Taysha Gene Therapies Announces Details for Oral Presentations at the 2025 IRSF Rett Syndrome Scientific Meeting Reviewing Recent Updates from the TSHA-102 Clinical Program

Recently disclosed clinical cohort data from high ($1x10^{15}$ total vg) and low dose ($5.7x10^{14}$ total vg) TSHA-102 from REVEAL adolescent/adult and pediatric Phase 1/2 trials

Caregiver research regarding gain/regain of developmental milestones supporting alignment with FDA on primary endpoint in the pivotal Part B trial of TSHA-102

Previously disclosed preclinical data supporting broad biodistribution across brain and spinal cord regions following lumbar intrathecal delivery of AAV9 gene therapy vectors in non-human primates

Symposium on Rett syndrome natural history data findings

DALLAS, June 03, 2025 (GLOBE NEWSWIRE) -- Taysha Gene Therapies, Inc. (Nasdaq: TSHA) (Taysha or the Company), a clinical-stage biotechnology company focused on advancing adeno-associated virus (AAV)-based gene therapies for severe monogenic diseases of the central nervous system (CNS), today announced details for three oral presentations reviewing recent updates supporting its TSHA-102 program in clinical evaluation for Rett syndrome, and a Taysha-hosted symposium on the Company's analysis of the natural history study data at the 2025 International Rett Syndrome Foundation (IRSF) Rett Syndrome Scientific Meeting, taking place in Boston from June 9-11, 2025. The three presentations will also be presented during a poster session on Monday, June 9, 2025, from 5:00-7:00 PM EST. Additional details on the meeting can be found at IRSF's website.

"We are excited to present data supporting our TSHA-102 clinical program and its potential to improve function or enable achievement of developmental milestones that would significantly improve quality of life. Importantly, these findings have increased our conviction in the differentiated potential of TSHA-102 to address the high unmet needs for patients and families suffering from this devastating disease," said Sukumar Nagendran, M.D., President and Head of Research & Development at Taysha. "We appreciate IRSF and their ongoing partnership, as well as the individuals with Rett syndrome, their caregivers and the clinicians who contributed to the important research that has increased our understanding of the disease progression and supported our alignment with the Food and Drug Administration (FDA) on a potential path to registration."

2025 IRSF Rett Syndrome Scientific Meeting Oral Presentation Details

Title: REVEAL Adolescent/Adult and Pediatric Clinical Trial Update: Safety and Efficacy Data on TSHA-102 AAV9 Investigational Gene Therapy in Clinical Evaluation for Rett Syndrome
Date/Time: Wednesday, June 11, 2025, 9:30 AM EST
Session: Industry Updates
Presenters: Elsa Rossignol, M.D., FRCP, FAAP, Associate Professor in Neuroscience and Pediatrics at the Université de Montréal, Director of the Rett Multidisciplinary Clinic of the CHU Sainte-Justine and Principal Investigator of the REVEAL Adolescent/Adult and Pediatric trials

Title: Every Gain, Expanding Possibilities: Caregiver Insights on Meaningful Improvement in Rett Syndrome Gene Therapy (GT)
Date/Time: Tuesday, June 10, 2025, 12:20 PM EST
Session: Biomarkers and Outcome Measures
Presenters: Jenny Downs, MSc Ph.D., Program Head, Development and Disability at The Kids Research Institute Australia

Title: rAAV9 Vector Biodistribution in Brain and Spinal Cord via Lumbar Intrathecal Infusion in Nonnhuman Primates (NHP): Assessing the Administration Route Leveraged in TSHA-102 Rett Syndrome Clinical Trials
Date/Time: Tuesday, June 10, 2025, 10:10 AM EST
Session: Model Systems
Presenters: Fred Porter, Ph.D., Chief of Staff and Technical Operations Officer of Taysha

Taysha-Hosted Symposium: Gain and Regain of Developmental Milestones: How Natural History Insights are Redefining the Therapeutic Development for Rett Syndrome
Date/Time: Tuesday, June 10, 2025, 7:30 AM EST
Presenter: Jeffrey Neul, M.D., Ph.D., Director, Vanderbilt Kennedy Center, Annette Schaffer Eskind Chair, Professor at the Vanderbilt University Medical Center, who served as Administrative Head of the Rett Syndrome Natural History Study

About TSHA-102
TSHA-102 is a self-complementary intrathecally delivered AAV9 investigational gene transfer therapy in clinical evaluation for Rett syndrome. Designed as a one-time treatment, TSHA-102 aims to address the genetic root cause of the disease by delivering a functional form of *MECP2* to cells in the CNS. TSHA-102 utilizes a novel miRNA-Responsive Auto-Regulatory Element (miRARE) technology designed to mediate levels of *MECP2* in the CNS on a cell-by-cell basis without risk of overexpression. TSHA-102 has received Regenerative Medicine Advanced Therapy, Fast Track and Orphan Drug and Rare Pediatric Disease designations from the FDA, Orphan Drug designation from the European Commission and Innovative Licensing and Access Pathway designation from the Medicines and Healthcare products Regulatory Agency.

About Rett Syndrome
Rett syndrome is a rare neurodevelopmental disorder caused by mutations in the X-linked *MECP2* gene encoding methyl CpG-binding protein 2 (MeCP2), which is essential for regulating neuronal and synaptic function in the brain. The disorder is characterized by loss of communication and hand function, slowing and/or regression of development, motor and respiratory impairment, seizures, intellectual disabilities and shortened life expectancy. Rett syndrome progression is divided into four key stages, beginning with early onset stagnation at 6 to 18 months of age followed by

rapid regression, plateau and late motor deterioration. Rett syndrome primarily occurs in females and is one of the most common genetic causes of severe intellectual disability. Currently, there are no approved disease-modifying therapies that treat the genetic root cause of the disease. Rett syndrome caused by a pathogenic/likely pathogenic *MECP2* mutation is estimated to affect between 15,000 and 20,000 patients in the U.S., EU, and U.K.

About Taysha Gene Therapies

Taysha Gene Therapies (Nasdaq: TSHA) is a clinical-stage biotechnology company focused on advancing adeno-associated virus (AAV)-based gene therapies for severe monogenic diseases of the central nervous system. Its lead clinical program TSHA-102 is in development for Rett syndrome, a rare neurodevelopmental disorder with no approved disease-modifying therapies that address the genetic root cause of the disease. With a singular focus on developing transformative medicines, Taysha aims to address severe unmet medical needs and dramatically improve the lives of patients and their caregivers. The Company's management team has proven experience in gene therapy development and commercialization. Taysha leverages this experience, its manufacturing process and a clinically and commercially proven AAV9 capsid in an effort to rapidly translate treatments from bench to bedside. For more information, please visit www.tayshagtx.com.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as "anticipates," "believes," "expects," "intends," "projects," "plans," and "future" or similar expressions are intended to identify forward-looking statements. Forward-looking statements include statements concerning the potential of TSHA-102, including the reproducibility and durability of any favorable results initially seen in patients dosed to date in clinical trials, including with respect to functional milestones, and our other product candidates to positively impact quality of life and alter the course of disease in the patients we seek to treat, our research, development and regulatory plans for our product candidates, including the timing of initiating additional trials, reporting data from our clinical trials and making regulatory submissions, communications from the FDA on the regulatory pathway for TSHA-102, and the potential for these product candidates to receive regulatory approval from the FDA or equivalent foreign regulatory agencies. Forward-looking statements are based on management's current expectations and are subject to various risks and uncertainties that could cause actual results to differ materially and adversely from those expressed or implied by such forward-looking statements. Accordingly, these forward-looking statements do not constitute guarantees of future performance, and you are cautioned not to place undue reliance on these forward-looking statements. Risks regarding our business are described in detail in our Securities and Exchange Commission (SEC) filings, including in our Annual Report on Form 10-K for the full-year ended December 31, 2024, and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2025, which are available on the SEC's website at www.sec.gov. Additional information will be made available in other filings that we make from time to time with the SEC. These forward-looking statements speak only as of the date hereof, and we disclaim any obligation to update these statements except as may be required by law.

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