



# Biotech Daily

Friday March 24, 2017

*Daily news on ASX-listed biotechnology companies*

- \* **ASX UP, BIOTECH DOWN: IDT UP 11.5%, ORTHOCELL DOWN 6%**
- \* **DR BOREHAM'S CRUCIBLE: BIONOMICS**
- \* **GERMANY EXTENDS REVA STENT TRIAL TO 'MORE COMPLEX' CASES**
- \* **BENITEC RECEIVES \$5.6m FEDERAL R&D TAX INCENTIVE**
- \* **US, AUSTRALIA APPROVE BOTANIX CANNABIDIOL EXPORT, IMPORT**
- \* **PETER HALL CEASES HUNTER HALL-LINKED 9.5% MACH7 HOLDING**
- \* **GRAHAM DURBIN SUPER 'REDUCES TO 8.3% OF GENERA', HOLDS 11.6%**

## MARKET REPORT

The Australian stock market was up 0.8 percent on Friday March 24, 2017, with the ASX200 up 45.5 points to 5,753.5 points.

Twelve of the Biotech Daily Top 40 stocks were up, 14 fell, 12 traded unchanged and two were untraded. All three Big Caps were up

IDT was the best, up 1.5 cents or 11.5 percent to 14.5 cents with 398,260 shares traded, followed by Cellmid up 10.3 percent to 3.2 cents with 11.3 million shares traded.

Mesoblast and Starpharma climbed more than four percent; Acrux and Benitec were up more than three percent; Bionomics rose 2.8 percent; Admedus, Cochlear, Osprey and Sirtex were up more than one percent; with CSL, Impedimed, Medical Developments and Resmed up by less than one percent.

Orthocell led the falls, down 2.5 cents or 5.9 percent to 40 cents with 79,057 shares traded.

Both Avita and Uscom lost five percent; Pharmaxis and Polynovo were down more than three percent; Compumedics, Factor Therapeutics and Oncosil shed two percent or more; Airxanders and Viralytics were down more than one percent; with Clinuvel, Nanosonics, Opthea and Pro Medicus down by less than one percent.

## DR BOREHAM'S CRUCIBLE: BIONOMICS

By TIM BOREHAM

**ASX code:** BNO

**Market cap:** \$178 million; **Share price:** 37 cents; **Shares on issue:** 483 million

**Chief executive officer:** Dr Deborah Rathjen

**Board\*\*:** Dr Errol De Souza (chairman), Dr Deborah Rathjen, David Wilson, Peter Turner and Alan Fisher.

**Financials (2016-'17 first half):** revenue\* \$7.1 million (down 30%), loss \$9.696 million (down 1%), cash burn \$3.02 million, cash balance \$43 million (down 5%) \*\*\*

\* includes licence fees, collaboration income, sales and rental income and interest income

\*\* Chairman Graeme Kaufman retired in August last year

\*\*\* Received another \$US10 million milestone payment from Merck post balance date.

**Shareholders:** Ausbil Dexia 7.3%, Link Traders 6.2%, PPM 5.2%, CVC 4.7%, Merck 4.5%

If there's any biotech that exemplifies the tortuous path of drug development, it's the Adelaide-based Bionomics as it pursues treatments for disorders including depression, anxiety, post-traumatic stress disorder (PTSD), cancer and Alzheimer's disease.

Like Her Majesty Queen Elizabeth II, Bionomics has graced our lives for years and at times the company is just as inscrutable. Like the Monarch, Bionomics is not short of a quid, although it is debateable just what its crown jewels are.

Like the Windsor family, Bionomics has delivered its fair quotient of drama as well, notably a shareholder revolt last year that resulted in the departure of chairman Graeme Kaufman and fellow director Trevor Tappenden.

The investor disquiet stemmed from a deeply discounted, \$US12 million warrants issue to US investors in late 2015. To an extent this has clouded the company's progress across its clinical and pre-clinical suite of molecules which read like an airport departures board at rush hour: BNC101, BNC105, BNC210 and BNC375.

Bionomics' current lead candidate, BNC210 has been trialled for the relief of generalized anxiety disorder (GAD), with a further expanded trial targeting post-traumatic-stress disorder (PTSD). The first data from a 192-patient US trial is expected by April 2017.

BNC210 works by modulating the alpha-7 nicotinic acetylcholine receptor, a target for the improvement of memory and learning deficits in illnesses such as Alzheimer's disease.

The common current treatment, the benzodiazepine class of drugs, have been around for more than 50 years. Indeed, the Rolling Stones were thought to be referring to Valium (one of the drugs in that class) when they penned Mother's Little Helper in 1966.

Benzodiazepines target another key central nervous system receptor called the GABA, which has nothing to do with Queensland cricket. The trouble is, they can create dependence issues and have even been blamed for suicide in long-term users.

BNC210 is also claimed to be non-sedating and works rapidly.

"Alpha-7 involves emotions and when overactive is responsible for symptoms of anxiety and depression," Bionomics chief executive officer Dr Deborah Rathjen says.

"But when it's not working enough it is responsible for memory loss."

BNC210 subtly turns down the 'volume' of the receptor without over compensating.

According to Bionomics, the generalised anxiety disorder results "met primary endpoints with a high level of significance". In other words, it stacked up well relative to the comparison drug lorazepam and the placebo, as measured partly by the Joystick operated runway task (JORT).

(JORT not an aviation term but an anxiety-inducing Pacman-like game in which a threatening red dot chases a green dot, with the player receiving an unpleasant burst of noise if the threatening red dot manages to catch the green dot).

On another front, BNC101 - a new class of cancer drug that targets cancer stem cells - is subject to US trials tackling relapsed chronic lymphocytic leukaemia and metastatic renal cell cancer. The latter is funded by Novartis.

Under the 2014 agreement with Merck Sharp and Dohme (known as Merck Inc in the US and Canada), Bionomics is entitled to receive up to \$US506 million in milestone payments, plus eventual royalties on product sales.

Last month, Bionomics claimed an \$US10 million milestone payment from Merck after Merck initiated a phase I Alzheimer's disease clinical study. The compound in question is BNC375, which also modulates the alpha-7 receptor.

On the oncology front, Bionomics last month announced a combination trial in which BNC105 would be used in conjunction with Merck's checkpoint inhibitor Keytruda for melanoma. This trial is proudly sponsored by the Victorian Cancer Agency, in collaboration with the Peter MacCallum Cancer Centre and the Olivia Newton-John Cancer Wellness and Research Centre.

The trial for advanced melanoma patients unresponsive to current treatment is due to enrol by July 2017.

But BNC105 has a chequered history. In 2014, a 136-patient phase II renal cell carcinoma program failed to meet its primary endpoints.

BNC210 has also had its collaborative setbacks: in 2012 the Cambridge, Massachusetts-based Ironwood Pharmaceuticals licenced the compound, in a deal worth “up to” \$US345 million.

But two years later, the men from Ironwood handed this one back to Bionomics – by mutual agreement, of course. At least in this case, Bionomics continues the clinical program off its own bat.

In 2012, Germany’s Merck Serono and Bionomics agreed to cancel work on compounds based on Bionomics Kv1.3 potassium ion channel program for multiple sclerosis.

### **Prospects:**

The cashed up Bionomics is well-placed to pursue its clinical program and Merck’s involvement is beneficial (although by no means guaranteed).

Progress is slower than expected.

The optimists argue Bionomics is tackling a raft of maladies, so there’s more chance of at least one being successful. While ‘parents’ shouldn’t play favourites, Dr Rathjen makes her view clear on the ‘child’ most likely to shine: “As a CEO, I will admit to moments of anxiety so BNC210 is up there. It (anxiety and depression) is also a huge market.”

Others point to past clinical failures, with one unkind soul describing BNC105 as the “undead” of drug development.

The cancer drug discovery expert says: “Failure after failure (though disclosures all carefully managed by Bionomics) and the compound is still in development? It just doesn’t work!”

Private equiteer Sydney’s CVC - the chief agitator which called last year’s extraordinary general meeting - this month reduced its shareholding below substantial level.

### **Dr Boreham’s diagnosis:**

It’s apt that Bionomics work revolves around the central nervous system because it has certainly delivered nervy moments for shareholders over the years.

Bionomics has been listed for more than a decade in its current guise, with the shares peaking at 76 cents in October 2013 and bottoming at 19 cents in February 2009.

We’re not quite sure what compound will drive short term momentum, but Bionomics obviously has a full slate of work.

With a \$170 million market cap backed by \$43 million in cash, the stock may appeal to investors who, like the Wave Hill stockmen, know how to wait.

***Disclosure: Dr Boreham is not a qualified medical practitioner and does not possess a doctorate of any sort. But he is of anxious disposition, which qualifies him for instant expert status.***

## REVA MEDICAL

Reva says that Germany has approved an expanded clinical trial of its Fantom bio-resorbable scaffold, or cardiac stent, to “a more complex patient population”.

Reva said the approval by the Bundesinstitut für Arzneimittel und Medizinprodukte, BfArM (Federal Institute for Drugs and Medical Devices) allowed it to extend the scope of the Fantom II trial, which enrolled 240 patients between March 2015 and March 2016 (BD: Nov 1, 2016).

The company said that the primary objective of the expanded study was to evaluate the safety and effectiveness of Fantom in a more complex patient population, treating up to two lesions in one or more coronary arteries and lesions in excess of 20mm in length.

Reva chief executive officer Dr Reggie Groves said that the results seen in the first 240 patients treated with Fantom “have been excellent”.

“But we know that [coronary artery disease] patients often have complicated disease, with longer lesions, and disease in multiple vessels,” Dr Groves said.

“We believe Fantom’s unique features including a more forgiving implant technique, and the ability to visualize the complete scaffold structure under x-ray, will be advantageous when treating these more complex cases,” Dr Groves said.

Reva said that the University of Kiel’s Dr Norbert Frey, a Fantom II trial investigator would be the lead investigator in the extended trial, with enrolment to begin “shortly”.

Reva was unchanged at \$1.00.

## BENITEC BIOPHARMA

Benitec says it has received \$5,590,235 from the Australian Tax Office under the Federal Government Research and Development Tax Incentive program.

Benitec said the rebate related to the costs of research and development for the year to June 30, 2016 and the funds would be used for its therapeutic programs in gene silencing.

Benitec was up half a cent or 3.2 percent to 16 cents.

## BOTANIX PHARMACEUTICALS

Botanix says the US has approved the export, and Australia the import, of synthetic cannabidiol for its trials.

Botanix said US Drug Enforcement Agency and Australian Office of Controlled Substances approvals allowed it to transport synthetic cannabidiol drug active from its contract manufacturing facility in Pennsylvania, to its clinical packaging site in Melbourne.

The company said that the first shipment of synthetic cannabidiol was “a key milestone” as it prepares for the first human clinical trials of BTX 1503 for acne.

Botanix said the safety and pharmacokinetic studies were scheduled to begin by July 2017, with ethics approval the final step to human studies.

Botanix’s chief operating officer Dr Michael Thurn said that “to move so rapidly from initial formulation development to being on the verge of commencing clinical studies within a 12 month timeframe, demonstrates the execution capability of the team we have assembled at Botanix and the benefit of using a pharmaceutical grade synthetic form of cannabidiol”.

Botanix said it continued to explore other commercial and product opportunities in parallel with its primary BTX 1503 acne program and there had been “substantial” interest in its development programs and Permetrex delivery technology from potential collaborators at the American Academy of Dermatology meeting in Orlando, Florida.

Botanix was up 0.3 cents or 5.3 percent to six cents with 19.3 million shares traded.

### [MACH7 TECHNOLOGIES](#)

Peter Hall, Zeppelin Investments, Aubigny Investments and Hampshire Assets and Services says they have ceased their association with Hunter Hall International. In a substantial shareholder notice, signed by Peter Hall, the four London-based entities associated with Mr Hall said they had ceased their association with the Sydney-based Hunter Hall International.

Mr Hall said his group was no longer associated with Hunter Hall's 100,000,000 shareholding (9.48%) in Mach7.

A spokesperson for Hunter Hall told Biotech Daily that its holdings continued.

Mach7 fell two cents or 6.7 percent to 28 cents.

### [GENERA BIOSYSTEMS](#)

The Hunters Hill, Sydney-based Durbin Superannuation claims he has reduced its holding in Genera from 11,637,068 shares (11.58%) to 8,320,068 shares (8.27%).

The notice, signed by director Graham Durbin, said that Durbin Superannuation transferred 3,500,000 shares for \$700,000 or 20 cents a share to a "personal account".

The notice said that Durbin Superannuation held 8,320,068 shares with Graham Charles and Susan Anne Durbin holding 3,500,000 shares.

Genera was untraded at 18 cents.