Alterity Therapeutics Announces Presentation of Novel Biomarker Data for Evaluation of Multiple System Atrophy

MELBOURNE, AUSTRALIA AND SAN FRANCISCO, USA – 27 November 2023: Alterity Therapeutics (ASX: ATH, NASDAQ: ATHE) ("Alterity" or "the Company"), a biotechnology company dedicated to developing disease modifying treatments for neurodegenerative diseases, today announced a poster presentation from the Company's Biomarkers of progression in Multiple System Atrophy (bioMUSE) Natural History Study at the recent 34th International Symposium on the Autonomic Nervous System (AAS).

The poster entitled, "Relationship between N-acetylaspartate and neurofilament light chain in multiple system atrophy" was presented by Paula Trujillo Diaz, PhD, Research Assistant Professor, Department of Neurology, Vanderbilt University Medical Center. Because MSA is pathologically characterized by degeneration and loss of neurons in the brain, identifying biomarkers to assess disease severity is critical. N-acetylaspartate (NAA) is a novel biomarker of neuronal integrity with potential for assessing disease severity, monitoring the course of disease, and evaluating the efficacy of disease modifying therapies in MSA. In the study, the data provided evidence that NAA correlates with levels of neurofilament light chain (NfL) in patients with early MSA. NfL is a widely used biomarker that is a measure of neuronal damage. The results suggest that NAA concentration may reflect the degree of neuronal integrity in these subjects.

"These valuable data produced by our partners at Vanderbilt continue to demonstrate that we are leading the way in the biomarker evaluation of MSA," said David Stamler, M.D., Chief Executive Officer of Alterity. "The data presented at AAS reveals another potentially important biomarker for the evaluation of this rapidly progressive disease with no approved treatment. The field is seeking non-invasive biomarkers to assess disease severity and this novel biomarker represents another potential shot on goal for demonstrating the efficacy of ATH434, our lead drug candidate in Phase 2 for the treatment of MSA. The findings suggest that the NAA metabolite may be a useful biomarker for assessing disease severity and treatment response in MSA."

The study assessed 13 early-stage MSA patients (motor symptom onset ≤ 4 yrs) with diagnosis supported by a multimodal approach that utilizes neuroimaging and fluid biomarkers[1]. Participants completed neurologic examination and clinical assessment with the Unified Multiple System Atrophy Rating Scale (UMSARS) and the Natural History and Neuroprotection in Parkinson Plus Syndromes scale (NNIPPS). All participants had α-synuclein seed amplification assay results consistent with MSA, CSF NfL > 2000, and plasma NfL > 20. The investigators utilized a non-invasive MRI technique known as magnetic resonance spectroscopy (MRS) that allows quantification of metabolites such as NAA in the brain. NAA is a marker of neuronal integrity

given its role in cellular energetics and myelin synthesis. In this study, the investigators tested the hypothesis that the quantity of NAA measured using MRS is correlated with NfL levels.

A copy of the poster is available at https://alteritytherapeutics.com/the-science/ .

About ATH434

Alterity's lead candidate, ATH434, is an oral agent designed to inhibit the aggregation of pathological proteins implicated in neurodegeneration. ATH434 has been shown preclinically to reduce α-synuclein pathology and preserve neuronal function by restoring normal iron balance in the brain. As an iron chaperone, it has excellent potential to treat Parkinson's disease as well as various Parkinsonian disorders such as Multiple System Atrophy (MSA). ATH434 successfully completed Phase 1 studies demonstrating the agent is well tolerated and achieved brain levels comparable to efficacious levels in animal models of MSA. ATH434 is currently being studied in two clinical trials: Study ATH434-201 is a randomized, double-blind, placebo-controlled Phase 2 clinical trial in patients with early-stage MSA and Study ATH434-202 is an open-label Phase 2 Biomarker trial in patients with more advanced MSA. ATH434 has been granted Orphan drug designation for the treatment of MSA by the U.S. FDA and the European Commission.

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.[2]

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.

[1] Claasen, et al, "A multimodal approach for diagnosis of early Multiple System Atrophy", MDS 2023
[2] Multiple System Atrophy | National Institute of Neurological Disorders and Stroke (nih.gov)

Authorisation & Additional information
This announcement was authorized by David Stamler, CEO of Alterity Therapeutics Limited.

Investor and Media Contacts:

Australia
Hannah Howlett
we-aualteritytherapeutics@we-worldwide.com
+61 450 648 064

U.S.
Remy Bernarda
remy.bernarda@iradvisory.com
+1 (415) 203-6386

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.