therapeutics

LogicBio® Therapeutics is a clinical-stage genetic medicine company pioneering genome editing and gene delivery platforms to address rare and serious diseases from infancy through adulthood. The company's genome editing platform, GeneRide®, is a new approach to precise gene insertion harnessing a cell's natural DNA repair process potentially leading to durable therapeutic protein expression levels. The company's gene delivery platform, sAAVy™, is an adeno-associated virus (AAV) capsid engineering platform designed to optimize gene delivery for treatments in a broad range of indications and tissues. The company is based in Lexington, MA. For more information, visit www.logicbio.com, which does not form a part of this release.

About the SUNRISE Trial

The SUNRISE trial is an open-label, multi-center, Phase 1/2 clinical trial designed to assess the safety, tolerability and preliminary efficacy of a single intravenous infusion of LB-001 in pediatric patients with methylmalonic acidemia (MMA) characterized by methylmalonyl-CoA mutase gene (MMUT) mutations. With the aim of evaluating LB-001 at an early age, the SUNRISE trial is designed to enroll patients with ages ranging from six months to twelve years and evaluate a single administration of LB-001 at two dose levels (5e13 vg/kg and 1e14 vg/kg) with dose escalation subject to certain conditions.

About LB-001

LB-001 is an investigational, first-in-class, single-administration, genome editing therapy for early intervention in methylmalonic acidemia (MMA) using LogicBio's proprietary GeneRide® drug development platform. GeneRide technology utilizes a natural DNA repair process called homologous recombination that enables precise editing of the genome without the need for exogenous nucleases and promoters that have been associated with an increased risk of immune response and cancer. LB-001 is designed to non-disruptively insert a corrective copy of the methylmalonyl-CoA mutase (MMUT) gene into the albumin locus to drive lifelong therapeutic levels of MMUT expression in the liver, the main site of MMUT expression and activity. LB-001 is delivered to hepatocytes intravenously via liver-targeted, engineered recombinant adeno-associated virus vector (rAAV-LK03). Preclinical studies found that LB-001 was safe and demonstrated transduction of hepatocytes, site-specific genomic integration, and transgene expression. LB-001–corrected hepatocytes in a mouse model of MMA demonstrated preferential survival and expansion (selective advantage), thus contributing to a progressive increase in hepatic MMUT expression over time. LB-001 resulted in improved growth, metabolic stability, and survival in MMA mice. The U.S. Food and Drug Administration (FDA) granted fast track designation, rare pediatric disease designation and orphan drug designation for LB-001 for the treatment of MMA. In addition, the European Medicines Agency (EMA) granted orphan drug designation for LB-001 for the treatment of MMA.

About Methylmalonic Acidemia (MMA)

Methylmalonic acidemia (MMA) is a rare and life-threatening genetic disorder affecting approximately 1 in 50,000 newborns in the United States. In the

most common form of MMA, a mutation in a gene called methylmalonyl-CoA mutase (MMUT) prevents the body from properly processing certain fats and proteins. As a result, toxic metabolites accumulate in the liver, in muscle tissue and in the brain. Symptoms include vomiting, lethargy, seizures, developmental delays and organ damage. There is no approved medical therapy addressing the underlying cause of the disease. To manage the symptoms, patients go on a severely restrictive, low-protein, high-calorie diet, often through a feeding tube. Even with aggressive management, these patients often experience life-threatening metabolic crises that can require recurrent hospitalizations and cause permanent neurocognitive damage. Because of this risk for irreversible damage, early intervention is critical, and newborns are screened for MMA in every state in the United States.

Forward-Looking Statements

Statements in this press release regarding LogicBio®'s strategy, plans, prospects, expectations, beliefs, intentions and goals are forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, as amended, including but not limited to statements regarding resumption of the SUNRISE clinical trial and timing thereof; our expectations to continue enrollment and dosing of clinical trial subjects and timing thereof; the potential of the GeneRide® platform; and the anticipated timing of announcing interim clinical data. The terms "aim," "anticipate," "designed," "enables," "evaluate," "expects to," "look forward to," "will," and similar references are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Each forward-looking statement is subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statement, including the risk that we will need to obtain the approval of each clinical trial site's institutional review board prior to resuming dosing in our SUNRISE trial; we may encounter difficulties enrolling patients; the potential direct or indirect impact of the COVID-19 pandemic on our business, operations, and the markets and communities in which we and our partners, collaborators and vendors operate; manufacturing risks; risks associated with management and key personnel changes and transitional periods; the actual funding required to develop and commercialize product candidates, including for safety, tolerability, enrollment, manufacturing or economic reasons; the timing and content of decisions made by regulatory authorities; the actual time it takes to initiate and complete clinical studies; the competitive landscape; changes in the economic and financial conditions of LogicBio; and LogicBio's ability to obtain, maintain and enforce patent and other intellectual property protection for LB-001 and any other product candidates. Other risks and uncertainties include those identified under the heading "Risk Factors" in LogicBio's Annual Report on Form 10-K for the year ended December 31, 2021 and other filings that LogicBio may make with the U.S. Securities and Exchange Commission in the future. These forward-looking statements (except as otherwise noted) speak only as of the date of this press release, and LogicBio does not undertake, and specifically disclaims, any obligation to update any forward-looking statements contained in this press release.

Investor Contact:

Stephen Jasper
Gilmartin Group
(858) 525-2047
stephen@gilmartin.com

Media Contact:

Adam Daley
Berry & Company Public Relations
W:212-253-8881
C: 614-580-2048
adaley@berrypr.com