



Biotech Daily

Tuesday March 13, 2012

Daily news on ASX-listed biotechnology companies

- * **ASX UP, BIOTECH DOWN: ANTEO UP 15%, USCOM DOWN 10.5%**
- * **ALLIED SHEEP TRIAL FOR CARDIAC VALVE RECONSTRUCTION**
- * **CALZADA'S AOD9604 IN VITRO EFFICACY IN CARTILAGE MUSCLE REPAIR**
- * **ANTEO JUMPS 26% ON EBIOSCIENCE MIX&GO LICENCES**
- * **MELBOURNE WINS 2014 SYSTEMS BIOLOGY CONFERENCE**

MARKET REPORT

The Australian stock market was up 1.21 percent on Tuesday March 13, 2012, with the S&P ASX 200 up 50.9 points to 4247.6 points.

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

Anteo was the best, up as much as 1.9 cents or 25.7 percent to 9.3 cents, before closing up 1.1 cents or 14.9 percent to 8.5 cents with 31.9 million shares traded.

Living Cell climbed 10 percent; Avita was up 6.7 percent; Allied Health and Genetic Technologies were up five percent or more; Antisense was up 4.55 percent; Alchemia climbed 3.2 percent; Biota and Phylogica rose more than two percent; CSL, Mesoblast, Starpharma and Resmed were up more than one percent; with Cochlear up 0.4 percent.

Uscom led the falls, down one cent or 10.5 percent to 8.5 cents, with 666,667 shares traded, followed by Ellex down 9.5 percent to 19 cents with 30,000 shares traded.

Benitec lost 5.3 percent; Pharmaxis and Sunshine Heart fell more than four percent; Circadian was down 3.7 percent; Bionomics, Nanosonics and Viralytics shed two percent or more; Clinuvel and QRX were down more than one percent; with Reva and Sirtex down by less than one percent.

ALLIED HEALTHCARE GROUP

Allied Health's Celxcel has begun a trial in sheep of its Adapt-treated Cardiocel cardiovascular patch for cardiac valve reconstruction.

The chief executive officer of Celxcel, Allied's tissue engineering division, Bob Atwill told Biotech Daily that the valve reconstruction trial of 10 sheep was being performed by paediatric cardiothoracic surgeons from the University of Melbourne and if successful would lead to human clinical trials.

Mr Atwill said six sheep had been implanted with the Adapt-treated patch with four controls implanted with the current standard of care, treated autologous pericardium.

Mr Atwill said the results were expected in about six months.

In a media release, Allied said that the study was designed to demonstrate Cardiocel's ability to be used surgically to repair damaged or congenitally deformed heart valves and the patch was implanted during "a double valve leaflet reconstruction".

The company said that the Cardiocel patch material was used to reconstruct the posterior leaflet of the mitral valve as well as one of the valve leaflets of the pulmonary valve.

Allied said that normal valve function was regained after reconstruction and all animals survived the open-heart procedures without any adverse effects or complications.

The company said that the animals would be monitored for six months for any accumulation of calcium in the implants and the patch would be evaluated for valve function, immunological responses to the tissue or remodelling and for evidence of calcification.

Allied managing director Lee Rodne said that the trial was "another important step forward for the technology and further demonstrates its wider application".

"This technology has the potential to change the way paediatric surgeons approach individualized reconstructions of deformed or damaged heart valves using our technology," Mr Rodne said.

"Positive results will also open up further commercial discussions on the potential applications for Cardiocel," Mr Rodne said.

Allied said that the study extended the potential for the technology seen in the then Biomed phase II human study where the patch was used to repair cardiovascular deformities caused by congenital heart disease (BD: Oct 9, 2008; Feb 19, 2009; Mar 4, Apr 8, 2010).

Allied said that joint studies with an unnamed tissue heart valve manufacturer in 2011 demonstrated the benefits of Celxcel's Adapt technology in the reduction of calcification on tissue heart valves.

The company said that reducing calcium formation on implanted tissue valves with Adapt could allow cardiologists and surgeons to treat many more patients and to intervene earlier with potential positive health economic impact.

"Having our product successful in this demanding end of cardiovascular repair may also give surgeons the confidence to use the Cardiocel patch for most of the other less complicated congenital and cardiovascular repair procedures," Mr Atwill said.

"The initial phase of this study has gone very well, with all procedures going smoothly," Mr Atwill said.

"The animals will be monitored over the next six months with the aim of determining how much better the Cardiocel heart patch performs as a valvular substitute in both the low pressured, pulmonary valve, and high pressured area, mitral valve, inside the heart," Mr Atwill said.

In addition to cardiovascular applications, Celxcel is also evaluating how the process can be applied in a number of other surgical procedures such as hernia repair, pelvic floor reconstructions, orthopaedics and as a biological scaffold to grow and deliver stem cells.

Allied was up 0.2 cents or 5.9 percent to 3.6 cents with 2.9 million shares traded.

CALZADA

Calzada says wholly-owned subsidiary, Metabolic Pharmaceuticals has positive in-vitro results for AOD9604 for cartilage and muscle repair.

Calzada said the orally available peptide trials were conducted at the Mt Sinai Hospital in Toronto, Canada under the direction of Prof Marc Grynbas and Prof Rita Kandel.

The company said that the studies were conducted in separate cartilage and muscle cell experiments using animal cell lines and were designed to explore the further commercial potential of the AOD9604.

Calzada has licenced AOD9604 to Phosphagenics as an anti-fat cosmetic ingredient renamed AOP9604, and is searching for commercial partners for AOD9604 for bone and fracture repair indications (BD: Oct 19, 2010; Feb 13, 2012).

AOD9604 was originally developed as an anti-obesity drug, but a phase II trial by the then Metabolic showed it only had efficacy in patients who did not comply with the US Food and Drug Administration required exercise and diet regime (BD: Feb 21, 2007).

Today, Calzada said that AOD9604 had a positive anabolic effect on cartilage tissue formation and was found to enhance cartilage tissue formation by increasing the proteoglycan or cellular matrix and collagen content of cartilage, as well as enhancing the differentiation of muscle progenitor cells to muscle cells.

The company said that no cell toxicity was caused by AOD9604 in any of the studies.

Calzada said the results mean that AOD9604 might promote cartilage creation and repair and may have a capacity to enhance muscle formation, which could be useful in fields such as osteoarthritis and diseases where muscle mass loss is a dominant factor.

Prof Kandel said the results were "exciting because they provide early stage evidence that AOD9604 may help to repair damaged cartilage and muscle tissue".

Calzada said that the efficacy data combined with the "highly favorable safety profile of AOD9604, proven in toxicology studies and six human clinical trials, provides strong rationale for use of the peptide where cartilage or muscle quality is compromised or in need of repair".

The company said that AOD9604 could have potential for support in patients with osteoarthritis and other diseases in which cartilage and muscle degeneration were key pathologies, such as costochondritis or inflammation of cartilage in the ribs, sarcopenia or age-related loss of muscle mass, and cachexia or muscle-wasting syndromes.

Calzada said that it could be possible to use AOD9604 to promote recovery from trauma, burns and other events where muscle and cartilage damage occurred in otherwise healthy individuals such as in sports injuries.

The company said the potential uses targeted very large markets, with limited or no adequate treatment options, with the global osteoarthritis market worth \$4.4 billion in 2010 and current treatment options were only symptomatic relief, with no disease modifying osteoarthritis drugs approved or in late stage development.

Calzada said that director Dr John Chiplotin was a former chief executive officer with Arana Therapeutics which ran programs in osteoarthritis and rheumatoid arthritis and had reviewed the Mt Sinai data.

"The early stage experimental data indicates that AOD9604 has a net positive effect on enhancing cartilage tissue formation and therefore may have a role to play in treating osteoarthritis," Dr Chiplotin said.

Calzada said that in December 2011 Metabolic lodged two patent applications covering the cartilage and muscle applications of AOD9604 for human and veterinary uses.

Calzada said that out-licencing was the preferred approach, but outsourced research activities could be considered.

Calzada was up 0.7 cents or 16.3 percent to five cents.

ANTEO DIAGNOSTICS

Anteo climbed as much as 25.7 percent to 9.3 cents on news of a patent and technology licence with the San Diego, California-based Ebioscience for Mix&Go.

Anteo said that Mix&Go enabled the stable attachment of bio-molecules such as antibodies and proteins to synthetic surfaces including beads, slides and plates.

Anteo said it would receive an undisclosed upfront payment, fixed revenue for Mix&Go reagent supplied and a royalty fee based on a percentage of worldwide net sales.

The company said that Ebioscience had undertaken technical assessment of the Mix&Go technology, performed due diligence “and reached an agreement with great efficiency”.

Anteo said it expected to work in close collaboration with Ebioscience to ensure that all products that incorporated Mix&Go were delivered to the market promptly, that the technology was used broadly across the Ebioscience product range and that where applicable, Mix&Go was used in new products.

Anteo chief executive officer Dr Geoff Cumming said the licence was “a significant commercial opportunity for the company”.

“To be entering into commercial agreements with market leaders such as Ebioscience is further validation of the Mix&Go technology,” Dr Cumming said.

“Additionally, the agreement signifies for Anteo a transition up the value chain from bead manufacturers to test manufacturers,” Dr Cumming said.

Ebioscience chief executive officer Don Tartre said the Mix&Go technology would “leverage our Flowcytomix bead-based immunoassay product line to even higher performance including greater sensitivity”.

Anteo said that Ebioscience conducted business in more than 70 countries and offered a full spectrum of more than 11,000 high quality reagents including Efluor multicolor flow cytometry reagents, Flowcytomix bead based immunoassays and Instant Elisa brands.

Anteo closed up 1.1 cents or 14.9 percent to 8.5 cents with 31.9 million shares traded.

VICTORIA GOVERNMENT

Victoria’s Minister for Innovation, Tourism and Major Events, Louise Asher, says Melbourne will host the 2014 Conference on Systems Biology.

Ms Asher said the conference would bring “750 of the world’s leading experts” in systems biology to Melbourne ... and was expected to generate \$3.6 million for Victoria.

“Systems biology is an emerging area in Australia which has been recognized by the Victorian Coalition Government as an area of focus,” Ms Asher said.

The Victoria Government media release said that systems biology was the multi-disciplinary science of studying, mapping and modeling organic structures and processes, and instead of breaking cells, organs, genomes or whole organisms into their component parts, systems biology studies them as a whole.

“Hosting this conference will give Victorian researchers international exposure and offer opportunities for engagement and collaboration with research leaders and centres of excellence overseas,” Ms Asher said.

The director of the Systems Biology Institute in Tokyo Prof Hiroaki Kitano said that systems biology was a multidisciplinary science and “holding the conference in Australia will help drive further collaboration between Australian laboratories and researchers in Asia, Europe and America.