Biotech Daily

Friday March 2, 2018

Daily news on ASX-listed biotechnology companies

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MARKET REPORT

The Australian stock market fell 0.74 percent on Friday March 2, 2018 with the ASX200 down 44.4 points to 5,928.9 points. Ten of the Biotech Daily Top 40 stocks were up, 24 fell, two traded unchanged and four were untraded. All three Big Caps fell.

Immutep (Prima) was the best, up 0.1 cents or 4.55 percent to 2.3 cents with 2.1 million shares traded.

Actinogen climbed 4.2 percent; Benitec was up 2.6 percent; Airxpanders was up 1.1 percent; with Impedimed, Nanosonics, Telix, Sirtex, Viralytics and Volpara up by less than one percent.

Bionomics led the falls, down four cents or 9.3 percent to 39 cents with 597,783 shares traded.

Uscom lost 8.6 percent; Optiscan fell 4.8 percent; Acrux, Admedus, Neuren, Oncosil Orthocell, Pharmaxis and Starpharma were down more than three percent; Ellex, Factor Therapeutics and Mesoblast shed more than two percent; Cochlear, Compumedics, Genetic Signatures, Opthea, Osprey, Polynovo, Prana, Pro Medicus, Resmed, Reva and Universal Biosensors were down more than one percent; with Clinuvel, CSL and Medical Developments down by less than one percent.

DR BOREHAM'S CRUCIBLE: BENITEC BIOPHARMA

By TIM BOREHAM

ASX code: BLT

Nasdaq code: BNTC

Share price: 19.5 cents; **Shares on issue:** 205,142,734; **Market cap:** $40.0 million

Chief executive officer: Greg West

Board: Dr Jerel Banks (chairman), Peter Francis, Kevin Buchi, Megan Boston

Financials (December quarter): receipts $81,000, cash burn $4.4 million, cash $10.3 million*****, estimated current quarter cash outflows $4.9 million
***** Subsequently received a $4.1 million R&D Tax Incentive in January

Identifiable shareholders: Nant Capital 28.6%, Dalat Pty Ltd 2.6%, CSIRO 0.94%, Lonceta Pty Ltd 0.97%

Anyone who thinks that gene therapies are a biotech fad should heed the words of US Food and Drug Administration commissioner Scott Gottlieb, MD.

"I believe gene therapy will become a mainstay in treating and maybe curing many of our most devastating and intractable illnesses," the good doc intoned recently.

"We're at a turning point when it comes to this novel form of therapy."

Globally, around 2,500 gene therapy studies are taking place, including 120 phase II or III clinical trials. In December, the FDA approved the first gene therapy: a drug called Luxturna to treat vision loss.

Enter Benitec, the only ASX-listed gene therapist and a rare exponent of 'gene silencing'. This has nothing to do with squeaky Levis, but is the art of turning off troublesome cells that cause diseases such as cancer. (Antisense is also involved in gene silencing, but Benitec's science is made in Australia, while Antisense is a US import.)

Benitec's know-how involves gene-silencing, or DNA-directed RNA interference (ddRNAi) to turn off the suspect genes.

The company's "silence and replace" credo sounds like something that happens to out-of-favour members of the North Korean politburo. But it actually involves the process of silencing the mutant gene while adding a copy of the normal version of the gene.

How cool is that?
"When people crack it, it will be the big deal,'' says Benitec chief executive officer Greg West.

Wrong way, go back

Not that Benitec's evolution has been straightforward, with the company abandoning its original hepatitis B program with California's City of Hope hospital and then going silent on a China hep B program, as well as a small-cell lung cancer tilt before abandoning its make or break TT-034 hepatitis C treatment, despite backing from Pfizer.

In a variation on Kerry Packer's "only one Alan Bond in a life time", Pfizer spent a shirtload on the drug but handed it back to Benitec because other hep C drugs had been developed in the meantime.

But Pfizer's investment (rumored to be $30 million) won't be wasted, as it has produced valuable data for Benitec's hep B program.

A series of US patent challenges delayed progress for years, but eventually Benitec and the CSIRO won the day for the Graham '099 patent, which is the basis of all its gene silencing work. Founding scientist and inventor Dr Michael Graham remains on the team.

At least Benitec has stuck to its remit since listing 16 years ago, on the gung-ho promise of "unleashing a global storm'' in gene silencing.

Over the years, Benitec has had a who's who of Australian biotech players, famously swapping CEO Sue MacLeman for Progen's then Dr John Chiplin and Dr Mel Bridges in 2010. Other bacon, lettuce and tomato alumni include New South Wales lawyer Ray Whitten, Novogen's (now Kazia) Iain Ross, as well as Fermiscan and Bioxyne's Dr Peter French, Sienna's Dr Cliff Holloway along with Sakura Holloway and Analytica's Carl Stubbings and Analytica and Viralytics' Bryan Dulhunty.

The DNA of Benitec

Benitec the listed entity was formed from the shell of Queensland Opals NL (as in No Luck) and debuted on the ASX in July 2002, having raised $19 million at 50 cents apiece.

Benitec listed on the Nasdaq in 2015. Last year it filed a US shelf registration, which streamlines the US fund-raising process.

As with so many biotechs, Benitec's roots trace back to the venerable CSIRO, which hived off the technology pre-listing and still owns a minute stake in Benitec.

In 2011 Benitec changed its name from Benitec to Benitec Biopharma to "better reflect the company's current activities" and the world kept turning.

Get with the programs

Benitec's two lead programs are undergoing clinical trials this year.

The first, BB-301 tackles oculopharyngal muscular dystrophy (OPMD), a rare genetic condition that affects about one person in every 100,000 (12,000 western world sufferers).

OPMD is characterised by eyelid drooping, difficulty in swallowing and limb weakness, with the sufferers likely to die from malnutrition or pneumonia.

The BB-301 program is designed to treat the dysphagia, the difficulty in swallowing associated with the disease. But it is hoped that the single-injection treatment might restore muscle tissue and - dare we say - cure the disease.
Last November, Benitec applied for FDA orphan drug designation for BB-301, which affects fewer than 200,000 Americans, and already has EU orphan status for OPMD.

The OPMD trial will involve 20 to 30 patients being injected weekly into a throat muscle, over eight weeks. The trial locations are yet to be decided, but here's a clue: OPMD is a 'cluster' disease prevalent in France, French-speaking Canada, New Mexico and Israel.

Traditionally, the standard measure of swallowing is the time it takes the patient to down a glass of water. But Benitec is looking at more quantitative measures, including real time x-ray imaging.

The second advanced program, BB-401 tackles head, neck and shoulder cancer (HNSCC), which Mr West describes as a "debilitating and hard to treat disease associated with a poor prognosis".

BB-401 targets a protein called the epidermal growth factor receptor (EGFR), which is over-expressed when tumors are present.

About 64,000 new HNSCC cases are detected in the US alone annually, with 13,000 deaths. The EGFR protein is over expressed in about 90 percent of HNSCC cases.

This program was bought to the table by Nantworks, a company owned by billionaire Patrick Soon-Shiong, said to be the world's wealthiest doctor, ahead of even American telly's Dr Phil. A related entity, Nant Capital, owns a chunky 29 percent of Benitec.

The BB-401 open-label trial intends to recruit up to 30 patients who have failed all standard therapies, across five to eight sites in Australia and Russia (where smoking and drinking rates are high).

The primary endpoint? Reduced tumor size or complete ablation.

Financials and performance

The "global storm" of gene silencing promised all those years ago has been more a case of shifting breezes with plenty of headwinds. Still, Benitec is well placed with around $10 million in cash. And with the backing of Nant, never say you can't.

With HNSCC, Benitec is vying for a drug market currently worth $386 million across the western countries that count, with the market forecast to grow to $1.53 billion by 2024.

Benitec also pocketed a $4.11 million Federal Government R&D Tax Incentive fund in January and received a total of $10.5 million in grant income in 2016-'17.

The shares are prone to some crazy-ape moves, having blipped like an errant cardiogram on three occasions in the last year.

On October 19, 2017, the shares closed 20 percent higher on the soporific news of a US patent grant in relation to hepatitis B. Over four trading days in January the stock spurted 60 percent to a two-year high of 33.5 cents, on orphan designation for BB-301 for OPMD.

What to expect

Benitec's a fun stock to trade, especially in the lead-up to key events. Seeing that you asked, these include the current-quarter launch of the HNSCC phase II confirmatory trial.

The OPMD program moves from lab to clinic by the end of 2018, with retinal disorders and infectious disease programs following in 2019.

In the case of the hepatitis B BB-103 program, work to date has been on mice with 'humanized' livers (which does not mean they were force fed 10 Martinis a day).

Having met with the FDA, Benitec reports a "clear and expeditious path to clinic''. But Mr West says the company plans to partner out the program and has had some deep and meaningful discussions already.

Benitec's other programs for retinal disorders and infectious diseases "could be" clinic-ready in 2019.

Benitec's programs relating to HIV/AIDS cancer immunology, Huntington's disease and intractable neuropathic pain have been licenced out.

Dr Boreham's diagnosis:

Unlike Scott Gottlieb MD, your humble faux practitioner finds the science around this one especially dense. Or maybe he's just dense.

Benitec chief scientific officer Dr David Suhy does a sterling job explaining it (with lots of diagrams) in a prezzo to the Biotech Showcase on January 8.

Interestingly, the Benitec register has been populated by doctors (and not just billionaire ones) putting in their own dough. So they get it, too.

"The initiation of the two clinical studies will be the major catalysts for value creation and news flow in 2018," Mr West says.

Let's hope at least one of the results puts a rocket up the share price - a concept any dumbo could understand.

Disclosure: Dr Boreham is not a qualified medical practitioner and does not possess a doctorate of any sort. He failed the Densa test - which is actually quite hard - with flying colours.

VISIONEERING TECHNOLOGIES

Visioneering says it has Australian Therapeutic Goods Administration approval for its portfolio of Naturalvue on day contact lenses.
Visioneering said the range of contact lenses included Sphere, Toric, Multifocal and Multifocal Toric.
The company said its Conformité Européenne (CE) mark approval included its Naturalvue Multifocal for myopia progression control to control progressive near-sightedness, allowing it to market and sell the lenses in Australia.
Visioneering said the lenses had its Neurofocus optics technology, using a depth-of-focus design to address known optical risk factors associated with myopia progression.
The company said the TGA approval allowed it to commercialize its contact lenses in Australia and prepare other Asia-Pacific regulatory submissions.
Visioneering chief executive officer said Dr Stephen Snowdy said the approval was “an important milestone”.
Visioneering was up 1.5 cents or 3.3 percent to 46.5 cents.

PHYLOGICA

Phylogica says its Phylomers have delivered the P1 bacteriophage gene product recombinant enzyme ‘causes recombination’, or Cre, into cells.
Phylogica said that Cre was a well-validated recombination enzyme routinely used in biological research and the proof-of-concept delivery of Cre was “an important step in establishing an in-vivo system to determine where in the body a drug cargo goes with Phylogica’s FPP delivery technology”.
The company recently renamed its Phylomer protein fragments “functional penetrating peptides”, or FPP, (BD: Sep 5, Oct 5, Dec 4, 2017)
Today, the company said that the Cre enzyme induced a color change in cells and organs on successful delivery, which it said it had delivered into kidney cells in-vitro, providing “further validation of the functionality of [its] FPP technology in-vitro”.
Phylogica chief scientific officer Dr Robert Hayes said that “through the Cre system, we will be able to determine where our FPPs, and the cargoes attached to them, end up in the body”.
“The Cre system will significantly reduce testing time, cutting in half the current testing regime to determine where in the body a FPP is taking the biologic cargo,” Dr Hayes said.
“This work also shows that the FPP1746-Cre gets into the nucleus of the cell,” Dr Hayes said.
“This data is important to companies that are working in the highly competitive area of gene editing technologies,” Dr Hayes said.
Phylogica executive chair Stephanie Unwin said that “successful delivery of a Cre cargo is a great result for our company, and does three important things”.
“[Firstly], it demonstrates that we can deliver an enzyme into kidney cells in-vitro,” Ms Unwin said.
“Secondly, it is a significant step achieved for our team ahead of using the live animal system for testing the delivery of drugs into the body, and gives potential pharma customers the confidence that Phylogica can deliver their drugs in a targeted way,” Ms Unwin said.
“Thirdly, our data once again shows clear outperformance of FPPs over the current delivery standard TAT, with over 50 percent more uptake into cells using our technology,” Ms Unwin said.
Phylogica was up 0.1 cents or 3.85 percent to 2.7 cents with 1.9 million shares traded.

INVICTUS BIOTECHNOLOGY

Invictus says it acquired the intellectual property rights associated with the Melt3 delivery platform from Gordagen and has been granted a Singapore patent.
Invictus said the Singapore patent was entitled 'Transmucosal delivery of tocotrienols' and would provide coverage until November 13, 2032, with patents previously granted in Australia, New Zealand and South Africa.
The company said the intellectual property rights were previously owned by Gordagen Pharmaceuticals (in liquidation) and were acquired by Invictus on January 24, 2018.
Invictus executive chairman and former Gordagen chief executive officer Dr Glenn Tong said the hyper-lipidaemia drug candidate had completed phase Ia clinical studies and was protected by thee patents.
"The registration of the Singapore patent, together with the already granted Australian patent, will expedite patent registrations in the [Association of South East Asian Nations] region," Dr Tong said.
Invictus said it was preparing for the launch in the US of two food additives, nE1-Heart for heart health and nE1-Elite for the reduction of delayed onset muscle soreness, improved muscle recovery after exercise and improved maintenance of muscle peak power.
The company said it expected additional patent registrations in the US, Japan and China in the next few months and patent applications had been filed in other markets.
Invictus is a private company.

MMJ PHYTOTECH

MMJ says it welcomes New South Wales Government "plans to simplify access to medicinal cannabis for doctors and patients".
In a joint media release the Federal Minister for Health Greg Hunt and the New South Wales Minister for Health and Medical Research Brad Hazzard said the new arrangement "would start in the coming weeks".
The media release said that instead of both the Federal and State Governments overseeing approvals, New South Wales would rely on a single clinical assessment by the Australian Therapeutic Goods Administration.
"A single approval process enables a focus on the world-leading clinical trials under the [State] Government's $21 million invested into medicinal cannabis," Mr Hazzard said.
Mr Hunt said the streamlined application process meant that doctors wanting to prescribe unregistered cannabis medicines would typically get approval within 36 hours.
"This approach by [New South Wales] to cut red tape and remove barriers is a template for other states to follow," Mr Hunt said.
MMJ said that it was "an important proposed change" given that investee Harvest One currently supplied Satipharm CBD capsules to approved patients in Australia.
MMJ was up 1.5 cents or 3.4 percent to 45.5 cents.

VIRALYTICS

The Los Angeles, California-based Capital Group Companies says it has sold all of its 15,650,000 Viralytics shares for an average price of $1.67.
Last year, Capital Group said it had become substantial in Viralytics with 14,000,000 shares which it bought at an average price of 95 cents a share (BD: Jul 18, 2017).
Last week, Merck Inc (Merck Sharp and Dohme) said it would pay $502 million to acquire the company, or $1.75 through a scheme of arrangement (BD: Feb 22, 2018).
Viralytics was up half a cent or 0.3 percent to $1.675 with 8.3 million shares traded.

LBT INNOVATIONS

LBT has requested a trading halt “pending an announcement in relation to a capital raising”.
Trading will resume on March 6, 2018 or on an earlier announcement.
LBT last traded at 20 cents.

CRYOSITE

Cryosite says that chairman Stephen Roberts has resigned as a director effective from today, March 2, 2018.
The company thanked Mr Roberts for his contribution.
Biotech Daily understands the company is actively looking for a third director for the company.
Cryosite was untraded at 10 cents.

RHINOMED

Rhinomed says that managing-director Michael Johnson will be paid $325,000 a year from March 1, 2018.
Rhinomed said that the base rate included compulsory superannuation and Mr Johnson would be entitled to a short-term bonus of $150,000 for the period ending June 30, 2018 pending performance hurdles.
The company said that Mr Johnson would have a long-term incentive of 4,000,000 options exercisable at 27 cents each.
Rhinomed was up 2.5 cents or 22.7 percent to 13.5 cents.