PHYLOGICA

BEYOND ANTIBODIES

Chairman's Update

Informal updates for Phylogica's shareholders

December 2010

Last year the company said its commercial target was up to three partnerships with major pharmaceutical clients within 12 months. We have secured two alliances since December 2009 and remain on track for closing further partnerships in line with our guidance. Our current partners are two of the largest global pharmaceutical companies. Roche, based in Switzerland, is the world's third largest drug company by sales. Roche reported revenue in 2009 of approximately US$49 billion and, since acquiring the US biotech company Genentech, is now the world's largest biologics company. MedImmune, based in the USA, is a wholly owned subsidiary of AstraZeneca, which is the world's seventh largest drug company with sales in 2009 of US$32 billion. ***The unique assets and skills of Phylogica have therefore been recognised by two of the largest and most highly regarded drug companies in the world.*** These companies undertook substantial due diligence before committing resources to their respective collaborations with Phylogica. They do their homework on selected collaborators in a very intensive manner to ensure the IP and technology hold up and that their partners have the skills to meet their exacting standards.

What are some of our key achievements over the last 12 months?

Cell Penetrating Peptides

Working with Roche, Phylogica has been finding new agents to act as carriers to transport new drugs inside cells where many disease processes are acting. Many potentially useful drugs cannot get to the site of the disease so, like a fire in a coalmine, until the defenders get there, it burns on. Relief can only be effective if it can reach the cause of the problem. ***The Phylogica team has found a number of these entirely new drug carriers.*** Most have never been indentified before by anyone. They have been manufactured, tested and sent to Roche for their review. We hope to have their response shortly and are optimistic they will confirm these exciting results and open new paths for new drugs. Roche's Dr Anton Haselbeck, Head of New Technologies in Roche's Pharma Research & Early Development unit, commented on the partnership: *"We scour the world looking for innovation that could lead to new medicines, and our collaboration with Phylogica has uncovered an exciting area of research…"*

In another release, Stella Xu, Executive Director for Roche Partnering also recently commented on our relationship at Ausbiotech: *"..In the past year we have established a research collaboration with Perth-based Phylogica. This partnership underscores our commitment to finding partners in Australia*

with novel technology platforms as well as therapies that could lead to the next step-change in medicine."

New and Unique approaches to Cancer Treatment

Cancer cells differ from normal cells in that they are out of control. They are rogue cells ignoring the body's directives on how to act and when to stop duplicating themselves. Treating cancer requires finding the rogues and destroying them or attacking their driving cancer processes so they halt their lethal activities and hopefully die. Rehabilitation is not an option here. Phylogica is playing a very active role here in two ways. It has worked with one of Britain's premiere cancer research groups, the MRC Hutchison Research Centre at the University of Cambridge, to assist them find new cancer causing triggers, and to plot the paths to create new drugs to deal with these triggers. ***This has been a hugely successful collaboration, such that the UK team is now exploring fresh and expanded commercial opportunities with Phylogica.***

In house, to fine tune some of Phylogica's search engines, the local team has investigated if it can find potential drug leads, those that might be modified into useful drugs, against one of the best known cancer-causing 'rogue machinery' curiously named the '*hedgehog pathway*'. Parts of this rogue machinery poke outside cancer cells and can be vulnerable to drugs acting outside. But a larger part nestles inside cells and out of the reach of most drugs. As Phylogica's massive collections of new chemical structures include billions of compounds that can act inside cells, the team has been looking for entirely new drug leads against the cancer hedgehog pathway in several parts of the cancer mechanism. They have found over 40 such possible drug candidates and this work is now being accelerated into their collaboration with the MRC Hutchison Unit. Importantly many of these new compounds are outside the reach of all other companies, being protected by the patent estate, which is at the heart of the Phylogica assets. These approaches point to new therapeutic options to deal with the hedgehog pathway which is a core driver of some brain cancers, skin cancer and many cancers of the pancreas, a notoriously hard to treat disease.

New Antibiotics

New anti bacterial or antiviral drugs are in increasing demand, both because of the emergence of dangerous bugs but also as many are becoming resistant to known antibiotics: the dreaded *super bugs.* Phylogica has previously shown that it can find antibacterial compounds from its own reservoirs of compounds. We are now working with MedImmune, the US biotech arm of AstraZeneca, seeking new treatments for one of the most resistant bacterial infectious agents, *Pseudomonas*, which causes severe and often lethal pneumonias, infections of catheters in hospital patients and terrible infections in children with cystic fibrosis. ***Here the collaboration works to the strengths of both parties where Phylogica indentifies the new drug leads and MedImmune does the bacterial testing and the clinical studies.*** The objective is to create new treatments for these dangerous infections.

Why Phylogica?

These disparate research programmes, each focussed on hugely demanding human diseases, show the incredible versatility of Phylogica and its unique contribution. Why is Phylogica so well placed to be seen as a core client for these major drug companies? Its massive reservoirs of billions of distinct

molecules from natural sources present our pharmaceutical partners with an entirely fresh source of possible drugs. However, controlling such a vast resource alone is not enough. The mine of possible drugs needs to be integrated with a process for finding, and then drilling, and then consolidating the resulting data. This requires very sophisticated search engines and probes. If there is a 'needle in a haystack' there has to be some way to find it. The Phylogica team is incredibly adept at that role and has shown its versatility in dealing with quite different projects as listed above: cell penetrating peptides, cancer and antibiotics. They make new 'haystacks' but they have better and better ways of finding the 'needles' within. Each of these tasks described above has required setting up new processes to find the optimal drug lead. Their successes demonstrate just how versatile the Phylogica team and our libraries are. Our partners are recognising that. ***Another new partnership will further demonstrate the Phylogica magic, as its engine is put to a quite distinct use in another very serious disease.***

Collaborations

The business plan is quite distinct from a contract manufacturer, where one simply competes for price and then sells the product and, takes the money , before moving on to the next contract. Phylogica has its unique source of possible drug leads and then adds its expanding research skills to solve the problem of drug discovery. However the commercial gain for Phylogica does not stop once it hands over its newly found Phylomers that meet the objectives of the partnership. Phylogica is entitled to receive downstream milestones and royalties from its partners as they progress the development and eventual commercialisation of drug candidates that derive from Phylogica's drug discovery expertise.

The pharmaceutical companies partnered with Phylogica are leaders in the industry. These collaborations validate the high international standing of the Phylogica team and their skills. Conducting joint R&D projects with these global behemoths could be a daunting task, but the Phylogica team has risen to the challenge. ***Rather, they bring to the table an increasingly confident and 'Can Do' attitude based on their growing track record of solving very tough problems.***

The next 12 months will further show that Phylogica is now a significant international player in the exciting field of peptide drug discovery. As the company moves closer to financial sustainability, it will simultaneously be banking increasing milestones and royalties opportunities for later harvest as its commercial assets. Our accumulating revenue will fuel the acceleration of the capital growth asset, which we've all invested in – the Phylomer libraries.

Dr Doug Wilson
Chairman,
Phylogica Limited

SHAREHOLDER CONTACT DETAILS

To ensure Phylogica can quickly and promptly provide you with future information can you please complete and return the following information to Phylogica:

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