PHYLOGICA

BREAKTHROUGH PEPTIDE THERAPEUTICS

ASX ANNOUNCEMENT

Four-fold delivery improvement in new lead candidate

29 October 2018: Phylogica is pleased to advise that we have identified a **new lead Cell Penetrating Peptide (CPP) that is 4-fold more efficient** than our first generation CPP at delivering a large cargo inside cells. The improvement has been obtained through screening our enriched peptide library in a high throughput format.

Background

- Phylogica own the world's most structurally diverse peptide library which we are using to identify CPPs to deliver large cargoes inside cells – opening up the target space known as the 'undruggable genome';
- The efficient delivery of large cargoes inside cells is the rate-limiting step in the development of an entirely new class of drugs – 'intracellular biologics';
- In 2017, Phylogica made a significant investment in expanding the diversity of our peptide libraries through the addition of more genomes of micro-organisms – tripling their size;
- This investment was made in anticipation of the greater diversity and richness of the expanded libraries yielding more efficient CPPs - the anticipated benefits of enriching our libraries have now been realised in the form of substantially higher performing CPPs; and
- Phylogica's first generation CPP was ~40 times more efficient at delivering a cargo inside a cell than the industry gold-standard 'Tat' *in vitro* – our new lead CPP is 4 times as effective as this first generation CPP with further improvement anticipated through maturation/optimisation of this new lead that has already begun.

Results

The screening and validation of these enriched libraries began in September 2018 and will continue through to February 2019. Having validated ~10% of the additional CPP candidates identified through these screens, Phylogica has:

- Identified one CPP that is approximately 4-fold more efficient at delivering a biologic cargo into a target cell than our original CPP;
- Identified a second CPP that is approximately 2-fold more efficient than our original CPP; and
- Improved the 'hit rate' (identification of 'true' CPPs as a percentage of the total number of peptides screened) obtained in the screening process (giving us a richer data set to work with).

Next steps

These results are significant beyond the individual CPPs identified through the screens. The quality of the data set created in this process is large enough to support an advanced analytics

framework that moves the company beyond 'observational' power of its libraries to 'predictive' power through incorporation of artificial intelligence. We are currently in the process of adopting this advanced analytics capability.

We are progressing into *in vivo* models with these 'second generation' CPPs in the first half of 2019.

Phylogica (ASX:PYC) is the owner of a peptide library containing the extraordinary richness and diversity of nature. We are using these libraries to develop a drug delivery platform capable of reaching the highest value drug targets located inside cells. Our delivery platform enables drug cargoes to cross the cell membrane and directly reach their target.

ENDS

For further information, please contact:

INVESTORS
Rohan Hockings
CEO
rohanhockings@phylogica.com

About Phylogica

Phylogica Limited (ASX: PYC) is a biotech company focused on commercialising its intracellular drug delivery platform and screening its peptide libraries to identify drug cargoes for development against a wide range of disease targets. Phylogica controls access to the world's most structurally diverse source of peptides which have the ability to act as effective drug delivery agents and drug cargoes, penetrating cell walls to reach previously 'undruggable' targets across a range of disease types. Phylogica's platform of proprietary cell penetrating peptides has been validated across multiple animal models for the ability to deliver a diverse range of drug cargoes into cells. The company has collaborations with several pharmaceutical companies including Roche, Medimmune, Pfizer, Janssen and Genentech.

Forward looking statements

Any forward-looking statements in this ASX announcement have been prepared on the basis of a number of assumptions which may prove incorrect and the current intentions, plans,

expectations and beliefs about future events are subject to risks, uncertainties and other factors, many of which are outside Phylogica's control. Important factors that could cause actual results to differ materially from assumptions or expectations expressed or implied in this ASX announcement include known and unknown risks. Because actual results could differ materially to assumptions made and Phylogica's current intentions, plans, expectations and beliefs about the future, you are urged to view all forward-looking statements contained in this ASX announcement with caution. Phylogica undertakes no obligation to publicly update any forward-looking statement whether as a result of new information, future events or otherwise.

This ASX announcement should not be relied on as a recommendation or forecast by Phylogica. Nothing in this ASX announcement should be construed as either an offer to sell or a solicitation of an offer to buy or sell shares in any jurisdiction.

Tel: +61 8 9384 3284 | Fax: +61 8 9284 3801

www.phylogica.com

Phylogica Ltd

ABN 48 098 391 961