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Daily news on ASX-listed biotechnology companies

Dr Boreham's Crucible: Vectus Biosystems

By TIM BOREHAM

ASX code: VBS

Share price: 66 cents; **Shares on issue:** 37,033,100; **Market cap:** \$24.4 million

Financials (year to June 30 2022): revenue \$1.3 million (up 27%), loss of \$3.99 million (previously a \$3.86 million loss), cash of \$1.28 million (down 77%), debt of \$5.889 million (consists of \$5.44 million of convertible notes and \$442,291 of director loans)

June quarter 2022: receipts nil, cash outflows \$1.4 million, quarters of available funding: 0.9 (the company received a \$936,000 Federal R&D Tax Incentive in July 2022)

Chief executive: Dr Karen Duggan (co-founder)

Board: Dr Ronald Shnier (chair), Maurie Stang (deputy chair, co-founder), Dr Duggan, Peter Bush, Dr Susan Pond.

Identifiable major shareholders: Ajjika Tech (Dr Duggan) 10%, Energy Trading Systems (Maurie Stang) 8%, Bernard Stang 8%, Kefford Holdings 7.2%, Truebell Capital 4.2%.

As with almost every other drug developer on the planet, Vectus co-founder Maurie Stang believes his fibrotic diseases outfit is of interest to potential, deep-pocketed partners.

The difference is that given his life science pedigree, his comments hold more weight. "There's a lot of management by press release in this market and that's not us," he says.

Given that, investors will be intrigued to know that a “very well-known biotech” is paying close interest to Vectus, while the company has already knocked back “a few barbarians at the gate” with undercooked proposals.

“All the premature attempts to get hold of the crown jewels have been rebuffed,” he says.

The former (now deputy) chair of Nanosonics, Mr Stang steered the sterilization device giant from a minnow to a \$1.1 billion market cap company.

He also founded Henry Schein, the country’s biggest dental supplies provider, as well as Regional Healthcare Dialysis and, in the US, x-ray innovator Lumitron.

Vectus dwells in fibrosis, which is linked to heart, kidney and liver failure, respiratory failure (pulmonary fibrosis) and Covid (long or otherwise).

Mr Stang says it’s a case of focusing on the science, while also understanding the business case for an eventual drug.

The key attraction is that while current treatments such as so-called Ace inhibitors might slow down fibrosis, they won’t reverse the condition.

It’s hoped that Vectus’s lead drug, VB-0004, will do just that.

Giving patients the VIP treatment

Accounting for 40 percent of all deaths, fibrosis is the thickening and scarring of connective tissue.

VB-0004 is a native vasoactive peptide, or VIP. It’s based on a mimetic platform, which is about creating compounds to resemble the active components of a naturally-occurring peptide.

More broadly, Vectus has a library of 1,000 compounds, derived from the platform underpinning VB-0004.

And seeing you asked, the key candidates are VB4-A32 (liver fibrosis, including alcoholic and non-alcoholic steato-hepatitis), VB4-A79 (pulmonary fibrosis, including idiopathic pulmonary fibrosis, asbestosis and black lung disease) and VB4-A5 (tubular cell death consequent to cytotoxic therapy).

“VIP is in all our bodies,” Mr Stang says. “The only time you don’t see them is when you’re ready for a heart or kidney transplant.

“While VIPs are a well-known marker of disease, no-one before saw them as a regulator of disease.”

Vectus's compounds work by stimulating a natural repair process in the body: activating receptors that prompt macrophages to take out scar tissue and regenerate functional tissue.

Mr Stang is highly encouraged by the results of in-vivo (animal) and human cell line testing.

"We see rigid aortas that are not functioning and they go back to being soft and normalizing blood pressure," he says.

In the case of kidneys, it's hoped that one of the compounds can protect them from the toxic effects of chemotherapy.

"A significant number of patients won't go on to dialysis if they are on our drug."

Deviating into drug development

Vectus was founded in 2005 by Mr Stang and hypertension expert Dr Karen Duggan.

Mr Stang said he vowed to stick with devices, rather than drug development. As it happened, an eminent professor told him to have a gander at the underlying technology, which was owned by the New South Wales health system and the University of New South Wales.

Before he knew it, he had co-founded the company with Dr Duggan. "It was a sub-optimal situation because everyone wanted [the technology], but no one would write a cheque to do it properly," he says.

Vectus listed on the ASX in February 22, 2016, having raised \$5.1 million at \$1.55 apiece, for a total market valuation of \$22 million.

An expert in imaging fibrosis, chairman Ron Schneir is the medical director of I-Med.

Among several other roles, Dr Duggan is the immediate past chair of the National Blood Pressure and Disease Advisory Committee.

Fellow director Susan Pond was the head of Ausbiotech.

The company is based at the CSIRO's old facility in North Ryde, Sydney, having engaged the agency for its drug synthesis ability.

Vectus also has a diagnostic platform called Accugen, which consists of reagents and software. In essence, Accugen provides a new way of standardizing a PCR (quantitative polymerase chain reaction) test, as used widely by molecular biology labs.

Readers keen to know more on that one can take Greens leader Adam Bandt's advice and "Google it, mate".

Nice and safe

Vectus is now moving to first-in-human, phase Ib trials of VB-0004 on patients with mild to moderate hypertension with low cardio-vascular risk.

“We are pretty confident we will see some efficacy,” Mr Stang says.

This follows single and ascending dose safety trials on healthy volunteers, which showed no adverse effects on strengths of up to 100 milligrams.

The last of the three cohorts in the multiple ascending dose study was completed this month, with no significant adverse events recorded. Mr Stang says the evidence to date suggests VB-0004 will be amenable to once daily dosing “a desirable feature” for treating the aforementioned diseases.

Financials and performance

With \$1.2 million in the bank, Vectus could do with a trip to the proverbial ATM.

The directors said that with the company posting a 2021-'22 million loss of \$3.99 million and with a net asset deficiency of \$3.53 million, there was a risk the company could not continue as a going concern.

The last time Vectus went to the market was in December 2020, raising \$7 million in a placement at 90 cents per share.

“The directors remain confident that this can be repeated as required to support the group’s continuing activities and the group has budgeted a further capital raising of \$4 million in October 2022 and a further raising in 2023 if required.”

Or failing that, the company will reduce its spending.

Mr Stang adds the company is looking at “one or more [possible pharmaceutical company] deals within a very acceptable time horizon”.

Of course, the longer the cash runway a company has, the more negotiating power it has at the partnering table.

Vectus shares peaked at \$2 in mid-October 2021 and hit a low of 29 cents in early February 2019.

500 million Chinese livers can’t be wrong

As well as being in discussion with some “well known” pharma companies, Vectus has appointed an advisory group in China, in view of having the liver-specific agent VB-A32 licenced there.

The attraction of the Middle Kingdom is that a whopping 40 percent of the populace has been exposed to hepatitis.

While VB-A32 shares the same DNA as VB-0004, its mechanism of action differs because it's not desirable to reduce blood pressure in the liver.

Mr Stang reckons a Chinese drug alone could be worth \$1 billion-plus in annual revenue.

Peering at the peers

Astute bio-watchers will note the similarities between Vectus and the ASX-listed Pharmaxis, which specializes in conditions including myelofibrosis, stromal (fibrotic) cancers such as pancreatic and liver cancer, NASH, pulmonary fibrosis, chronic kidney disease, liver fibrosis and fibrotic scarring from burns and other trauma.

In other words: the fibrotic A to Z.

Another listed peer is Dimerix, which is in phase III trials for proving up a drug for the kidney disease focal segmental glomerulosclerosis (FSGS).

Yet another is Adalta as it pursues its I-body candidate AD-214 drug for idiopathic pulmonary fibrosis and - possibly - wet age-related macular degeneration.

Adalta is valued at a mere \$15 million while Dimerix and Pharmaxis are worth around \$45 million.

Then there's the intriguing tale of Fibrotech Therapeutics, which attracted the backing of Uniseed and the Medical Research Commercialisation Fund (Brandon Capital) for its repurposed drug candidate for diabetic kidney disease.

Fibrotech was acquired by British drug maker Shire in 2014 for a cool \$US500 million (\$A735 million). Two years later, Shire itself was acquired by Baxalta, which dropped a number of programs including Fibrotech's

Baxalta handed back the rights to Brandon Capital and the program lives on within Certa Therapeutics, which in 2018 raised \$25 million.

Dr Boreham's diagnosis:

Mr Stang says he had more than enough on his plate, but became involved in Vectus because of the potential for high social - and commercial - impact.

"We are totally committed to our shareholders but we are not doing this for a quick financial return," he says.

“We believe that doing something extraordinarily will get a better return for shareholders and ourselves.”

Vectrus has been travelling under the radar, but to mix metaphors the company is now coming out of its shell: “we are the unsung hero on the ASX”.

Mr Stang says that at recent investor meetings, participants would start out with crossed arms but by the end of the company’s prezzzo they were “taking notes like school children” (or biotech writers).

Mr Stang says every transaction the company has pondered has been “well in excess” of its market cap.

“The risk/reward for shareholders is pretty good,” he says. “I’m personally of the view this will be one of Australia’s most important drug discovery companies.”

He leaves one last message for the doubters:

“I had the same problem when Nanosonics when it was 18 cents a share and no-one thought we would become the lead company in automating infection prevention.”

Over to you, Maurie ...

Disclosure: Dr Boreham is not a qualified medical practitioner and does not possess a doctorate of any sort. But he’s diligently taking notes.