Biotech Daily

Tuesday April 14, 2015

Daily news on ASX-listed biotechnology companies

*** ASX, BIOTECH DOWN: COMPUMEDICS UP 39%, GI DYNAMICS DOWN 15%**

*** WEHI DISCOVERS 'ARCHITECTS' FOR BODY BLUEPRINT**

*** ACTINOGEN ADVISERS DETAIL XANAMEM ALZHEIMER'S TRIAL**

*** EURO PATENT FOR COMPUMEDICS STROKE, TBI DIAGNOSTIC**

*** ANTEO, UQ PRE-CLINICAL IMAGING PARTNERSHIP**

*** AVITA APPOINTS ADAM KELLIHER CEO, STARTS ON $434k**

*** MEDIBIO APPOINTS MAYO'S PROF FRANKLYN PRENDERGAST ADVISER**

*** UK BARCLAYS BANK TAKES 7% OF GENETIC TECHNOLOGIES**

MARKET REPORT

The Australian stock market fell 0.23 percent on Tuesday April 14, 2015 with the S&P ASX 200 down 13.7 points to 5,946.6 points.

Twelve of the Biotech Daily Top 40 stocks were up, 19 fell, six traded unchanged and three were untraded.

Compumedics was the best, up seven cents or 38.9 percent to 25 cents with 2.9 million shares traded.

Avita and Patrys climbed more than seven percent; Sirtex was up 6.9 percent to $26.34; Analytica, Atcor and Viralytics were up more than five percent; Starpharma was up 4.2 percent; Clinuvel and Psivida were up more than three percent; Tissue Therapies rose 2.4 percent; Bionomics was up 1.2 percent, with Cochlear up 0.1 percent.

GI Dynamics led the falls, down 2.5 cents or 15.15 percent to 14 cents with 51,900 shares traded.

Biotron, Living Cell and Medical Developments lost more than six percent; Universal Biosensors fell 5.45 percent; Antisense, Cellmid and Neuren fell more than four percent; Benitec was down 3.05 percent; Anteo and Genetic Technologies shed more than two percent; Acrux, IDT, Impedimed, Mesoblast, Nanosonics, Oncosil and Optiscan were down one percent or more; with CSL, Osprey and Resmed down less than one percent.

THE WALTER AND ELIZA HALL INSTITUTE FOR MEDICAL RESEARCH

The Walter and Eliza Hall Institute says its researchers have identified two proteins that act as genetic architects, creating the blueprint for early embryo development.

The Institute said the research team showed that the protein monocytic leukemia zinc finger (MOZ) could relay external messages to the developing embryo, revealing a mechanism for how the environment could affect development in very early pregnancy.

WEHI said that Prof Anne Voss and colleagues discovered that MOZ and the protein cell-specific Moloney murine leukemia virus integration site 1 (BMI1) played opposing roles in giving developing embryos the instructions needed to ensure that body segments including the spine, nerves and blood vessels developed correctly and in the right place.

The research article, entitled 'MOZ and BMI1 play opposing roles during Hox gene activation in ES cells and in body segment identity specification in vivo' was published in the US Proceedings of the National Academy of Sciences.

Prof Voss said the study showed that the proteins tightly regulated homeobox, or Hox, gene expression in early embryonic development.

"In very early development, when the embryo is still just a cluster of dividing cells, the embryo must become organized so that the body tissues and organs develop correctly, with everything in its right place," Prof Voss said.

"The embryo is organized along an axis from head to tail and a standard pattern of development is established that subdivides the body into segments, with each segment responsible for producing specific aspects of tissues and organs, including the vertebral column, spinal cord and nerves," Prof Voss said.

Prof Voss said that the proteins MOZ and BMI1 were important for initiating activation of the Hox genes, section by section, providing the blueprint the developing organism needs for proper development but MOZ and BMI1 played opposing roles.

She said that MOZ and BMI1 were important for initiating and correctly timing Hox gene expression, ensuring the genes were activated at the right time and in the right place.

Prof Voss said that MOZ was responsible for activating the genes, while BMI1 prevented Hox genes being switched on prematurely and said the research also showed that significantly reducing Hox gene expression still allowed normal development, as long as the timing and location of expression were correct.

"We found that if the Hox genes were activated too early or late, it had significant repercussions for the developing embryo, such as malformations of the spine," Prof Voss said. "Interestingly, we also found that producing an accurate amount of MOZ or BMI1 in developing embryos was not nearly as important for correct development as when and where Hox genes were activated."

Prof Voss said that MOZ and BMI1 could provide a mechanism to transmit signals from the environment to the developing embryo, with potentially devastating consequences.

"We know that Hox genes can be directly affected by too much vitamin A, which can cause severe deformities in the embryo," Prof Voss said.

"Substances or environmental challenges that impact MOZ or BMI1 expression could affect when and where Hox genes are expressed, causing defects in the developing embryo," Prof Voss said.

Prof Voss said the research team's discovery overturned a decades-long belief about embryonic development.

"A lot of what we know about embryonic development and how it is controlled was learned from studies of fruit flies," Prof Voss said.

"In this study we showed a key difference," Prof Voss said. "Two molecules that have only a maintenance role in fruit flies are indispensible for initiating the blueprint in mammalian development."

ACTINOGEN MEDICAL

Actinogen says its phase II trial of Xanamem for Alzheimer's disease will randomize about 200 patients in a 12-week trial using cognitive tests to measure efficacy.

In a teleconference introducing the three members of the advisory board, the University of Melbourne's Prof Colin Masters, the University of Edinburgh's Prof Craig Ritchie and the Cleveland Ohio Clinic's Prof Jeff Cummings, Actinogen's chief executive officer Dr Bill Ketelbey said that the outline would be further developed and taken to the US Food and Drug Administration (FDA) for approval, with the trial expected to begin "in early 2016".

Prof Cummings told the teleconference that efficacy would be measured using approved cognitive tests including the Alzheimer's disease assessment scale cognitive (ADAS-Cog) test, the mini-mental state examination (MMSE) and the clinical dementia rating (CDR).

Prof Masters said that changes to blood biomarkers required dosing for longer periods of 12 to 24 months and that as Xanamem, formerly UE2343, was not directed against amyloid plaques but was expected to lower active cortisol levels, medical imaging used by Prana in its trials of PBT2 would not be used.

All three Actinogen advisors are also members of Prana's advisory board.

Prof Masters said there was "emerging evidence" that increased cortisol levels in cerebro-spinal fluid was an indication of cognitive changes in Alzheimer's disease and that by lowering levels of cortisol Xanamem might mediate those changes.

Prof Ritchie said that in patients with mild dementia, he would expect to see some degree of cognitive decline over a 12-week period.

Asked about the evidence that Xanamem could have an effect on Alzheimer's disease, Prof Ritchie said that "work at the University of Edinburgh in animal models including transgenic mice has shown improvements in special memory tests".

Dr Ketelbey said that Actinogen had data from the last seven years of work in rodent models at the University of Edinburgh which had not yet been published in a journal.

Actinogen was unchanged at 9.3 cents with 2.05 million shares traded.

COMPUMEDICS

Compumedics says its German Doppler sonography division has been granted a European patent for the ultrasound diagnosis and treatment of stroke.

Compumedics said that the patent, entitled 'Ultrasound Diagnosis and Treatment Apparatus' covered a servo-controllable transducer, which allowed automatic signal detection in the brain-supplying arteries as well as the discovery of narrowing, or the stenosis or occlusion in the arterial system.

The company said that stenoses or occlusions were characteristic of most strokes it intended to develop an automatic system for detecting and treating stenosis or occlusion for the prevention and treatment of stroke as well as monitor traumatic brain injury.

Compumedics Germany managing director Christoph Witte said the patent grant followed "many years of research ...[combining] the latest principles and technology behind automated tracking and treatment management of vascular dysfunction associated with traumatic brain injury along with similar potential functionality during stroke management".

"This system will simplify the current, largely manual, process for assessing blood flow through the brain, expanding significantly the potential application of the automatic device into new and existing markets," Mr Witte said.

Compumedics executive chairman and patent author Dr David Burton said the technology had been deployed within the US Department of Health "where there is a growing need to remotely and automatically diagnose [traumatic brain injury]," Dr Burton said.

Compumedics rose seven cents or 38.9 percent to 25 cents with 2.9 million shares traded.

ANTEO DIAGNOSTICS

Anteo says it has a research partnership with the University of Queensland to use its Mix&Go molecular adhesive for imaging in-vitro and in-vivo preclinical research.

Anteo chief executive officer Dr Geoff Cumming said the 12-month partnership with the University's Australian Institute for Bioengineering and Nanotechnology was "a strong endorsement of the potential for Mix&Go in the in-vivo area and is the second announcement we have made relating to in-vivo applications for Mix&Go in recent weeks".

"This project should also deliver additional data that confirms the broad applicability of our platform technology in the in-vivo space," Dr Cumming said.

Dr Cumming said that Anteo's scientists would prepare the necessary nanoparticles activated by the Mix&Go molecular adhesive for the project.

Anteo said the partnership would be funded by the University's Collaboration and Industry Engagement Fund grants program, which was used to encourage industry-linked research and provided seed-funding to generate Australian Research Centre and National Health and Medical Research Council applications.

Anteo's head of new technologies Dr Charlie Huang said there was "a growing need for flexible approaches to attaching multiple imaging and targeting moieties to sub-micron particles, including nanoparticles".

"These particles have broad application in the fields of medical and diagnostic imaging and Anteo's Mix&Go metal-complex technology can provide a flexible and simple method to enable such attachments," Dr Huang said.

The University of Queensland's Prof Andrew Whittaker said the research partnership would "enhance the likelihood of success for future funding applications to ARC Linkage or NHMRC Development schemes".

Anteo said that refining and improving outcomes in medical and diagnostic imaging could deliver substantial improvements in patient outcomes and the technology to be developed in the project aimed "to improve patient clinical practice by combining several advanced imaging technologies onto a single particle using a simple but innovative approach".

Anteo fell 0.2 cents or 2.15 percent to 9.1 cents with 2.6 million shares traded.

AVITA MEDICAL

Avita says it has appointed Adam Kelliher as chief executive officer starting on GBP225,000 ($A433,745) along with performance related bonuses.

Avita said that interim chief executive officer Tim Rooney would resume his role as chief financial officer and chief operating officer.

Mr Rooney said that Mr Kelliher brought "exceptional sales and marketing expertise to the company having founded and built multiple commercial franchises in the life science sector".

Avita said that Mr Kelliher founded Equateq in 2006, a manufacturer of "super-pure fatty acids" for the nutritional, pharmaceutical and research sectors and started Equazen in 2000, an omega-3 and omega-6 supplement company whose lead product, Eye Q for lipid deficiencies linked to learning conditions.

The company said that Mr Kelliher held a Master of Arts from the University of Auckland and was a graduate of the Entrepreneurial Development Program at the Massachusetts Institute of Technology Sloan School of Management.

Avita said that Mr Kelliher would be entitled to up to GBP50,000 a year in short term incentive payments and a long-term equity-based incentive linked to continuous employment and share price milestones, subject to shareholder approval.

Avita was up half a cent or 7.1 percent to 7.5 cents.

MEDIBIO (FORMERLY BIOPROSPECT)

Medibio says it has appointed Mayo Medical School's Prof Franklyn Prendergast to its physician advisory board.

Medibio said that Prof Prendergast was the former chair of the Department of Biochemistry and Molecular Biology and the former director for research at Mayo Clinic from 1989 to 1992 and a member of the Mayo Clinic board of governors from 1989 to 1996 and on the executive committee from 1999 to 2007 and director emeritus for the Mayo Clinic Center for Individualized Medicine until 2012, retiring in December 2014.

The company said that Prof Prendergast had been a director of Eli Lilly since 1995 and had worked in "numerous" advisory roles for the US National Institutes of Health.

Medibio was up 1.5 cents or 5.45 percent to 29 cents.

GENETIC TECHNOLOGIES

The London-based Barclays Bank says it has a substantial holding in Genetic Technologies of 122,877,121 shares (7.2%).

Barclays said that the shares were held for various custodians and composed 816,200 American depository receipts (ADRs) equivalent to 122,430,000 Australian shares, along with a further 447,121 Australian shares.

Barclays said that on April 9, 2015 it borrowed 815,600 ADRs from an unnamed third party as well as taking a "collateral title transfer" of 447,121 Australian shares, equivalent to a total of 122,787,121 shares, all for "nil" consideration.

Genetic Technologies fell 0.1 cents or 2.6 percent to 3.8 cents with 2.9 million shares traded.