

Biotech Daily



Tuesday November 8, 2016

Daily news on ASX-listed biotechnology companies

- * **ASX, BIOTECH UP: NEUREN UP 13%, ACTINOGEN DOWN 7%**
- * **WEHI LINKS MYC PROTEIN TO T-CELL DIVISION AND APOPTOSIS**
- * **CROSSBETA LICENCES ADALTA SHARK ANTIBODIES FOR ALZHEIMER'S**
- * **ADALTA HIRES XL-PROTEIN FOR LONG-ACTING AD-114 FOR FIBROSIS**
- * **PHARMAUST RIGHTS OFFER TO RAISE \$4.6m**
- * **OPTISCAN RECEIVES \$726k FEDERAL R&D TAX INCENTIVE**
- * **AUSTRALIAN SUPER TAKES 5% OF OSPREY**
- * **FIL TAKES 5.5% OF COGSTATE**
- * **AUSTRALIAN ETHICAL BELOW 5% OF IDT**
- * **WAYNE STRINGER GROUP TAKES 23.5% OF PROBIOTEC**
- * **PSIVIDA APPOINTS DEB JORN HEAD OF CORPORATE, COMMERCIAL**

MARKET REPORT

The Australian stock market edged up 0.13 percent on Tuesday November 8, 2016 with the ASX200 up 7.0 points to 5,257.8 points. Twenty-one of the Biotech Daily Top 40 stocks were up, 10 fell, seven traded unchanged and two were untraded. All Big Caps fell.

Neuren was the best, up 0.6 cents or 13.3 percent to 5.1 cents with 474,835 shares traded. Oncosil and Osprey climbed more than eight percent; Viralytics was up 7.3 percent; Prima rose 6.1 percent; Atcor and Bionomics were up more than five percent; Avita, Opthea, Orthocell and Starpharma improved four percent or more; Airxpanders and Compumedics were up more than three percent; Anteo, Ellex, Factor Therapeutics, Pro Medicus rose more than two percent; Nanosonics and Prana were up more than one percent; with Impedimed and Medical Developments up by less than one percent.

Actinogen led the falls, down 0.3 cents or seven percent to four cents with 117,000 shares traded. Uscom lost 3.7 percent; Acrux and Cyclopharm shed more than two percent; Benitec, Living Cell and Polynovo were down one percent or more; with Cochlear, CSL, Mesoblast, Psivida, Resmed and Sirtex down by less than one percent.

THE WALTER AND ELIZA HALL INSTITUTE OF MEDICAL RESEARCH

The Walter and Eliza Hall Institute says that during an immune response the T-cells have a set amount of time to divide and have a prescribed lifespan.

WEHI said that the finding helped explain how the body controlled immune responses, as well as explaining how immune cell cancers such as leukaemia and lymphoma were caused by errors in the system.

The Institute said that immune T-cells were programmed to recognise different microbes that might cause infection, with T-cells activated and increase in number by dividing.

WEHI said the number of cells formed and how long they lived was controlled to ensure the infection could be fought, with excess immune cells cleared from the body.

The Institute said that Prof Phil Hodgkin and Dr Susanne Heinzel led a research team that investigated how the two processes of division and clearance were controlled.

The research, entitled 'A Myc-dependent division timer complements a cell-death timer to regulate T-cell and B-cell responses', was published in Nature Immunology with an abstract available at: <http://go.nature.com/2fNL3Cm>.

Dr Heinzel said the team discovered that activated T-cells in an immune response were programmed to divide for a limited time.

"We had previously shown the number of cells a parent T-cell produces is tightly regulated," Dr Heinzel said.

"The suspicion was the T-cell knows how many times it can divide," Dr Heinzel said.

"We were stunned to find this wasn't the case," Dr Heinzel said.

"The T-cell is given an amount of time in which it can divide, like a clock running," she said.

"Once this time is up, no more divisions can happen," Dr Heinzel said.

"Intriguingly, as well as being allocated a certain amount of time in which to divide, early in an infection, we found T-cells separately set their lifespan, how long they and their offspring live," Dr Heinzel said.

Dr Heinzel said that after that time, the cells underwent apoptosis or programmed cell death.

Prof Hodgkin said the team built on their discovery of the two-clock system by pin-pointing the Myc protein that acted as the cell division clock.

"At the start of an immune response, responding T-cells are allocated a certain amount of Myc," Prof Hodgkin said.

"This diminishes over time and once the cell runs out of Myc, time's up and division stops," Prof Hodgkin said.

"The more Myc there is, the more time the cells have to divide," Prof Hodgkin said.

"We also showed the lifespan clock is controlled by a protein called Bcl-2," Prof Hodgkin said. "When this time runs out the cells die, whether or not they've come to the end of their division clock."

Dr Heinzel said the research provided new insights into how complex immune responses were controlled and the fine balance between normal cell division and cancerous cell growth.

"The two clocks are an elegant way that our body governs how many responder cells are produced in an immune response, and how long they are retained," Dr Heinzel said.

"Small changes in each clock combined to substantially alter immune cell numbers."

"It has been known for many years that excess Myc and Bcl-2 are important contributors to cancer formation," Dr Heinzel said.

"Our findings explain how a small series of mutation-driven changes in healthy immune responses could lead to immune cell cancers such as leukaemia and lymphoma," Dr Heinzel said.

[ADALTA](#)

Adalta says it has licenced Alzheimer's disease-specific shark antibodies to Crossbeta Biosciences for therapeutic and diagnostic development.

Adalta said that the Utrecht, Netherlands-based Crossbeta had been granted an exclusive licence to three beta-amyloid oligomer-specific shark antibodies, identified under a collaboration signed in 2013.

The company said that the shark antibodies were considered to have immediate and highly disease-specific potential for the diagnosis and treatment of Alzheimer's disease. Adalta said it would receive royalties on future revenues from commercialization of the shark antibodies as novel therapeutics or diagnostic agents, with all on-going research and development as well as commercialization to be managed by Crossbeta.

The company said that the research and development collaboration used beta-amyloid oligomers produced by Crossbeta's oligomer-stabilizing technology and Adalta's single-domain shark antibody library to screen novel targets to identify the therapeutic and diagnostic lead candidates.

Adalta said that the three licenced antibodies bound specifically to the disease relevant beta-amyloid oligomer preparation, but did not recognize or bind to the monomer and fibrils of the beta-amyloid protein.

Adalta chief executive officer Samantha Cobb said "the long loop of the shark single domain antibody, or I-body, binds to unusual epitopes with high affinity and specificity, as demonstrated with our lead candidate to a [G-protein-coupled receptor] and previous targets and, most recently, in this instance with Crossbeta's [beta-amyloid oligomers]".

"This licencing deal fits with our strategy to focus on the I-body platform and our lead candidate in fibrosis and we believe that Crossbeta with its strong position in the therapeutic area of Alzheimer's is the right partner to realize the potential of these novel antibodies," Ms Cobb said.

Adalta was unchanged at 18 cents.

[ADALTA](#)

Adalta says it is collaborating with the Freising, Germany-based XL-protein GmbH to develop and commercialize a long-acting form of its AD-114 for fibrosis.

Adalta said that AD-114 was developed from a platform producing human proteins which mimicked the shape of shark antibodies and engineered their antigen-binding and stability features to create compounds known as I-bodies to treat diseases.

The company said that XL-protein would apply its proprietary Pasylation technology to AD-114 to extend its circulation half-life and duration of therapeutic action, but financial terms were not disclosed.

Adalta said that a long-acting AD-114 would allow less frequent administration and lower dosing, making it ideal for chronic indications such as for idiopathic pulmonary fibrosis.

The company said that XL-protein's Pasylation was a biological alternative to chemical pegylation, which was used to modify and tailor residence time of protein drugs in blood. Adalta said that Pasylation used genetic engineering to fuse a polymer of natural amino acids, including proline, alanine and/or serine (PAS), with a protein-based therapeutic such as AD-114, enabling manufacture of a fully active protein in various host organisms, including the laboratory bacterium *Escherichia coli*.

Adalta said that Pasylation provided a tuneable plasma half-life that was related to the length of the PAS polymer as well as traceless metabolization.

Adalta chief executive officer Samantha Cobb said that preliminary data from pilot animal studies was promising and showed the plasma half-life of AD-114 had been extended.

PHARMAUST

Pharmaust says it hopes to raise up to \$4,625,182 through a pro-rata, non-renounceable one-for-one rights issue at five cents a share.

Pharmaust said that for each parcel of three shares subscribed, investors would receive one attaching option, exercisable at 12 cents each by November 30, 2019.

The company said that the funds would be used to complete the monepantel (formerly PPL-1) dog cancer trials, fund the costs of preparing for a Nasdaq listing, prepare for a phase II human trial of monepantel, pay the costs of the rights issue and provide working capital (BD: Nov 19, 2015; Jun 2, 2016).

Pharmaust said that the record date was November 11, the offer would open on November 16 and close on December 5, 2016.

Pharmaust fell 1.5 cents or 21.4 percent to 5.5 cents.

OPTISCAN

Optiscan says it has received \$726,264 from the Australian Tax Office under the Federal Government Research and Development Tax Incentive program.

Optiscan said the rebate related to expenditure for the year to June 30, 2016.

The company said the funds would be applied to the repayment of a loan of \$500,000 plus interest and to working capital.

Optiscan was up 0.1 cents or 2.3 percent to 4.5 cents with 1.5 million shares traded.

OSPREY MEDICAL

The Melbourne-based Australian Super Pty Ltd says it has become a substantial shareholder in Osprey with the acquisition of 13,392,857 shares (5.20%).

Australian Super said it acquired the shares for \$5,089,286 or 38 cents a share.

Osprey was up three cents or 8.1 percent to 40 cents.

COGSTATE

FIL Limited says it has become a substantial shareholder in Cogstate with 6,270,548 shares or 5.55 percent.

The Hong Kong-based FIL said it bought the shares between August 2 and November 3, 2016, at prices ranging from 70 cents to \$1.16.

Cogstate was up three cents or 2.8 percent to \$1.10.

IDT AUSTRALIA, AUSTRALIAN ETHICAL INVESTMENT

Australian Ethical Investment says it has reduced its holding in IDT from 15,704,981 shares (6.33%) to below substantial.

Australian Ethical said that it sold shares between September 29 and November 4, 2016 with the single largest sale 1,146,674 shares for \$217.389 or 18.96 cents a share.

In September, Australian Ethical increased its holding in IDT by 1,432,283 shares with the largest purchase 800,000 shares at 27.6 cents a share (BD: Sep 30, 2016).

IDT was unchanged at 19 cents.

PROBIOTEC

Probiotec founder and former executive director Charles Wayne Stringer has increased his holding from 9,637,690 shares (18.2%) to 12,460,845 shares (23.54%).

The substantial shareholder said that the shares were held by Mr Stringer and Jane Stringer, as well as Mr Stringer's Inston Pty Ltd.

Mr Stringer said that he acquired 335,715 shares (0.7%) between March 5 and October 30, 2015, with 2,462,440 shares (4.65%) acquired due to an association with the Balwyn North, Melbourne-based Ganter Corp and Rudi Ganter which would cease following the company's annual general meeting.

Last week, Probiotec said that shareholders would vote to remove chairman Robert Maxwell Johnston and director Richard David Kuo (BD: Nov 1, 2016).

In September, Mr Charles Wayne Stringer was a signatory to a call to remove directors Robert Maxwell Johnston and Richard David Kuo (BD: Sep 23, 2016).

There was no explanation for the call for the removal of the two directors.

Last month, the Neutral Bay, Sydney-based Vintage Capital said it sold all of its 4,500,000 Probiotec shares (8.50%) for \$3,503,240 or 77.8 cents a share when the company was trading at 57.5 cents a share but there has been no subsequent initial or change of substantial shareholder notice (BD: Oct 13, 2016).

Probiotec was unchanged at 48 cents.

PSIVIDA

Psivida says it has appointed Deb Jorn to the new position of head of corporate and commercial development.

Psivida said that Ms Jorn was a proven business development executive and her primary responsibilities would be to establish collaborations leveraging the company's technologies and finalizing a European Union partnership deal for Durasert, for uveitis, formerly known as Medidur.

The company said that Ms Jorn had expertise in corporate licensing, mergers and acquisitions and alliance management and she had built pharmaceutical businesses across numerous therapeutic areas, including ophthalmology.

Psivida said that most recently Ms Jorn was Valeant Pharmaceuticals executive vice-president and chair and previously was Bausch & Lomb's chief marketing officer.

The company said that prior to Bausch & Lomb Ms Jorn was Schering Plough's group vice-president of women's healthcare and fertility and Johnson & Johnson's head of internal medicine and early commercial input, and began her career at Merck.

Psivida said that Ms Jorn held a Bachelor of Arts in Biochemistry from the New Brunswick, New Jersey-based Rutgers University and a Masters of Business Administration from New York University.

Psivida fell two cents or 0.8 percent to \$2.53.