



# Biotech Daily

Friday February 8, 2019

*Daily news on ASX-listed biotechnology companies*

- \* **ASX, BIOTECH DOWN: AIRXPANDERS UP 10%; REVA DOWN 19%**
- \* **DR BOREHAM'S CRUCIBLE: ADALTA**
- \* **VALE BOTANIX CHAIR GRAHAM GRIFFITHS (19.8.1955 – 6.2.2019)**
- \* **RECCE RAISES \$1.8m**
- \* **RHYTHM: ETHICS OK FOR COLOSTAT COLORECTAL CANCER TRIAL**
- \* **CRYOSITE, ACCC AGREE \$1.1m CARTEL PENALTY**
- \* **NUCLEUS BUYS Q-PHARM FOR EARLY CLINICAL TRIALS**
- \* **CORRECTION: ANATARA**
- \* **PHYLOGICA PEPTIDE 'OUTPERFORMS ZEBRA COMPETITOR' IN MICE**
- \* **GOODBYE ITL**

## MARKET REPORT

The Australian stock market fell 0.34 percent on Friday February 8, 2019, with the ASX200 down 21.0 points to 6,071.5 points. Nine of the Biotech Daily Top 40 stocks were up, 15 fell, 13 traded unchanged and three were untraded. All three Big Caps were up.

Airxpanders was the best, up 0.3 cents or 10.0 percent to 3.3 cents with 9.2 million shares traded.

Uscom climbed 8.3 percent; Cynata improved 7.4 percent; Telix was up 6.6 percent; Polynovo rose 4.55 percent; Impedimed was up two percent; CSL, Dimerix and Resmed were up one percent or more; with Cochlear, Opthea and Pro Medicus up by less than one percent.

Reva led the falls, down four cents or 19.05 percent to 17 cents, with 58,442 shares traded.

Cyclopharm and Osprey lost eight percent or more; Imugene fell 5.6 percent; Genetic Signatures and Paradigm were down more than three percent; Clinuvel and Ellex shed more than two percent; Kazia and Neuren were down more than one percent; with Medical Developments, Mesoblast, Nanosonics, Starpharma and Volpara down by less than one percent.

## [DR BOREHAM'S CRUCIBLE: ADALTA](#)

**By TIM BOREHAM**

**ASX code:** 1AD

**Share price:** 25 cents; **Shares on issue:** 117,604,523; **Market cap:** \$29.4 million

**Chief executive officer:** Samantha Cobb

**Board:** Dr Paul MacLeman (chairman), Samantha Cobb, Dr Robert Peach, Dr John Chiplin, Liddy McCall (Yuuwa rep) and Dr James Williams (Yuuwa rep).

**Financials (December quarter)** revenue nil, cash burn \$213,000, cash \$5.36 million \*, estimated current quarter cash outflows \$3.27 million.

**Identifiable major shareholders:** Yuuwa Capital 46%, Platinum Asset Management 9.8%, Citycastle (Leon Serry) 4.6%, La Trobe University 2.6%, (Peter) Meurs Holdings 2.8%, Robin Beaumont 1.6%, Sam Cobb 1.2%

\* Includes \$2.02 million Federal R&D Tax Incentive, received in October.

In the milieu of listed biotechs it's all too easy to become subsumed by either the science of the underlying pill or potion, or financial angles such as cash burn and the size of the addressable market.

The human sufferers of the ailment question are often lost in the dialogue, so it was refreshing to see upbeat idiopathic pulmonary fibrosis (IPF) sufferer Bill Van Nierop address Adalta's investor update in Melbourne last week.

Mr Van Nierop contracted the lung disease in 2015, but he's not taking the ailment lying down. So much so that last September he completed a 2,200-kilometre kayak ride down the Murray River to raise awareness of the condition.

He says former AFL footballer Neale Daniher has done a fine job raising awareness for motor neuron disease, which afflicts about 2,000 Australians. In contrast, about 10,000 of us have IPF, but it lacks a high-profile champion.

"Having lung disease in Australia is a pretty lonely place these days," he told an Adalta investor forum in Melbourne.

Dr Glen Westall, a respiratory clinician at Melbourne's Alfred Hospital described IPF as an unfair condition.

"It comes out of the blue in your mid 60s and damages the lungs rapidly," he told the forum. "The outlook is far worse than lung cancer."

"Idiopathic" means the cause of the disease is unknown, but there is some link to smoking and exposure to irritants such as dust, coal and silica.

## **(Ad)-altering the fibrosis treatment landscape**

While Mr Van Nierop was more likely to grapple a rogue Murray Cod than a shark on his expedition, the predators of the ocean are never far from mind when it comes to Adalta developing its proteins, dubbed i-bodies.

That's because Adalta's lead candidate AD-214 mimics the cell characteristics of sharks, which are excellent role models given they are hardy creatures indeed.

About one-half the size of normal human antibodies, the AD-214 molecules are engineered with two loops that mimic the shape of shark antibodies. The loops are twice the length of human antibodies, and can access nooks and crannies to latch on to drug targets that evade normal monoclonal antibodies.

The core mechanism of action is that the compound binds to the protein CXCR4, which sounds like a new Mazda, but is a receptor over-expressed in the unhealthy fibrotic tissue.

The idea is that AD-214 binds to the lung tissue and blocks the migration of cells implicated in fibrosis, without impacting the healthy cells.

"Our i-body will bind to the disease target and have an effect," Ms Cobb says. "We have seen both anti fibrotic and anti-inflammatory effects in a number of different animal models." These include lung, liver, skin and kidney models.

(If you really need to know, the "i" stands for intermediate because the antibody came from the "intermediate" of four groups of immunoglobulin or immunoglobulin-like domains.)

Adalta is aiming AD-214 at IPF but it is also a potential treatment for other fibrotic ailments such as wet aged-related macular degeneration (wet AMD) and non-alcoholic steatohepatitis (NASH) - anything fibrotic for which current treatments are sub-optimal and there's a high unmet medical need.

The in-vitro (test tube) and in-vivo (mice) studies were enough to convince the US Food and Drug Administration to grant orphan drug indication status in January 2017, which could lead to fast-track approval if the protein is developed further.

Adalta was spun-off from Latrobe University and the Commonwealth Scientific and Industrial Research Organisation and listed on the ASX in August 2016, raising \$10 million at 25 cents apiece.

## **News from the production line**

While Adalta has been around for a while now, we stress that AD-214 is still in early development. After positive pre-clinical trials, the company's attention has focused on manufacturing enough of the magic protein at a consistent quality to further clinical work.

It's called 'the boring but important' bit and with a \$6 million to \$7 million manufacturing budget, it's also the 'expensive' bit.

In October, Adalta reported manufacturing yields were in line with expectations, at just over one gram a litre. In January the company reported a yield of 3g/litre.

As with the Iphone X over the Iphone 7, AD-214 is a souped up version of AD-114, the key difference being improved half-life (the time the drug is active in the body).

The manufacturing work has been done in conjunction with the US contract pharma manufacturer KBI and the cell-line specialist Selexis SA.

## **News from the clinic**

To date, Adalta claims validation via a number of non-human models and also testing on diseased human tissue. In this respect, Dr Westall comes in handy: Melbourne's Alfred Hospital performs about 100 lung transplants a year and given the old ones are thrown in the bin, there's plenty of sample tissue to play with.

With the manufacturing down pat, Adalta intends primate toxicity trials in July, with a phase I clinical study slated for January next year. Using healthy volunteers, the trial will assess pharmacokinetics and change in biomarkers via single ascending and multiple ascending doses. A phase Ib trial might also ensure.

"We are mapping out with clinicians what a trial might look like," Ms Cobb says.

Adalta's work last February was aired in Scientific Reports, an open-access journal from the publishers from Nature, in a report catchily titled 'Anti-fibrotic effects of CXCR4-targeting i-body AD-114 in preclinical models of pulmonary fibrosis'.

## **Partnering is the endgame**

Not surprisingly, Adalta intends to pursue advanced trials via a partnership. Ms Cobb is heartened that, unlike with most other therapies, pharma companies have picked up fibrosis treatments at an earlier stage.

"All of the IPF deals since 2011 have happened around the end of phase I, with an average up-front payment of \$US100 million and \$US300 million to \$US400 million of milestone payments," she says.

Last September, United Therapeutics acquired Samumed for \$10 million, plus \$340 million of potential milestones, for the US alone. In phase I testing, Samumed's SMO4646 is being developed as potential IPF treatment. The mechanism of action is to reduce the activity of genes associated with fibrosis. In 2015, Roche acquired Adheron Therapeutics and its phase I IPF candidate SDP-51 for \$US105 million upfront, plus \$US474 million of milestones.

## **Finances and performance**

Adalta reported a December quarter cash balance of \$5.36 million, with expected current quarter outflows of \$3.27 million.

The company raised \$4.73 million in a share placement and share purchase plan in August last year. But Ms Cobb says given the company's forecast current quarter cash burn of more than \$3 million, "we will need to raise money and the board is looking at various options".

Adalta shares have traded between a record high of 39 cents in March 2018 and a nadir of 17 cents in December 2016.

Adalta enjoys the benefit of a stable and supportive register, underpinned by 48 percent holder Yuuwa Capital (a Perth based boutique fundie) and Platinum Asset Management with a further 9.6 percent. The register also features biotech doyen Leon Serry and Latrobe Uni for old time's sake.

The board is also well credentialed: Dr Chiplin was head of Arana Therapeutics, sold to Cephalon (now Teva) for \$US200 million. Chairman Paul MacLeman headed Genetic Technologies, Hatchtech and IDT Australia, while Dr Robert Peach founded Receptos Inc (sold to Celgene Corp for \$US7.8 billion).

### **Dr Boreham's diagnosis:**

The reality for Adalta is that IPF affects about 300,000 people globally, with half of them likely to die within two to three years.

The existing treatments - Boehringer Ingelheim's nintedanib and Roche's pirfenidone - are regarded as ineffective for many patients, who are prone to nasty side effects such as severe diarrhoea and nausea.

But they're still \$1 billion-plus drugs.

The markets for NASH and wet AMD are estimated at \$US1.6 billion and \$US8 billion.

In addition, Adalta holds a broader 'library' of i-body patents that can be used to identify new potential therapies.

Here's hoping that Adalta's eminent crew have oodles of patience, as well as talent: two years ago, Ms Cobb hinted at "benchmark deals" to secure partnership funding but we are still waiting.

Given the IPF-related acquisition activity, there's always the potential for an earlier than expected conclusion to the elongated Adalta story. As with those creatures of the deep, you never know when a predator will strike.

(Cue Jaws theme)

***Disclosure: Dr Boreham is not a qualified medical practitioner and does not possess a doctorate of any sort. He is phobic about sharks, but only the variety found in boardrooms, brokerages and investment banks.***

## BOTANIX PHARMACEUTICALS

Botanix says "it is with great sadness and regret that the board ... advises the unexpected passing of [non-executive chairman] Graham Griffiths".

Botanix said it was "greatly shocked and saddened by Graham's sudden passing".

"Through his leadership, encouragement and support, Graham helped build Botanix from an idea into a successful clinical stage dermatology company in 36 months," Botanix said. The company said Mr Griffiths "had many qualities that he infused into the culture of the company and its leadership team".

"He was thoughtful, encouraging, creative and loyal and he will be sorely missed," Botanix said. "He had a tremendous sense of humor and an abiding love of sport, which he often weaved into clever and memorable analogies that helped us all to learn and grow in business."

Botanix executive director Matt Callahan told Biotech Daily that Mr Griffiths had "a long and distinguished career in ASX listed and private entrepreneurial companies in technology and biotech".

Mr Callahan said that Mr Griffiths was the long-term chief executive officer of QPSX Ipernica "which pioneered the patent licencing and enforcement business and generated more than \$130 million from a patent portfolio in the telecoms sector".

Mr Callahan said that Mr Griffiths.

Botanix said that Mr Griffiths worked with Rob Newman to build Nearmap into a company worth close to one billion-dollars.

"He was also the chairman of Pointerra, a leading cloud software company and NGIS, a leading asset location and geospatial company in Perth," Mr Callahan said.

"Graham had a successful career in the US and Australia with NCR and remains one of the most respected and admired company directors in the tech space," he said.

Botanix said it offered its condolences to his family and friends, and would make a decision on the chairman position "in due course".

Botanix was up half a cent or 5.3 percent to 10 cents with 2.8 million shares traded.

## RECCE PHARMACEUTICALS

Recce says it has raised \$1,800,000 in a placement to sophisticated and institutional investors at 14 cents a share.

Recce said the funds would strengthen its balance sheet as it moves its new class of broad-spectrum antibiotic towards clinical trials, further pre-clinical programs, general working capital and to repay a \$200,000 loan from directors (BD: Dec 18, 2018).

The company said DJ Carmichael was the lead manager of the placement and would receive six percent of the amount raised and 1,800,000 options exercisable at a 20 percent premium to the issue price of the shares, or 16.8 cents, within four years.

Recce fell 1.5 cents or 8.8 percent to 15.5 cents.

## RHYTHM BIOSCIENCES

Rhythm says the Central Adelaide Local Health Network has given ethics approval for a blinded, prospective, 1,000-patient trial of the Colostat blood test for colorectal cancer.

Rhythm said the ethics approval allowed for additional trial sites in Adelaide and Melbourne.

Rhythm chairman Shane Tanner told Biotech Daily that preparations for recruitment were underway and the company expected the trial to be completed by the end of 2019.

Rhythm was up 1.5 cents or 11.5 percent to 14.5 cents.

## CRYOSITE

Cryosite says it will pay the Australian Competition and Consumer Commission \$1.1 million over 10 years for breaching Federal cartel laws.

In June 2017, Cryosite agreed to licence its umbilical cord blood and tissue business and sell certain assets to Cell Care Australia and in August 2017, the Australian Competition and Consumer Commission (ACCC) announced an inquiry (BD: Jun 23, Aug 4. 2017).

Cryosite said the ACCC alleged, and the company agreed, that it “breached the [Competition and Consumer Act 2010] by including a competition restraint provision in the sale agreement, which required Cryosite to refer all sales enquiries to Cell Care from the date of signing of the contract to the date on which the transaction closed”.

The company said “this constituted a cartel provision”.

Cryosite said it retained external lawyers to advise it on the terms of the agreement, but the lawyers did not raise concerns about cartel provisions.

Cryosite said it was “obviously disappointed to have been party to the proceeding”.

The company said the ACCC would apply to the Federal Court that Cryosite would pay a penalty of \$1.1 million, with \$250,000 to be paid within 30 days of the hearing and the balance in 10 equal instalments between 2020 and 2029.

Cryosite chairman Bryan Dulhunty said “Cryosite has fully cooperated with the ACCC ... and, while clearly disappointed with the proceeding, is pleased to have reached the settlement with the ACCC, in the process avoiding the cost, disruption, board and management distraction and uncertainty necessarily associated with a lengthy trial”.

Cryosite was untraded at 4.1 cents.

## NUCLEUS NETWORK

Melbourne’s Nucleus Network says it has acquired Q-Pharm, a 62-bed dedicated early-phase clinical trial facility in Brisbane, but did not disclose the price paid.

Nucleus Network said Q-Pharm was previously owned by the Queensland Berghofer Institute of Medical Research (QIMR) and the sale was finalized on January 31, 2019.

The company said Q-Pharm was founded in 2002 as a specialist early-phase clinical trials unit and was acquired by QIMR in 2014.

Nucleus Network chief executive officer Cameron Johnson said “trials conducted by both Nucleus and Q-Pharm provide a critical step in ensuring the safety and efficacy of new drugs prior to launch into the market place”.

“Australia is receiving growing international recognition as a location for early phase clinical trials due to the efficiency and pragmatism of its regulatory approval processes and global best practice quality of research,” he said.

Mr Johnson said “the combination of Nucleus and Q-Pharm has created Australia’s only multi-site dedicated phase I clinical research organization”.

Nucleus Network is a private company.

## ANATARA LIFESCIENCES

Last night’s edition reported that Anatara was untraded at 50 cents, which is what the Market Report sub-editor believed she saw.

According to multiple sources, Anatara was unchanged at 50 cents with 17,612 shares traded through the ASX and 19,419 shares traded in total.

The sub-editor has been seconded to the Farm and Home Loans division of one of the four major banks to better understand calculations, reporting and corporate governance.

Today, Anatara closed unchanged at 50 cents.

## PHYLOGICA

Phylogica says its “cell penetrating peptide” has outperformed a competitor ‘zebra’ peptide in delaying melanoma tumor growth in mice.

Phylogica did not provide specific data, but a chart indicated that mice treated with the Phylogica peptide, formerly known as a Phylomer, took longer for tumors to grow to 1,000 cubic millimeters than either the zebra peptide or the adjuvant.

Phylogica was unchanged at three cents with 1.9 million shares traded.

## ITL HEALTH GROUP

ITL says it has requested the ASX says to suspend its shares at the close of trading today.

ITL said it would continue as a publicly unlisted company.

ITL closed unchanged at 14.5 cents with 1.1 million shares traded.