MeiraGTx Announces Positive Preliminary Data from the AQUAx Phase 1 Clinical Trial of AAV-hAQP1 for the Treatment of Grade 2/3 Radiation-Induced Xerostomia

December 7, 2021

- *Clinically meaningful improvements in xerostomia symptoms and disease burden reported in two validated Patient Reported Outcome (PRO) measures*
- *6 of the 7 participants through 90-day assessments following treatment achieved clinically meaningful improvement in symptoms using both the McMaster Global Rate of Change PRO and the Xerostomia Questionnaire*
- *One participant with the maximum response evaluable at 12 months has now reached 24 months and the same level of response/xerostomia symptom improvement was maintained*
- *AAV-hAQP1 appears safe and well-tolerated at each dose tested*
- *Webcast and conference call to be held today, December 7, 2021 at 8:00 a.m. ET*

LONDON and NEW YORK, Dec. 07, 2021 (GLOBE NEWSWIRE) -- MeiraGTx Holdings plc (Nasdaq: MGTX), a vertically integrated, clinical stage gene therapy company, today announced positive preliminary data from the ongoing Phase 1 AQUAx trial of AAV-hAQP1 for the treatment of grade 2/3 radiation-induced xerostomia (RIX).

“We are very pleased to share this preliminary data from cohorts 1-3 of the AQUAx trial which provides encouraging evidence of the emerging clinical profile of AAV-hAQP1 for the treatment of radiation-induced xerostomia. While the primary endpoint of this Phase 1 trial is safety, we have seen both efficacy and durability in patients treated so far,” said Alexandria Forbes, Ph.D., President and Chief Executive Officer of MeiraGTx. “The size of the effects we are seeing at these early stages in the study are clinically meaningful and appear greater than those seen to date with approved drugs for RIX and xerostomia associated with Sjögren’s Syndrome. These results point to the potential for AAV-hAQP1 to be a disease-modifying one-time treatment for this large population of patients who currently have no effective treatment options for this devastating and intractable condition.”

Study Design and Safety Update in the Phase 1 AQUAx Trial of AAV-hAPQ1 for the Treatment of Grade 2/3 Radiation-Induced Xerostomia

AQUAx is an open label, multi-center, dose escalation study of a single administration of AAV-hAQP1 to one or both parotid glands in patients with radiation-induced salivary hypofunction and xerostomia. Four unilaterally treated escalating dose cohorts with a minimum of 3 subjects per cohort have completed treatment (n=12) and four bilaterally treated escalating dose cohorts have been added to the protocol to further assess potential efficacy. One bilateral dose cohort has been treated (n=3). Six centers (5 in US, 1 in Canada) are currently open and screening patients. All subjects are to be followed for 1-year post-treatment in the present study and for an additional 4 years in the long-term follow-up study, per FDA guidelines. As of December 6, 2021, the investigational gene therapy AAV-hAQP1 has been well tolerated with no dose limiting toxicity (DLT) and no serious adverse events (SAEs) reported.

Preliminary data is presented from the 7 subjects treated in one parotid gland in cohorts 1, 2 and 3 of the unilateral dose escalation phase of the AQUAx study who have passed the Day 90 assessment.

McMaster Global Rate of Change PRO measure results:

- 6 of the 7 participants who reached the Day 90 assessment reported their symptoms of dry mouth as better following treatment
- All 6 of these participants rated changes in xerostomia scores that were important or very important to the participant (a score of 2 or more)
- 3 participants rated the change in xerostomia symptoms with the highest level of improvement (scores of 6 or 7)
- Improvement in xerostomia symptoms persisted through 1 year in two of the patients who reached Day 360
- Participant 1-1 has just reached the 24-month assessment and the highest possible score of 7 was maintained
- Participant 2-1 reported no improvement and was the only one of the 7 participants who had no saliva production at baseline
- No participant reported a worsening of xerostomia symptoms at any time point

		Dry Mouth Symptoms? Better (+), Worse (X), or Same (=)			How Much Better / Worse?		
Cohort	Participant	Day 90	Day 180	Day 360	Day 90	Day 180	Day 360
1	1-1	+	+	+	5	6	7
	1-2	+	+	+	3	3	6
	1-3	+	+	=	3	3	

2	2-1	=	=				
	2-2	+	+		2	4	
	2-3	+			6		
3	3-1	+			4		

Xerostomia Questionnaire (XQ) PRO measure results:

- 6 of 7 participants reaching the Day 90 assessment reported decreases in disease burden of 10 points or more on the XQ – indicating a clinically meaningful alleviation in disease burden; a change in disease burden score of 6 is considered clinically meaningful
- More dramatic reductions of 19, 25, 26, and 41 points were reported by 4 of 7 participants at Day 90
- In the participants who completed visits at Day 180 and 360, scores continued to improve or were stable at these later timepoints
- One participant reported complete resolution of symptoms at Day 360 following treatment with no symptoms of xerostomia (a score of 0 for all symptom scores), and has maintained the same score of 0 following the 24 month assessment

Phase 2 Study Plans:

- Based on the safety and efficacy profile of AAV2-hAQP1 in the AQUAx Phase 1 study and regulatory precedent, the Company intends to initiate a randomized, double-blind, placebo-controlled Phase 2 study evaluating two active doses of AAV2-hAQP1 in the second half of 2022
- The change from baseline to 12-months in the McMaster Global Rate of Change questionnaire is expected to be the study's primary efficacy endpoint. The change from baseline to 12-months in the Symptom-specific Xerostomia Questionnaire and in whole saliva volume are expected to be secondary and exploratory endpoints, respectively.

Grade 2/3 Radiation-Induced Xerostomia unmet medical need and market size:
There are currently 170,000 patients in the U.S. with grade 2/3 RIX two or more years out from successful radiation treatment for head and neck cancer, and an estimated 5,000 to 10,000 new patients per year in the U.S. Current treatment options for RIX are few and are of limited benefit. The sialogogues pilocarpine (approved for RIX) and cevimeline (used off-label) are minimally effective in patients with grade 2/3 radiation induced xerostomia where the gland structure and function have been significantly impaired. No new medications for RIX have been approved in over 20 years.

The Company will host a conference call and webcast today at 8:00 a.m. ET.
Details of the webcast are listed below:

Title: MeiraGTx Xerostomia Clinical Program Update
Presenters:

- Alexandria Forbes, Ph.D., President and CEO of MeiraGTx
- Robert K. Zeldin, M.D., Chief Medical Officer of MeiraGTx
- Michael Brennan, DDS, MHS, FDS RCSEd, Chairman of the Department of Oral Medicine and Director of the Sjögren's Syndrome and Salivary Disorders Center, Atrium Health's Carolinas Center for Oral Health

Date: Tuesday, December 7, 2021
Time: 8:00 a.m. ET

- To register and attend the event, please click here
- For those who are unable to listen live, a replay of the call will be available by clicking here

About Grade 2/3 Radiation-Induced Xerostomia
Xerostomia is a chronic and debilitating disorder of the salivary glands in which saliva production is impaired. Xerostomia has a number of causes, including radiation therapy for head and neck cancer and certain autoimmune diseases. In the U.S., there are currently more than 170,000 patients with chronic grade 2/3 radiation-induced xerostomia, with an estimated 5,000 to 10,000 new grade 2/3 radiation-induced xerostomia patients a year in the U.S. In these patients, reduced salivary output results in a lack of lubrication and a loss of the antimicrobial and antifungal properties of saliva with consequent morbidities and significant negative impact on patient quality of life. Current options for the management of xerostomia are few and are of limited benefit so there is a high unmet medical need for a safe and effective treatment.

About the Phase 1 AQUAx Clinical Trial
The Phase 1 AQUAx clinical trial is an open-label, non-randomized, dose escalation trial designed to evaluate the safety of MeiraGTx's investigational gene therapy AAV-hAQP1 when administered via Stensen's duct to one or both parotid glands in patients who have been diagnosed with grade 2 or 3 radiation-induced xerostomia and who have remained cancer free for at least five years (or at least two years if HPV+) after receiving radiation treatment for head and neck cancer. Primary endpoint of the trial is safety, with efficacy endpoints including patient reported measures of xerostomia symptoms.

About the McMaster Global Rating of Change Questionnaire and the Xerostomia Questionnaire
The McMaster Global Rating of Change Questionnaire is a validated Patient Reported Outcome measure wherein the patient rates the severity of their dry mouth. Patients are asked, "Overall, has there been any change in your Dry Mouth since you received the study treatment?" Patients may reply, "Better", "Worse", or "About the Same". If the patient replies "Better" or "Worse", they are asked to quantify the change for better/worse on a 7-point

scale, with 7 a very important change from baseline, and 1 being minimal. A two-point change is important to the patient. This PRO measure was accepted by the FDA in its review and approval of cevimeline[1].

The Xerostomia Questionnaire is a PRO measure consisting of 8 symptom-specific questions wherein the patient rates each symptom from 0 (not present) to 10 (worst possible). The responses are summed (0-80), providing an overall measure of disease burden. This PRO is refined from the Xerostomia Inventory which consists of 11 questions and for which a 6-point change in disease burden is defined as a clinically meaningful improvement. Drugs approved based on positive McMaster Global Rating of Change assessments have failed to demonstrate clinically meaningful improvement on this measure in registrational studies.

[1] Mark S. Chambers, Marshall Posner *et al*., Cevimeline for the Treatment of Postirradiation Xerostomia in Patients With Head and Neck Cancer, 2007. Int. J. Radiation Oncology Biol. Phys., Vol. 68, No. 4, pp. 1102–1109

About MeiraGTx
MeiraGTx (Nasdaq: MGTX) is a vertically integrated, clinical stage gene therapy company with six programs in clinical development and a broad pipeline of preclinical and research programs. MeiraGTx has core capabilities in viral vector design and optimization and gene therapy manufacturing, as well as a potentially transformative gene regulation technology. Led by an experienced management team, MeiraGTx has taken a portfolio approach by licensing, acquiring and developing technologies that give depth across both product candidates and indications. MeiraGTx's initial focus is on three distinct areas of unmet medical need: ocular, including inherited retinal diseases and large degenerative diseases, neurodegenerative diseases and severe forms of xerostomia. Though initially focusing on the eye, central nervous system and salivary gland, MeiraGTx intends to expand its focus in the future to develop additional gene therapy treatments for patients suffering from a range of serious diseases. For more information, please visit 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-hAQP1, plans to advance AAV-hAQP1 into Phase 2 clinical trial and anticipated milestones regarding our clinical data and reporting of such data and the timing of results of data, including in light of the COVID-19 pandemic, as well as statements that include the words "expect," "intend," "plan," "believe," "project," "forecast," "estimate," "may," "should," "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, identify additional and develop existing product candidates, successfully execute strategic 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 the COVID-19 pandemic 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 most recent quarterly report on Form 10-Q or annual report on Form 10-K or subsequent 8-K reports, as filed with the Securities and Exchange Commission. 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. Unless otherwise stated or the context otherwise requires, the information herein is as of December 7, 2021.

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