



# Biotech Daily

Friday May 18, 2018

*Daily news on ASX-listed biotechnology companies*

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- \* **DR BOREHAM'S CRUCIBLE: INVITROCUE**
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## MARKET REPORT

The Australian stock market fell 0.11 percent on Friday May 18, 2018 with the ASX200 down 6.9 points to 6,087.4 points.

Thirteen of the Biotech Daily Top 40 stocks were up, nine fell, 14 traded unchanged and four were untraded.

Yesterday's worst, Reva, was today's best, up two cents or 7.7 percent to 28 cents with 35,850 shares traded.

Genetic Signatures and Mesoblast climbed five percent or more; CSL and Prescient improved four percent or more; Oncosil and Optiscan were up more than three percent; Clinuvel and Universal Biosensors rose more than two percent; Compumedics was up 1.3 percent; with Cochlear, Cynata, Sirtex, Starpharma and Viralytics up by less than one percent.

Airxpanders led the falls, down half a cent or 4.8 percent to 10 cents with 913,574 shares traded, followed by Medical Developments down 4.2 percent to \$5.53 with 540,430 shares traded.

Nanosonics lost 3.9 percent; Bionomics, Pro Medicus and Telix shed more than two percent; Admedus, Orthocell and Polynovo were down more than one percent; with Resmed down 0.7 percent.

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

**By TIM BOREHAM**

**ASX code:** IVQ

**Share price:** 9.6 cents

**Market cap:** \$44.0 million

**Shares on issue:** 458,455,572

**Chief executive officer:** Dr Steven Fang

**Board:** Jamie Khoo Gee Choo (chair), Ee Ting Ng, Chow Yee Koh, Dr Boon Sing (Steven) Fang, Prof Hanry Yu, Dr Andreas Linder

**Financials (March quarter)\*:** receipts \$164,000, cash burn \$986,000, cash on hand \$1.72m, estimated current quarter cash outflows \$900,000

\* Financials are stated in Singapore dollars and assumes parity with \$A

**Major identifiable holders:** Dr Steven Fang 25.6%, Faith Champ Enterprises 18.2%, Hanry Yu 11%, Clearbridge Ventures 8.4%

As a provider of bespoke drug tests Invitrocue is an exponent of personalized medicine, which is not snuggling up with a bottle of penicillin, but tailoring therapeutics to suit the individual.

In the case of oncology, Invitrocue is not claiming be on the cusp of curing cancer. But its 3D-based diagnostic technology is helping clinicians to work out the best drugs to administer and more quickly.

The Singapore based Invitrocue's flagship product is Onco-PDO, as in oncology patient-derived organoid.

Onco-PDO uses 3D culture to grow patients' own cancer cells on scaffolds and then assay them in view of the best medicine to use.

The technology is based on the notion that every tumor is slightly different, which means individual patients will react differently to a particular drug or drug combination

"We create micro-tumors that are highly correlated to the patient's cancer tumor," company founder and chief executive officer Dr Steven Fang says.

In effect the process creates a 3D tumor 'avatar', so let's think of Invitrocue as the Lara Croft or Dr Grace Augustine (Sigourney Weaver) of the oncology world.

Invitrocue already has two products for in-vitro liver toxicology testing: Hepatocue and 3D Cellusponge.

While the oncology product is used by clinicians, the liver testing is deployed by pharmaceutical companies to assess the toxicity of new drugs.

The market is a buoyant one given the ageing population and lack of effective cures for non-alcoholic steatohepatitis (NASH) and hepatitis B.

In 2016, Invitrocue expanded its work from liver diseases to oncology.

### **Better, faster drug testing**

Onco-PDO is competing with the gold-standard technique of the xenograph mice model (patient-derived tumors grown on the animals).

The trouble is, each of these specially-bred, immune system-deprived rodents costs \$15,000 to \$20,000. So one just can't visit a Mallee wheat silo with a toss bag to grab a few.

Invitrocue claims the advantage of being significantly more cost-effective, with a much faster turnaround of days rather than weeks.

In mid-April the company said it had screened its first patient with Onco-PDO for colorectal cancer, generating first revenues for the product.

That's worth a drum roll.

Dr Fang says the company is getting daily inquiries from customers in relation to patients who are failing their therapies and newly-diagnosed diseases.

### **'We are not a biotech'**

Dr Fang dubs Invitrocue as a life science or healthcare company, rather than a biotech.

That's because these days it spends little on research and development. But the company has benefited from \$40 million sunk into the technology in the past.

"The capital required now is about building capacity to roll out the services," he says.

Dr Fang founded Invitrocue in 2012, based on technology that originated within Singapore's august Agency for Science Technology and Research (Astar).

This discovery was led by Prof Henry Yu, at Astar's Institute of Bioengineering and Nanotechnology.

The company back-door listed in June 2015, having been acquired by the shell of Bunuru Corp.

(As an aside, in its previous life Bunuru was linked with a scandal involving the Panama Papers and mining companies operating in North Korea).

A former Glaxosmithkline heavy-hitter, Dr Fang has listed no fewer than four companies over the years. The last one, the umbilical cord stem cell blood bank Cordlife remains listed on the Singapore Stock Exchange with a \$190 million market cap.

## **Commercialisation plans**

Invitrocue so far has focused on its Asian home base, as well as Japan, Hong Kong, Australia and Europe.

“We haven’t even started looking at the US,” Dr Fang says. “We are doing every country we can physically get our head around, rather than doing everything and not succeeding.”

Invitrocue’s revenues to date have derived from the liver testing. These amounts include reagents and consumables, as well as revenue for interpreting the data the models generate.

The company expects to roll out its Onco-PDO kits this year.

In February, the company announced \$100,000 assistance from Invest Northern Ireland, which could involve “a number of possible scientific and commercial partnerships”.

It’s expected this tie-up will be a beach head to the European market - even though Irish eyes aren’t smiling after Northern Ireland is being forced to secede from the EU by its Westminster masters.

Invitrocue isn’t ignoring the Middle Kingdom, either: In August 2016, the company inked a strategic agreement with Qiagen Suzhou Translational Medicine Co.

This deal involves Invitrocue providing its technology to discover biomarkers (indicators of disease) for the Chinese biopharmaceutical market.

## **Financials**

Invitrocue’s is light-on for cash – with just \$1.72 million at the end of March - but the directors opine the company is a going concern as it intends to raise “at least” \$2.5 million by May 2018.

Hey – that’s this month!

Dr Fang confirms a capital raising is in train, but is circumspect about its exact nature.

In the December quarter, Invitrocue raised \$2.6 million from institutional investors across two placements.

The company also has 69.7 million unlisted options on issue, exercisable between five and 10 cents, with 48.4 million of them expiring in February 2033, about the same time as Dr Augustine's ship leaves for Pandora in search of unobtainium.

The board is also mulling a dual listing but not necessarily on the Nasdaq, having been contacted by a number of exchanges globally.

"But my hope is to make Invitrocue a dividend stock before we talk about corporate action," Dr Fang says.

### **Dividend? Say that again?**

Yes!

Dr Fang says that Invitrocue can become profitable even without Onco-PDO and pay a divvy - a unicorn-type rarity in the biotech, sorry, life sciences, world.

"But Onco-PDO will really drive the company in terms of revenue and profits."

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

Invitrocue is a bit like the 19<sup>th</sup> Century goldfields shovel merchants, who ultimately did better than the miners themselves.

Rather than digging for gold (making drugs) per se, Invitrocue is making life easier for the drug-makers while hopefully saving lives.

As usual, there are grown-up companies that Invitrocue can aspire to become. The Nasdaq-listed Foundation Medicine tests for more than 300 cancer-related genes and is worth a cool \$US2.5 billion.

Dr Fang says he's made mistakes along the way and Invitrocue will learn from them.

"There is no such thing as getting it right in the first time."

That said, Invitrocue looks well past the experimental sand-pit stage and hopefully that will be reflected in the financials sooner rather than later.

***Disclosure: Dr Boreham is not a qualified medical practitioner and does not possess a doctorate of any sort. Mistakes? He's made a few - often the same ones twice - and is still learning from them, but looks good in blue skin.***

## CSL

CSL says it expects net profit after tax for 2017-'18 to be 7.6 percent above previous guidance to a range of \$US1.68 billion to \$US1.71 billion (\$A2.27 billion).

In February, CSL said it expected net profit after tax to be in the range of \$US1.55 billion to \$US1.6 billion (BD: Feb 14, 2018).

The company said the forecasts were at constant currency and considered variables including material price, volume movements in plasma products, competitor activity, changes in healthcare regulations and reimbursement policies, royalties arising from the sale of human papillomavirus vaccine, internationalization of influenza vaccine sales and plasma therapy life cycle management, enforcement of intellectual property, regulatory risk, litigation, effective tax rate, and foreign exchange movements.

CSL chief executive officer Paul Perreault said he was "pleased to report an improved company outlook for the financial year, underpinned by a confluence of positive outcomes as we work to deliver our strategy".

"Of particular note has been a positive product and geographic sales mix shift, particularly with better than expected sales of Idelvion and Haegarda," Mr Perreault said.

"Furthermore, Seqirus is also performing well, following a severe northern hemisphere influenza season," Mr Perreault said.

"The phasing of investments in some of our clinical trials has also yielded a positive financial variance," Mr Perreault said.

CSL climbed \$7.26 or 4.1 percent to \$182.95 with 1.4 million shares traded.

## BARD1 LIFE SCIENCES

Bard1 has told the ASX that discussions with contract laboratory organizations, prior to appointing Thermo Fisher may have led to an increase in its share price and volume.

The ASX said the company's share price climbed 31.25 percent from 1.6 cents on May 7 to 2.1 cents on May 9, 2018 and noted a significant increase in trading volumes.

Bard1 said that in its Appendix 4C quarterly report for the three months to March 31, 2018, published on the ASX platform on April 30, it said it had "initiated discussions with multiple contract laboratory organizations during the quarter and was intending on finalizing the contract negotiations with the preferred contract laboratory organization to commence the custom assay development project".

The company said that at the time it received the ASX share price query it was "in advanced discussions with its preferred contract laboratory organization ... [but] no binding contract ... had been concluded".

In a separate announcement, Bard1 said that today it signed an agreement with the Waltham, Massachusetts-based Thermo Fisher Scientific for multiplex research-use-only custom assay development for its auto-antibody assay using Procartaplex technology for performance on Luminex instrumentation.

The company said that the first application of the Procartaplex technology would be for its ovarian test in development.

Bard1 said the agreement defined the development of a multiplex immune-assay kit for the semi-quantitative detection of auto-antibodies against 20 Bard1 peptides using Procartaplex for performance on Luminex instrumentation for research and evaluation.

The company said the custom research assay development project would begin today and was expected to take about nine months.

Bard1 said that if the project was successful the companies would discuss the potential for Thermo Fisher to supply it research autoantibody kits for its use in research studies.

Bard1 fell 0.3 cents or 15 percent to 1.7 cents with 39.4 million shares traded.

## MMJ PHYTOTECH

MMJ says the Toronto, Canada-based Cannabis Wheaton Income Corp has completed the acquisition of its marijuana consumer health company Dosecann.

In April, MMJ said Cannabis Wheaton would buy the Toronto-based Dosecann for \$C38 million (\$A39.5 million), and that MMJ had a \$C2.5 million convertible note that gave the option to acquire 1.25 million shares for \$C1.00 a share (BD: Apr 5, 2018).

MMJ said that as consideration for the acquisition, its convertible note was converted into 3.12 million Cannabis Wheaton shares and its warrants were converted into warrants in Cannabis Wheaton, allowing MMJ to acquire a further 1.56 million Cannabis Wheaton shares at 96.2 Canadian cents a share by January 2020.

MMJ said the consideration was worth about \$C5.9 million, based on Cannabis Wheaton's share price of \$C1.59 on May 17, 2018, and was a 2.4 multiple of unrealized invested capital for MMJ's shareholders.

MMJ was up two cents or 6.45 percent to 33 cents.

## G (GEVA) MEDICAL INNOVATIONS

G Medical says chief executive officer Dr Yacov Geva will provide an unsecured \$US3,000,000 (\$A3,992,910) loan at 10 percent a year for short-term funding.

G Medical said the loan repayment date would be April 30, 2019, with the company able to fully repay the loan at its own discretion before that date.

According to Dr Geva's most recent Appendix 3Y director's interest statement and the most recent Appendix 3B new share issue announcement Dr Geva held 193,036,154 shares or 56.8 percent of G Medical.

In March, the company responded to an ASX query saying it had not achieved a number of milestones it had expected to reach, including a trial of its smartphone case announced in May, 2017, and a Chinese distribution deal worth \$US67,500,000 announced in July (BD: Mar 28, 2018).

G Medical was up half a cent or two percent to 26 cents.

## QUEENSLAND BAUXITE

Queensland Bauxite has requested a third extension to the suspension following a trading halt relating to an acquisition by subsidiary Medical Cannabis.

Queensland Bauxite said the request for a suspension extension was due to a "significant and price sensitive announcement requiring comprehensive detailing and ASX approval" and followed the trading halt, the first suspension request and subsequent suspension extension request on May 4, 7 and 9, 2018 (BD: May 2, 4, 2018).

The company said on May 15, 2018, it was advised by the ASX that further modifications needed to be undertaken to be fully in accordance with ASX Listing Rules, as such the directors needed time to work with the company's legal team and for the ASX to complete the final comprehensive draft announcement as well as consider any additional information provided by the company.

Queensland Bauxite said it expected everything to be finalized with the ASX on or before trading on May 25, 2018.

Queensland Bauxite last traded at 4.9 cents.