



BREAKTHROUGH PEPTIDE THERAPEUTICS

Market Announcements Platform
Australian Securities Exchange

ALLOWANCE OF PHYLOGICA'S US PATENT FOR SYNTHETIC PHYLOMER LIBRARIES

- **US Patent allowed for rationally designed synthetic Phylomer libraries**
- **Broad applications of synthetic Phylomer libraries in therapeutics and diagnostics**
- **Patent allowance further secures Phylogica's ownership of the entire Phylomer peptide class**
- **New patent greatly extends life of Phylogica's core patent estate – out to November 2027**
- **Phylogica is already in discussion with prospective partners interested in accessing this technology**

PERTH, AUSTRALIA: October 2nd, 2013 – Phylogica Ltd (ASX: PYC, XETRA: PH7) a leading Australian peptide drug discovery company, announces the allowance of its US patent application for synthetic Phylomer libraries. This core patent (designated USSN 11/672,419) covers generic methods of designing synthetic Phylomer peptide libraries based on the identification of parts of natural proteins, which are predicted to form structures independently 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.

In summary, this technology allows Phylogica to use computer-based approaches to 'cherry-pick' from the most suitable structures found in nature. This provides Phylogica with the ability to customise the properties of the peptides to suit particular screening applications, providing an extraordinary level of control. For example, libraries can be designed to capture the most diverse set of different peptide shapes available with the greatest stability in the smallest set of Phylomers possible. This ability to rationally-design miniaturised Phylomer libraries enriched for desirable properties offers great potential for applications such as arrayed library screens and for the development of Universal Biosensors. Phylogica is encouraged by the interest from prospective licensing partners wanting to access Phylomers in synthetic form. The patent allowance also provides Phylogica with a strong IP position in the synthetic biology space, while significantly extending the period of exclusivity of the company over the Phylomer peptide class.

Dr Richard Hopkins, Phylogica's CEO commented: "This major patent milestone constitutes another major barrier-to-entry to potential competitors. Phylogica's claim over the entire Phylomer class of peptides is analogous to an exploration company securing rights to an oil field, which has been further extended by this new allowance. These comprehensive rights allow the company to control access to this valuable resource via licensing deals with pharmaceutical companies interested in exploiting the unique properties of Phylomers, while still retaining Phylogica's ownership of the resource itself."

This patent protects Phylogica's ability to use computer modelling to rationally design its libraries from natural protein structures. By customising its libraries in this way, Phylogica can selectively engineer-in preferred shapes/structures found in nature with desired drug-like properties. This provides unprecedented control over library quality that is predicted to result in higher success rates, particularly where screening throughout is limiting. This new intellectual property around construction of rationally designed Phylomer libraries perfectly complements our existing portfolio of patents that cover construction of high complexity Phylomer libraries in genetic formats that are suitable for other applications.

The improved quality and quantity of hits facilitated by such designed libraries is ideal for applications where the numbers of compounds that can be screened are limiting, like the construction of Phylomer arrays or chips, or in the direct phenotypic screening of libraries in mammalian cells. The new technology has direct application to Phylogica's existing alliances, include the design of 'universal biosensor arrays' (in collaboration with University of Queensland) and Phenotypic screens (in collaboration with Cambridge University).



BREAKTHROUGH PEPTIDE THERAPEUTICS

Phylogica's CSO Dr Paul Watt added: "The Phylogica team is delighted with this allowance because of the particularly broad patent claims that have been secured for rational library design approaches, which are aligned with latest trends in synthetic biology. Such a design-based strategy is ideal for high throughput screening applications and can be applied to the construction and screening of libraries of Phylomers immobilised on beads, peptide microarrays or biosensor chips. The patent specification covers the design of Phylomer libraries based on bioinformatic analysis of any available protein databases and is not restricted to particular sources of protein sequence, underlining the extensive scope of coverage we've obtained with this allowance. This new patent also further extends the life of Phylogica's core intellectual property claim over this area, since the proprietary rights do not expire until 22 November 2027."

-ends-

For further information, please contact:

Dr Richard Hopkins
Tel: 61 08 9489 7855
Email: richardh@phylogica.com

Rudi Michelson
Monsoon Communications
Tel + 61 3 9620 3333
rudim@monsoon.com.au

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[®] 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[®] 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[®] 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.