Biotech Daily

Tuesday May 17, 2016

Daily news on ASX-listed biotechnology companies

*** ASX UP, BIOTECH DOWN: FACTOR THERA UP 6%, ANTISENSE DOWN 10%**

*** WEHI CANCER DRUG ACTION INSIGHT TO RESISTANCE**

*** PHOSPHAGENICS TPM-OXYCODONE MYSTERY JAPAN OPTION**

*** NUSEP SUES PRIME FOR GF100 BLOOD SEPARATION UNIT**

*** CLARIFICATION: NUSEP**

*** REGENEUS, ADELAIDE UNI, MACQUARIE UNI $340k ARC PAIN GRANT**

*** MEDICAL AUSTRALIA TO DISTRIBUTE ARDO BREAST PUMPS**

*** CCP TO BACKDOOR INTO AGENIX FOR REFRIGERATOR CONTROL**

MARKET REPORT

The Australian stock market climbed 0.69 percent on Tuesday May 17, 2016 with the ASX200 up 37.0 points to 5,395.9 points.

Thirteen of the Biotech Daily Top 40 stocks were up, 18 fell, five traded unchanged and four were untraded.

Factor Therapeutics, formerly known as Tissue Therapies, was the best, up 0.2 cents or 5.9 percent to 3.6 cents with 1.2 million shares traded.

Benitec, Cellmid and Prima climbed more than four percent; Biotron and Cochlear were up more than three percent; Anteo, Medical Developments and Mesoblast rose more than two percent; Bionomics, Compumedics, Living Cell and Pharmaxis were up more than one percent; with CSL and Nanosonics up by less than one percent.

Antisense led the falls, down 0.6 cents or 10.2 percent to 5.3 cents with 293,598 shares traded.

Actinogen and Oncosil lost more than seven percent; Avita and Neuren fell four percent or more; Clinuvel, Opthea, Polynovo, Sirtex, Starpharma and Viralytics shed more than two percent; Acrux, Admedus, Airxpanders, IDT, Orthocell and Pro Medicus were down more than one percent; with Ellex and Resmed down by less than one percent.

THE WALTER AND ELIZA HALL INSTITUTE OF MEDICAL RESEARCH

The Walter and Eliza Hall Institute says it has shown how a new class of drugs kills cancer cells, helping explain how cancer cells can become treatment-resistant.

WEHI said that its researchers studied the anti-cancer bromodomain and extraterminal domain (BET) inhibitors, which were considered promising new drugs for the treatment of blood cancers such as leukaemias and lymphomas.

The Institute said that BET inhibitors reduced tumor growth by blocking BET proteins, a family of proteins that control whether genes were switched on or off.

WEHI said that although it was known that BET inhibitors were effective at halting tumor growth, it was unclear whether the drugs killed cancer cells or just paused their growth.

The Institute said that Dr Zhen Xu, Prof David Huang, Dr Stefan Glaser and colleagues answered this question and in the process have identified potential ways in which cancer cells may develop resistance to BET inhibitors.

The article, entitled 'BET inhibition represses miR17-92 to drive BIM-initiated apoptosis of normal and transformed hematopoietic cells' was published in the journal Leukemia.

An abstract is at: http://www.nature.com/leu/journal/vaop/ncurrent/full/leu201652a.html.

The abstract said that BET bromodomain-containing proteins, such as BRD4, were "highly promising targets for treating lymphoid and myeloid malignancies".

"They act to modulate the expression of multiple genes that control diverse cellular processes including proliferation, survival and differentiation that are consequentially disrupted by small-molecule BET bromodomain inhibitors," the abstract said.

"Our study strongly suggests that mutations that permit the evasion of apoptosis, for example, BCL2 over-expression, BIM inactivation, are likely to blunt the activity of the BET bromodomain inhibitors and should be anticipated when therapy resistance develops," the abstract said.

"Strikingly, we also found that certain normal haematopoietic cells, especially those of lymphoid origin, are as prone to apoptosis induced by the BET inhibitors as their transformed counterparts, indicating that their susceptibility to BET inhibitors did not arise from oncogenic transformation," the abstract said.

WEHI said that when tumors were treated with drugs, some resistant cancer cells could survive and continue to grow, leading to disease relapse.

The Institute said that experiments performed by postdoctoral researcher Dr Xu showed that BET inhibitors principally acted to kill cancer cells through the process of apoptosis, or programmed cell death.

WEHI said that Dr Xu showed that for BET inhibitors to successfully kill lymphoma and myeloid leukaemia cells the presence of the BIM protein, which brought on apoptosis, was critical.

"We found that when apoptosis was impaired, for instance by loss of BIM, the BET inhibitors were no longer effective," Dr Xu said.

"This suggests that cancer cells that acquire mutations in genes that drive apoptosis will lose sensitivity to BET inhibitors and thus will be able to survive treatment, leading to disease relapse," Dr Xu said.

Dr Glaser said understanding how BET inhibitors worked could help researchers develop improved strategies for using these drugs to treat cancer.

"Understanding how the drugs work gives us the opportunity to investigate new treatments, for example by using combination therapies, or altering the dosage and timing of treatment to prevent drug resistance from emerging," Dr Glaser said.

WEHI said it was "the research powerhouse of the Victorian Comprehensive Cancer Centre, an alliance of leading Victorian hospitals and research centres committed to controlling cancer".

PHOSPHAGENICS

Phosphagenics says its licence option agreement with an unnamed Japanese company has been expanded to its tocopheryl phosphate mixture-oxycodone patch.

In April, Phosphagenics jumped 170 percent to 2.7 cents on news that the unnamed Japanese company had a six-month licence option agreement for its tocopheryl phosphate mixture (TPM) oxymorphone patch and had formed an alliance for three more products (BD: Apr 29, 2016).

Today, the company said that the new agreement was for an exclusive six-month licence option to its TPM-oxycodone patch in Japan.

Phosphagenics said it would receive an additional upfront option payment and the two companies would collaborate on pre-specified activities “to confirm the development path and commercial opportunity for the product in Japan”.

The company said that if the option was exercised and the companies entered into a licence agreement, it would expect to receive a licencing fee, milestone payments and royalties on commercial sales of the TPM-oxycodone patch in Japan.

Phosphagenics chief executive officer Dr Ross Murdoch said that the agreement extension “provides us with a valuable opportunity to potentially have a single Japanese healthcare company focusing on the development and commercialization of both of our opioid patches as well as several other TPM-based products”.

Phosphagenics said that it had completed a phase IIa clinical study of the TPM-oxycodone patch earlier this year and was assessing strategies for additional development.

In January, Phosphagenics said that its TPM-oxycodone patch failed to reduce pain more than placebo in a 28-patient, phase IIa, proof-of-concept trial for post-herpetic neuralgia pain (BD: Jan 29, 2016).

Phosphagenics said at that time that the TPM-oxycodone patch did not meet the endpoint of showing that locally-delivered oxycodone could significantly ($p < 0.05$) reduce pain scores compared to placebo.

Phosphagenics climbed as much as 0.7 cents or 31.8 percent to 2.9 cents before closing unchanged at 2.2 cents with 41.5 million shares traded.

NUSEP HOLDINGS

Nusep says it has begun litigation in the High Court of Singapore against former subsidiary Prime Biologics Pte Ltd to repossess a blood separation system.

Nusep said that the GF100 machine was a plant and system for the separation of plasma proteins up to 10 litres.

The company said that the GF100 was originally loaned by Nusep to Prime on a temporary basis for demonstration purposes in its Singapore manufacturing facility in 2012 and Prime subsequently used the machine for research purposes.

Nusep said that Prime ceased paying rent on the GF100 machine from July 2015, save for one payment in January 2016 and Nusep terminated the lease, which Prime accepted.

The company said that Nusep sought to reclaim and repossess the GF100 machine and the outstanding rent owed by Prime to Nusep, among other things, but Prime refused to allow Nusep access to its premises to make arrangements for the removal of the GF100 machine.

Nusep said it would take legal action to defend its ownership rights to the GF100 blood separation machine.

Nusep fell 0.1 cents or 11.1 percent to 0.8 cents with 4.8 million shares traded.

NUSEP HOLDINGS

Last night's edition referred to Singapore's Prime Biologics Pte Ltd as a "subsidiary" of Nusep, which it once was.
Nusep chairman Alison Coutts told Biotech Daily that "Prime is no longer a subsidiary".
"Instead, it is an investment in which Nusep holds non-voting B-class shares".
No sub-editors were hurt in making this clarification.

REGENEUS

Regeneus says a neuropathic pain collaboration with Macquarie University and the University of Adelaide has won a $340,000 Australian Research Council Linkage Grant.
Earlier this month, the Federal Government allocated $163 million to fund 258 Australian Research Council projects (BD: May 6, 2016).
Today, Regeneus said the three year research project would "seek to develop a better understanding of chronic pain and how it affects women and men differently and how stem cells specially selected for their cytokine profiles can be used to relieve chronic pain in animals and help lay the foundations for future human therapies".
The company said that the research consortium brought together cell-labelling technologies developed by the ARC Centre of Excellence for Nanoscale Biophotonics and a cross-disciplinary team of researchers with expertize in the physiology of pain, cell analysis, bio-sensing and the development and clinical application of stem cells for inflammatory disease.
Regeneus said the University of Adelaide's Prof Mark Hutchinson researched the mechanisms of neuropathic pain and had shown that neuropathic pain was controlled by the immune system with female chronic pain more widespread than male pain.
"Stem cells secrete molecules that control or modulate the immune system," Prof Hutchinson said. "Because neuropathic pain is driven by the immune system we can use stem cells to control and shut down the pain."
"However, stem cells can secrete both good, anti-inflammatory, and bad, inflammatory, molecules, therefore, the use of cells that secrete the right molecules is going to be critical," Prof Hutchinson said.
Regeneus said that Macquarie University's Prof Ewa Goldys' group had developed cell labelling technologies to identify and select cells based on the molecules they secreted, which could be used to select cells for the manufacture of stem cells for chronic pain.
The company said that it had patents and applications on the use of stem cells for neuropathic pain and had previous success with stem cells for neuropathic pain and the research project could lead to off-the-shelf stem cell products for animals and humans.
Regeneus fell half a cent or three percent to 16.0 cents.

MEDICAL AUSTRALIA

Medical Australia says it has an agreement to distribute the Switzerland-based Ardo Medical AG's range of breast pumps.
Medical Australia said that the exclusive distribution agreement would be initially for three years period for Australia and New Zealand.
The company said that the range would be distributed by its Clements Medical Equipment division and would be promoted under the name 'Ardo by Clements'.
Medical Australia said it continued "to look at products that are complementary to our existing range that will further enhance and build our product suite".
Medical Australia was up 0.2 cents or 3.8 percent to 5.5 cents.

AGENIX

Agenix expects to complete the backdoor listing of CCP Holdings for its critical control point refrigeration management and monitoring by July 2016, pending approvals.

Agenix said in March that due diligence had been completed and in a presentation today the company said it would propose a one-for-five share consolidation resulting in 31,455,161 shares on issue and issue 109,600,000 shares to CCP shareholders along with a public offer of 60,000,000 shares at five cents each to raise $3 milion.

Agenix director and company secretary Adam Gallagher told Biotech Daily that while the temperature control technology could have application in life sciences it was primarily targeting the food service and retail sectors and would not be considered a life sciences company.

Agenix was developing Thromboview for imaging pulmonary embolisms and deep vein thrombosis, later acquiring Chinese drugs for hepatitis B, but exited its China operations, following a failed acquisition, and the exposure of fraud by the previous chief executive officer Neil Leggett (BD: May 28, 2008; Feb 18, 2010; Dec 11, 2012).

Former chairman Nick Weston and company secretary Gary Taylor attempted to rebuild the company acquiring assets from Tyrian Diagnostics (BD: Jun 4, 2014).

Mr Weston and Mr Taylor effectively “cleaned-up” the company to become a viable shell company.

Agenix fell 0.3 cents or 25 percent to 0.9 cents with 1.95 million shares traded.