



Biotech Daily

Tuesday May 27, 2014

Daily news on ASX-listed biotechnology companies

- * ASX, BIOTECH EVEN: GENETIC TECH UP 10%, TISSUE THERA DOWN 6%
- * NOVOGEN SUPER-BENZOPYRAN FOR PROSTATE CANCER
- * QUEENSLAND SUPPORTS UQ SKIN CANCER LASER DETECTION
- * IMUGENE APPOINTS BACHEM TO MANUFACTURE HER-VAXX PEPTIDE
- * IMMURON: 6% OPPOSE GRANDLODGE SHARES
- * HUNTER HALL TAKES 5% OF VIRALYTICS
- * ISONEA PLEADS OPTIONS TO ASX 35% QUERY

MARKET REPORT

The Australian stock market slipped 0.02 percent on Tuesday May 27, 2014 with the S&P ASX 200 down 1.1 points to 5,511.7 points.

Thirteen of the Biotech Daily Top 40 stocks were up, 13 fell, 10 traded unchanged and four were untraded.

Genetic Technologies was the best, up 0.4 cents or 10.0 percent to 4.4 cents with 431,168 shares traded.

Analytica and Benitec climbed more than eight percent; Patrys was up 6.1 percent; Universal Biosensors was up 5.6 percent; Avita was up 4.35 percent; Clinuvel rose 2.1 percent; Biotron, GI Dynamics, Medical Developments, Nanosonics and Viralytics were up more than one percent; with Sirtex up 0.06 percent.

Tissue Therapies led the falls, down two cents or 6.25 percent to 30 cents with 544,105 shares traded.

Anteo, Atcor, Neuren, Oncosil and Prima fell four percent or more; Ellex was down 3.1 percent; Acrux, Pharmaxis and Starpharma shed more than two percent; Bionomics, Osprey and Psivida were down one percent or more; with Cochlear and CSL down by less than one percent.

[NOVOGEN](#)

Novogen says it has identified a number of super-benzopyran compounds with potent anti-cancer activity against human prostate cancer cells in-vitro.

Novogen said it had extended its preclinical super-benzopyran program to include prostate cancer as well as ovarian and brain cancers.

The company said that prostate cancer cells were resistant to chemotherapy and the few drugs approved for late-stage, hormone-resistant prostate cancer offered only modest improvements in survival and there was "an urgent need to develop drugs specifically against prostate cancer".

Novogen said that University of Western Sydney oncologist Prof Paul de Souza tested a number of super-benzopyran compounds in-vitro against five different prostate cancer cell lines that most closely mimic common clinical situations.

"There is a significant need for more effective treatments for prostate cancer, Prof de Souza said. "With anti-cancer activity down around 50 nanomolar levels, this group of chemicals appears to be at least as active as standard cytotoxic drugs such as cisplatin."

"We now can work to bring the lead compound into the clinic," Prof de Souza said.

Novogen said it funded Prof de Souza's study as part of its research program and a structural-activity-relationship drug discovery program produced a sub-family of super-benzopyran compounds with high potency against prostate cancer cells, a lead candidate compound had been identified and would enter lead optimization phase.

Novogen said that Prof de Souza would be the lead investigator in the program, with the aim of testing the investigational drug as a monotherapy in Australia in 2015 in men with advanced prostate cancer who have failed standard of care.

The company said that it would file an investigational new drug application with the US Food and Drug Administration for permission to conduct a US trial in 2015.

Novogen said that its super-benzopyran drug technology platform targetted an oncogene that appeared to be common to all forms of cancer, producing a mutant form of an enzyme that regulated fundamental biochemical processes within all cells, but when inhibited, the cell quickly died.

The company said that the mechanism of action offered the potential for super-benzopyran drugs to avoid the common problems associated with targetted therapies of the cancer cell being able to develop alternative signaling pathways or multi-drug resistance mechanisms.

Novogen said that studies it had funded had identified two super-benzopyran structures with particular activity against ovarian cancer and glioblastoma cells, respectively.

Novogen chief scientific officer Dr David Brown said "the horizon for new and effective chemotherapeutics for prostate cancer is bleak".

"This discovery heralds in an entirely new and exciting area of clinical development," Dr Brown said.

"Other [super-benzopyran] compounds have already shown a potent ability to kill the full hierarchy of cancer cells within ovarian cancer and the main form of brain cancer, glioblastoma and we have every confidence that what we are seeing in this study is the potential to do the same thing with prostate cancer," Dr Brown said.

"The prostate cancer cells used in this study respond poorly both in the laboratory and in the clinic to standard chemotherapy drugs, so our ability to kill them at such low drug concentrations suggests that we have broken through an important barrier," Dr Brown said.

Novogen was up 1.5 cents or 10.3 percent to 16 cents with 1.7 million shares traded.

QUEENSLAND GOVERNMENT, UNIVERSITY OF QUEENSLAND

The Queensland Government says a prototype terahertz laser imaging system will help detect and diagnose skin cancer.

Queensland Science Minister Ian Walker said the laser imaging system developed at the University of Queensland's School of Information Technology and Electrical Engineering and the University of Leeds would help the early detection of skin cancer.

"We live in the skin cancer capital of the world where one in two Queenslanders will develop skin cancers in their lifetime," Mr Walker said.

Mr Walker said that the prototype terahertz laser imaging system was the first of its kind in Australia.

"It has huge potential to revolutionize skin cancer treatment as it takes a more accurate picture of the skin and what is going on under the surface, reducing the need for invasive surgery," Mr Walker said.

University of Queensland researcher Dr Yah Leng Lim said current methods for detecting and diagnosing skin cancer were based on a visual examination by a general practitioner and a biopsy.

"If cancer is detected, treatment usually involves the surgical removal of the lesions," Dr Lim said.

"The problem is that the visual examination is not always perfect," Dr Lim said.

"Treatment options, such as surgery, can overestimate the tumor extent, leading to the removal of healthy as well as damaged tissue," Dr Lim said.

"With a medical imaging system based on a terahertz laser, you can get a more accurate picture of what's going on beneath the skin surface," Dr Lim said.

"The other big advantage is that it is harmless to humans," Dr Lim said.

The media release said that Dr Lim had received \$120,000 Queensland Government grant, with a further \$60,000 to be provided over the next year.

IMUGENE

Imugene says it has appointed Bachem AG to manufacture the clinical-grade peptide component of its HER-Vaxx cancer vaccine.

Imugene said that the Bubendorf, Switzerland-based Bachem had extensive experience in synthesizing clinical grade peptides suitable for incorporation and assembly into the vaccine delivery platform to be used in HER-Vaxx and had previously manufactured the three individual peptide B-cell epitope antigens used in the completed phase I breast cancer trial.

The company said that all three peptides were being combined into a single, longer version of peptide, which could potentially result in manufacturing challenges.

Imugene said that Bachem had completed a successful feasibility for the longer peptide, and manufacture of the vaccine had begun.

The company said that HER-Vaxx was a therapeutic cancer vaccine that stimulated a polyclonal antibody response to HER-2/neu, the same biomarker targeted by the \$US6.9 billion a year drug Herceptin.

Imugene said that HER-Vaxx had completed a phase I study in breast cancer and the next stage of development would be a phase II study in gastric cancer.

Imugene executive director Dr Nick Ede said that Bachem was "a constant in quality and experience".

Imugene was up 0.1 cents or 10 percent to 1.1 cents with 15.4 million shares traded.

IMMURON

All resolutions at the Immuron extraordinary general meeting were passed, but with up to 5.6 percent opposition to the issue of 10,208,333 shares to Grandlodge.

The resolution was opposed by 55,040,599 proxy votes (5.6%) with 919,873,081 votes (94.4%) in favor.

The director of Grandlodge, Peter Anastasiou, is the brother of Immuron director Stephen Anastasiou.

A resolution to approve the issue of 5,602,241 unlisted options to Reza Moussakhani was also opposed by 55,040,599 proxy votes, but supported by 1,445,736,189 proxy votes, with similar support for the ratification of the prior issue of unlisted options and the adoption of a new constitution.

The company's most recent Appendix 3B said that Immuron had 2,985,453,787 shares on issue meaning that the largest opposition vote amounted to 1.8 percent of the company's total shares on issue, not sufficient to requisition extraordinary general meetings.

Immuron was unchanged at 0.5 cents with 1.9 million shares traded.

VIRALYTICS

Hunter Hall Investment Management has become a substantial shareholder in Viralytics in 9,732,995 shares (5.29%).

The Sydney-based Hunter Hall said it acquired the shares between February 3 and May 22, 2014 with more than half acquired on March 6 at the time of Viralytics \$27 million placement at 28 cents a share (BD: Mar 13, 2014).

Viralytics was up 0.5 cents or 1.8 percent to 28.5 cents.

ISONEA

Isona has told the ASX that it is not aware of any information it has not announced which, if known, could explain recent trading in its securities.

The ASX said the company's share price climbed from 17 cents on Friday May 23 to 23 cents, a 35.3 percent increase, on Monday May 26, 2014 and noted an increase in trading volumes.

Isona said that it released a 'Quarterly Activities Update' on April 16, 2014 and that listed ISNOB options exercisable at 14 cents each would expire on June 30, 2014.

Isona fell 1.5 cents or 7.5 percent to 18.5 cents.