Biotech Daily

Thursday July 5, 2012

Daily news on ASX-listed biotechnology companies

*** ASX FLAT, BIOTECH DOWN: QRX UP 13%, SUNSHINE HEART DOWN 12.5%**

*** WEHI LEADS SUV39H1 ENZYME IMMUNE CHANGE FOR ASTHMA**

*** CANCER THERAPEUTICS CRC 2nd COMPOUND, SCREENING PLATFORM**

*** MEDICAL DEVELOPMENTS, CSIRO PENTHRANE PRODUCTION DEAL**

*** PERPETUAL TAKES 5% OF RESMED**

*** JAPANESE PATENT FOR BONE'S AXCESS III**

MARKET REPORT

The Australian stock market closed down 0.07 percent on Thursday July 5, 2012 with the S&P ASX 200 down 3.0 points to 4,169.2 points.

Seven of the Biotech Daily Top 40 stocks were up, 13 fell, 13 traded unchanged and seven were untraded. All three Big Caps were up.

QRX was the best, up 8.5 cents or 13.3 percent to 72.5 cents with 436,698 shares traded.

Alchemia and Living Cell climbed four percent or more; Mesoblast rose two percent; Cochlear, CSL, Starpharma and Tissue Therapies were up more than one percent; with Clinuvel and Resmed up by less than one percent.

Sunshine Heart led the falls, down 0.3 cents or 12.5 percent to 2.1 cents with 123,000 shares traded, followed by Compumedics down 10.7 percent to 6.7 cents with 100,071 shares traded.

Phylogica fell 9.3 percent; Genetic Technologies lost 8.3 percent; Avita was down 7.3 percent; Bionomics was down 6.7 percent; Impedimed lost 5.4 percent; Neuren fell 4.55 percent; Nanosonics and Phosphagenics were down more than three percent; Anteo and Pharmaxis were down more than one percent; with Acrux down 0.2 percent.

THE WALTER AND ELIZA HALL INSTITUTE FOR MEDICAL RESEARCH

The Walter and Eliza Hall Institute says identifying the Suv39h1 enzyme that modifies the DNA of asthma-promoting T-helper 2 cells could lead to new asthma treatments.

The Institute said that a French team led by WEHI researcher Dr Rhys Allan showed that reprogramming the asthma-promoting T-helper 2 (Th2) immune cells in mice diminished airway damage and inflammation.

The Institute said that the Suv39h1 enzyme could be a target for the development of new treatments for chronic inflammatory diseases, in particular allergic asthma, caused by an excess of Th2 cells.

The Institute said that Dr Allan led the research while working at the Paris France-based Institut Curie and the team from Institut Curie along with France's National Centre for Scientific Research, National Institute of Health and Medical Research and the Montpellier Cancer Research Institute published the study entitled 'An epigenetic silencing pathway controlling T helper 2 cell lineage commitment' in the journal Nature. A preview is available at: http://www.nature.com/nature/journal/vaop/ncurrent/full/nature11173.html.

Dr Allan said the research team discovered that the enzyme Suv39h1 could switch off genes to control the function of Th2 cells, which were key to the allergic response.

"Th2 cells have an important function in the immune response, but they also play a significant role in diseases such as allergic asthma," Dr Allan said.

"People with asthma have too many Th2 cells, which produce chemical signals that inflame and damage the upper airways," Dr Allan said.

"In this study, we discovered that the Suv39h1 enzyme plays a critical role in programming these asthma-promoting cells, making it a potential target for new therapies to treat asthma," Dr Allan said.

WEHI said that more than two million Australians had asthma, about 10 percent of the popilation, and the disease was even more common among indigenous Australians, with the prevalence of asthma in children in Australia among the highest in the world.

Dr Allan said the Suv39h1 enzyme was part of the epigenetic circuitry of Th2 cells.

"Epigenetics refers to changes or modifications in the DNA that alter how genes are switched on and off, without changing the fundamental DNA sequence," Dr Allan said.

"Suv39h1 effectively tags the DNA to tell the cells which genes they need to switch on or off to promote an allergic response," Dr Allan said.

"Using agents that inhibit Suv39h1 could destabilize Th2 cells in people who have an excess of these asthma-promoting cells so they no longer cause inflammation," Dr Allan said.

"We had the idea that erasing these epigenetic tags could short-circuit the asthma-promoting Th2 cells and diminish the inflammatory immune response," Dr Allan said.

"And, in fact, in mouse models of allergic asthma, blocking this pathway with an inhibitory compound did reduce allergy-related airway damage," Dr Allan said.

"Ultimately, our results have identified a potential target for therapeutic intervention in asthma and potentially other Th2-mediated inflammatory diseases, which could improve outcomes for patients," Dr Allan said.

WEHI said that Dr Allan was continuing to study the epigenetic circuitry of asthma-promoting immune cells in the institute's molecular immunology division, with funding from the National Health and Medical Research Council of Australia.

The Institute said that the French research was supported by Institut Curie, France's National Centre for Scientific Research, National Institute of Health and Medical Research and Dr Allan was funded by a French National Institute of Health and Medical Research and an Australian National Health and Medical Research Council exchange fellowship.

CANCER THERAPEUTICS COOPERATIVE RESEARCH CENTRE

Cancer Therapeutics says it has validated and assessed the performance of CTX-0294886, in combination with Avastin in a mouse model of breast cancer.

Cancer Therapeutics said that the anti-tumor response to CTX-0294886, a potent small molecule inhibitor of focal adhesion kinase (FAK) and vascular endothelial growth factor receptor 3 (VEGFR3), was compared to its first product, CTX-0294945, a potent selective FAK inhibitor.

The LaTrobe University Victoria-based company said that CTX-0294886 in combination with Avastin (bevacizumab) showed additional benefits to those previously demonstrated by CTX-0294945 in addition to Avastin (BD: Apr 5 2012).

Cancer Therapeutics said that in both cases the small molecules in combination with Avastin inhibited angiogenesis and increased the duration of tumor response in a mouse model of basal breast cancer.

The company said that CTX-0294886 in combination with Avastin also provided a highly statistically significant increase in the median survival time compared to the Avastin only group.

Cancer Therapeutics chief executive officer Dr Warwick Tong said that “having achieved preclinical validation for our first product candidate in conjunction with Avastin, we are delighted to be announcing that our second candidate is even more potent at prolonging and strengthening the effects of Avastin”.

“We … have two targeted molecules that will allow rational combinations with other therapies in the fight against cancer,” Dr Tong said.

“We are now starting to reap the benefits of our highly collaborative approach to drug discovery, working … with some of the top research institutes in Australia and our international partner, Cancer Research Technology UK,” Dr Tong said

Cancer Therapeutics also said that it had developed a high throughput screening (HTS) platform for the identification of small molecule inhibitors of protein ubiquitination, a key element in the essential cellular process of protein homeostasis, a new target pathway for cancer treatment.

The company said that the Ubiquitin HTS platform closely replicated cellular ubiquitination pathways and provided a mechanism for high throughput screening of multiple targets.

Cancer Therapeutics said that ubiquitins were small regulatory proteins that attached to other target proteins allowing their destruction and recycling.

The company said the process required a family of dedicated enzymes, such as ligases, for completion and the E3 ligase, E6AP, was selected to validate the platform.

Cancer Therapeutics said that E6AP ubiquitinates p53 and PML in human papillomavirus (HPV) related cancer and other cancers.

The company said that both p53 and PML were well known suppressors of tumor growth so substances that inhibited E6AP would be expected to retard tumor growth in cancers such as cervical and head and neck cancers.

Cancer Therapeutics said the platform was able to identify several small molecules that were undergoing further investigation.

Cancer Therapeutics chief scientific officer Dr Ian Street said the Ubiquitin HTS platform “opens up the potential to collaborate with industry by screening chemical libraries to address multiple targets in this new and exciting area of cancer biology”.

The company said that both scientific developments would be presented as posters at the European Association of Cancer Research in Barcelona, Spain on July 7-10, 2012.

Cancer Therapeutics Cooperative Research Centre is a private company.

MEDICAL DEVELOPMENTS INTERNATIONAL
COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION

Medical Developments and the Commonwealth Scientific and Industrial Research Organisation will develop a new production process for methoxyflurane.

Medical Developments markets the inhaled acute pain drug methoxyflurane (Penthrane) as part of its Penthrox system.

In a joint media release CSIRO and Medical Development s said that if successful, the project would significantly reduce the cost of producing Penthrox and facilitate large-scale production to support the company's plan to sell Penthrox in the UK and Europe.

The media release said that CSIRO was investing $750,000 under its Australian Growth Partnerships program into the project to strengthen Medical Developments position as the only manufacturer of methoxyflurane.

Medical Developments chief executive officer John Sharman told Biotech Daily that the CSIRO funds were not in return for equity but were dependent on the outcome of the project, with a royalty stream payable on success.

Mr Sharman said that CSIRO had spent five years developing a next generation production methodology platform and had worked with methoxyflurane, which he said the organization knew well.

Mr Sharman said the project catch-phrase was "five times the volume at half the cost".

Mr Sharman said the technology was CSIRO's but the manufacturing would be undertaken at Medical Developments plant.

Medical Developments said that if it received regulatory approval in the UK and Europe, it would increase production drug using CSIRO's manufacturing process.

The company said that was used in Australia as an analgesic by emergency medical practitioners, the defence forces, ambulance, surf lifesaving services, dentistry, general practitioners, cosmetics and other medical specialities such as endoscopy.

Medical Developments said Penthrox had advantages over other analgesics such as nitrous oxide and morphine in that it was fast acting, self-administered, non-addictive, non-narcotic, safe to use and provides strong pain relief.

CSIRO biotechnology program leader Dr Paul Savage said the AGP program was an example of how innovative small and middle-sized enterprises could access CSIRO's research and development capability.

The media release said that the Australian Growth Partnerships program was a competitive, merit-based pilot funding program managed by CSIRO, providing high potential technology receptive small and middle-sized enterprises with funding to access CSIRO research and development capability and intellectual property.

The program was designed to assist small and middle-sized enterprises overcome technical issues, providing them with an opportunity to accelerate growth in high impact industries.

Medical Developments was up 5.5 cents or 6.3 percent to 92.5 cents.

RESMED

Perpetual and its subsidiaries have become substantial shareholders in Resmed with the acquisition of 78,850,607 shares or 5.07 percent.

The initial substantial shareholder notice said the shares were acquired for a range of companies including RBC Dexia Investor Services, UBS Nominees, Citicorp Nominees, Cogent Nominees, JP Morgan Chase Nominees, National Nominees and State Street, between March 29 and July 2, 2012 at process ranging from $2.91 to $3.29.

Resmed was up one cent or 0.3 percent to $2.99 with 6.6 million shares traded.

BONE MEDICAL

Bone says its Axcess III oral peptide formulation technology patent has been granted in Japan.

Bone's chairman, chief scientific officer and inventor of the technology Dr Roger New said that Axcess III was "the specific version of our oral formulation technology that we use in our proprietary oral peptide product Capsitonin, oral calcitonin for osteoporosis and arthritis pain".

"Long-term treatment of these chronic conditions is an area of serious unmet clinical need due to safety, tolerability, and drug interaction problems," Dr New said.

"Capsitonin has significant potential safety and compliance advantages over existing therapies for these diseases," Dr New said.

"We recently announced the issue of our Axcess II patent in Japan," Dr New said.

"The grant of Axcess III in Japan extends our proprietary position in the Japanese market, one of the largest and most significant pharmaceutical markets in the developed world," Dr New said.

Bone was up 0.2 cents or 50 percent to 0.6 cents with 16.6 million shares traded.