Athira Pharma Presents Phase 2 Clinical Data Correlating Improvements in Biomarkers of Neurodegeneration and Neuroinflammation with Improvements in Measures of Cognition and Function in Alzheimer's Disease

July 17, 2023

New preclinical data demonstrate neuroprotective effects of fosgonimeton in models of amyloid-ß-mediated toxicity

In preclinical models, ATH-1105 protects against pathologies common to amyotrophic lateral sclerosis (ALS) and frontotemporal dementia (FTD)

Data presented at the Alzheimer's Association International Conference in Amsterdam

BOTHELL, Wash., July 17, 2023 (GLOBE NEWSWIRE) -- Athira Pharma, Inc. (NASDAQ: ATHA), a late clinical-stage biopharmaceutical company focused on developing small molecules to restore neuronal health and slow neurodegeneration, is presenting new data supporting its pipeline of small molecule therapeutic candidates designed to enhance the HGF/MET neurotrophic system. The data are being presented in three poster presentations at the Alzheimer's Association International Conference (AAIC) 2023, taking place July 16 – 20, 2023, virtually and in Amsterdam, Netherlands.

"These findings underscore the potential clinical utility of biomarkers of neurodegeneration and neuroinflammation in Alzheimer's disease, and help elucidate the neuroprotective mechanisms of this promising product candidate," said Hans J. Moebius, M.D., Ph.D., Chief Medical Officer of Athira Pharma. "Even with the recent advancements in Alzheimer's disease drug development, there remains significant need for treatments that can rescue cells from neurodegeneration to aid in preserving and protecting the memories and independence of people living with this progressive disease. Additional new preclinical data being presented at AAIC 2023 suggest that fosgonimeton treatment protects neurons by attenuating the toxic effects of amyloid-beta, including reduction of p-Tau levels, which may be driven by recovery of mediators of autophagy."

Kevin Church, Ph.D., Chief Scientific Officer, Athira Pharma, commented, "We are encouraged by the growing body of preclinical research supporting ATH-1105, which shows that the molecule is protective against several pathologies common to ALS and FTD animal models. The consistency and breadth of these effects in reducing markers of inflammation, neurodegeneration, and TPD-43 protein pathology continue to support the broad therapeutic potential and continued advancement of ATH-1105."

Poster Presentation (Poster 80009; Session P4-06): "*Biomarker analyses from the phase 2, randomized, placebo-controlled ACT-AD and open-label extension clinical trials of fosgonimeton in patients with mild-to-moderate Alzheimer's disease"*

Dr. Moebius is presenting data suggesting that improvements in plasma biomarkers of neurodegeneration (neurofilament light chain or NfL) and neuroinflammation (glial fibrillary acidic protein, or GFAP) correlate with improvements of clinical measures of cognition and function in patients with mild-to-moderate Alzheimer's disease.

- This was a post-hoc analysis of the randomized, placebo-controlled Phase 2 ACT-AD study and data from the open-label extension study in patients with mild-to-moderate Alzheimer's disease.
- Change from baseline in NfL and GFAP concentrations both significantly correlated with improvements in ADAS-Cog11 (Alzheimer's Disease Assessment Scale–Cognitive Subscale).
- Further, change from the double-blind period baseline in NfL concentrations significantly correlated with improvements in MMSE (Mini-Mental State Examination) scores at the transition to the open label extension study. Change from baseline in GFAP trended toward correlation with improvements in MMSE scores.
- NfL and GFAP improvements significantly correlate with a composite score of cognition and function, further supporting the clinical utility of these biomarkers.

Poster Presentation (Poster 79759; Session P2-05): "*Fosgonimeton, a small-molecule positive modulator of the HGF/MET system, attenuates amyloid-beta-mediated toxicity in primary neuron cultures"*

Sherif Reda, Ph.D., Associate Director, Discovery Biology, Athira Pharma, is presenting a preclinical study demonstrating that fosgonimeton attenuates amyloid-ß-mediated toxicity in vitro.

- Treatment with fosgonimeton reduced tau phosphorylation and protected cultured cortical neurons from amyloid-ß-induced degeneration.
- Fosgonimeton drove pro-survival signaling cascades that under the conditions tested counteracted protein pathology, apoptotic signaling, oxidative stress and autophagy impairment.
- Results highlight fosgonimeton's potential as a therapeutic candidate to slow disease progression and restore neuronal

health.

Poster Presentation (Poster 80041; Session P4-05): "*ATH-1105, a small-molecule positive modulator of the HGF/MET system, is neuroprotective and attenuates TDP-43 protein pathology in ALS and frontotemporal dementia-relevant preclinical models"*

Jewel Johnson, Ph.D., Director, In Vivo Pharmacology, Athira Pharma, is presenting findings in preclinical models demonstrating that ATH-1105 offers protection against several pathologies common to ALS and FTD, supporting its strong therapeutic potential and continued development in these indications. The data showed that treatment with ATH-1105:

- Reduced markers of inflammation, neurodegeneration, and TDP-43 pathology in a mouse model of ALS and FTD;
- Attenuated LPS-induced cognitive impairment in vivo;
- Enhanced neurite outgrowth and synaptogenesis in primary rat hippocampal neurons;
- Protected against neurotoxic injury in primary rat cortical neurons; and
- Mitigated lipopolysaccharide (LPS)-stimulated cytokine release of THP-1 macrophages.

All presentations will be available on the Scientific Publications & Presentations page of the company's website at www.athira.com.

The ACT-AD trial and the related open-label extension for ACT-AD participants were supported by a grant from the National Institute on Aging of the National Institutes of Health under Award Number R01AG06268. The information presented in this press release is solely the responsibility of Athira Pharma and does not necessarily represent the official views of the National Institutes of Health.

About Fosgonimeton
Fosgonimeton is a small molecule designed to enhance the activity of hepatocyte growth factor (HGF) and its receptor, MET, an endogenous repair mechanism for a healthy nervous system. The function of the HGF/MET neurotrophic system may be impaired in conditions of neurodegeneration. Targeting the protection and repair of neuronal networks, fosgonimeton has disease-modifying potential to address a broad range of neurodegenerative diseases, including Alzheimer's disease, Parkinson's disease, and Dementia with Lewy bodies.

About ATH-1105
ATH-1105 is an orally available small molecule designed to positively modulate the HGF/MET system. In preclinical models of amyotrophic lateral sclerosis (ALS), ATH-1105 was shown to significantly increase survival and delay time to first death, enhance motor and nerve function, reduce motor neuron demyelination and axon degeneration, and improve biomarkers of neurodegeneration and inflammation.

About Athira Pharma, Inc.
Athira Pharma, Inc., headquartered in the Seattle, Washington area, is a late clinical-stage biopharmaceutical company focused on developing small molecules to restore neuronal health and slow neurodegeneration. Athira Pharma aims to alter the course of neurological diseases by advancing its pipeline of therapeutic candidates targeting the HGF/MET neurotrophic system for Alzheimer's and Parkinson's disease, Dementia with Lewy bodies, and amyotrophic lateral sclerosis (ALS). For more information, visit www.athira.com. You can also follow Athira Pharma on Facebook, LinkedIn and @athirapharma on Twitter and Instagram.

Forward-Looking Statements
This communication contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, Section 21E of the Securities Exchange Act of 1934 and the Private Securities Litigation Reform Act of 1995. These forward-looking statements are not based on historical fact and include statements regarding: product candidates as a potential treatment for Alzheimer's disease, Parkinson's disease, Dementia with Lewy bodies, and other neurodegenerative diseases, such as amyotrophic lateral sclerosis and frontotemporal dementia; Athira's platform technology and potential therapies; future development plans; expectations regarding the potential efficacy and commercial potential of Athira's product candidates; and Athira's ability to advance its product candidates into later stages of development. Forward-looking statements generally include statements that are predictive in nature and depend upon or refer to future events or conditions, and include words such as "may," "will," "should," "on track," "would," "expect," "plan," "believe," "intend," "pursue," "continue," "suggest," "potential," and other similar expressions, among others. Any forward-looking statements are based on management's current expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. These risks and uncertainties include, but are not limited to, the data for our product candidates from our preclinical and clinical trials not supporting the safety, efficacy and tolerability of our product candidates; cessation or delay of Athira's development of product candidates may occur; regulatory authorities could object to protocols, amendments and other submissions; future potential regulatory milestones for product candidates, including those related to current and planned clinical studies, may be insufficient to support regulatory submissions or approval; the impact of the COVID-19 pandemic on Athira's business, research and clinical development plans and timelines, and the regulatory process for Athira product candidates; Athira may not be able to recruit sufficient patients for its clinical trials; the outcome of legal proceedings that have been or may in the future be instituted against us and certain of our directors and officers; clinical trials may not demonstrate safety and efficacy of any of Athira's product candidates; possible negative interactions of Athira's product candidates with other treatments; Athira's assumptions regarding the sufficiency of its cash, cash equivalents and investments to fund its planned operations may be incorrect; adverse conditions in the general domestic and global economic markets; the impact of competition; regulatory agencies may be delayed in reviewing, commenting on or approving any of Athira's clinical development plans as a result of the COVID-19 pandemic, which could further delay development timelines; the impact of expanded product development and clinical activities on operating expenses; the impact of new or changing laws and regulations; as well as the other risks detailed in Athira's filings with the Securities and Exchange Commission. These forward-looking statements speak only as of the date hereof and Athira undertakes no obligation to update forward-looking statements. Athira may not actually achieve the plans, intentions, or expectations disclosed in its forward-looking statements, and you should not place undue reliance on the forward-looking statements.

Media Contact
Janine Bogris
Evoke Canale for Athira Pharma
Janine.bogris@canalecomm.com
201-245-6838