# Biotech Daily

Tuesday February 2, 2016

*Daily news on ASX-listed biotechnology companies*

*** ASX, BIOTECH DOWN: BIOTRON UP 19%, USCOM DOWN 9%**

*** STARPHARMA: '120-DAY DENDRIMER MOUSE TUMOR SUCCESS'**

*** FEDERAL GOVERNMENT CRC FUNDING ROUND OPENS**

*** RECCE-327 ANTIBIOTIC: 'EFFECTIVE IN LOWER DOSES IN MICE'**

*** DIASOURCE CHAIR ROLF SICKMAN APPOINTED ANTEO DIRECTOR**

*** BIO-MELBOURNE BRIEFING: 'INNOVATION AND OPPORTUNITIES'**

## MARKET REPORT

The Australian stock market fell 1.0 percent on Tuesday February 2, 2016 with the ASX200 down 50.3 points to 4,993.3 points.

Twelve of the Biotech Daily Top 40 stocks were up, 21 fell, six traded unchanged and one was untraded.

Biotron was the best, up one cent or 18.5 percent to 6.4 cents with 524,215 shares traded, followed by Living Cell up 10.6 percent to 5.2 cents with 53,900 shares traded.

Starpharma climbed 9.5 percent; Optiscan was up 8.3 percent; Actinogen rose 7.8 percent; IDT and Universal Biosensors improved more than six percent; Genetic Technologies was up five percent; Neuren climbed 4.55 percent; Opthea, Prana and Viralytics rose more than two percent; with Cochlear up one percent.

Uscom led the falls, down 1.5 cents or 8.6 percent to 16 cents with 13,000 shares traded.

Osprey lost 7.5 percent; Impedimed fell 4.3 percent; Benitec, Compumedics, Medical Developments, Psivida and Sirtex were down more than three percent; Atcor, Mesoblast, Oncosil and Pro Medicus shed more than two percent; Admedus, Anteo, Bionomics, Clinuvel, Ellex, Nanosonics, Polynovo and Resmed lost more than one percent; with Acrux, CSL and Reva down by less than one percent.

STARPHARMA

Starpharma says the final results of its HER2-targeted dendrimer conjugate trial shows complete ovarian cancer tumor regression in mice at 120 days after dosing.

In November last year, Starpharma said its antibody-targeted dendrimer conjugate resulted in complete ovarian cancer tumor regression and 100 percent survival in mice at 60 days, with leading anti-cancer drugs no better than saline(BD: Nov 16, 2015).

Today, Starpharma said that the results were an extension of the previously announced findings and its HER2-targeted dendrimer enhanced (DEP) conjugate also significantly outperformed all other treatment groups, including Kadcyla,or trastuzumab-DM1, an Herceptin antibody-drug conjugate, with respect to both tumor regression and survival.

The company said that 100 percent of mice treated with its HER2-targeted DEP conjugate were tumor-free within three weeks of treatment and remained that way for the total duration of the study, whereas “only tumor stasis was observed during treatment in the Kadcyla group, with a maximum tumor volume inhibition of 32 percent with significant tumor regrowth occurring soon after the completion of dosing”.

In November, the company provided one graph showing that tumor volumes treated with saline, Herceptin and Kadcyla all rose at approximately the same rate, from about 100 cubic millimetres to more than 1,000 $mm^3$, while its DEP conjugate reduced tumor volumes from the same level to near zero in 15 days ($p = 0.0011$).

A second graph showed that survival rates fell to zero within 50 days for saline, Herceptive and Kadcyla, while the DEP conjugate retained a 100 percent survival rate to 60 days.

Today, the same graphs extended those results to 120 days post-treatment.

Starpharma said in November that its antibody-targeted conjugate, using Herceptin as the targeting group, with an unnamed chemotherapy drug, significantly outperformed both Roche’s Herceptin antibody-drug conjugate Kadcyla and the monoclonal antibody Herceptin, or trastuzumab, itself in the pre-clinical ovarian cancer model.

Starpharma said that ovarian cancer xenograft in mice with five or six in each group received 10mg/kg of saline or 10mg/kg Kadcyla and the DEP-conjugate group was dosed once a week for three weeks, with Herceptin dosed at 20mg/kg twice each week for three weeks.

The company said that the targeted DEP treated group “showed vastly improved anti-cancer effectiveness and survival compared to both Kadcyla and Herceptin”.

Today, Starpharma chief executive officer Dr Jackie Fairley said the company was “very excited by these latest results … and the feedback from commercial parties on the study data has been very positive indeed”.

“Both the extent and the sustained nature of the anticancer effect seen with Starpharma’s DEP candidate have been considered most impressive,” Dr Fairley said.

“Discussions are now underway with a number of leading pharmaceutical companies in relation to targeted DEP conjugates and the application of Starpharma’s targeted DEP platform to their proprietary drugs,” Dr Fairley said.

Starpharma said that the study used “a well-established ovarian cancer model for assessing efficacy of therapies against HER2-positive cancer cell lines”.

The company said that the results demonstrated significant and long term survival benefits for the targeted DEP conjugate compared to other treatment groups, including Kadcyla.

Starpharma said the leading three antibody based treatments in cancer, Rituxan, Avastin and Herceptin, had total sales of more than $US20 billion in 2014 and targeted therapies, such as Kadcyla and Adcetris, had combined sales of more than $US1 billion in 2014.

Starpharma climbed six cents or 9.5 percent to 69 cents with 1.1 million shares traded.

## FEDERAL GOVERNMENT

The Federal Government says that co-operative research centre (CRC) and CRC project funding applications have opened.

The Minister for Industry, Innovation and Science Christopher Pyne said the funding would be the first held under the Federal Government's new guidelines.

"Improving collaboration between researchers and industry to cultivate a more innovative and entrepreneurial economy is a key pillar of the new National Innovation and Science Agenda, and that's why the Government committed to opening this CRC round as part of the agenda", Mr Pyne said.

Mr Pyne said funding would be prioritised to CRCs and projects aligned with the six industry growth centres and the nine science and research priorities, but would be "flexible enough to address emerging priority areas and consider proposals from other … sectors".

A media release from Mr Pyne said that traditional CRCs supported medium to long-term industry-led research, while CRC projects would focus on shorter term activity with an emphasis on involving small and medium sized enterprizes.

"The CRC programme has been successful over a long period of time in solving industry problems and getting great Australian innovations, like the Cochlear ear implant, to market," Mr Pyne said.

The media release said the funding rounds opened on February 1 with project applications closing on March 17, CRC applications closing on March 31, 2016 and applications that were industry-led and focused on practical outcomes were encouraged to apply.

The media release said that webinar information sessions would be held on February 23 and 24, 2016 with more information at: www.business.gov.au/crc.

## RECCE

Recce says that its synthetic polymer antibiotic Recce-327 shows efficacy in mice at 70mg/kg without toxicity up to 556mg/kg.

Last month, Recce said that at 132mg/kg Recce-327 was equal to or better than the efficacy of a commercial antibiotic at 500mg/kg against methicillin-resistant Staphylococcus aureus.

Today, the company said that the toxicity results, in four groups of 10 mice per group, showed that the dose could be reduced 70mg/kg, with 90 percent of mice surviving to eight days at the 70 mg/kg dose, 100 percent surviving to eight days at 139mg/kg, and the higher doses of 278mg/kg and 556mg/kg resulting in survival to 90 days.

In October, Recce said that its antibiotics were effective in attacking a wide range of disease-causing gram-positive and gram-negative bacteria and superbugs of these bacteria (BD: Oct 9, 2015).

Recce said at that time that it had synthesised Recce-327 and Recce-355 and early testing had shown that both were effective in treating a wide range of disease-causing gram-positive and gram-negative bacteria, with Recce-327 intended for the treatment of sepsis, or blood poisoning, and secondarily gastritis, or inflammation in the stomach, in humans and Recce-355 for Escherichia coli in the human intestine:

In a media release, Recce said that the wide gap between efficacy and any observed toxicity was "very important … [and] there is apparently a good space for safety in effective dosing of the antibiotic".

Recce executive chairman Dr Graham Melrose said that "many regard the mouse as an exceptionally good model for antibiotic behaviour in humans and in this context especially, the results are very reassuring".

Recce climbed four cents or 10.5 percent to 42 cents.

## ANTEO DIAGNOSTICS

Anteo says that as part of its acquisition of Belgium's Diasource Immunoassays SA, Rolf Sickman has been appointed a director of Anteo.
Anteo said that Mr Sickman continues as chairman of Diasource; and founder and chief executive officer Dr Jozef (Jef) Vangenechten would continue as the chief executive officer of the Diasource company in Belgium (Aug 26, Nov 30, Dec 18, 2015).
In its annual general meeting presentation in November 2015, Anteo said that Mr Sickman began his career as an advisor at the Amsterdam stock, before joining Kempen & Co and then was appointed as an executive at Banque de Suez.
Anteo said that Mr Sickman developed and managed two family offices with more than EUR1 billion in assets.
The company said that Mr Sickman held a Master of Laws from the Vrije Universiteit in Amsterdam.
Anteo fell 0.1 cents or 1.4 percent to 6.9 cents.

## BIO-MELBOURNE NETWORK

The Bio-Melbourne Network says its February 16, 2016 Bio-Briefing will address 'Innovation with Impact: Unrecognised Opportunities in Global Health'.
The Bio-Melbourne Network said that Bio-Briefing would be held on the eve of the Lorne Infection and Immunity conference and would highlight unrecognised commercial opportunities, showcase local innovation and identify areas for international partnership and collaboration.
The Network said that the global infectious disease product pipeline had been revolutionized over the past decade, with increased investment and research and development activity worldwide.
The industry organization said that the Bio-Briefing would hear how innovative collaborations between the public and private sectors were driving product development with investment flowing from corporate venture funds, non-government organizations, philanthropy and governments.
Bio-Melbourne Network chief executive officer Dr Krystal Evans said that "with under-served markets in India, China and Brazil, there is significant commercial potential and interest in the development of candidate products to address unmet need and deliver global public health outcomes".
The Network said that the networking reception would connect leaders from the Melbourne business community with guests including the invited speakers and attendees for the Lorne conference.
The Network said that speakers at the Bio-Briefing would include Policy Cures executive director Dr Mary Moran; Geelong Centre for Emerging Infectious Diseases' director Prof Martyn Jeggo; 360-Biolabs chief executive officer Dr Simon Tucker and the Walter and Eliza Hall Institute's senior research officer Dr Brad Sleebs.
The Bio-Briefing will be held at Seminar Room 1, Level 7, Walter and Eliza Hall Institute of Medical Research, 1G Royal Parade, Parkville, on February 16, 2016, with registration from 3.45pm for a 4pm start followed by networking until 6.30pm.
To register go to: http://www.biomelbourne.org/events/view/405.