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## ALLOWANCE OF PHYLOGICA EUROPEAN PATENT FOR SYNTHETIC PHYLOMER LIBRARIES

- **Broad applications of synthetic Phylomer libraries in therapeutics and diagnostics**
- **New patent extends life of Phylogica's core patent estate – out to Nov 2027**
- **Synthetic Phylomer technology also validated through University of Queensland collaboration**

PERTH, AUSTRALIA: 25 November 2014 – Phylogica Ltd (ASX: PYC, XETRA: PH7) a leading Australian peptide drug discovery company, announces the allowance of its European patent application for synthetic Phylomer libraries. This new patent also further extends the life of Phylogica's core intellectual property claim over this area until 2027.

Phylomers are peptides derived from nature that bind to disease associated target proteins to block interactions that promote multiple diseases such as infectious diseases, cancer, autoimmune and heart disease. A synthetic Phylomer library uses rational design to 'hand-pick' the best quality peptides found in nature – particularly those that have evolved over billions of years for the ability to bind targets. By so doing we can greatly reduce the numbers of peptides required to generate disease-specific binders – down from billions of peptides for a conventional Phylomer library to potentially less than 100,000 candidates using a synthetic approach.

The ability to condense or miniaturise a synthetic Phylomer library also makes them ideal for incorporation into next generation micro-sensors in diagnostics. For example, a synthetic Phylomer library could be used as a universal-biosensor to screen patient samples from blood, urine or saliva to detect diseases such as diabetes, cancer or various infections. When samples come into contact with the sensor they generate a 'binding signature' characteristic of a particular disease thus enabling rapid diagnosis.

Importantly, biosensors are recognised as being critical to the future of personalised medicine. Here, the binding signature generated by a biosensor would be used not just for diagnosis but also to design a course of treatment tailored specifically for the patient and to monitor the response to therapy.

Dr Richard Hopkins, Phylogica's CEO commented, "This patent milestone is another major barrier-to-entry to potential competitors and ensures Phylogica has a stake-hold in the rapidly growing fields of diagnostics and personalised medicine. We see these areas as offering strong commercial opportunities as we develop these technologies."

Phylogica's CSO Dr Paul Watt added, "This patent supports the highly productive ARC-funded collaboration we have with the University of Queensland that is developing next generation biosensors. We have made solid progress towards validating the synthetic Phylomer library concept and look forward to reporting on this over the coming months."

This core patent (designated 07750247.4-1453) covers broad methods of designing synthetic Phylomer peptide libraries based on the identification of parts of natural proteins that are predicted to form structures independently in solution when isolated from the parent protein from which they are derived. The patent also contains methods for maximising the diversity of such structures represented in the library. The corresponding patent (PCT/US2007/003393) is also granted in other jurisdictions including the US and Japan.

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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. The Company was incorporated in 2001 as a spin out from the Telethon Institute for Child Health Research (Perth, Australia) and the Fox Chase Cancer Centre (Philadelphia, USA). The Company's drug discovery platform is based on its proprietary Phylomer<sup>®</sup> libraries containing over 400 billion unique natural peptides, which have been optimised by evolutionary selection to have stable drug-like structures. Phylogica offers fully integrated drug discovery services to the pharmaceutical industry utilising its Phylomer<sup>®</sup> libraries and proprietary screening technologies. Partners from the last four years include Genentech (a member of the Roche Group), MedImmune (the worldwide biologics arm of AstraZeneca), Pfizer, Janssen and Cubist Pharmaceuticals.

**About Phylomer<sup>®</sup> 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.