



Biotech Daily

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Daily news on ASX-listed biotechnology companies

Dr Boreham's Crucible: Arovella Therapeutics

By TIM BOREHAM

ASX code: ALA

Share price: 3.6 cents

Market cap: \$23.7 million

Shares on issue: 658,203,648

Chief executive officer: Dr Michael Baker

Board*: Paul Hopper (chair), Dr Baker, David Simmonds, Dr Debora Barton, Dr Elizabeth Stoner

*David Phillips resigned from the board in January 2022.

Financials (March quarter 2022): receipts \$22,000, net cash outflows \$2.47 million, cash on hand \$8.12 million, quarters of available funding 3.3

Identifiable major shareholders: Merchant Funds Management 7.9%, Mann Beef Pty Ltd 3.0%, Zerrin Investments 2.1%, Dylide Pty Ltd 1.9%

When biotech entrepreneur Paul Hopper took over the chair of the spray-mist drug delivery house Suda Pharmaceuticals in September 2019, we all knew the corporate status quo would not last for long.

Sure enough, the country's busiest biotech entrepreneur installed his own CEO - Dr Michael Baker - and declared the company was pursuing too many small programs without a sharp commercial focus.

Having pivoted before the term became fashionable, Suda is barely recognizable, as the company pursues one of Mr Hopper's specialties: acquired immune-oncology programs.

"When I joined the company, I don't think it was going exactly where it needed to go, there's been a bit of a turnaround," Dr Baker says.

The company hasn't exactly abandoned its oral delivery programs, but they've been whittled down to one well-advanced lead indication - insomnia - and a couple of other strands.

What's in a name?

In October last year Suda changed its name to Arovella, which derives from arrow (as in targeted drug delivery) and novel (as in novel therapies).

Whatever the derivation, it's a nice name that rolls off the tongue.

The company was initially known as Eastland Medical, which was incorporated in 1999 and listed in 2001.

The troubled Eastland changed its name to Suda in 2012, but Suda remained lumbered with historical baggage, including a patent-related damages claim resulting in a \$13 million settlement.

In September 2019, Suda announced Mr Hopper as its chair and the departure of chief executive Stephen Carter after nine years at the helm.

Dr Baker previously was an investment manager with Bioscience Managers.

Natural born thrillers

Arovella's corporate thrills and spills now will revolve around the immune-oncology platform, with the oral spray side generating short term revenues to keep the lights on.

Broadly - very broadly - Arovella plays in the sexy field of Car-T therapies, as does Mr Hopper's recently listed Chimeric Therapeutics and Prescient Therapeutics.

CAR stands for chimeric antigen receptor and T refers to T-cells.

In June 2021 Arovella signed a deal with Imperial College London to acquire a cell therapy platform called invariant Natural Killer T, or iNKT.

(This should not to be confused with Oliver Stone's blood-splattered 1994 celluloid effort called Natural Born Killers, which used gratuitous violence to convey an anti-violence message).

Dr Baker said the company had been looking at several expansion activities. But the program appealed because of Imperial College's lofty status and the shovel ready - or rather lab ready - nature of the asset.

"You don't have to reinvent the wheel on these things," he says.

In December 2021, the company then acquired a separate program from Texan cancer centre MD Anderson, called a DKK1 peptide-targeting monoclonal antibody. The asset, poetically monikered DKK1-Car/mAb is the first to target DKK1, a biomarker of several forms of blood and solid cancers.

In April this year, Arovella entered a manufacturing agreement with Q-Gen Cell Therapeutics, by which Q-Gen makes the Car19-iNKT cells for the clinical trials.

Dr Baker describes iNKT cells as "one of the most potent, naturally occurring immune cells."

The core idea with the iNKT program is that the cells are genetically reprogrammed to attack the specific cancer markers called CD19 and Cd1d. The company intends to combine both assets to target multiple myeloma (where DKK-1 is highly expressed) and then explore "different receptors for different targets".

Avoiding the pain of rejection

A feature of the iNKTs is that they are suitable for off the shelf (allogeneic) therapies, as opposed to tissue taken from the patient (autologous).

To avoid the problem of rejection and graft-versus-host diseases (GvHD), current approved therapies are autologous. But if the patient is over 60 years and has undergone chemotherapy or radiotherapy, the cell quality is unlikely to be top-notch.

Also, T-cells vary between people and they need to be genetically engineered.

But Arovella's T-cells are monomorphic - they exist in only one form. "That means I can give my iNKT cells to you and you won't get GvHD," Dr Baker says. "Not only do they not cause GvHD, they protect against it."

Zolpimist: a real sleeper

Arovella's oral delivery is based on its hydrotape (water soluble) platform called Oromist, which is about reformulating common drugs into oral sprays in order to be more effective. After all, absorption through the mouth lining is a more direct route to the blood stream than the stomach.

Suda had been developing oral (spray-mist) delivery versions of common drugs used for insomnia, cancer, migraines, malaria, erectile dysfunction and medicinal cannabis.

Close to being commercialized, Zolpimist re-works zolpidem tartrate, which is widely prescribed in tablet form as Ambien (in the US) or Stilnox (Australia).

In July 2021, Suda won Australian Therapeutic Goods Administration (TGA) assent for Zolpimist, the first jurisdiction to approve Zolpimist outside North America.

In October 2021, Chile's Ministry of Health approve Zolpimist, the first approval for big pharma distributor Teva which holds the rights for Mexico, Chile and Brazil.

In August last year, Mitsubishi Tanabe Pharma Korea decided not to pursue a licence and supply agreement for South Korea, citing problems with the country's drug regulator.

But as one door closes, another opens. A day after announcing the South Korean setback, the company revealed a compact with Stada Pharma, an arm of the German based Stada Group, for the Australian rights. The deal involved Arovella pocketing a \$170,000 payment, with a \$40,000 milestone on regulatory approval and a 10 percent royalty on sales.

While Zolpimist is already listed on the Australian Register of Therapeutic Goods, Arovella believed it did not have the resources to distribute a drug.

And in case you're wondering why we haven't mention North America: the rights to Zolpimist there are owned (completely separately) by the Colorado-based Aytu Bioscience.

Let us spray

On the cancer front, Anagrelide has been approved by the US Food and Drug Administration and European Medicines Agency for essential thrombocythemia (high blood platelet levels).

The spray formulation obviates the cardiotoxic effect of going through the liver.

With its migraine program, sumatriptan, Suda is partnered with India's pharma house Strides. Sumatriptan is the generic name for Glaxosmithkline's blockbuster drug Imitrex. The deal involves upfront and milestones of \$6 million, with Strides ponying up for \$4 million of development costs (including clinical trials). Strides has the US franchise and has the first right of refusal for other territories.

The company was developing Artimist, the spray version of the malarial drug artemether. But after formulation and other setbacks, the program has been Morteined, even though malaria remains the biggest killer in the third world.

Arovella was also discussing oral spray cannabis drug delivery with Zelira Therapeutics and Cann Pharma, but not anymore.

Plans for Duromist, a reformulation of the off-patent erectile dysfunction drug Viagra, also failed to firm up.

Finances and performance

Arovella has been twice to the well in the last 12 months.

In January underwent \$4.57 million placement at 3.8 cents, with biggest shareholder Merchant Funds chipping in \$3 million. An underwritten, oversubscribed share purchase plan raised a further \$1.5 million.

That largesse provides enough cash in bank to do manufacturing and basic non-clinical work.

“Taking these programs to the clinic is capital intensive and I’m not hiding the fact we will need to raise more money,” Dr Baker says.

He says investors were buoyed by the support of Merchant, which has also backed Polynovo, Dimerix, Race Oncology, Auscann and Bard1 (now Inoviq).

Over the last 12 months, Arovella shares have traded between 3.3 cents (mid-May 2021) and 7.0 cents (mid-July 2021). In the last five years, the shares peaked at 44 cents in early 2017, but taking the October 2019, 25-to-one consolidation into account, the then Suda hit the equivalent of \$1.725 in late 2013.

Big ticket hires

Arovella’s immune-oncology push is being aided by two recent big-ticket hires.

In January 2022 the company announced Dr Mini Bharathan as head of development and translational medicine.

Dr Bharathan held a similar role at Cellectis, which is using gene editing to deliver allogeneic cell therapies. A doctor of veterinary medicine, Dr Bharathan also had senior roles at Celgene, Celularity and Immatix.

Last August, the company appointed Dr Sandhya Buchanan, a cell and gene therapy manufacturing expert as head of manufacturing and quality. Dr Buchanan had a senior role at off-the-shelf cell specialist Atara Biotherapies and has also toiled at Novartis, Fujifilm, Diosynth and Torque Biotherapeutics.

Dr Boreham’s diagnosis:

When we last covered Suda in September 2020 the world was in the grip of the plague but the Perth-based company was conducting business as usual (including research and development) in Western Australia.

“With a circa \$14 million market cap Suda is being priced to fail,” we opined. “Or perhaps the stock is a bargain in the context of frothy valuations elsewhere in the sector?”

While the overly optimistic valuations largely have been taken care of, Arovella remains priced to fail with a \$14 million enterprise value (market cap less cash).

Dr Baker notes the other iNKT companies have had “significant commercial events”.

Okay, seeing you asked ...

US start-up Appia Bio raised \$US52 million in May 2021 and then entered a partnership with Gilead subsidiary Kite Pharma, involving up to \$US875 million in upfront payments and milestones.

Around the same time, Athenex acquired US counterpart Kuur Therapeutics for \$US70 million upfront and \$US115 million in milestones.

MiNK Therapeutics raised \$US40 million and listed on the Nasdaq in October last year. The company roared to a \$US670 million valuation but is now valued at ... \$US40 million.

In our view, Suda needs to maintain a laser-like focus on commercial and clinical progress, rather than just talk up prospects as it did in the past. It also needs to be careful with its cash in these now unforgiving market conditions.

While Zolpimist is a short-term cash contributor, the longer-term fortunes will rest with oncology.

Dr Baker says: “The iNKT therapy has been shown to work. We now just have to prove it’s scalable - and the rest of it.”

Disclosure: Dr Boreham is not a qualified medical practitioner and does not possess a doctorate of any sort. He is proud to have ink in his blood and hopes he never needs iNKT in his blood.