Alterity's ATH434 Prevents Loss of Brain Cells in Parkinson's Disease Animal Model

Independent Study Reports ATH434 Prevented Onset of Motor and Non-Motor Symptoms in Animals with Genetically Induced Parkinson's disease

MELBOURNE, AUSTRALIA AND SAN FRANCISCO, USA – 30 January 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 that a study recently published in the journal *Neurotherapeutics* demonstrated that its lead clinical asset, ATH434, was neuroprotective in a genetic model of Parkinson's disease (PD). Parkinson's is a progressive neurodegenerative disorder that causes slow or abnormal movements of the body and non-motor features that contribute significantly to morbidity and reduced quality of life.

The publication, entitled "ATH434 Rescues Pre-motor Hyposmia in a Mouse Model of Parkinsonism" assessed the impact of ATH434 on motor and non-motor deficits in mice with genetically induced Parkinson's disease[1]. Hyposmia, defined as reduced sensitivity to odor, is an early and common non-motor symptom of PD that precedes the typical motor symptoms by several years, occurring in approximately 90% of early-stage cases of PD[2].

The study found that ATH434 prevented a loss of smell in the younger mice and rescued it in older mice. More importantly, the authors also demonstrated that ATH434 prevented the development of motor impairment in older animals, which was associated with a reduction in iron levels and preservation of neurons in the substantia nigra, the brain region affected in Parkinson's. These data support other studies indicating that ATH434 has a beneficial effect on the motor and non-motor symptoms in animal models of PD.

David Stamler, M.D., Chief Executive Officer, Alterity, commented, "This publication provides further evidence that ATH434 has the potential to be neuroprotective in humans. The demonstration of efficacy in yet another model of Parkinson's disease adds to the weight of evidence supporting the potential of ATH434 to address the underlying pathology of Parkinson's disease and related disorders."

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 nerve cells 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 a randomized, double-blind, placebo-controlled Phase 2 clinical trial in patients with early-stage MSA. ATH434 has been granted Orphan designation for the treatment of MSA by the U.S. FDA and the European Commission.

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]

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. Alterity also has a broad drug discovery platform generating patentable chemical compounds to intercede in disease processes. 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.

Sources:

[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

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, uncertainties relating to the impact of the novel coronavirus (COVID-19) pandemic on the company's business, operations and employees, 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.