



PHYLOGICA

BREAKTHROUGH PEPTIDE THERAPEUTICS

PHYLOGICA & THE UNIVERSITY OF QUEENSLAND RECEIVE \$670K GRANT TO DEVELOP MACROCYCLIC PHYLOMER DRUGS

- *ARC grant awarded to develop a novel platform that generates and screens macrocyclic Phylomer libraries*
- *Supporting new Phylogica foothold in macrocyclic drug market – one of the fastest growing sectors for therapeutic peptides*
- *Potential to feed Phylogica’s oncology pipeline with high-quality macrocyclic peptide drugs active inside cells.*

Perth, Australia 17 July 2015: Phylogica Ltd (ASX:PYC, XETRA:PH7) in partnership with The University of Queensland’s Institute for Molecular Bioscience (IMB) have been awarded a 3 year \$670K Linkage Grant from the Australian Research Council (ARC) to develop a novel platform to generate macrocyclic Phylomer libraries. This is one of the largest linkage grants awarded by the ARC this year.

Macrocycles are an emerging class of therapeutic peptides that have been chemically modified to form circular structures. ‘Cyclised’ peptides have very favourable drug-like properties, which allows them to bind more effectively to drug targets and to resist being broken down in the body like normal peptides. In some cases macrocyclics can be chemically engineered to enter cells and hit targets inaccessible to conventional drugs.

This capability would further add to Phylogica’s ability to deliver drugs inside cells.

Phylogica’s CEO Dr Richard Hopkins said, *“This grant has potential to provide Phylogica with a firm foothold in the macrocyclic peptide space that is dominated by companies such as Peptidream, which is currently valued at over \$1 billion. While demand for therapeutic macrocyclic peptides is growing rapidly, platforms capable of generating libraries of macrocyclic drugs are very rare.”*

IMB chief investigator Professor Kirill Alexandrov said, *“We are delighted to collaborate with Phylogica to pioneer this cutting-edge macrocyclisation platform. A key feature of our technology is that it allows for much greater versatility in the choice of amino acids that can be joined in the cyclisation step. This flexibility significantly expands the structural and size diversity of the Phylomer libraries allowing them to access a broader landscape of druggable targets. It also has potential to improve the scale and efficiency of downstream processing thereby overcoming a major bottleneck of alternative macrocyclisation platforms.”*

Dr Paul Watt, Chief Scientific Officer Phylogica commented, *“This is an extension of our long standing and productive partnership with Professor Alexandrov. A successful outcome to this project will add to the therapeutic reach and asset value of the*

Phylomer platform. This is our third ARC-linkage grant in three years with the IMB, highlighting Phylogica's commitment to drive innovation in the Phylomer platform by working with world-leading researchers. This non-dilutive funding supports cutting-edge developments without compromising our main goal of advancing the Phylogica's core oncology programmes".

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About Phylogica

Phylogica Limited (ASX: PYC) is a biotechnology company based in Perth, Australia with a world-class drug discovery platform harnessing the rich biodiversity of nature to discover novel peptide therapeutics from the most structurally diverse libraries available. The Company listed on the ASX in 2005 as a spin out from the Telethon Kids Institute (Perth, Australia) and the Fox Chase Cancer Centre (Philadelphia, USA). The Company's drug discovery platform is based on its proprietary Phylomer[®] libraries containing over 400 billion unique natural peptides, which have been optimised by evolutionary selection to adopt stable drug-like structures. Phylogica offers fully integrated drug discovery services to the pharmaceutical industry utilising its Phylomer[®] libraries and proprietary screening technologies in exchange for licence fees, milestones and royalties. Partners from discovery alliances within the last 5 years include Roche, MedImmune, Pfizer, Janssen, Cubist Pharmaceuticals and Genentech.

About Phylomer[®] Peptides

Phylomer peptides are derived from biodiverse natural sequences, which have been selected by evolution to form stable structures, which can bind tightly, and specifically to disease associated target proteins, both inside and outside cells. Suitable targets for blockade by Phylomers include protein interactions that promote multiple diseases, such as infectious diseases, cancer, autoimmunity and heart disease. Phylomer peptides can have drug-like properties, including specificity, potency and thermal stability, and are capable of being produced by synthetic or recombinant manufacturing processes. Phylomer peptides are also readily formulated for administration by a number of means, including parenteral or intranasal delivery approaches. Current Phylomer libraries comprise more than 400 billion distinct sequences derived from thousands of protein structure families encoded by biodiverse genomes, representing the most structurally diverse peptide libraries available. Phylomer peptides have also been demonstrated to have world-class cell penetrating ability, enabling them to deliver protein cargoes with unprecedented efficiency.

About IMB

Established in 2000 as UQ's first research institute, IMB is a multidisciplinary life sciences research institute committed to improving quality of life through excellence in research. IMB's 500 researchers, postgraduate students and support staff work in partnership with their academic, industry and clinical colleagues around the world to advance knowledge in areas including pain, rare diseases, inflammation and superbug infection.

About Telethon Kids Institute

Telethon Kids Institute is one of Australia's leading child health research organisations. More than 500 staff and students are focussed on delivering on its vision to improve the health and wellbeing of children through excellence in research. With cutting edge facilities in Perth, Western Australia, Telethon Kids has four research focus areas: Early Environment, Chronic Diseases of Childhood, Brain and Behaviour and Aboriginal Health. Find out more at telethonkids.org.au.

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