

## HARNESSING NATURAL DIVERSITY FOR DRUG DISCOVERY

Phylogica is a biotechnology company based in Perth, Australia and Oxford, UK, which provides peptide drug discovery services to the Pharmaceutical industry.

Phylogica has discovered and patented a unique proprietary class of targeted peptide therapeutics (Phylomer® peptides). These peptides exhibit competitive therapeutic, manufacturing, and commercial advantages over other more traditional targeted biologics such as proteins, monoclonal antibodies and most current therapeutic peptides. Libraries of billions of Phylomers have been constructed, which constitute the most structurally diverse set of peptides available, resulting in a higher quality and quantity of hits. For example, the hit to target ratios from Phylomer® libraries are high and the proportion of hits which are functional, is also very high, when compared with traditional libraries of random peptides. *The value of Phylomer libraries as a rich source of drug-like peptides is demonstrated by Phylogica's growing list of drug discovery agreements with big Pharma companies, including Roche, Medimmune (AstraZeneca), Pfizer and Janssen (Johnson & Johnson).*

Phylogica has created, and validated potential therapeutic Phylomer® drug leads against intracellular and extracellular targets, with high affinities. These peptides can be readily enhanced by focused lead optimization strategies based on the structural information obtained from the parent proteins from which Phylomers are derived. Phylomers have also been obtained which are capable of transporting large biologics into cells.

Phylogica has also demonstrated in-vivo efficacy for Phylomer® peptides against intracellular targets in animal models of diverse diseases such as stroke, traumatic brain injury, burns, wound healing and acute respiratory distress syndrome. As these peptides are synthetic, chemical manipulation can enhance their stability, improve their solubility, prolong their in-vivo half-lives and minimize their risk of being immunogenic.

Phylomer® peptides are suited for targeting a wide range of disease-associated proteins and their interactions and this versatility is ideal for phenotypic screening for target discovery. Phenomica is new spinoff between Phylogica and the prestigious Cambridge University in the UK, which was created to pursue commercial opportunities created by the proven use of Phylomer libraries for target discovery and validation.

