Encoded Therapeutics Provides Pipeline Updates From Its Vector Engineering Platform Ahead of Four Preclinical Presentations at the 27th Annual Meeting of the American Society of Gene & Cell Therapy (ASGCT)

Four newly disclosed programs follow clinical-stage Dravet syndrome gene therapy ETX101 Non-human primate (NHP) data support non-monogenic program in Lennox-Gastaut syndrome and demonstrate proof-of-concept for vectorized miRNA-based UBE3A upregulation in Angelman syndrome Promising early data suggest potential next generation therapeutics for neuropathic pain & Alzheimer's disease

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SOUTH SAN FRANCISCO, Calif.--(BUSINESS WIRE)--Encoded Therapeutics Inc., a biotechnology company developing genetic medicines for severe central nervous system (CNS) disorders, today unveiled multiple pipeline programs ahead of the 27th ASGCT Annual meeting on May 7 - 11, 2024 in Baltimore, MD. Presentations will highlight progress of preclinical programs for Angelman syndrome, Lennox-Gastaut syndrome (LGS), STXBP1-related disorders (STXBP1-RD), Alzheimer's disease (*MAPT*) and neuropathic pain (*SCN9A*), together with innovations in the company's vector engineering platform.

"Our ASGCT presentations showcase the depth and versatility of our vector engineering platform to develop highly specific precision therapies for CNS disorders with high unmet need," said Stephanie Tagliatela, Chief Scientific Officer at Encoded. "Combining our novel regulatory elements and transgenes provides control of expression in target cells, potentially enabling treatment of devastating, intractable diseases. Building on our strong foundation in neuroscience, we are leveraging the experience and infrastructure established for our Dravet syndrome program, ETX101, to rapidly advance our promising pipeline of potentially best-in-class gene therapies."

Platform Innovations

Encoded is engineering precision and selectivity into gene therapy constructs by combining highly selective and potent regulatory elements (REs) with novel transgenes to customize expression and functionality while minimizing off-target effects. These modular elements are compatible with multiple capsids and gene delivery systems.

Novel REs developed by Encoded include those for GABA selectivity to target expression to GABAergic (inhibitory) interneurons, utilized by the clinical-stage program ETX101 for Dravet syndrome and the preclinical program for LGS. For STXBP1-RD, regulatory element engineering has been harnessed to drive potent, neuron-specific expression in the brain, while de-targeting expression in dorsal root ganglia (DRG).

Engineered transgenes include transcription factors (eTFs) that upregulate the expression of endogenous genes as well miRNA sequences derived from Encoded's miRNA discovery platform. A miRNA approach is utilized by the Angelman syndrome, Alzheimer's disease and neuropathic pain programs, each of which demonstrate robust gene silencing or knockdown of their respective targets.

"The data we're sharing at ASGCT highlights our platform's ability to achieve precise, targeted expression of transgenes

with unique functionality, addressing technical limitations that exist today. This enables us to potentially unlock first-in-class gene therapies in monogenic disorders, like Dravet and Angelman syndromes, while also advancing potentially best-in-class gene therapies into more common diseases such as LGS, Alzheimer's disease and neuropathic pain," said Encoded CEO Kartik Ramamoorthi, Ph.D. "This is a significant maturation of our pipeline, and future success in these indications has the potential to transform the lives of many people living with severe CNS diseases."

ASGCT Annual Meeting Presentations

Oral Presentation Details

Title: GABA Selective AAV-mediated Gene Therapy Provides Durable Seizure Protection in Multiple Refractory Epilepsy Models (Abstract #19)
Session: AAV Vectors - Preclinical and Proof-of-Concept: Therapy Focus
Date & Time: Tuesday, May 7, 1:45–2:00 p.m. ET
Location: Ballroom 2

Poster Presentation Details

Title: Advancing Gene Therapy for STXBP1-related Disorders Through Targeted Vector Engineering: Efficacy and Safety Results in Mice and Non-Human Primates (Abstract #508)

Date & Time: Wednesday, May 8, 5:30–7:00 p.m. ET
Location: Exhibit Hall

Title: A Vectorized miRNA-based Approach to Unsilence UBE3A in Angelman Syndrome (Abstract #1125)
Date & Time: Thursday, May 9, 5:30–7:00 p.m. ET
Location: Exhibit Hall

Title: Identification of Potent and Selective AAV-miRNA Candidates to Knockdown Non-Monogenic Neurological Targets *SCN9A* (Pain) and *MAPT* (Tauopathies) (Abstract #1601)
Date & Time: Friday, May 10, 5:30–7:00 p.m. ET
Location: Exhibit Hall

Scientific Symposium Details

Title: Searching for Goldilocks – Scaling for AAV Clinical Dose Prediction
Presentation: Dose Scaling from Preclinical Models to First-In-Human (FIH) for Local CNS AAV Gene Therapies
Date & Time: Thursday, May 9, 8:00–8:25 a.m. ET
Location: Ballroom 4
Presenter: Stephanie Tagliatela

Full abstracts are available on the ASGCT meeting website.

About Encoded Therapeutics

Encoded Therapeutics is a clinical-stage genetic medicines company developing potentially disease-modifying therapies to improve the lives of people with severe CNS disorders. Our proprietary vector engineering approach combines novel regulatory elements and payloads with AAV vectors to unlock innovative solutions for debilitating, intractable CNS conditions. At the forefront is our flagship clinical program, ETX101 for Dravet syndrome, which targets the underlying cause of the disorder to enable highly selective upregulation of *SCN1A* for potentially long-lasting benefit. In parallel, we are advancing a pipeline of potentially best-in-class programs to address significant unmet needs across both monogenic and prevalent CNS conditions. Harnessing our proprietary technology platform and expertise, we are able to efficiently advance programs from discovery through clinical development. Encoded is committed to pioneering breakthrough treatments for CNS disorders. For more information, please visit **www.encoded.com**.