Alterity Therapeutics Announces Presentation on Tracking the Progression of Multiple System Atrophy at International Symposium

MELBOURNE, AUSTRALIA AND SAN FRANCISCO, USA – 12 November 2024: Alterity Therapeutics (ASX: ATH, NASDAQ: ATHE) ("Alterity" or "the Company"), a biotechnology company dedicated to developing disease modifying treatments for neurodegenerative diseases, today announced the presentation of data from Alterity's Biomarkers of progression in Multiple System Atrophy (bioMUSE) natural history study at the 35th International Symposium on the Autonomic Nervous System.

"The data presented highlights our work to better understand not only how multiple system atrophy (MSA) initially presents, but also how it progresses over time," said David Stamler, M.D., Chief Executive Officer of Alterity. "The presentation describes the use of state-of-the-art technology that goes beyond traditional MRI methods to track the change in volume in specific regions of the brain affected in patients with MSA. Importantly, we observed that significant reductions in brain volume over 12 months correlated with clinical worsening of the disease. The results underscore the importance of utilizing advanced neuroimaging and analytical methods in evaluating MSA which we have implemented in our Phase 2 clinical trials."

The platform presentation entitled, "The MSA Atrophy Index: A Marker of Clinical Progression in Multiple System Atrophy", was presented by Paula Trujillo Diaz, PhD, Research Assistant Professor, Department of Neurology, Vanderbilt University Medical Center.

While previous MRI studies have reported brain volume reductions in regions implicated in MSA, tracking these changes reliably has been challenging. In this study, machine learning tools were used to precisely define the neuroanatomy and a specific brain atrophy measure was designed to track disease progression in MSA patients over one year. The results were then correlated with clinical measures of disease progression. The poster introduces the MSA Atrophy Index (MSA-AI), a composite atrophy marker derived from the lentiform nucleus (LN, putamen and globus pallidus) and olivopontocerebellar (OPC, cerebellum and brainstem) regions, as a potential biomarker for assessing MSA progression. These methods can enhance the understanding of MSA progression and provide support for using brain atrophy markers for the evaluation of disease-modifying therapies.

About bioMUSE

Biomarkers of progression in Multiple System Atrophy (bioMUSE) is a natural history study that aims to track the progression of individuals with MSA, a parkinsonian disorder without approved therapy. The study is being conducted in collaboration with Vanderbilt University Medical Center in the U.S. under the direction of Daniel Claassen, M.D., M.S., Professor of Neurology and Principal Investigator. Natural history studies are important for characterizing disease progression in selected patient populations. The study has provided rich data for optimizing the design of Alterity's randomized ATH434-201 Phase 2 clinical trial and enrolled approximately 20 individuals with clinically probable or clinically established MSA. BioMUSE continues to provide vital information on early stage MSA patients, informs the selection of biomarkers suitable to evaluate target engagement and preliminary efficacy, and delivers clinical data to characterize disease progression in a patient population that mirrors those currently enrolling in the Phase 2 clinical trial.

About Multiple System Atrophy

Multiple System Atrophy (MSA) is a rare, neurodegenerative disease characterized by failure of the autonomic nervous system and impaired movement. The symptoms reflect the progressive loss of function and death of different types of nerve cells in the brain and spinal cord. It is a rapidly progressive disease and causes profound disability. MSA is a Parkinsonian disorder characterized by a variable combination of slowed movement and/or rigidity, autonomic instability that affects involuntary functions such as blood pressure maintenance and bladder control, and impaired balance and/or coordination that predisposes to falls. A pathological hallmark of MSA is the accumulation of the protein α-synuclein within glia, the support cells of the central nervous system, and neuron loss in multiple brain regions. MSA affects at least 15,000 individuals in the U.S., and while some of the symptoms of MSA can be treated with medications, currently there are no drugs that are able to slow disease progression and there is no cure.[1]

[1]Multiple System Atrophy | National Institute of Neurological Disorders and Stroke (nih.gov)

About Parkinson's Disease

Parkinson's disease (PD) is the second most common neurodegenerative disorder and causes unintended or uncontrollable movements of the body along with neuropsychiatric and other nonmotor features. The precise cause of PD is unknown, but some cases are hereditary while others are thought to occur from a combination of genetics and environmental factors that trigger the disease. In PD, brain cells become damaged or die in the substantia nigra, the part of the brain that produces dopamine--a chemical needed to produce smooth, purposeful movement. The cardinal symptoms of PD are tremors, rigidity, slowing of movements, and later in disease, impaired balance. Other symptoms may include difficulty swallowing, chewing, or speaking; emotional changes; urinary problems or constipation; dementia or other cognitive problems; fatigue; and problems sleeping.[3] Nearly one million people in the U.S. and more than

10 million people worldwide are living with PD. Approximately 60,000 Americans are diagnosed with PD each year.[4]

[1]Beauchamp et al, "ATH434 Rescues Pre-motor Hyposmia in a Mouse Model of Parkinsonism, *Neurotherapeutics*, DOI:10.1007/s13311-022-01300-0
[2]Xiao, et al, "Hyposmia: a possible biomarker of Parkinson's disease" Neurosci Bull. 2014 Feb; 30(1): 134–140.
[3]National Institute of Health: Neurological Disorders and Stroke, Parkinson's Disease Information Page;
[4]Parkinson's Foundation

About Alzheimer's Disease

Alzheimer's disease is a progressive neurologic disorder that causes the brain to shrink (atrophy) and brain cells to die. Alzheimer's disease is the most common cause of dementia — a continuous decline in thinking, behavioral, and social skills that affects a person's ability to function independently. Approximately 5.8 million people in the United States age 65 and older live with Alzheimer's disease. Of those, 80% are 75 years old and older. Out of the approximately 50 million people worldwide with dementia, between 60% and 70% are estimated to have Alzheimer's disease. Medications may temporarily improve or slow progression of symptoms, but there is no treatment that cures Alzheimer's disease or alters the disease process in the brain. In advanced stages of the disease, complications from severe loss of brain function, such as dehydration, malnutrition or infection, result in death.[1]

About Alterity Therapeutics Limited

Alterity Therapeutics is a clinical stage biotechnology company dedicated to creating an alternate future for people living with neurodegenerative diseases. The Company's lead asset, ATH434, has the potential to treat various Parkinsonian disorders and is currently being evaluated in two Phase 2 clinical trials in Multiple System Atrophy. Alterity also has a broad drug discovery platform generating patentable chemical compounds to treat the underlying pathology of neurological diseases. The Company is based in Melbourne, Australia, and San Francisco, California, USA. For further information please visit the Company's web site at www.alteritytherapeutics.com.

Authorisation & Additional information

This announcement was authorized by David Stamler, CEO of Alterity Therapeutics Limited.

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Forward Looking Statements

This press release contains "forward-looking statements" within the meaning of section 27A of the Securities Act of 1933 and section 21E of the Securities Exchange Act of 1934. The Company has tried to identify such forward-looking statements by use of such words as "expects," "intends," "hopes," "anticipates," "believes," "could," "may," "evidences" and "estimates," and other similar expressions, but these words are not the exclusive means of identifying such statements.

Important factors that could cause actual results to differ materially from those indicated by such forward-looking statements are described in the sections titled "Risk Factors" in the Company's filings with the SEC, including its most recent Annual Report on Form 20-F as well as reports on Form 6-K, including, but not limited to the following: statements relating to the Company's drug development program, including, but not limited to the initiation, progress and outcomes of clinical trials of the Company's drug development program, including, but not limited to, ATH434, and any other statements that are not historical facts. Such statements involve risks and uncertainties, including, but not limited to, those risks and uncertainties relating to the difficulties or delays in financing, development, testing, regulatory approval, production and marketing of the Company's drug components, including, but not limited to, ATH434, the ability of the Company to procure additional future sources of financing, unexpected adverse side effects or inadequate therapeutic efficacy of the Company's drug compounds, including, but not limited to, ATH434, that could slow or prevent products coming to market, the uncertainty of obtaining patent protection for the Company's intellectual property or trade secrets, the uncertainty of successfully enforcing the Company's patent rights and the uncertainty of the Company freedom to operate.

Any forward-looking statement made by us in this press release is based only on information currently available to us and speaks only as of the date on which it is made. We undertake no obligation to publicly update any forward-looking statement, whether written or oral, that may be made from time to time, whether as a result of new information, future developments or otherwise.