



# Biotech Daily

Wednesday September 7, 2016

*Daily news on ASX-listed biotechnology companies*

- \* **ASX UP, BIOTECH DOWN: DIMERIX UP 8%, ACTINOGEN DOWN 9%**
- \* **PARADIGM, GRIFFITH COLLABORATE ON PPS FOR ALPHAVIRUS**
- \* **SPEEDX WINS FEDERAL \$1m FOR ANTIBIOTIC RESISTANCE TESTS**
- \* **OSPREY \$1m SHARE PLAN TAKES TOTAL TO \$29m**
- \* **RESONANCE EXTENDS UNNAMED COMPANY PHASE III TRIAL CONTRACT**
- \* **BIO-MELBOURNE 'ADVANCES IN CANCER' BIO-BREAKFAST**

## MARKET REPORT

The Australian stock market edged up 0.2 percent on Wednesday September 7, 2016 with the ASX200 up 10.6 points to 5,424.2 points.

Twelve of the Biotech Daily Top 40 stocks were up, 21 fell, five traded unchanged and two were untraded. All three Big Caps fell.

Dimerix was the best for the second day in a row, up 0.1 cents or 7.7 percent to 1.4 cents with 9.8 million shares traded, followed by Bionomics up 7.3 percent to 29.5 cents with 1.1 million shares traded.

Atcor and Living Cell climbed more than four percent; Cellmid, Opthea and Osprey were up more than three percent; Airxpanders and IDT rose more than two percent; with Orthocell, Universal Biosensors and Uscom up more than one percent.

Actinogen led the falls, down 0.6 cents or 9.1 percent to six cents with 3.1 million shares traded.

Compumedics retreated 6.7 percent; Benitec and Prana fell four percent or more; Cyclopharm, Impedimed, Medical Developments, Mesoblast and Pharmaxis lost more than three percent; Neuren shed 2.4 percent; Acrux, Anteo, Avita, Ellex, Pro Medicus, Sirtex, Starpharma and Viralytics were down more than one percent; with Clinuvel, Cochlear, CSL, Nanosonics, Resmed and Reva down by less than one percent.

## PARADIGM BIOPHARMACEUTICALS

Paradigm says its pentosan polysulfate sodium has shown potential for treating alphavirus-induced arthralgia and arthritis in mice.

Paradigm said that a study at the Griffith University's Institute for Glycomics in mouse models of the alphaviruses Ross River virus and chikungunya virus showed that pentosan polysulfate sodium (PPS) "significantly alleviated the severity of disease and reduced both the inflammatory response and the loss of articular cartilage".

The company said the mouse data suggested that PPS had "the potential to treat both acute and chronic symptoms associated with mosquito-transmitted alphavirus infections". Paradigm said that infection in mice resulted in a significant acute inflammatory response and cartilage destruction, with the severity alleviated by PPS, as assessed by histological analysis, gene expression and soluble biomarkers.

The company said that severe Ross River virus-induced joint pathology, including thinning of articular cartilage and loss of proteoglycans in the cartilage matrix, was diminished with PPS treatment.

Paradigm said that five human patients with Ross River virus-arthralgia, or joint pain, had been treated with PPS under the Australian Therapeutic Goods Administration special access scheme and demonstrated "tolerance and potential clinical effects".

The company said it had a partnership with Griffith University for a phase II trial of PPS for Ross River virus and chikungunya virus-induced arthritis and arthralgia and had the rights to commercialize and acquire the Griffith University intellectual property.

Griffith University's Dr Lara Herrero said that PPS was "a promising new agent for [Ross River virus]-induced arthritis acting to reduce viral-induced inflammation and preserve the cartilage matrix, which is damaged during virus infection".

"Our study showed that treatment with PPS also reduced the loss of articular cartilage and protected the level of proteoglycans in the cartilage matrix," Dr Herrero said.

"Overall we concluded in our study PPS was a safe and effective treatment for both acute and chronic [Ross River virus] infection," Dr Herrero said.

The research, entitled 'Pentosan Polysulfate: a Novel Glycosaminoglycan-Like Molecule for Effective Treatment of Alphavirus-Induced Cartilage Destruction and Inflammatory Disease' was published in the Journal of Virology in August 2015 and an abstract is available at: <http://www.ncbi.nlm.nih.gov/pubmed/26018160>.

Paradigm said the research had generated interest from doctors and Ross River virus patients and five patients who had failed the current standard of care had been treated at Queensland medical clinics, with no patients having adverse events and "most patients showed improvement in the quality of life assessments".

Paradigm said that alphavirus diseases caused "crippling joint pain and arthritis, which often [had] an extended duration leaving patients bed-ridden and incapacitated".

The company said that some medications provided temporary symptomatic relief, but there were no specific drugs to treat Ross River virus and chikungunya virus infections with the potential global market estimated to be "hundreds of millions of dollars" a year.

Paradigm said that chikungunya virus had expanded into the Americas with more than 1.7 million cases in the region since 2014 and 180,000 reported so far in 2016.

Paradigm chief executive officer Paul Rennie said that given the safety of PPS and that the intra-muscular route of administration and dosage had been confirmed as well as the pre-clinical safety and efficacy and the scarcity of any registered drugs the company was "hopeful to receive accelerated approval for the treatment in some countries".

Paradigm said its programs for bone marrow lesions, or bone bruising, and for allergic rhinitis, or hay fever, were continuing.

Paradigm was up 3.5 cents or 7.2 percent to 52 cents.

### SPEEDX PTY LTD

Speedx says it has received a \$1 million grant from the Federal Government Accelerating Commercialization program for its antibiotic resistance diagnostics.

The Sydney-based Speedx said the funds would support testing and partnering of its drug-resistant bacteria molecular diagnostics, which was “a faster way to detect drug resistant infections by analysing DNA biomarkers in the bacteria” and could detect sexually transmitted infections that were resistant to first-line antibiotics in 24 hours instead of taking weeks to accurately diagnose.

Speedx chief executive officer Colin Denver said funds would be used “to expedite the commercialization of an important new Australian-developed healthcare technology with the potential to enable development of better treatments and promote responsible use of antibiotics globally”.

The company said that the technology was spun-out from Johnson & Johnson’s Australian research facility in 2009.

Speedx said it had opened a London office and was seeking distribution partners for Europe, the Middle East and Africa for its diagnostic to detect herpes simplex virus 1 and 2 as well as varicella zoster, or chicken pox, virus which received the Conformité Européenne (CE) mark in June (BD: Jul 4, 2016).

The company said it was seeking distribution partners for its test for *Mycoplasma genitalium*, a sexually transmitted infection often misdiagnosed due to having similar symptoms to other common infections and its technology allowed for simultaneous detection of the organism along with common mutations in the bacterial DNA linked to antibiotic resistance.

Speedx said it focussed on *Mycoplasma genitalium* because antibiotic resistance in people infected with the infection in the Asia-Pacific region was more than 40 percent.

The company said that independent studies had shown that its technology allowed “rapid and sensitive detection of mutations in the bacteria” which indicated resistance to commonly prescribed macrolide-based antibiotics, which could inform appropriate patient management and which would not be available using current diagnostics.

Speedx said it was rolling-out its *Mycoplasma genitalium* test in Europe and was preparing for US Food and Drug Administration clearance.

The company said it was developing other products including an assay to detect respiratory viruses including influenza, and a drug resistance test for *Neisseria gonorrhoeae*, to be released in 2017.

Speedx said that the UK ‘Review On Antimicrobial Resistance’ estimated that if drug resistance was left unchecked at its current rate, by 2050 it would kill 10 million people a year and cost the world up to \$US100 trillion.

Speedx is a private company.

### OSPREY MEDICAL

Osprey says its share purchase plan at 28 cents a share closed oversubscribed raising the capped \$1 million taking the total raising to \$29 million (BD: Aug 4, 2016).

Osprey said that “due to the strong support of eligible holders of [Chess depository instruments], all applicants ... will receive 22.8 percent of their application”.

The company said that applicants would receive a refund of excess application monies.

Osprey was up 1.5 cents or 3.8 percent to 41 cents.

## RESONANCE HEALTH

Resonance says it has extended its provision of for an unnamed pharmaceutical company's phase III trial.

In June, Resonance said it had a two-year collaboration to provide Ferriscan and Cardiac T2 services for the Asia-based component of the unnamed company's trial (BD: Jun 15, 2016).

Today, the company said that the contract had been extended geographically to include a European country joining the study as well as providing the new service of a spleen volume measurement, to assist in the detection of hypersplenism.

Resonance general-manager Sander Bangma said that it was "very rewarding to have successfully negotiated extension of the collaboration with our newest pharmaceutical company partner and to be commencing service delivery of our spleen volume measurement".

The company said that its Ferriscan, Cardiac T2 and spleen volume measurement would be provided for the Asia-based component and the new European country, with service provision in Asia underway.

Resonance fell 0.2 cents or 6.9 percent to 2.7 cents.

## THE BIO-MELBOURNE NETWORK

The Bio-Melbourne Network says that it will discuss advances in cancer therapeutics at its Bio-Breakfast tomorrow, September 8, 2016.

Bio-Melbourne said that new combinations of therapeutic agents for oncology were delivering results for patients and attracting interest from global pharmaceutical partners. The Network said that the breakfast would review the research and development pipeline for clinical oncology with Viralytics chief executive officer Dr Malcolm McColl and Cancer Therapeutics CRC chief executive officer Dr Warwick Tong.

The Bio-Breakfast will be held at Walter and Eliza Hall Institute of Medical Research, 1G Royal Parade, Parkville on September 8, 2016, with registration from 7:15am, a networking breakfast until presentations from 8am to 9am.

To register go to: <http://bit.do/biobreakfastSept>.