

First competitive read-out – peptide vaccine

Delivering drug cargoes across cell membranes is the major challenge in the development of a revolutionary new class of drugs. Cell Penetrating Peptides (CPPs) can overcome this challenge and provide access to the 'undruggable genome' – the highest value drug targets that exist inside cells. Phylogica (ASX:PYC) owns the world's most structurally diverse peptide library and is using these libraries to identify a new generation of highly efficient CPPs.

- In July 2018, Phylogica's Scientific Advisory Board identified the importance of obtaining *in vivo* (animal model) evidence of the ability of our Cell Penetrating Peptides (CPPs) to outperform competitive technologies to our prospects of commercial success (See ASX announcement of 9 July 2018)
- The results described below represent the first *in vivo* competitive read-out of Phylogica's CPP technology in relation to our peptide vaccine program
- **Phylogica's lead first generation CPP has out-performed a competitor CPP known as the 'zebra' peptide *in vivo* in a model of melanoma (cancer) – see Figure 1 below**
- CPPs derived from the viral Zebra protein are currently being progressed into clinical evaluation in the context of a peptide vaccine therapeutic in oncology (ie. the same therapeutic setting as the animal model described below)

8 February 2019: Phylogica is pleased to advise that the first competitive *in vivo* evaluation of our intracellular delivery technology clearly demonstrates the differentiation of our CPP platform. Competitive *in vivo* evaluation is the primary driver of commercial outcomes because it informs the answer to the question of whether the results observed in animals are likely to translate into a product with a competitive advantage in humans (see ASX announcement of 9 July 2018).

The advantages of our CPP platform have been well described *in vitro* and this outcome demonstrates that those advantages do translate from better outcomes in the test tube to better outcomes in a living organism.

The results

The results were obtained using a well described experimental model of melanoma, which is known to be highly aggressive and difficult to treat. Mice were vaccinated prior to tumour inoculation and the results demonstrate that Phylogica's CPP-vaccination strategy generated an anti-tumour immune response directed against the melanoma. Importantly, this resulted in a greater delay in tumour outgrowth (extended survival), compared to the competitor CPP.

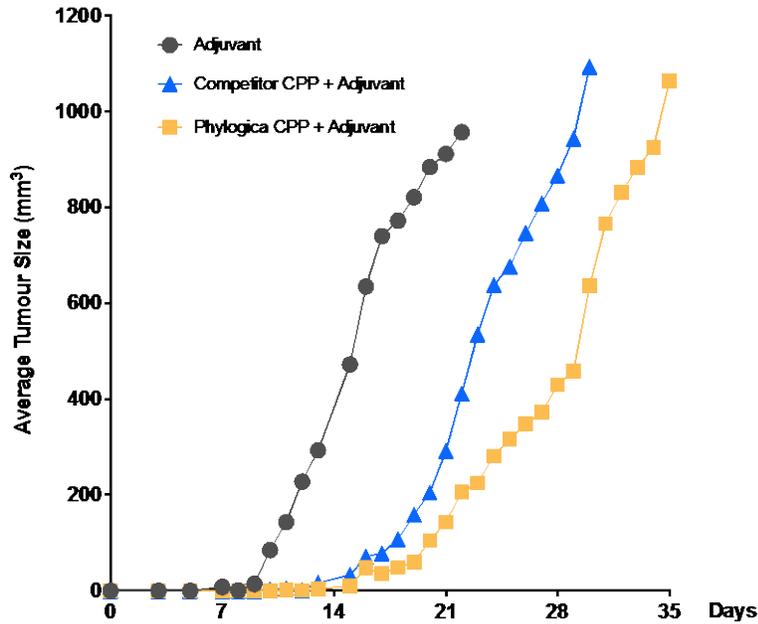


Figure 1: Mice were treated with a CPP-vaccine in the presence of an adjuvant prior to subcutaneous inoculation of B16-melanoma cells. Tumour growth was measured daily and survival of experimental animals was measured for Phylogica’s CPP-linked vaccine vs. competitor CPP-linked vaccine and the adjuvant alone.

The peptide vaccine work described above was conducted in collaboration with Dr. Jason Waithman of the Telethon Kids Institute.

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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.

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