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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: 13.0 cents; **Shares on issue:** 61,690,348; **Market cap:** $8.0 million

CEO: Dr Tara Speranza

Board: Dr Ronald Cecil Shnier (chair), Maurice Stang, Linda Ann Walters

Financials (June quarter 2026): revenue nil, cash outflows $167,000, end of quarter cash $718,000, quarters of available funding 4.3

Major identifiable shareholders: Kefford Holdings 10.7%, Maurice Stang 7.9%, Spinite Pty Ltd 6.5%, JB Toro 6.5%, Ajjika Tech Pty Ltd 5.2%, Bernard Stang 4.3%

A decade after listing, anti-inflammation drug developer Vectus Biosystems has decided that chasing a niche rare disease makes more sense than pursuing a more common indication.

While that sounds perverse, plenty of biotechs have discovered the value in 'orphan' drugs, including the commercialized Clinuvel and Neuren and – still in development – Dimerix.

So, in taking the orphan route, Vectus is in good company.

Having pursued renal diseases with its lead asset VB0004, Vectus has homed-in on the difficult lung disease idiopathic pulmonary fibrosis (IPF).

‘Idiopathic’ indicates the level of the challenge, in that no-one knows what causes the disease.

New Vectus CEO Dr Tara Speranza says while three IPF drugs are on market, they are not that great.

“We are the first anti-fibrotic company to be targeting no just slowing progression but also actually reversing fibrosis,” she says.

In ASX terms, Vectus assumes the IPF mantle from Adalta, which had an active program for the disease but swapped to cancer cell therapies.

VIP treatment

One of the quieter ASX biotechs to date, the Sydney-headquartered Vectus is based on the vaso-active intestinal peptide (VIP).

The technology was discovered and developed by the late Dr Karen Duggan, a clinician and prominent cardio-vascular physician and researcher.

Focusing on patients with hypertensive renal fibrosis, Dr Duggan noted in research that most of her patients had very low VIP levels in their kidneys.

The same applied to patients with cardiac fibrosis.

Because patients were ill and older, she didn’t want them taking injected peptides, so she worked with scientists to design small, orally delivered molecules.

Vectus listed in February 2016, having raised $5.17 million at $1.55 apiece.

The former Nanosonics chair, Maurice Stang, has been a Vectus director since the company was founded in 2005.

Speranza history

Dr Speranza says when Dr Duggan passed away from cancer in May 2024, the company lost its driving force.

Dr Speranza became CEO (and chief technology officer) in May this year, and the board asked her to help package the company’s other drug assets.

A molecular biologist, she evolved from academia at the University of Sydney and Geneva University, to commercial roles at Bell Potter (as an analyst) and Dr Andrew Forrest’s Tenmile.

Dr Speranza did what was asked of her, spearheading a licencing deal for the renal fibrosis asset VB4-P5, with Canada's Nasdaq-listed Xortx Therapeutics.

As consideration Vectus received 154,544 shares in Xortx, currently valued at around $500,000 and equating to 9.9 percent of the company.

Vectus also pocketed 692,150 Xortx warrants that can be converted to common stock at nil cost.

Dr Speranza said that normally the company would prefer a licencing deal with milestones and royalties, but the asset was very early stage.

While IPF is Vectus's key priority, the company has earlier stage programs for pulmonary fibrosis (VB4-A79) and liver fibrosis (VB4-A32).

"As a small Aussie biotech, kidney fibrosis is too big a disease," she says.

"Because the drug works so well in lungs … why don't we reset and refocus on idiopathic pulmonary fibrosis, which will come under an orphan drug designation.

About IPF

Usually fatal, IPF causes irreversible lung damage, with the alveoli replaced with scars and affects about three million people worldwide.

"It's quite nasty," Ms Speranza says. "Median survival time is between two and five years."

"Even with the three currently approved treatments that are on the market, they don't improve survival time by much more than six to 12 months."

There are just under 95,000 IPF patients in the US - well within the FDA threshold of 200,000 for 'orphan' designation. Extrapolating the numbers, Australia has about 7,500 sufferers.

IPF is most likely to occur in men over 60 years, but "it doesn't discriminate, and you will find it across all sexes and age groups".

Unlike ailments such as mesothelioma or chronic obstructive pulmonary disease, there's no known link between occupations or smoking.

Current therapies are pirfenidone, nintedanib and the recently-approved neranoblimast.

Ms Speranza says the approved therapies don't reverse the condition. They reduce the disease progress by 50 percent, adding about 12 months of life expectancy.

They also have gastrointestinal side effects.

The company expects the IPF market to be worth $US5 billion by 2030.

How VB-0004 works

VB-0004 binds to the N-Crp receptor – one of four on a vaso-active intestinal peptide, but not as heavily expressed.

In doing so, it activates calcium entry into the cells, as well as other mechanisms that down-regulate those pro-fibrotic factors.

“The molecules were designed specifically as ‘mimics’ of the parts of the vaso-active intestinal peptide that binds to its receptors,” Dr Speranza says. “It’s not a case of throw the bomb in and see what happens, this is very precisely designed.”

The drug also activates macrophages: large white blood cells that act as the immune system’s cleanup crew.

“Macrophages are like Pacman: they chomp away at fibrosis,” Dr Speranza says.

VB-0004 thus is dual mechanism, in that it reduces fibrosis while activating the macrophage precursors to clear up the ‘debris’.

Where’s the proof?

To prove the mechanism of action, Vectus carried out a rat study.

The rodents were administered a chemotherapy agent (Bleomycin) over 14 weeks, known to cause “nasty fibrosis”.

In fact, most cancer patients come off Bleomycin because of this side effect.

Within two weeks, 20 percent of the rats’ lungs were covered in fibrotic tissue, rising to 23 percent over four weeks. The affected areas were marked by blue areas of collagen.

At 16 weeks, the rats administered with VB-0004 had this fibrosis reduced to 14 percent.

“That gave a clear indication we really want to be looking at lungs with this drug,” Dr Speranza says. “We know full well that we're working on the correct pathway.”

Enrolling healthy volunteers, a phase I study showed “strong safety and predictable pharmaco-kinetics”. The single ascending dose study of up to three milligrams showed maximum blood concentration six to eight hours after dosing.

The drug had a 10 to 15 hours of half-life “which is just perfect for once-a-day dosing”.

Other drugs need to be taken two to three times day – not ideal for forgetful older patients who may be on a raft of other meds.

The company also completed a multiple ascending dose (MAD), with no serious adverse effects.

The next steps

The company expects to appoint a contract research organization for a randomized phase Ib MAD study, enrolling up to 50 healthy volunteers.

The trial will treat the patients for 21 days, with a seven day follow up.

“My best guesstimate is that by the end of the year we will have recruitment complete,” Dr Speranza says.

“We wouldn't expect it to be going for longer than six months … once we start”.

If all goes well, Vectus expects to carry out a global phase IIb study, under a US Food and Drug Administration investigational new drug application (IND) framework.

The trial will use the optimal dose determined by the phase Ia trial.

Meanwhile, the company is compiling an orphan drug package for the FDA.

Orphan indication bestows benefits including seven to 10 years of market exclusivity, research tax credits, government fee waivers and specialist advice to speed up trials.

Finances and performance

In the three months to June 30, 2026 Vectus burnt cash of $167,000 and did not derive any income.

At quarter’s end the company had scant cash of $94,000, but then completed a $791,000 private placement in May, leaving $718,000 at June 30, 2026.

Dr Speranza says the raising was well supported by high-net-worth individuals and family offices on the register.

The deal was done at 10 cents a share, with subscribers receiving one option for each share acquired, exercisable at 20 cents within 12 months.

The company has drawn down $450,000 of a $550,000 loan advanced by Mr Stang.

The company’s biggest holder is Melbourne’s Kefford family.

“Our family office shareholders have been very supportive to date, but we would like to open up to institutions as we develop further,” Dr Speranza says.

She won’t comment on the size and scope of a further funding drive, “but like all biotechs we will need to raise capital eventually”.

With the phase Ib trial finalized, the company says expenditure in recent quarters has been “dramatically reduced”.

The company has relocated to less costly Sydney digs – if there is such a thing – and it has “arrangements that will defer certain significant operating costs” through 2026.

The company is pondering whether to divest its Xortx Therapeutics stake.

The common shares are out of escrow, while the warrants are exercisable in October.

Dr Speranza says any selling will be gradual, so as not to disturb Xortx’s share price, too much.

Over the last 12 months, Vectus shares have ranged between an all-time low of five cents in mid-September 2025 and a high of 44 cents on November 11.

Lest we forget.

The stock hit a decade high of $1.90 in October 2021.

Dr Boreham’s diagnosis:

Your columnist has penned his Crucible column for almost as long as Vectus’s life, but the company has never blipped on the radar.

Apart from reflecting your scribe’s lack of due diligence, it also highlights the company’s slow progress and publicity-shy nature.

With the ‘under new management’ shingle, we should hear more about Vectus as clinical trials unfold.

One reason for optimism is that Dr Speranza has an unusual claim to fame: she discovered a drug which went commercial.

While working on the molecule for a Doctorate of Philosophy at the University of Sydney in 2003, Dr Speranza attracted the attention of French drug maker Servier Pharmaceuticals, which acquired the osteoporosis treatment via a technology transfer.

The drug, Protelos (strontium ranelate) is now generic, but still sold.

And as the Xortx deal shows, she can get things done.

The enduring question is whether the efficacy in the animal work will translate to humans.

“If we all had a crystal ball and knew the answer to that question, we'd all be running major pharmaceutical companies,” Dr Speranza says.

But she is heartened that the human safety trial included volunteers with mild hypertension.

The drug alleviated the high blood pressure, which is a sign that the drug works.

Meanwhile, Dr Speranza is unfazed by the rash of disappointing late-stage trial results that have afflicted ASX-listed drug developers.

She says investors have focuses on the advanced trial results with big data readouts, which overshadows the earlier-stage companies that are doing well.

“It sounds like doom and gloom and certainly the market behaves as though it's doom and gloom,” she says.

“You get lots of failures before you get a win - and the wins are all we need.”

Disclosure: Dr Boreham is not a qualified medical practitioner and does not possess a doctorate of any sort. Languishing near the bottom of the ladder, his footy team could do with a win