



Alterity and UniQuest partner to reverse bacterial resistance to antibiotics

New commercial opportunity for PBT2

MELBOURNE, AUSTRALIA AND SAN FRANCISCO, USA – 21st December 2020: Alterity Therapeutics (ASX: ATH, NASDAQ: ATHE) (“Alterity” or “the Company”) has today announced it has been granted a licence by UniQuest, the commercialisation company of The University of Queensland (UQ), to novel zinc ionophore technology to combat antimicrobial resistance in superbugs.

Under the licence, Alterity has secured the worldwide exclusive right to patented technology to develop and commercialise therapies that re-sensitise bacteria to antibiotics. The licensed technology combines Alterity’s PBT2 and other zinc ionophores with commonly used antibiotics to treat infections caused by multidrug resistant bacteria. This is an opportunity for Alterity to further leverage its investment in PBT2.

PBT2, Alterity’s most advanced zinc ionophore, breaks the resistance of many important superbugs to available antibiotics, and is covered for this use by patents until 2038. Importantly, PBT2 has previously completed long term preclinical safety studies and phase 2 clinical trial testing in other indications and has been shown to have a favourable safety profile in those trials.

A recently published article in the high-impact journal *Science Translational Medicine*¹, showed that PBT2 could reverse antibiotic resistance to critical superbugs and demonstrate efficacy in an animal model of sepsis.

Professor Mark Walker of The University of Queensland said: “The results from our paper demonstrate that by breaking the resistance of superbugs, PBT2 and other zinc ionophores have the potential to restore the efficacy of several widely available antibiotics.”

The authors also noted that superbugs exposed to a combination of PBT2 and antibiotics had a very low propensity to develop further resistance, making the emergence of cross-resistance to the novel treatment unlikely. Thus, PBT2 may help address the issue of antimicrobial resistance without becoming part of the problem.

Geoffrey Kempler, Alterity’s Chairman and CEO said: “Even without the effects Covid-19, antibiotic resistant pathogens kill more than 700,000 people each year and represent a major threat to global public health”.

“The approach developed by our collaborators is novel and potentially revolutionary. Existing antibiotics are losing the battle against these infections and science is struggling to keep up as pathogens continually adapt. Because we can combine PBT2 with existing antibiotics, many of which are generic, this approach has strong commercial value to Alterity.”

The World Health Organisation has declared antibiotic resistant bacteria a serious threat to global health that requires novel strategies to overcome the problem. PBT2 can break the resistance of the most important resistant pathogens designated by the WHO.^{1,2}

“The critical and urgent importance of this work is amplified in the current context of Covid-19, because secondary bacterial infections associated with viral pandemics are an important cause of mortality³. The need for effective antimicrobial regimens is very high,” added Mr Kempler.

UniQuest CEO Dr Dean Moss said the technology had the potential to be a catalyst for change in what was a significant and growing public health problem. “This partnership has significant potential to help combat a growing and complex global problem,” he said.

In exchange for the grant of exclusive worldwide rights, once Alterity generates commercialization revenue, UniQuest is entitled to receive certain payments including milestone and royalty payments commensurate with academic licenses.

Alterity intends to direct new resources to the project with no impact on its lead commercialisation program for ATH434, which is advancing to Phase 2 in Multiple System Atrophy, a Parkinsonian disorder with no approved therapy.

1. De Oliveira D, Bohlmann L, Conroy T, et al. Repurposing a neurodegenerative disease drug to treat Gram-negative antibiotic-resistant bacterial sepsis. *Science Translational Medicine* 18 Nov 2020: Vol. 12, Issue 570, eabb3791. DOI: 10.1126/scitranslmed.abb3791

2. Bohlmann L, De Oliveira D, El-Deeb I, et al. 2018. Chemical synergy between ionophore PBT2 and zinc reverses antibiotic resistance. *mBio* 9:e02391-18. <https://doi.org/10.1128/mBio.02391-18>.

3. Morens, D, Taubenberger, J, and Fauci, A. Predominant Role of Bacterial Pneumonia as a Cause of Death in Pandemic Influenza: Implications for Pandemic Influenza Preparedness. *J Infect Dis.* 2008 October 1; 198(7): 962–970. doi:10.1086/591708.

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Authorization & Additional information

This announcement was authorized by Geoffrey Kempler, Chairman and CEO of Alterity Therapeutics Limited.

Contact:

Investor Relations

Rebecca Wilson, WE Communications
E: WE-AUAlterity@we-worldwide.com
Tp: +61 417 382 391

About Altery Therapeutics Limited and PBT2

Altery Therapeutics Limited is a biopharmaceutical company developing potential new treatments for neurodegenerative and other disease. It's lead compound ATH434 is in clinical development for Multiple System Atrophy, a type of Parkinsonian disease.

Its second most advanced compound is PBT2, a drug that is being explored for applications outside of neurodegenerative disease.

Altery's core technology is covered by an extensive patent library including the 8-hydroxyquinoline chemical class which covers PBT2 and other lead 8-hydroxyquinoline compounds. The majority of these patent cases include claims to compositions of matter and the uses of these compounds in numerous neurological disorders. Notably these cases include composition of matter claims to Altery's product candidates for Parkinson's disease/movement disorders, brain cancer, and Light Chain Amyloidosis.

For further information please visit the Company's website at www.alteritytherapeutics.com.

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 (formerly PBT434), 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 patent protection for the Company's intellectual property or trade secrets, including, but not limited to, the intellectual property relating to ATH434.

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.