



Biotech Daily

Tuesday September 4, 2018

Daily news on ASX-listed biotechnology companies

- * **ASX DOWN, BIOTECH UP: NEUREN UP 17%; AIRXPANDERS DOWN 15%**
- * **TELIX READY FOR TLX101 GLIOBLASTOMA TRIAL**
- * **BRANDON, MRCF, YUUWA \$16m FOR POLYACTIVA GLAUCOMA TRIAL**
- * **UNI NSW: SWITCHABLE CAR-T FOR PANCREATIC CANCER, IN MICE**
- * **MEDLAB: SYDNEY UNI STUDY BACKS NANOCELLE**
- * **PHOSPHAGENICS UP-TO \$416m MYLAN DECISION 'SHORTLY + 3 WEEKS'**
- * **PHARMAUST: MONEPANTEL TABLET FOR DOG, HUMAN TRIALS**
- * **ZELDA APPOINTS HAPA FOR GERMAN MANUFACTURE, DISTRIBUTION**
- * **AUSTRALIAN ETHICAL REDUCES TO 6% OF IMMUTEP**
- * **MACQUARIE GROUP TAKES 6% OF PATRYS**

MARKET REPORT

The Australian stock market fell 0.28 percent on Tuesday September 4, 2018 with the ASX200 down 17.8 points to 6,293.1 points. Eighteen of the Biotech Daily Top 40 stocks were up, 13 fell, five traded unchanged and four were untraded.

Neuren was the best, up 22 cents or 16.9 percent to \$1.52 with 598,756 shares traded.

Avita climbed 7.5 percent; Volpara rose 6.8 percent; Orthocell was up 5.3 percent; Imugene improved 4.55 percent; Actinogen, Bionomics, Genetic Signatures and Opthea were up more than three percent; Immutep rose 2.9 percent; Cynata and Starpharma were up more than one percent; with Clinuvel, Cochlear, CSL, Cyclopharm, Medical Developments, Nanosonics, Pro Medicus and Sirtex up by less than one percent.

Yesterday's 17.4 percent best, Airxpanders, led the falls, down two cents or 14.8 percent to 11.5 cents, with 237,404 shares traded.

Optiscan lost 6.8 percent; Compumedics, LBT and Universal Biosensors fell more than four percent; Prescient was down 3.1 percent; ITL and Oncosil shed more than two percent; Ellex, Factor Therapeutics and Pharmaxis were down more than one percent; with Mesoblast, Resmed and Telix down by less than one percent.

TELIX PHARMACEUTICALS

Telix says it has ethics approval from two Austrian centres for a 45-patient, phase I/II trial of TLX101 for recurrent glioblastoma multiforme.

Telix said the multi-centre, open-label, dose-ranging study, designated Ipax-1, would evaluate the safety, tolerability, dosing schedule and preliminary efficacy of carrier-added TLX101 and was expected to begin by mid-October 2018.

The company said that the Linz, Austria-based Kepler University and the University Hospital Vienna had approved the trial with additional sites in Belgium, the Netherlands, Germany, Switzerland and Australia to follow, pending approvals.

Telix said that TLX101, or 4-L-[¹³¹I] iodophenylalanine (131I-IPA) was delivered as single or repeated injections in patients with recurrent glioblastoma multiforme in conjunction with external radiotherapy.

The company said that TLX101 was a small molecule molecularly-targeted radiation therapeutic product that specifically targetted L-Type amino-acid transport 1 (LAT-1), which was “highly expressed in many aggressive cancers including glioblastoma and multiple-myeloma”.

Telix said it had completed manufacturing of TLX101 at Austria’s Seibersdorf Laboratories and had achieved product stability of more than 96 hours, supporting international clinical trial use and eventual commercial distribution.

The company said that TLX101 had orphan drug designation from both the US Food and Drug Administration and the European Medicines Agency.

Telix chief medical officer Dr Andreas Kluge said that Ipax-1 combined “the benefits of external-beam radiation with molecularly-targeted radiation”.

“By simultaneously irradiating both bulky lesions and small metastases, we hope to demonstrate improved survival in [glioblastoma multiforme] patients, a cancer patient population that has few good therapeutic options at this time,” Dr Kluge said.

Telix fell half a cent or 0.5 percent to 92 cents.

POLYACTIVA

Polyactiva says Brandon Capital and Yuuwa Capital have provided \$16 million to develop its glaucoma implant PA5108, with a seven-patient phase I trial underway.

Polyactiva said the recruitment had begun for the ocular implant trial at Melbourne’s Royal Victorian Eye and Ear Hospital and would assess the safety and tolerance of the implant, with results expected by April 2019.

The company said it had secured more than \$16 million in funding Melbourne’s Brandon Capital through its Medical Research Commercialization Fund and the Perth-based Yuuwa Capital.

Polyactiva said it had used its proprietary polymer pro-drug technology to develop ocular implants that, when placed in the eye, provided sustained treatment over a six-month period, compared to current glaucoma treatment where patients often need to administer four eye drops daily.

The company said the implant would provide a constant daily therapeutic dose of latanoprost free acid, the active ingredient of common glaucoma treatment Xalatan, for at least 26 weeks.

Polyactiva said the implant had been designed to biodegrade within 90 days after the treatment period and was capable of being administered in an ophthalmologist’s office using a custom-designed administration device.

Polyactiva is a private company.

UNIVERSITY OF NEW SOUTH WALES

The University of New South Wales says its researchers have co-developed a cell-based immunotherapy for pancreatic cancer, which is successful in mice.

The University said that the La Jolla-based California Institute of Biomedical Research it showed that the treatment led to mice being completely cancer-free, including cancer cells that had spread to the liver and lungs.

A media release from the University of New South Wales said the researchers obtained pancreatic cancer cells from patients with late-stage disease and transplanted them into mice.

The University said patients' CAR-T immune cells were modified to specifically identify and eliminate the cancer cells.

The University's Prof Chris Heeschen said that after injecting CAR-T cells into mice, "they were capable of finding any cancer cells in the body, stick to them via surface markers, and subsequently destroy the cancer cells".

"The treatment was so effective that the animals remained tumor-free," Prof Heeschen said.

The research article, titled 'Switchable CAR-T cells mediate remission in metastatic pancreatic ductal adenocarcinoma' was published in the journal Gut and an abstract is available at: <https://www.ncbi.nlm.nih.gov/pubmed/30121627>.

The article concluded that the results "suggest that a switchable CAR-T system is efficacious against aggressive and disseminated tumors derived from patients with advanced [pancreatic ductal adeno-carcinoma] while affording the potential safety of a control switch".

The University said the researchers introduced a new technology that allowed them to control the activity of CAR-T cells.

The media release said that using 'switchable CAR-T cells', the team divided cancer target recognition and subsequent killing of the cancer cells into two separate processes. Co-author Dr Alexandra Aicher said CAR-T cells were "very powerful therapies that need to be tightly controlled".

"Switchable CAR-T cells now allow us to stop the treatment, if required, thus making our therapy extremely safe," Dr Aicher said.

"Switchable CAR-T cells will also ensure to rapidly adapt our treatment target to another cancer surface marker, if resistance may occur," Dr Aicher said.

The University of New South Wales said the research team hoped to take the therapy to the clinic and was seeking funding.

"This is the first time in my career that I have seen an actual cure for this very aggressive disease," Prof Heeschen said.

"The next step will be to combine CAR-T cells with treatments that make it easier for the CAR-T cells to reach the cancer cells," Prof Heeschen said.

"Pancreatic cancer is known for its fortress-like structure that needs to be overcome in order for the CAR-T cells to reach their target cells and remain at maximum activity," Prof Heeschen said.

"We hope to have this new treatment strategy ready for the clinic within the next three years, pending funding," Prof Heeschen said.

The University said that more than 3,300 Australians will be diagnosed with pancreatic cancer in 2018.

The media release said that pancreatic cancer was often diagnosed at a late and advanced stage, when the tumor had spread to other organs, and current treatments "only marginally extend the lifespan of pancreatic cancer patients, with five-year survival at just 7.7 percent".

PHOSPHAGENICS

Phosphagenics says the Singapore International Arbitration Centre expects a draft decision in the \$US300 million (\$A416.4 million) Mylan Laboratories case “shortly”. The Centre said that on receipt of its tribunal’s “draft award ... [it would] endeavor to expedite the scrutiny which typically takes at least three weeks”.

Last year, Phosphagenics said it had filed its expert reports in the Mylan arbitration, including a \$US300 million damages claim over Mylan’s licence of its tocopheryl phosphate mixture (TPM) daptomycin for skin infections and staphylococcus aureus bloodstream infections licenced to Strides Arcolab subsidiary, the India-based Agila Specialties, acquired by Mylan in 2013 (BD: Oct 30, 2012; Mar 3, May 29, 2017). Phosphagenics climbed 0.6 cents or 33.3 percent to 2.4 cents with 19.25 million shares traded.

MEDLAB CLINICAL

Medlab says the University of Sydney’s Nano Institute School of Pharmacy research validates the science of its Nanocelle delivery platform.

Medlab said the Institute’s preliminary research results of the Nanocelle buccal, or cheek, spray delivering medicine in particle form, found that the cannabidiol and tetrahydrocannabidiol molecules of Medlab’s marijuana products Nanabis and Nanabidial showed “a consistent uniform pattern in nanoparticle form”.

The company said it was separately conducting a clinical trial of Nanocelle with a widely used statin to test if speed of absorption into the bloodstream could allow a reduction in dosage and thus reduce potential side effects.

Medlab chief executive officer Dr Sean Hall said Nanocelle was designed to bypass traditional routes of delivery and the results “provide a significant level of confidence in Medlab’s Nanocelle platform and further confirms specific proposed functions for Medlab’s cannabis medicines”.

Medlab was up five cents or 11.1 percent to 50 cents.

PHARMAUST

Pharmaust says it has completed preclinical studies to formulate monepantel into a tablet, to be used in human and dog cancer treatment trials.

Since 2016, Pharmaust said it had attempted to reformulate monepantel into a tablet for clinical trials, as the liquid form originally designed for sheep worm, was unpalatable to humans and dogs (BD: Jul 11, 2016; Jun 27, 2017).

This year, the company said a reformulation method improved its taste and dosing and monepantel had been reformed into a tablet for dog trials (BD: Jan 30, May 28, 2018).

Today, Pharmaust said it expected the tablet to be taken used in human and dog cancer, trial, with preliminary clinical trials to be completed in the next few weeks to help determine how many tablets dogs should take and the frequency of dosage.

The company said it was completing optimization for the manufacture of the tablets to meet good manufacturing practice standards and expected the phase I pharmaco-kinetic trial to begin by January 2019, and to be followed by a phase II clinical trial.

Pharmaust said that, prior to the trials, it would report the effective absorption of monepantel in dogs from the new tablets, to determine food-associated effects on drug absorption rates and provide a reference so manufacturers know how compact to make the tablet, to ensure optimal breakdown rates in the stomach and intestine.

Pharmaust was up 0.1 cents or 2.7 percent to 3.8 cents.

ZELDA THERAPEUTICS

Zelda says it has given European medical marijuana company Hapa Medical the rights to distribute and manufacture Zelda products in Germany.

Zelda said the Dortmund, Germany-based Hapa cultivated, manufactured and distributed medical cannabis in Germany.

The company said that Hapa's ability to manufacture specialized pharmaceuticals combined with its distribution network provided "an attractive market entry pathway".

Zelda said that "no amounts will be received initially under this arrangement and all future receipts will come from the sale and distribution of Zelda's products into the German and European markets from this relationship".

The company said that there had been growth in the number of German-registered users of medical marijuana following a German government decision to subsidize the cost for registered patients through their insurance companies.

Zelda said that "with a population of 83 million people, Germany is estimated to have the potential to become the world's largest single medical cannabis market".

The company said that it was yet to complete clinical trials of its marijuana products and the partnership would allow it "to rapidly commercialize its clinically validated formulations".

Zelda managing-director Dr Richard Hopkins said the partnership "reinforces the global breadth of Zelda's relationships and shows our focus on commercializing our clinically validated formulations".

Hapa managing director Ricardo Pendón said that Zelda was "positioned as one of the world's leading science-driven medicinal cannabis companies".

"Growth in doctor and patient use is enabled by clinically validated data, and having access to Zelda's pipeline of products is an important success factor for us," Mr Pendón said.

Zelda was up 0.3 cents or 3.9 percent to eight cents with two million shares traded.

IMMUTEP

Australian Ethical Investment says it has reduced its substantial shareholding in Immutep from 202,380,952 shares (7.43%) to 192,199,218 shares (6.35%).

Australian Ethical said that between May 25, 2018 and August 31, 2018 it sold 10,181,734 shares for \$356,289 or 3.5 cents a share.

Immutep was up 0.1 cents or 2.9 percent to 3.6 cents with 4.6 million shares traded.

PATRYS

The Macquarie Group says it and its controlled entities have increased their substantial shareholding in Patrys from 55,637,703 shares (5.18%) to 66,467,703 (6.21%).

The Sydney-based Macquarie said that the registered holder was Bond Street Custodians and named a large number of companies as controlled entities.

The company said that between May 24, 2018 and August 29, 2018 it bought, sold and transferred shares at prices ranging from four cents to six cents.

Patrys was up 0.1 cents or 2.4 percent to 4.3 cents with 4.8 million shares traded.