



Phylogica exceeds gold-standard for treatment of MYC-driven cancer

More than 7 in 10 cancer cases depend on the mutant gene MYC for survival¹. While recognised as an important cancer target, there are currently no effective MYC therapies available. This is due primarily to the inability to deliver an effective MYC inhibitor into the intracellular environment where MYC exists.

Phylogica recently announced the results of an independently performed animal model of disease that demonstrated the ability of its Cell Penetrating Phylomers (CPPs) to deliver a drug cargo called OmoMYC inside cells to effectively inhibit MYC. Phylogica is now pleased to announce that:

- *It has identified multiple Phylomer peptide cargoes that are able to inhibit activity of MYC when delivered as drugs inside cancer cells;*
- *two of these Phylomer cargoes demonstrate superior activity to the gold standard MYC inhibitor (OmoMYC) for the ability to kill cancer cells;*
- *it will evaluate an expanded set of potential candidates before selecting a lead cargo to assess for drug like properties when conjugated to its lead CPP and delivered in an animal model of cancer.*

Perth, Australia, 16 November 2015: Phylogica Limited (ASX:PYC) has successfully identified multiple proprietary Phylomer candidates with confirmed ability to bind and block intracellular MYC activity. Notably, two of these Phylogica candidates exhibit better killing activity in cancer cells than the previous gold-standard OmoMYC when fused to Phylogica's proprietary cell penetrating Phylomers.

Richard Hopkins, Phylogica's CEO said "*We're delighted to have identified at least two proprietary Phylomers that represent the most potent inhibitors of MYC yet described. This outcome is a testament to the power of the Phylomer platform which has unique potential to discover and deliver our own drugs against some of the highest value (but currently undruggable) targets in cancer.*"

¹ Cancer research UK available at: <https://www.cancerresearchuk.org/funding-for-researchers/how-we-deliver-research/grand-challenge-award/challenge6?wssl=1>

In an additional encouraging finding, preliminary testing using one of the two Phylomers with superior activity to OmoMYC showed that this peptide was stable when incubated in serum for over 24 hours. Serum stability is an important 'drug-like' property required to achieve activity in animal models of disease.

Phylogica's CSO, Dr Paul Watt, commented *"To date we've assayed less than 20% of the hits identified in the primary screens against MYC as fusions to our cell penetrating Phylomers. We are encouraged by the high hit rate so far and are confident that a larger pool of specific MYC inhibitors will emerge once the functional screens are completed early next year. Once we have identified a broader set of MYC inhibitors we will then choose the highest quality candidates for analysis in animal models of cancer."*

Phylogica's differentiation in the field of intracellular drug delivery now extends from best in class cell penetrating Phylomers for drug delivery to best in class active biologics drug compounds active against MYC. The company is looking forward to publishing the results of animal models demonstrating the effects of systemically delivered proprietary CPP-cargo compounds in 2016.

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About MYC

MYC is one of the first cancer causing proteins (oncoproteins) to be discovered because of its profound effects on the growth and differentiation of cancer cells; yet it has not been successfully targeted in 30 years with conventional therapies. The MYC gene is the most frequently over-expressed cancer causing gene (oncogene) being amplified in more than half of common cancers such as breast, lung, lymphoma, leukaemia and brain tumours. Many of these cancers have an absolute dependence on MYC for continued growth and are therefore described as being 'addicted' to MYC. This makes MYC a very attractive drug target avoiding problems of resistance to chemotherapy and addressing a major unmet need.

About Phylogica

Phylogica Limited (ASX: PYC) is an oncology-focussed biotech company discovering and developing a new generation of biologics-based therapies against intracellular cancer targets. The Company was originally spin out from the Telethon Kids Institute (Perth, Australia) and the Fox Chase Cancer Centre (Philadelphia, USA). Phylogica controls access to the world's most structurally diverse source of peptides - called Phylomers. The company specialises in Phylomer-based solutions to discover and deliver novel biologics drugs against intractable intracellular cancer targets with unprecedented potencies. Phylogica is advancing its proprietary oncology programmes developing first in class therapies against transcription factors such as MYC and STAT5. These targets play a critical role in many common cancers such as breast, lung, prostate and pancreatic but have proven undruggable with conventional small molecule therapies. Within the last six years the company has entered into discovery collaborations with Roche, Genentech, MedImmune, Pfizer, Janssen and Cubist Pharmaceuticals.