Appendix 4C – Q2 FY25 Quarterly Cash Flow Report

Highlights

- Topline data for ATH434-201 randomized, double-blind Phase 2 clinical trial on track for expected release by early February 2025
- ATH434-201 trial in early-stage MSA completed in November 2024
- Positive interim data presented at MDS from the ATH434-202 Phase 2 trial in advanced MSA
- Multiple data presentations and publications showing the potential for ATH434 to modify disease progression in neurodegenerative conditions
- Cash balance on 31 December 2024 of A$4.54 m

MELBOURNE, AUSTRALIA AND SAN FRANCISCO, USA – 24 January 2025: Alterity Therapeutics (ASX: ATH, NASDAQ: ATHE) ("Alterity" or "the Company"), a biotechnology company dedicated to developing disease modifying treatments for neurodegenerative diseases, today released its Appendix 4C Quarterly Cash Flow Report and update on company activities for the quarter ending 31 December 2024 (Q2 FY25).

"The second fiscal quarter of this year was extremely productive for Alterity and highlighted the tremendous potential of our lead asset, ATH434, as a promising therapy to treat a variety of neurodegenerative diseases," said, David Stamler, M.D., Chief Executive Officer of Alterity. "Most significantly, we completed the ATH434-201 study, our 12-month, double-blind Phase 2 clinical trial of ATH434 in early-stage Multiple System Atrophy (MSA). Throughout the course of the trial, we have had tremendous interest from our clinical sites, doctors and patients around the globe as we seek a treatment to slow the progression of this devastating condition. The data analysis is being finalized, and we remain on track to report topline results in by early February."

"During the quarter, we delivered numerous posters, presentations and publications on the potential of ATH434 as a disease modifying treatment in a variety of indications including MSA, Parkinson's disease, and Friedreich's Ataxia. New, non-clinical data was presented that further describes the neuroprotective qualities and the mechanism of action of ATH434 including the importance of iron and iron-targeting agents like ATH434 to treat neurodegenerative diseases. Notably, positive clinical and biomarker interim results were presented from the ATH434-202 Phase 2 trial in advanced MSA, suggesting that ATH434 has the potential to modify disease progression. The topline 12-month results from the 202 trial are expected in the first half of calendar year 2025," concluded Dr. Stamler.

Alterity's cash position on 31 December 2024 was A$4.54M with operating cash outflows for the quarter of A$5.06M.

In accordance with ASX Listing Rule 4.7C, payments of A$126K made to related parties and their associates included in item 6.1 of the Appendix 4C incorporates directors' fees, consulting fees, remuneration and superannuation at commercial rates.

Operational Activities

ATH434–201: Randomized, Double-Blind Phase 2 Clinical Trial in Early-State MSA

On 4 December 2024, Alterity reported the completion of the ATH434-201 study as the last patient finished all clinical evaluations. The completion of the trial represented a major accomplishment for Alterity in this rare neurodegenerative disease. With the achievement of this milestone, topline results remain on track to be reported by early February 2025.

In October 2024, Alterity announced Dr. Stamler delivered an Oral Platform presentation and poster session at the International Congress of Parkinson's Disease and Movement Disorders® (MDS), entitled, "A Phase 2 Study of ATH434, a Novel Inhibitor of α-Synuclein Aggregation, for the Treatment of Multiple System Atrophy". The oral presentation and poster described the baseline characteristics for the 77 participants from Alterity's ATH434-201 randomized, double-blind Phase 2 clinical trial, with a focus on baseline fluid biomarkers, neuroimaging and clinical data. The participants met strict selection criteria designed to confirm they had early-stage MSA. The presentation characterized the distribution of iron in MSA affected brain areas and demonstrated that plasma levels of neurofilament light chain, a marker of neuronal injury, were correlated with disease severity at baseline.

ATH434–202: Open-label, Biomarker Phase 2 Clinical Trial in Advanced MSA

In October 2024, Alterity announced the presentation of positive interim data from the ATH434-202 trial as both a late-breaking oral presentation and poster session entitled, "Preliminary Efficacy and Safety of ATH434 in Multiple System Atrophy", by Daniel O. Claassen, M.D., M.S., Professor of Neurology, Vanderbilt University Medical Center at the MDS meeting. The data suggest that ATH434 may have a disease-modifying effect in MSA, as 30% of participants had stable or improved clinical outcomes (clinical responders). Disease progression over 6 months was slower compared to a historical group of untreated MSA patients, as indicated by the Unified MSA Rating Scale (UMSARS) Part I which assesses functional performance. The clinical responders had stable brain iron and brain volume after 12 months treatment. The stabilization of iron content in MSA affected brain regions, combined with stable levels of NfL, indicates that ATH434 may slow neurodegeneration by modulating brain iron levels and reducing oxidative injury.

The trial remains ongoing with topline 12-month results expected in the first half of calendar year 2025.

bioMUSE Natural History Study

The Company's "Biomarkers of progression in Multiple System Atrophy" (bioMUSE) natural history study has produced promising data to track the progression of individuals with MSA and characterize MSA in terms of various biomarkers.

In November 2024, data was presented at the 35th International Symposium on the Autonomic Nervous System that highlighted Alterity's work to better understand not only how MSA initially presents, but also how it progresses over time. 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. The presentation described 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, it was 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 Alterity has implemented in its Phase 2 clinical trials.

In October 2024, Alterity announced that a poster featuring bioMUSE data was presented at the MDS meeting entitled, "Association Between Clinical Progression in Multiple System Atrophy and Brain Volume Changes Evaluated via Deep Learning Segmentation". The poster described the novel MRI imaging techniques and deep learning segmentation that were used to assess brain volume in MSA brain regions of interest (ROI) in bioMUSE participants. Over the course of one year, MRI with deep-learning segmentation revealed significant brain volume reduction in MSA ROIs whereas Parkinson's disease patients showed no significant brain volume changes. In contrast, the MSA patients exhibited significant volume reductions in the cerebellum, globus pallidus, and brainstem. In addition, patients with the parkinsonian variant of MSA showed significant volume loss in the putamen. The results illustrate the correlation between the brain volume reduction and worsening clinical scores, as measured by the UMSARS, providing the basis for subcortical brain volume as a potential biomarker in treatment studies.

Peer-reviewed Publication Describing Novel Mechanism of Action for ATH434

In November 2024, the peer-reviewed journal, *Metallomics,* published data on the importance of iron and iron-targeting agents like ATH434 to treat neurodegenerative diseases. The publication, entitled, "ATH434, a promising iron-targeting compound for treating iron regulation disorders" was led by author Ashley Pall, Department of Pharmaceutical Sciences at Wayne

State University. This publication demonstrates the novel way in which ATH434 targets the labile, or reactive, form of iron which can be so damaging to cells when in excess. The iron binding properties of ATH434 presented in the publication support the characterization of ATH434 as an iron chaperone. The publication describes how ATH434 targets the toxic form of iron that drives the pathology of a rare neurodegenerative disease known as Friedreich's Ataxia. This toxic form of iron is also involved in the pathogenesis of Parkinson's disease and MSA.

Non-Clinical Data Describing Neuroprotection of ATH434

In October 2024 promising new data related to ATH434 were presented at the Society for Neuroscience 2024 that further the understanding of ATH434's potential as a disease modifying treatment for neurodegenerative diseases, including Parkinson's disease and related disorders. The poster presentation entitled, "Potent Antioxidant and Mitochondrial-protectant Effects of ATH434, a Novel Inhibitor of α-Synuclein Aggregation with Moderate Iron-binding Affinity," demonstrated that the neuroprotective and mitochondrial protectant properties of ATH434 include reducing lipid damage in two distinct and disease-relevant neuronal injury models. ATH434's antioxidant properties were distinguished from those of another iron binding agent approved for treating iron overload. This is key as oxidative injury is an important contributor to the pathology of neurodegeneration. By addressing this injury in two different ways, both directly and by redistributing excess labile iron, ATH434 has excellent potential to treat this group of diseases. The ability of ATH434 to reduce damage to lipid membranes undergoing oxidative stress may augment its ability to slow disease progression. The study was run under the direction of Dr. Daniel J. Kosman, Distinguished Professor of Biochemistry at the State University of New York at Buffalo.

ATH434 for the Treatment of Parkinson's Disease

Also announced in October 2024, a poster was presented at MDS entitled, "Effects of ATH434, a Clinical-Phase Small Molecule with Moderate Affinity for Iron, in Hemiparkinsonian Macaques". The presentation demonstrated that ATH434 treatment led to lower iron levels in the affected area of the brain, the substantia nigra, and improved motor performance and general function in monkeys with experimentally induced Parkinson's disease. At week 12, all 5 ATH434-treated macaques had stable or improving scores from Baseline while two of three vehicle-treated macaques did not demonstrate improvement. The improved general behavior was well-correlated with reduced motor impairment. These favorable parkinsonian outcomes observed in each of the ATH434-treated monkeys were also associated with increased levels of striatal synaptophysin, a protein marker that reflects functional connections between neurons, suggesting functional recovery of nerve endings in this critical motor pathway. These results support further investigation of ATH434 for the treatment of Parkinson's disease.

Corporate Activities

During the quarter, management participated in several investor activities and Alterity was featured in multiple media articles. The event webcasts and links to news coverage can be found on the Company's website here.

On 22 November 2024, Alterity held its Annual General Meeting in Melbourne, Australia. The results, presentation, and Chairman's Address can be found on the Company's website here.

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.