PHYLOGICA

BREAKTHROUGH PEPTIDE THERAPEUTICS

Market Announcements Platform
Australian Securities Exchange

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CHAIR'S ADDRESS TO SHAREHOLDERS AT ANNUAL GENERAL MEETING

PHYLOGICA PLATFORMS ALL HELPING TO PROGRESS COMMERCIALISATION

In the world of drugs – as in many areas of life – delivery is all important.

You can have the world's most effective drug but if it can't be delivered to where it is required, it simply won't fulfil its potential or have the desired result.

It is this whole process of delivery all of the way into individual diseased cells that is the reason why Phylogica's peptide platform technologies are now really starting to provoke significant commercial interest.

One of the great advances we have made this year is in further validating our intracellular delivery technology platform based on functional penetrating Phylomers (which we refer to as FPPs, for short).

We have now more accurately quantified that this intracellular delivery method is very fast; beginning to occur within a few minutes with the majority of delivery occurring within an hour.

We have also been able to quantify the approximate concentration of the protein which we have delivered into the cell and shown that the efficiency of delivery is greatly superior to that achievable with the conventional cell penetrating peptide TAT.

This progress not only proves that the FPP platform is producing better results, but that it has led directly to further discussions and collaborations with potential partners who are interested in using the FPP platform to deliver proprietary cargoes in various disease areas.

Phylogica has not only made progress in the functional penetration of cells, we have also used our extensive Phylomer library to identify phylomers that can be used as the drug cargo itself.

This is our internal iMYC cancer program which continues to build up an impressive proof of concept data pack on the way to undertaking formal preclinical development in the second half of 2017.

We have now narrowed the number of proprietary iMYC candidates to 5 and the most suitable leads will be chosen for optimisation.

Our other cargoes directed at oncology targets in the high value MYC pathway, the Stat5 and YB1 programs, are being run by the Dana Farber centre of Harvard Medical School in Boston.

It is important to note here that our iMYC candidates are performing well on a number of measures which is all the more impressive given that they are yet to be fully optimised.

Further experiments have shown no evidence of FPP-mediated toxicity, improvements in pharmacokinetics and evidence of activity in two independent animal models of cancer even when administered intravenously.

These results have given us much greater confidence in the iMYC program and are also providing more evidence in support of the FPP program and its ability to carry cargoes into the cell.

The iMYC program is our most advanced oncology program with entry into a formal pre-clinical program planned for H2 2017. Phylogica is now entering the optimisation phase, where it is planning to achieve substantial increases in the potency of both its lead FPP and its lead iMYC before further multi-parameter optimisation of the conjugate begins.

If successful, this will enable the company to evaluate its lead candidate in the second half of 2017 in the context of a highly validated model of disease with a lead conjugate that is orders of magnitude more potent than the candidates that have already demonstrated good results.

Collaborations

Since the end of June we have signed an additional three non-disclosure agreements with international pharmaceutical companies to discuss elements of Phylogica's technology portfolio.

While these discussions are still at an early stage and may not necessarily lead to licensing or other types of deals, they signal a growing level of interest in Phylogica's progress.

There is an additional non-core body of work being conducted in association with Genentech, the focus of which is to discover and develop novel antimicrobials to treat resistant bacterial infections including 'superbugs'. Genentech are due to make a decision regarding licensing/extension of this research program in December 2016.

Phylogica's delivery technology (in the form of its FPPs) is also being examined by multiple third parties (Academic, Biotech and Pharma) for the delivery of various proprietary drug cargoes. These cargoes range in nature from peptides (both stapled and linear) to oligonucleotides, small molecules and beyond.

Platform

While there has been much encouraging work in the clinic in the past year, the core intellectual property of Phylogica is our extensive library made up of protein fragments expressed from the genetic material of micro-organisms (Phylomers).

The idea behind using this as a source of drug candidates is that the sequences found in nature are highly evolved and enriched for structures that have the ability to interact with natural proteins in a manner that yields therapeutic benefit if those protein targets are associated with disease.

For several years our team of scientists, managers and advisers has been working hard to use that Phylomer library to efficiently deliver biologics cargos such as peptides, proteins and nucleic acids into the inside of cells.

To reach this goal, the libraries were screened for rare Phylomers with the greatest ability to facilitate not only cellular uptake but also endosomal release, such that any cargo that they were 'carrying' would be free to interact with its disease target in the intracellular environment.

In achieving this ambitious objective, Phylogica has significantly expanded the landscape of druggable targets as well as enhancing the specificity and sensitivity of these drug-target interactions.

Searching through the library to identify Phylomers that may be used as the drug cargo in conjunction with the Functional Penetrating Phylomers (FPPs) was a natural next step and resulted in our oncology program which I outlined earlier.

In summary, the past year has been transformative for Phylogica, producing a lead oncology drug candidate that shows tremendous promise in being able to progress to pre-clinical studies in the second half of next year and with validating an FPP cell delivery system that is also showing excellent results.

We look forward with great confidence to further developments in our laboratories and I would like to take this opportunity to thanks all of our hard working discovery team and our loyal shareholders for their support as Phylogica gets closer to reaching commercial outcomes from its exceptional Phylomer library.

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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 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 have stable drug-like structures. Phylogica offers fully integrated drug discovery services to the pharmaceutical industry utilising its Phylomer® libraries and proprietary screening technologies. Phylogica's alliance partners have included Roche, Genentech (a member of the Roche Group), MedImmune (the worldwide biologics arm of AstraZeneca), Pfizer, Janssen and Cubist Pharmaceuticals (subsequently acquired by Merck).