Logic Bio THERAPEUTICS

Genome editing for pediatric diseases

April 28th, 2019

Disclaimer

LogicBio Therapeutics, Inc. has filed a Registration Statement on Form S-1 (File No. 333-227523), as amended (the "Registration Statement"), with the Securities and Exchange Commission ("SEC") in connection with the offering to which this presentation relates. Before you invest, you should read the Registration Statement, the preliminary prospectus included within the Registration Statement, and other documents we have filed with the SEC for more complete information about us and this offering. You can obtain these documents for free by visiting EDGAR on the SEC website at www.sec.gov. Alternately, copies of the preliminary prospectus may be obtained by contacting Jefferies LLC, Attention: Equity Syndicate Prospectus Department, 520 Madison Avenue, 2nd Floor, New York, NY 10022, or by telephone at (877) 821-7388, or by email at Prospectus_Department@Jefferies.com.

We are an "emerging growth company" within the meaning of the Jumpstart Our Business Startup Act of 2012. As a result, we will be subject to reduced public company reporting requirements. No securities will be offered or sold and no offers to buy will be accepted prior to the time the Registration Statement becomes effective.

This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such data and estimates. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

This informational meeting regarding LogicBio Therapeutics, Inc. is strictly confidential and is for you to familiarize yourself with the company. We request that you keep any information we provide at this meeting strictly confidential and that you do not disclose any of the information to any other parties without the company's prior express written permission. By attending this meeting, you agree to the foregoing confidentiality restrictions.

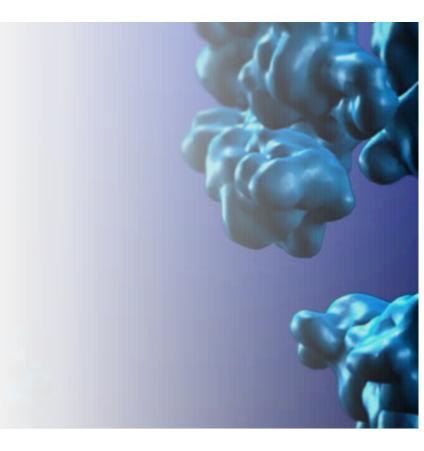
We anticipate that this presentation may contain forward-looking statements, including about our future expectations, plans and prospects, including statements about the preclinical and clinical development of our product candidates, timing of regulatory filings and other statements containing the words "anticipate," "believe," "continue," "could," "estimate," "expect," "hypothesize," "intend," "may," "plan," "potential," "predict," "project," "should," "target," "would," and similar expressions. All forward-looking statements are subject to a number of risks, uncertainties and assumptions, and you should not rely upon forward-looking statements as predictions of future events. All forward-looking statements will be based upon current estimates and expectations about future events and financial and other trends. There is no guarantee that future results, performance or events reflected in the forward-looking statements will be achieved or occur. No person assumes responsibility for the accuracy and completeness of the forward-looking statements, and, except as required by law, no person undertakes any obligation to update any forward-looking statements for any reason after the date of this presentation.



LogicBio Therapeutics

Striving to deliver on the promise of genetic medicine to transform the life of pediatric patients with rare disease

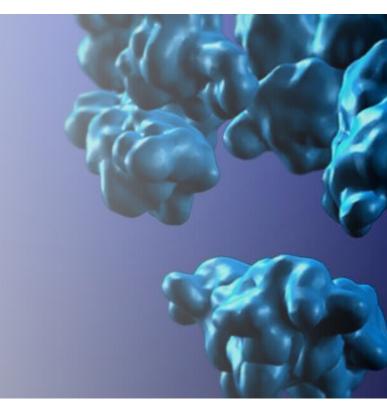
- **GeneRide**[™]: first-in-class genome editing proprietary platform for a durable treatment from a single injection
- Modular and broadly applicable platform with robust research pipeline
- Lead product LB-001 for methylmalonic acidemia, a rare inborn error of metabolism
- Experienced leadership team with track record of bringing novel drugs to market
- Successful IPO in October 2018 raising \$80.5 million





GeneRide[™]: designed to deliver durable, precise and safer transformative therapies

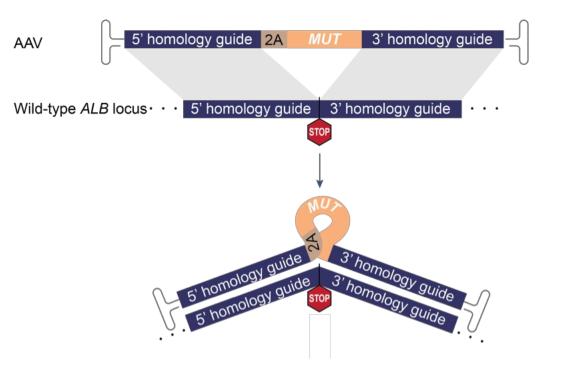
- Nuclease-free genome editing by leveraging homologous recombination
- Therapeutic transgene expression driven by strong endogenous promoters
- Site-specific integration
- Durable treatment achieved with a single vector therapy in animal disease models





GeneRide: genome editing without nucleases

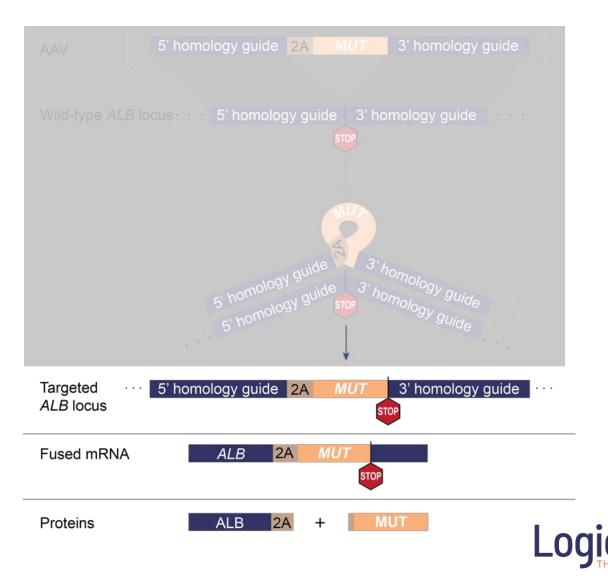
- Leverages the natural process of homologous recombination (HR)
- Achieves genome editing without engineered nucleases
- High fidelity, site-specific integration, driven by long homology guides
- Non-disruptive integration of therapeutic transgenes





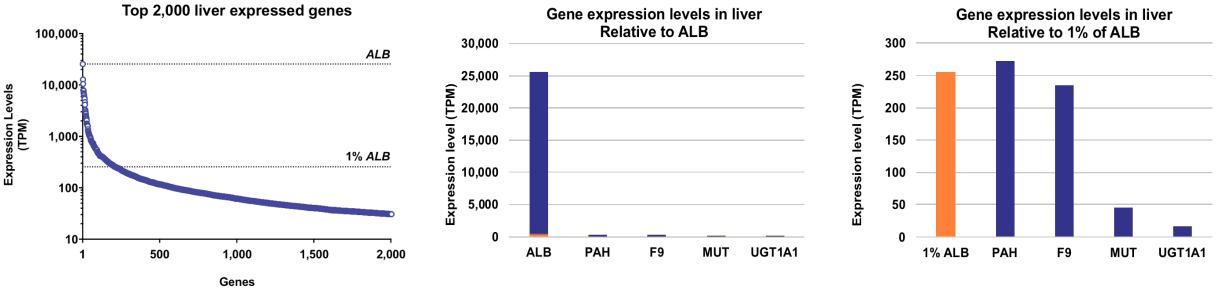
GeneRide: expression without promoters

- Leverages the natural process of homologous recombination (HR)
- Achieves genome editing without engineered nucleases
- High fidelity, site-specific integration, driven by long homology guides
- Non-disruptive integration of therapeutic transgenes
- Harnesses potent endogenous
 promoters to express transgenes



Liver-directed programs: riding the albumin promoter for therapeutic benefit

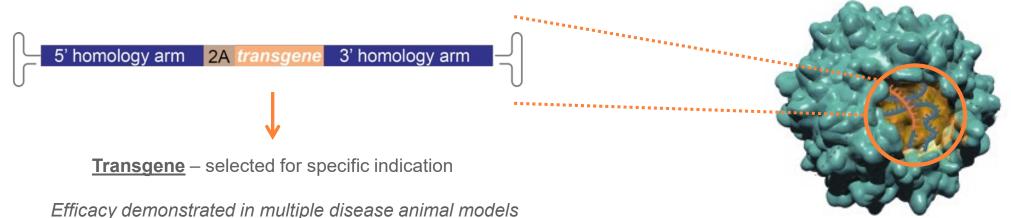
- Albumin is the most abundant protein in circulation and the most highly expressed gene in the liver
- Modest rates of integration at the ALB locus is sufficient to achieve near physiological expression levels of many disease-related liver proteins



Transcriptional profiling data from The GTEx Project

ALB – Albumin PAH – phenylalanine hydroxylase (PKU) F9 – Factor IX (Hemophilia B) MUT – Methylmalonyl-CoA mutase (MMA) UGT1A1 - UDP glucuronosyltransferase family 1 member A1 (Crigler-Najjar syndrome)

GeneRide: a modular and broadly applicable platform

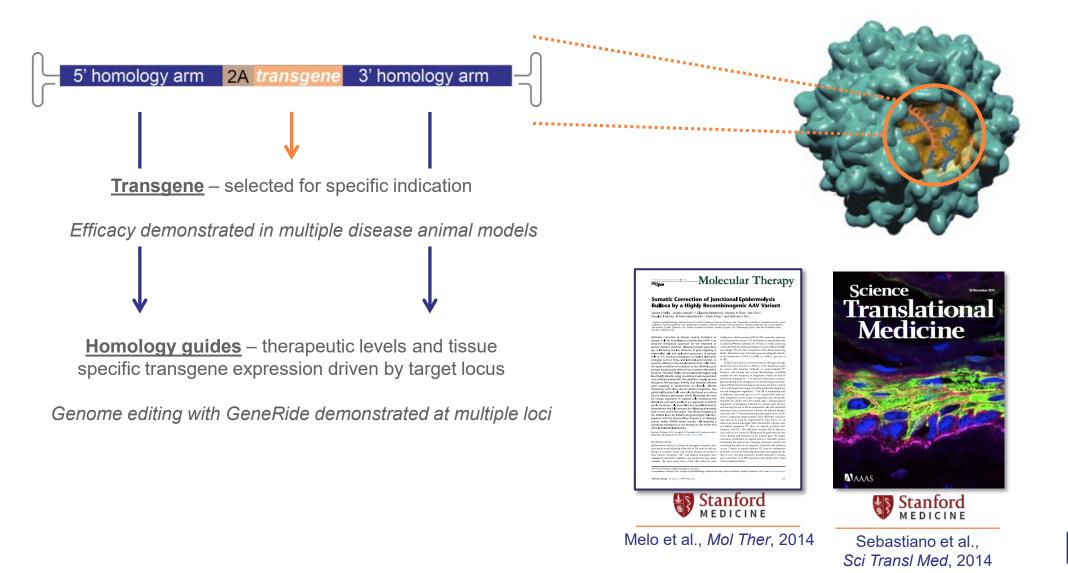


Efficacy demonstrated in multiple disease animal models

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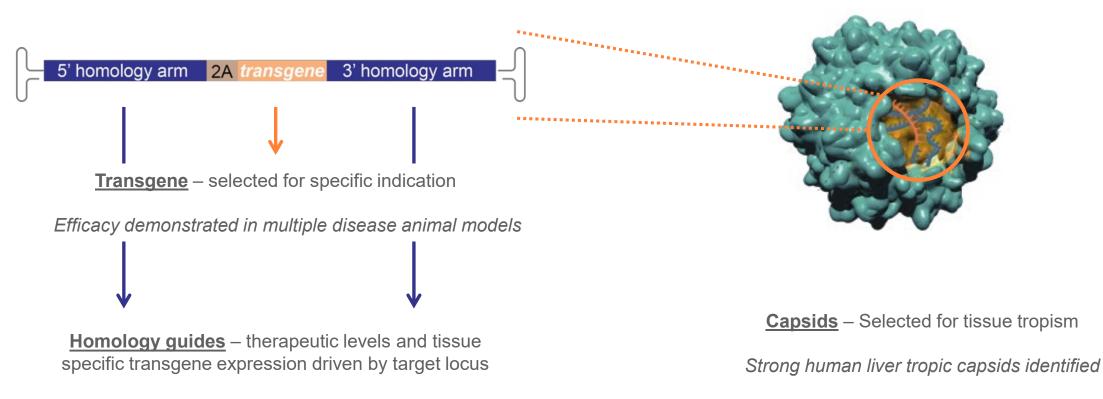


GeneRide: a modular and broadly applicable platform



Logic Bio

GeneRide: a modular and broadly applicable platform



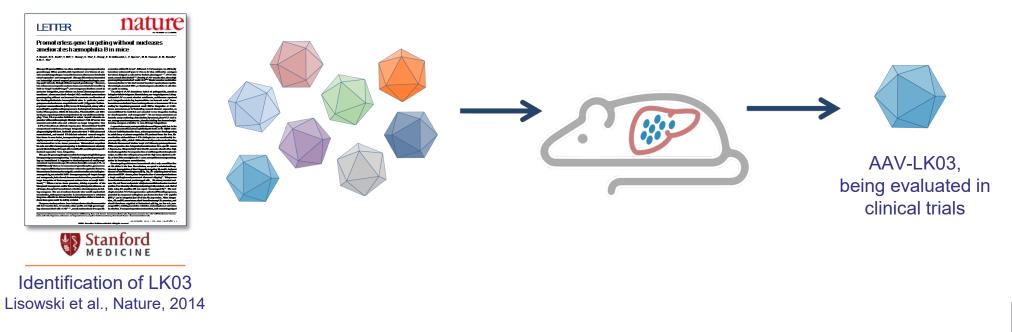
Genome editing with GeneRide demonstrated at multiple loci

Other tissue specific capsids in development



Identification of potent liver-targeting AAV to support our genome editing platform

- Best-in-class: novel approach identified human hepatocyte targeting capsid LK03
- Clinical translation: LK03 optimized to target human hepatocytes
- Broad IP: expanded to include additional novel capsids with enhanced tissue tropism





Pipeline

Growing pipeline across indications and target tissues

THERAPEUTIC AREA	CANDIDATE	DISCOVERY	IND ENABLING	PHASE 1/2	PHASE 3
Liver	LB-001	Methylmalonic acidemi	ia (MMA)		
Discovery Engin Indication selection • High unmet need	e Process	Initial target tiss Liver 	ue	Liver targeted candidate • AAV-LK03 • ALB locus • Disease related transgene	es
 Neonatal onset Potential for meaningful Well understood biology Existing animal models / 	·	 New target tissu Muscle CNS 	es	 New tissue candidates Tissue tropic capsid Highly expressed, tissue sp integration locus Disease related transgene 	

Methylmalonic acidemia

Life-threatening inborn error of metabolism with no treatment options

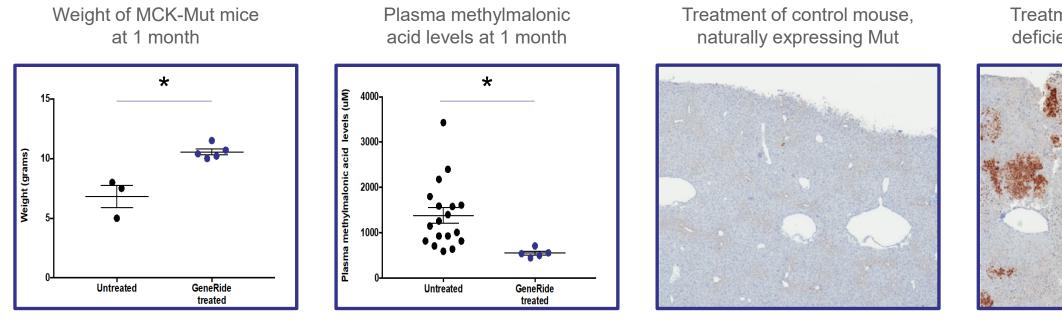
- Incidence: 1 in 50,000 births (US)
- Organic acidemia caused by mutations in *MUT* pathway
- Results in metabolic deficiency and inability to metabolize AA
- Restricted diet: strict low-protein, high-calorie



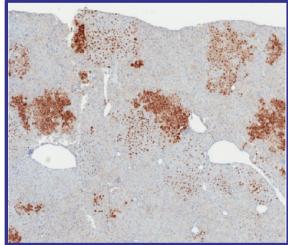
- Poor quality of life with frequent hospitalizations
- No treatment, only aggressive management of symptoms
- Often fatal in newborns, life expectancy of 20 – 30 years
- Liver or liver-kidney transplants often needed



GeneRide integrated *MUT* to provide hepatocytes with a durable selective advantage in animal models













LogicBio

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