



## MeiraGTx Announces Positive Data from Randomized, Sham-controlled Clinical Bridging Study of AAV-GAD for the Treatment of Parkinson's Disease

October 15, 2024

*The primary study objective of safety and tolerability was met*

*Significant and clinically meaningful improvements from baseline demonstrated for key efficacy endpoints at 26 weeks*

*Significant improvement of 18 points in Unified Parkinson's Disease Rating Scale (UPDRS) Part 3 in the high dose group at 26 weeks*

*Significant improvement in the Parkinson's Disease Questionnaire (PDQ-39) score, a key quality of life measure, for both the high and low dose groups at 26 weeks*

LONDON and NEW YORK, Oct. 15, 2024 (GLOBE NEWSWIRE) -- MeiraGTx Holdings plc (Nasdaq: MGTX), a vertically integrated, clinical-stage genetic medicines company, today announced top-line data from its clinical bridging study of AAV-GAD for the treatment of Parkinson's disease, MGT-GAD-025.

MGT-GAD-025 is a 6-month, three-arm, randomized, double-blind, sham-controlled study using AAV-GAD drug product manufactured by MeiraGTx at its wholly-owned facilities with its commercial platform process. Participants had idiopathic Parkinson's disease, a history of levodopa responsiveness for at least 12 months, and a UPDRS Part 3 score of  $\geq 25$  points in the "off" state. Fourteen subjects were randomized to one of three groups (high dose n=5, low dose n=5, and sham n=4).

Subjects received either AAV-GAD infused bilaterally into the subthalamic nucleus or a sham procedure in a blinded fashion. The total dose per treated participant was  $7.0 \times 10^{10}$  vg (low dose group) or  $21 \times 10^{10}$  vg (high dose group). The primary objective of the study was to evaluate the safety and tolerability of AAV-GAD, with exploratory efficacy endpoints including the mean change from baseline to Week 26 in MDS-UPDRS Part 3 (motor examination) scores in the "off" state and the Parkinson's Disease Questionnaire (PDQ-39) score, a key patient-reported quality of life measure in Parkinson's disease. Subjects who completed this trial may enroll in a long-term follow-up study ([NCT05894343](#)), where they will be monitored for a total of five years post-treatment.

### Top-line data summary:

- AAV-GAD was safe and well tolerated, with no serious adverse events (SAEs) related to AAV-GAD treatment.
- At Week 26, a statistically significant 18-point average improvement from baseline in UPDRS Part 3 "off" medication score was demonstrated in the high dose group ( $p=0.03$ ), with no significant change in the sham or low dose groups.
- Significant improvements from baseline in the disease-specific, patient-reported quality of life PDQ-39 score were demonstrated in both the high and low dose groups with no significant change in the sham group at Week 26:
  - In the high dose AAV-GAD group, the PDQ-39 score improved by 8 points from baseline ( $p=0.02$ ), the low dose group improved by 6 points from baseline ( $p=0.04$ ), while the 0.2 point worsening in the sham surgery group was not statistically significant.
  - A dose response in PDQ-39 score was observed, with 100% of participants in the high dose group, 60% of participants in the low dose group, and 25% of participants in the sham surgery group reporting an improvement.
  - For the PDQ-39 score, there was a trend to significance between the high dose and sham surgery groups at 6 months (n=4 evaluable per group).

Dr. Ali Rezai, M.D., executive chair of the Rockefeller Neuroscience Institute at West Virginia University (WVU), past president of the Congress of Neurological Surgeons, and principal investigator of the AAV-GAD study, stated, "These safety and outcome results are excellent. The extent of motor score improvements in patients who received the high dose treatment combined with significant quality of life improvement measures are very encouraging for both patients and physicians."

"We are excited about these impressive clinical data in Parkinson's disease," said Alexandria Forbes, Ph.D., president and chief executive officer of MeiraGTx. "With material made using our proprietary production process at commercial scale, we have demonstrated that AAV-GAD is safe at all doses studied, including a higher dose than previously tested. We have now treated a total of 58 patients in this development program in 3 independent multicenter clinical studies and have seen no SAEs related to AAV-GAD treatment."

Dr. Forbes continued, "With the completion of this randomized, double-blinded bridging study, we have also demonstrated with even very small numbers of subjects that AAV-GAD treatment results in significant and clinically meaningful changes in key efficacy endpoints in Parkinson's disease. For the UPDRS Part 3 in the "off" state, a change of 5 to 10 points is considered clinically meaningful. The 18-point change observed in the high dose arm in this study underscores the very substantial impact of AAV-GAD treatment in these Parkinson's patients. Similarly, for the PDQ-39, where a 2 to 4-point change is considered clinically meaningful, the 8-point and 6-point changes observed in the high and low dose groups, respectively, again indicate a substantial and clinically meaningful impact of AAV-GAD treatment."

"These data demonstrate the impact of using highly targeted local delivery of gene-based therapy to correct the aberrant circuitry that results from the depletion of dopamine in the brain of idiopathic Parkinson's patients as the disease progresses. AAV-GAD treatment is designed to normalize circuit

function in all forms of Parkinson's disease with its potential benefit not limited to any single type of Parkinson's. The significant, substantial, and clinically meaningful changes observed in this small, sham-controlled study provide us with a clear path forward in our clinical development strategy and underpin our discussions with regulators in the US, Europe, and Japan with the goal of initiating a Phase 3 study to support approval of this disease-modifying treatment globally."

### **About AAV-GAD**

Parkinson's disease (PD) is the second most common neurodegenerative disease after Alzheimer's, with nearly one million people in the U.S. currently living with Parkinson's disease and approximately 90,000 new patients diagnosed annually in the U.S. There are more than 10 million people worldwide currently living with PD. Most individuals with PD initially respond to dopamine replacement therapy, yet for a large percentage of patients, over time, this type of treatment is no longer sufficiently helpful while adverse effects of medication can also occur, leading to a considerable reduction in quality of life and the ability to function effectively. The cause of Parkinson's disease is unknown for a majority of patients, while a much smaller percentage have a known genetic cause, but in all cases, there is dysfunction of the key circuits that control movement. AAV-GAD is an investigational gene therapy designed to reprogram these dysfunctional brain circuits through the local production of GABA, a chemical neurotransmitter that can help restore more normal activity to these critical cells in any form of PD. AAV-GAD is delivered via a one-time infusion through a minimally invasive procedure, using a MeiraGTx proprietary device that allows infusion of the equivalent of one drop of gene therapy solution into the subthalamic nucleus, a key regulator of the circuits responsible for normal movement.

### **About MeiraGTx**

MeiraGTx (Nasdaq: MGTX) is a vertically integrated, clinical-stage genetic medicines company with a broad pipeline of late-stage clinical programs supported by end-to-end manufacturing capabilities. MeiraGTx has internal plasmid production for GMP, two GMP viral vector production facilities as well as an in-house Quality Control hub for stability and release, all fit for IND through commercial supply. In addition, MeiraGTx has developed a proprietary manufacturing platform with leading yield and quality aspects and commercial readiness, MeiraGTx has core capabilities in viral vector design and optimization and a transformative riboswitch gene regulation platform technology that allows for the precise, dose-responsive control of gene expression by oral small molecules. MeiraGTx is focusing the riboswitch platform on the delivery of metabolic peptides, including GLP-1, GIP, Glucagon, and PYY, using oral small molecules, as well as cell therapy for oncology and autoimmune diseases. MeiraGTx has developed the technology to apply genetic medicine to more common diseases, increasing efficacy, addressing novel targets, and expanding access in some of the largest disease areas where the unmet need remains high.

For more information, please visit [www.meiragtx.com](http://www.meiragtx.com)

### **Forward Looking Statement**

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this press release that do not relate to matters of historical fact should be considered forward-looking statements, including, without limitation, statements regarding the development and efficacy of AAV-GAD, plans to advance AAV-GAD into Phase 3 clinical trial and anticipated milestones regarding our clinical data, reporting of such data and the timing of results of data and regulatory matters, as well as statements that include the words "expect," "will," "intend," "plan," "believe," "project," "forecast," "estimate," "may," "could," "should," "would," "continue," "anticipate" and similar statements of a future or forward-looking nature. These forward-looking statements are based on management's current expectations. These statements are neither promises nor guarantees, but involve known and unknown risks, uncertainties and other important factors that may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements, including, but not limited to, our incurrence of significant losses; any inability to achieve or maintain profitability, raise additional capital, repay our debt obligations, identify additional and develop existing product candidates, successfully execute strategic transactions or priorities, bring product candidates to market, expansion of our manufacturing facilities and processes, successfully enroll patients in and complete clinical trials, accurately predict growth assumptions, recognize benefits of any orphan drug designations, retain key personnel or attract qualified employees, or incur expected levels of operating expenses; the impact of pandemics, epidemics, or outbreaks of infectious diseases on the status, enrollment, timing and results of our clinical trials and on our business, results of operations and financial condition; failure of early data to predict eventual outcomes; failure to obtain FDA or other regulatory approval for product candidates within expected time frames or at all; the novel nature and impact of negative public opinion of gene therapy; failure to comply with ongoing regulatory obligations; contamination or shortage of raw materials or other manufacturing issues; changes in healthcare laws; risks associated with our international operations; significant competition in the pharmaceutical and biotechnology industries; dependence on third parties; risks related to intellectual property; changes in tax policy or treatment; our ability to utilize our loss and tax credit carryforwards; litigation risks; and the other important factors discussed under the caption "Risk Factors" in our Quarterly Report on Form 10-Q for the quarter ended June 30, 2024, as such factors may be updated from time to time in our other filings with the SEC, which are accessible on the SEC's website at [www.sec.gov](http://www.sec.gov). These and other important factors could cause actual results to differ materially from those indicated by the forward-looking statements made in this press release. Any such forward-looking statements represent management's estimates as of the date of this press release. While we may elect to update such forward-looking statements at some point in the future, unless required by law, we disclaim any obligation to do so, even if subsequent events cause our views to change. Thus, one should not assume that our silence over time means that actual events are bearing out as expressed or implied in such forward-looking statements. These forward-looking statements should not be relied upon as representing our views as of any date subsequent to the date of this press release.

### **Contacts**

Investors:

MeiraGTx

[investors@meiragtx.com](mailto:investors@meiragtx.com)

or

Media:

Jason Braco, Ph.D.

LifeSci Communications

[jbraco@lifescicomms.com](mailto:jbraco@lifescicomms.com)

