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Phylogica looks for tie-ups in Asia: COO Nick Woolf

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Phylogica, a leading peptide drug discovery company based in Australia, has developed a world-class drug discovery platform by harnessing the rich biodiversity of nature to discover novel peptide therapeutics. Phylogica has been a research-focused enterprise since its inception in 2001. However, it revamped its business model in 2009 and switched to collaborative strategies.

The company has signed partnerships with Starting with Pfizer, Roche, MedImmune, and more recently Johnson and

Johnson, to help the companies in discovering novel drugs. The revamped business model has been a successful strategy for Phylogica and today 75 percent of its business comes from strategic collaborations with pharmaceutical companies.

Excerpts from the interview with Mr Nick Woolf, COO, Phylogica:

What is the spectrum of drug discovery services that Phylogica is offering to pharmaceutical companies? How is it unique from other preclinical services?

Mr Woolf: We have billions of distinct peptides known as Phylomer peptides, which represent a rich source of biologically active drug leads. These natural peptides are based on expressed sequences of protein fragments that are encoded by the genes of evolutionary diverse microbes, and they thus represent a new class of biological therapeutics. Phylogica utilizes these Phylomer peptide libraries and screening methodologies to identify unique peptide drug candidates for its pharmaceutical and biotechnology partners.

The peptide that we provide have exceptional structural stability, specificity and affinity that has the potential to address disease targets that are intractable to small molecules and other protein biologics, including antibodies.

Since Phylomer libraries have the most comprehensive collection of distinct protein-based structures, they have a key versatility advantage over other libraries, such as classes of antibody alternatives. This feature of high structural diversity has resulted in Phylomer libraries successfully yielding high quality functional primary hits against multiple classes of intracellular and extracellular drug targets as well as in direct phenotypic screens.

In terms of revenue generation, how is the new business model different? Has it diverted Phylogica's focus from R&D?

Mr Woolf: When we were following the R&D model, we realized that it can be difficult to survive unless we have resources to raise large sums of money for the drug development process. Hence, we switched the model.

Very recently, Phylogica collaborated with Johnson and Johnson to discover new classes of drugs derived from Phylomer peptide platform. This is the biggest deal for us in breadth and scope as Phylogica will receive an initial technology access fee as well as research funding over the first 18 months of the collaboration.

Similarly, we have a $135 million deal with Pfizer signed in December 2010, and in 2011, we successfully completed the first stage of collaboration to discover novel peptide-based vaccines. In 2010, we signed another deal with MedImmune at a value of $100 million, to evaluate Phylomer platform to identify antimicrobial peptides for infectious diseases.

With these research partnerships, we have made impressive progress. It is important to work with partners because the contract drug discovery partnership business model drives parallel revenue through upfront technology access fees, significant ongoing milestone payments and royalties on successful drugs once they reach the market.

However, we will continue to put in efforts into drug discovery. We follow a business model that balances the internal discovery projects and those with partners. For us, it has been a phase of evolution.

Are you looking at expanding your presence in Asia?

Mr Woolf: We work with many academic and research institutes in the US and Europe. In Asia, we don't have any partnerships as such, but we are looking to build relations with research groups in biotech-focused countries such as Singapore.

Your focus is on developing biologics. What is your view on Asia growing as a destination for biologics?

Mr Woolf: By 2015, half of the drugs approved will be biologics in nature and the market of peptide is also growing. I believe that biologics is emerging as a large-scale business avenue, complemented by small molecule drugs. Asia will be a key destination for developing and manufacturing potential biologics therapeutics. It is well-equipped with talent and GMP-accredited manufacturing facilities. Not only India and China, but other Asian countries are also bound to grow.