



Biotech Daily

Thursday May 16, 2013

Daily news on ASX-listed biotechnology companies

- * **ASX DOWN, BIOTECH EVEN:
- GENETIC TECHNOLOGIES UP 19%, STARPHARMA DOWN 6%**
- * **WEHI STUDY FINDS MALARIA PARASITES 'TALK' TO EACH OTHER**
- * **BIONOMICS, CRC 'CTx-0357927 INHIBITS MELANOMA TUMORS IN MICE'**
- * **AUSTRALIA ALLOWS BONE LEXCICON PATENT**
- * **ANGELINA JOLIE PUMPS GENETIC TECHNOLOGIES 33%**
- * **UP TO 15% OF EGM VOTES OPPOSE PRIMA SHORTFALL SHARES**
- * **CELLESTIS FOUR WIN ATSE CLUNIES ROSS AWARDS**

MARKET REPORT

The Australian stock market fell 0.5 percent on Thursday May 16, 2013, with the S&P ASX 200 down 26.0 points to 5,165.7 points.

Fourteen of the Biotech Daily Top 40 stocks were up, 15 fell, four traded unchanged and seven were untraded. All three Big Caps were down.

Genetic Technologies was the best, climbing as much as 33 percent to 10.5 cents, before closing up 1.5 cents or 19.0 percent at 9.4 cents with 3.85 million shares traded, followed by Impedimed up 14.3 percent to eight cents with 505,118 shares traded and Antisense up 11.1 percent to one cent with 1.55 million shares traded.

Allied Health, Circadian and Neuren climbed more than eight percent; Alchemia and Phylogica were up more than five percent; Phosphagenics was up four percent; Sirtex was up 3.4 percent; with Anteo, Avita, Nanosonics and Osprey up more than one percent.

Starpharma led the falls, down 5.5 cents or 6.2 percent to 83.5 cents, with 543,015 shares traded.

Prana fell 4.35 percent; Cellmid, Optiscan, Patrys and Pharmaxis were down more than three percent; Clinuvel, Cochlear, CSL, GI Dynamics, Living Cell and Mesoblast shed more than two percent; Acrux, Prima, Resmed and Viralytics were down more than one percent; with Medical Developments and QRX down by less than one percent.

THE WALTER AND ELIZA HALL INSTITUTE FOR MEDICAL RESEARCH

The Walter and Eliza Hall Institute says its scientists have discovered that malaria parasites 'talk' to each other to ensure the parasite's survival and transmission.

The Institute said that the finding could provide a niche for developing anti-malarial drugs and vaccines that prevent or treat the disease by cutting the communication networks.

WEHI said that Prof Alan Cowman, Dr Neta Regev-Rudzki, Dr Danny Wilson and colleagues from the Walter and Eliza Hall Institute in collaboration with University of Melbourne's Bio21 Institute and Department of Biochemistry and Molecular Biology Prof Andrew Hill showed that malaria parasites were able to send out messages to communicate with other malaria parasites in the body.

The study, entitled 'Cell-Cell Communication between Malaria-Infected Red Blood Cells via Exosome-like Vesicles' was published in the journal Cell and an abstract is available at: [http://www.cell.com/abstract/S0092-8674\(13\)00504-7](http://www.cell.com/abstract/S0092-8674(13)00504-7).

Prof Cowman said the researchers were shocked to discover that malaria parasites work in unison to enhance activation into sexually mature forms that could be picked up by mosquitoes, which were the carriers of the disease.

"When Neta showed me the data, I was absolutely amazed, I couldn't believe it," Prof Cowman said.

"We repeated the experiments many times in many different ways before I really started to believe that these parasites were signaling to each other and communicating," Prof Cowman said.

"But we came to appreciate why the malaria parasite really needs this mechanism - it needs to know how many other parasites are in the human to sense when is the right time to activate into sexual forms that give it the best chance of being transmitted back to the mosquito," Prof Cowman said.

The Institute said that malaria killed about 700,000 people a year, mostly children aged under five and pregnant women and every year, hundreds of millions of people were infected with the malaria parasite, Plasmodium falciparum, which was transmitted through mosquito bites.

WEHI said that half the world's population was at risk of contracting malaria, with the disease being concentrated in tropical and subtropical regions including many of Australia's near neighbors.

Dr Regev-Rudzki said the malaria parasites inside red blood cells communicated by sending packages of DNA to each other during the blood stage of infection.

"We showed that the parasites inside infected red blood cells can send little packets of information from one parasite to another, particularly in response to stress," Dr Regev-Rudzki said. "The communication network is a social behavior that has evolved to signal when the parasites should complete their lifecycle and be transmitted back to a mosquito." "Once they receive this information, they change their fate - the signals tell the parasites to become sexual forms, which are the forms of the malaria parasite that can live and replicate in the mosquito, ensuring the parasites survives and is transmitted to another human," Dr Regev Rudzki said.

Prof Cowman said he hoped to see the discovery pave the way to new anti-malarial drugs or vaccines for preventing malaria.

"This discovery has fundamentally changed our view of the malaria parasite and is a big step in understanding how the malaria parasite survives and is transmitted," Prof Cowman said.

"The next step is to identify the molecules involved in this signaling process and ways that we could block these communication networks to block the transmission of malaria from the human to the mosquito," Prof Cowman said.

BIONOMICS, CO-OPERATIVE RESEARCH CENTRE FOR CANCER THERAPEUTICS

Bionomics says CTx-0357927, developed in collaboration with the Co-operative Research Centre for Cancer Therapeutics inhibits tumor growth in a mouse model of melanoma. Bionomics said the program with the Cancer Therapeutics CRC had reached a proof-of-concept milestone in the discovery and preclinical evaluation of inhibitors of vascular growth factor receptor 3 (VEGFR3) and CTx-0357927 suppressed cancer progression as indicated by tumor growth inhibition and number of identified metastases in the mouse model of melanoma.

The company said that the model of human melanoma formed primary melanoma lesions that metastasized to the regional lymph nodes and enables the evaluation of a compound's ability to suppress both primary tumor growth and lymph node metastasis. Bionomics said that the activation of VEGFR3 was closely linked to the development of lymphatic vessels, which were important for the metastasis of cancer as they acted as a conduit for tumor cells that spread to distant sites around the body.

The company said that tumors, such as melanoma and breast cancer, activated VEGFR3 to increase the growth of lymphatic vessels to enable tumor cells to spread.

Bionomics said that about 90 percent of cancer deaths were caused by cancer that spread from the original site and targeting the mechanisms that encouraged metastasis would be key to further reducing cancer deaths.

The company said that US data suggested that the overall five-year survival rate for patients whose melanoma was detected early, before the tumor spread to regional lymph nodes or other organs, was about 98 percent, but the survival rate fell to 62 percent when the disease reached the lymph nodes and 15 percent when the disease metastasizes to distant organs.

Bionomics chief executive officer Dr Deborah Rathjen said that VEGFR3 inhibitors such as CTx-0357927 had potential in the treatment of melanoma and in breast cancer.

Bionomics said that melanoma was the fourth most common cancer reported in Australia, with 11,057 new cases of melanoma of the skin in Australia reported in 2008, accounting for 9.8 percent of all new cancers.

The Cancer Therapeutics CRC chief executive officer Dr Warwick Tong said that the program was "a great example of how the collaborative research model fostered by the CRC Program combines the expertise from a group of research and commercial partners to produce novel cancer drugs".

Dr Rathjen is a director of the Cancer Therapeutics CRC.

Bionomics was unchanged at 40.5 cents.

BONE MEDICAL

Bone says the Australian patent and trademark office IP Australia has allowed its first Lexcicon patent.

Bone chairman Dr Roger New said that the Lexcicon system was a platform technology "to provide a stable molecular framework for novel agents derived from our Mozaic drug discovery technology".

"It is an indispensable component in potential drug candidates like BN006, our innovative Mozaic-based peptide for rheumatoid arthritis," Dr New said.

Dr New said Lexcicon and Mozaic were "effectively twinned systems" with Lexcicon adding an additional dimension to the proprietary profile of Mozaic-based products.

Bone said that the Mozaic patent had been granted in the US, EU and other markets.

Bone fell 0.1 cents or 50 percent to 0.1 cents with one million shares traded.

GENETIC TECHNOLOGIES

Genetic Technologies climbed as much as 33 percent on the ASX following actor Angelina Jolie's statement that she had surgery to prevent breast cancer, related to a BRCA1 gene mutation.

On the Nasdaq overnight, Genetic Technologies was up 54 US cents or 21.95 percent to \$US3.00 with 540,308 shares traded and Rosetta Genomics climbed 15.7 percent to \$US3.75 with 2.1 million shares traded.

On May 14, 2013 in the US, the New York Times published an article by Ms Jolie detailing her family history and the need for her double mastectomy. Ms Jolie's article is at:

http://www.nytimes.com/2013/05/14/opinion/my-medical-choice.html?_r=0.

Genetic Technologies chief executive officer Alison Mew told Biotech Daily that Myriad held the patents for the BRCA genes and her company held the rights to the BRCA testing in Australia and New Zealand.

Ms Mew said that Genetic Technologies also had the Brevagen sporadic breast cancer risk assessment test, launched in the US in 2011.

"The announcement by Angelina Jolie will raise awareness in women to determine their risk of developing breast cancer," Ms Mew said.

"Only five to 10 percent of breast cancer is due to the BRCA gene mutations," Ms Mew said.

"The vast majority of breast cancer arises sporadically, against which the Brevagen test is directed," Ms Mew said.

Ms Mew said there was no other obvious explanation for the increase in the company's share price and trading volume.

The Cancer Council of Australia said that the prevalence of breast cancer in Australia was 14,000 new cases and 2,700 deaths a year and agreed that "only five to 10 percent of cases are linked to known genetic factors".

"Prophylactic surgery on the basis of genetic susceptibility to illness is a complex issue and we recommend anyone considering this form of surgery seek expert advice so they can make an informed decision," the Cancer Council said.

"Women who are concerned about genetic risk of breast cancer should discuss the issue with their doctor," the Cancer Council said.

"The main cause of breast cancer is ageing," The Council said.

"Cutting alcohol intake can, however, significantly reduce your risk, as can maintaining a healthy weight, being physically active and eating a balanced diet, particularly for postmenopausal women," the Council said.

Genetic Technologies closed up 1.5 cents or 19.0 percent at 9.4 cents with 3.85 million shares traded.

PRIMA BIOMED

Prima shareholders have passed both extraordinary general meeting resolutions to place shortfall shares with up to 14.58 percent of proxy votes opposing the resolutions.

Prima said that the resolutions to place up to \$2 million of shortfall shares with directors and to issue up to \$15 million of shortfall shares to sophisticated and professional investors were both "passed unanimously by a show of hands".

Yesterday, Prima said that its share purchase plan had raised \$5 million of a hoped for \$15 million (BD: May 15, 2013).

The 6,945,367 votes opposing the second resolution amounted to 0.65 percent of the company's 1,066,063,388 shares on issue.

Prima fell 0.1 cents or 1.2 percent to 8.3 cents with 1.1 million shares traded.

AUSTRALIAN ACADEMY OF TECHNOLOGICAL SCIENCES AND ENGINEERING

Four scientists who developed the Cellestis (now Qiagen) Quantiferon test for tuberculosis have won Australian Academy of Technological Sciences and Engineering awards.

At a dinner last night hosted by the Victorian Government Department of Business and Innovation, the Academy of Technological Sciences and Engineering presented the Clunies Ross awards to Dr Tony Radford, Dr James Rothel, Dr Paul Wood and Dr Stephen Jones.

Dr Radford told Biotech Daily that the four were “very happy to have the award” but said the development of the Quantiferon test involved more than 300 people.

Dr Radford said that Cellestis had 100 staff who all worked to bring Quantiferon to market and said that the work done by a further 200 staff of distributors and collaborators all deserved the award.

In 2011, Cellestis was acquired by the Germany-based Qiagen for about \$365.3 million (BD: Jul 11, Aug 10, 2011).

The Academy said that Dr Ian Clunies Ross was “a visionary leader of our scientific community and inspired all with whom he worked ... [and was] best known for his pioneering work in veterinary science”.

The Academy said that Dr Clunies Ross “waged a lifelong war against ignorance and fear and left us with an enduring legacy upon which we can build for the future”.

“As a scientist he greatly advanced parasitology and disease control in animals and spanned the gap between Eastern and Western scientific cultures,” the Academy said.

Dr Clunies Ross was the foundation chief of the Commonwealth Scientific and Industrial Research Organisation’s Division of Animal Health, and in 1949 was chairman of the new CSIRO.

The other award recipients were Ian Croser for his work on phased array radar technology and Dr Simon Poole with Dr Steven Frisken for their work on optical communications.