Alterity Therapeutics Presents New Data Demonstrating Potential of ATH434 to Treat Rare Neurodegenerative Disease Friedreich's Ataxia

– *New Evidence Indicates ATH434 can Function as an Iron Chaperone to Redistribute Iron* –

MELBOURNE, AUSTRALIA AND SAN FRANCISCO, USA – 29 April 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 that important new data on its lead drug candidate ATH434 was presented at the World Orphan Drug Congress USA 2024 in Boston, MA.

The poster, entitled, "Biophysical Characteristics of ATH434, a Unique Iron-Targeting Drug for Treating Friedreich's Ataxia", was presented by Ashley Pall, Department of Pharmaceutical Sciences at Wayne State University. The study evaluated the ability of ATH434 to target the toxic form of iron that drives the pathology of Friedreich's Ataxia, a rare neurodegenerative disease that affects young children to young adults. The study also evaluated traditional iron chelators that are designed to bind iron and remove iron from the body. Conversely, an iron chaperone is designed to bind and redistribute iron within the body.

"This investigation provides important insights into the mechanism of action of ATH434, namely that it selectively targets the labile iron implicated in the pathology of important neurodegenerative diseases. In this way, ATH434 behaves like a chaperone to redistribute iron within the body. There has historically been great interest in targeting iron in general to treat these diseases, and we now have clear evidence that ATH434 is very different from traditional iron chelators," said, David Stamler, M.D., Chief Executive Officer of Alterity.

Specifically, the study investigated how strongly ATH434 or traditional iron chelators bind the two forms of cellular iron: ferric iron, the stored form, or ferrous iron, the form required for vital cellular functions such as energy production. In excess, the ferrous or "labile" iron can also promote oxidative stress in diseases like Friedreich's Ataxia as it does in Parkinson's disease and Multiple System Atrophy.

Dr. Stamler continued, "The genetic defect in Friedreich's Ataxia leads to reduced function of frataxin, a protein necessary for utilizing labile iron, thus leading to iron accumulation in disease. By acting as an iron chaperone, ATH434 has potential to reduce labile iron levels and thus slow disease progression. Given these new data, we are excited to evaluate FA as a potential new indication for ATH434."

The novel iron binding properties of ATH434 presented in the poster support the characterization of ATH434 as an iron chaperone based on properties it shares with endogenous iron chaperones such as frataxin and poly-C binding proteins. These include its low micromolar binding affinity for ferrous iron and a bound structure that may allow for transfer of ferrous iron proteins involved in cellular function. The new data also confirmed that ATH434 has a dramatically lower affinity for ferric iron than traditional iron chelators that are approved for treating systemic iron overload. Together, these properties suggest that ATH434 has the capacity to selectively target pathogenic ferrous iron without impairing normal cellular iron trafficking or functions.

The poster presentation can be found on Alterity's website here.

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 Friedreich's Ataxia

Friedreich ataxia (FA) is a rare, inherited disorder that causes progressive damage to the nervous system. In the brain, the cerebellum, part of the brain that coordinates balance and movement, is most affected. FA also may cause heart disease, specifically cardiomyopathy, and diabetes. Symptoms typically begin between the ages of five and 15, although they sometimes appear after age 25. While progression of FA varies from person to person, generally individuals with FA may need to use a wheelchair within 10 to 20 years after the appearance of symptoms. In later stages of the disorder, people may become completely incapacitated. There is no cure for the disorder, and heart disease is the most common cause of death in people with FA.[1]

[1]Source: National Institutes of Health – National Institute of Neurological Disorders and Stroke

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.