

Biotech Daily

March 28, 2007

CIRCADIAN PIONEERS COMMERCIALIZATION

MARC SINATRA'S BIOGUIDE: CIRCADIAN TECHNOLOGIES

Listed in 1985, Circadian has been a pioneer of life science commercialization, with founder, Leon Serry, arguably the grandfather of Australian biotechnology. Times have changed and the commercialization of Australian science is more professional, the market more crowded and strategies for creating value numerous. This raises the question: can Circadian compete in this more highly developed environment?

Overview: Traditionally, Circadian has sourced commercialization projects from Australian academic institutions and provided funding and management expertise in return for equity. If the science continues to look promising, Circadian will form a company around the research and raise capital via a stock exchange listing. Circadian currently has 10 projects ranging from neuroscience to peptide chemistry and holdings in four listed biotechs. Like other listed investment companies, Circadian trades at a discount to its net tangible asset (NTA) backing. Historically, this discount has been 30 percent.

Financials: Market cap: \$56 million; cash: \$35 million; listed holdings: \$27 million; estimated value of unlisted holdings: \$18-\$70 million. The \$18 million figure values Circadian's unlisted holdings largely at cost, while the \$70 million figure is based on a higher end potential, should they be listed (see Verdict below).

Board & Management: chairman: Dominique Fisher; managing director: Leon Serry; executive director: Graeme Kaufman; non-executive directors: Dr John Stocker, James MacKenzie, Don Clark; manager strategic developments, Robert Klupacs. Circadian's people have significant experience spanning intellectual property identification through to life science product introduction and marketing.

Investment Strategy: According to Graeme Kaufman, a major factor Circadian considers when deciding whether to fund a project is whether the people are right for a commercialization project. Will they meet timelines? Can they work with business partners? The market characteristics of the opportunity are important factors. Technical feasibility can be hard to assess and is formally addressed in detail for those projects that pass the people and market screens. Circadian also manages technical risk through staged funding agreements and a diversified portfolio. Circadian usually realizes the value from its investments by gradually selling down its holdings in its listed companies, as they mature.

Portfolio: Projects, listed and unlisted companies by percentage ownership.

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| 1) Vegenics (62.5%) | 8) Memory enhancement project (60%) |
| 2) Dicarba Analogues (50%) | 9) Analgesic project (85.7%) |
| 3) Cancer vaccine (50%) | 10) Paracetamol project (50%) |
| 4) Cancer of unknown primary (50%) | 11) Antisense (23.6%) |
| 5) Cancerprobe Pty Ltd (60%) | 12) Avexa (7.63%) |
| 6) Syngene (42.4%) | 13) Metabolic (12%) |
| 7) Alzheimer's project (100%) | 14) Optiscan (6.37%) |

Vegenics is the biggest of Circadian's unlisted assets and it is a potential listing candidate. It is developing drugs to restrict the blood supply to tumors, like Genentech's \$US1.1 billion a year Avastin. Unlike Avastin, Vegenics' drugs also target the supply of lymph vessels to the tumor to restrict the cancer's ability to metastasize. In addition to its intellectual property, Vegenics also has licensing agreements with several companies including Ark Therapeutics and Imclone.

Dicarba Analogues is a new project aimed at creating more stable peptides through the ability to precisely substitute disulphide bonds with stronger carbon bonds. This technology could be important in the many areas where peptide stability is an issue.

Competition: Venture capital (VC) companies represent Circadian's main competitor for projects. Examples include GBS Venture Partners and the Queensland Biocapital Funds. There are many differences between the strategies of a typical VC and Circadian, with the VC route more complex than Circadian's, but probably providing a greater network of contacts for the company. The point is that these differentiated strategies probably segment the market, reducing the direct competition for projects. In any case, there appears to be no shortage of projects to feed Circadian's pipeline.

In terms of listing biotech companies, it has long been argued that the listed biotech sector is overcrowded. Compared to the listed resources sector this appears to be a fallacy. Listed or unlisted, good companies tend to find funding and bad ones don't.

Verdict: Circadian's initial investment of \$400,000 in Metabolic has generated \$15 million in cash plus a continuing 12 percent interest in a company with a strong product pipeline, despite the recent termination of its obesity drug project. Numbers like these make Circadian's ability to generate wealth clear. Vegenics and Dicarba indicate that Circadian is still finding quality projects in today's market place. Leon Serry and Graeme Kaufman (who floated CSL) are the experts in preparing and then listing biotechnology companies in Australia. Consequently, Circadian's ability to compete in today's market seems as strong as ever.

From an investor's point of view, Circadian looks more like a traditional company than a listed investment company, such as Everest Babcock & Brown, with Circadian's science-based projects being its products and the means of revenue generation being the share market. One could argue strongly that Circadian should not be discounted in the same manner that listed investment companies are.

When you add up the value in each of Circadian's asset classes, you get a total of \$80 to \$132 million. When you compare these numbers to Circadian's current market capitalisation of \$57 million, the company looks undervalued.

Circadian represents a very good opportunity for investors seeking well diversified exposure to the biotechnology sector with very significant potential upside.

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