



# Biotech Daily

Monday January 31, 2011

*Daily news on ASX-listed biotechnology companies*

- \* **ASX, BIOTECH DOWN:**
  - IMMURON UP 7%; GENETIC TECHNOLOGIES, ANTISENSE DOWN 12.5%
- \* **CSIRO, MHRI IDENTIFY A STRUCTURE OF ALZHEIMER'S AMYLOID-BETA**
- \* **BRAIN RESOURCE DEVELOPS DEPRESSION TEST**
- \* **JIANGSU AOSAIKANG TAKES 5% OF LIVING CELL; COLLABORATION**
- \* **CHINA PATENT ADDS RNA TO VIRALYTICS' CAVATAK METHOD**
- \* **ACUVAX MEETING CALLED TO ROLL DIRECTOR KEONG CHAN**
- \* **FLUOROTECHNICS CEO JAMES WALKER ROLE CHANGE TO OPTALERT**
- \* **NOVAPORT TAKES 8.4% OF MEDICAL DEVELOPMENTS**

## MARKET REPORT

The Australian stock market fell 0.44 percent on Monday January 31, 2011 with the S&P ASX 200 down 21.0 points to 4753.9 points.

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

Immuron was the best, up half a cent or 6.9 percent to 7.7 cents, with 19,999 shares traded.

Benitec climbed 5.4 percent; Living Cell was up four percent; Tissue Therapies was up 3.1 percent; with Genera, Starpharma and Sunshine Heart up more than two percent.

Antisense and Genetic Technologies led the falls, both down 12.5 percent to 0.7 cents and 10.5 cents, respectively, with 135,000 shares and 1.4 million shares traded, respectively.

Virax lost 7.1 percent; Nanosonics was down 5.9 percent; Cathrx and Pharmaxis fell four percent or more; Impedimed and QRX were down more than three percent; Circadian, Phylogica and Sirtex shed more than two percent; with Acrux, Bionomics, Biota, Mesoblast and Psivida down more than one percent.

## COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION MENTAL HEALTH RESEARCH INSTITUTE OF VICTORIA

The Commonwealth Scientific and Industrial Research Organisation says it is close to understanding the structure of the protein thought to cause Alzheimer's disease.

The CSIRO said its scientists and collaborators had successfully crystallized the part of amyloid beta that forms plaque in the brain by fusing it to a shark antibody to prevent clumping.

The director of the CSIRO's Preventative Health Flagship Prof Richard Head told Biotech Daily that there were many different forms of the amyloid beta protein and the researchers had crystallized one of the potentially many forms at a very early stage.

He said this was important to understanding the protein.

"Before we can understand the processes involved in the deterioration of the brain, we must determine the molecular shape of the damaging protein," Prof Head said in a CSIRO media release.

"Until now this has proved incredibly difficult because of the protein's propensity to self assemble and clump together," Prof Head said.

The CSIRO said that Alzheimer's disease was associated with the development of the toxic amyloid beta protein which rapidly self-assembled in the brain and built up to form plaques which were a hallmark of the disease.

The Organization said it was thought that the accumulation of small amyloid beta aggregates and plaques disrupted connections within the hippocampus, which was involved in memory, causing loss of neuron function.

The CSIRO said that there was as yet no cure for Alzheimer's disease, but determining the structure of amyloid beta protein was "a vital step towards understanding why aggregates and plaques occur" which could assist in the development of new treatments. The CSIRO said that the Parkville Victoria-based Dr Jose Varghese and his team devised a way of capturing the protein in a crystal long enough to enable its analysis at the Australian Synchrotron through x-ray crystallography, solving one of a number of potential amyloid beta small aggregates that may play a role in the development of Alzheimer's disease.

The Organisation said Dr Varghese and his team successfully crystallized the part of amyloid beta that formed plaque by fusing it to a shark antibody to prevent clumping.

"This enabled a structure to be resolved to atomic resolution thus providing an insight into the early molecular processes that occur in Alzheimer's disease," Dr Varghese said.

"The discovery of the amyloid beta's structure offers a molecular target for early detection of Alzheimer's and may provide a vital step towards developing a drug to treat the disease," Dr Varghese said.

The findings were published in the Journal of Neurosciences in an article entitled 'Crystal Structure of the Amyloid-beta p3 Fragment Provides a Model for Oligomer Formation in Alzheimer's Disease' (Jan 2011; 31: 1419 – 1426).

An abstract is at: <http://www.jneurosci.org/cgi/content/short/31/4/1419>.

A co-author of the paper, Victoria's Mental Health Research Institute director Prof Colin Masters said the structure of the amyloid beta has been sought for the past 25 years.

"This discovery provides one of many possible structures, but it is a starting point for discovering drugs which might be used to interfere with the accumulation of the amyloid beta in Alzheimer's disease," Prof Masters said.

The CSIRO said that Alzheimer's disease was one of the fastest growing diseases in Australia and the most common form of dementia.

The number of people in Australia with dementia was expected to rise from 300,000 to 1.13 million by 2050.

## BRAIN RESOURCE

Brain Resource says the Ispot personalized medicine study on depression completed its first 1,000 subject acquisitions in December 2010.

Brain Resource said patients were recruited from 20 of its laboratories in the US, Europe, New Zealand and Australia and the analysis is expected to conclude by April 2011.

The company said that pilot data pointed to the likelihood of finding a new brain test for diagnosing and predicting treatment response in depression.

Brain Resource said the analysis was shaped by meetings and discussions with the US Food and Drug Administration and the company expected to file for FDA approval to market the brain test, by April 2011.

Brain Resource said that the FDA had "best expressed this need for objective tests as part of its critical path initiative".

The company said that studies had shown a less than one-in-three chance of getting the right treatment first time for depression.

Brain Resource said that depression resulted in more than 85 million clinical visits and cost the US more than \$83 billion a year, with 212 million antidepressant prescriptions in the US in 2009 with a value of \$12 billion in sales.

Brain Resource was unchanged at 25 cents.

## LIVING CELL TECHNOLOGIES

Living Cell says it has an agreement to place with 14,334,080 shares at 12 cents a share to the Nanjing-based Jiangsu Aosaikang Pharmaceutical Co to raise \$1.72 million.

Living Cell said that Jiangsu Aosaikang was a private research-based pharmaceutical company and would have a five percent equity stake and would negotiate a collaborative research agreement, including a right of refusal to negotiate a licence to commercialize the use of its Diabecell porcine encapsulated islets of Langerhans for type 1 diabetes.

The company said Jiangsu Aosaikang would become the sole agency to implant and treat patients with Diabecell once the product was registered in China.

Living Cell said payment was expected no later than March 4, 2011 and would fund further development and clinical trials Diabecell.

The company said Jiangsu Aosaikang was established in 2005 and developed, produced and marketed pharmaceuticals and healthcare products, with more than 60 products in the market place.

Living Cell chief executive officer Dr Ross Macdonald said the support of Jiangsu Aosaikang reflected increasing attention that his company's work was generating.

"Our relationship with [Jiangsu Aosaikang] provides us with a highly experienced, knowledgeable local partner in a large and promising emerging market," Dr Macdonald said.

Jiangsu Aosaikang chairman and chief executive officer Dr Qingcai Chen said his company was "quite honored to be granted with such an opportunity to establish a strategic partnership with LCT, a global leader in the treatment of Type 1 diabetes".

"Like other markets globally, type 1 diabetes is a major disease in China, which currently has inadequate treatment options," Dr Chen said.

"We see Diabecell as a significant step in offering Chinese diabetics real treatment options and improved lifestyles," Dr Chen said.

Living Cell was up half a cent or four percent to 13 cents.

### VIRALYTICS

Viralytics says China has granted a patent involving of the use of Cavatak RNA as an anticancer agent in human melanoma.

Viralytics said the scope of the application involved the delivery of viral RNA extracted directly from Cavatak or synthetically manufactured RNA, to human melanoma cells to initiate an oncolytic viral infection and cell death.

The company said that existing patents involved the use of live whole virus while the new application involved the use of only the viral RNA 'genetic blueprints' extracted from within the Cavatak particle.

Viralytics said the viral RNA could be delivered alone or in combination with an appropriate lipid formulation.

The company said the treatment regime offered a potential alternate strategy in producing oncolytic infection in human melanoma cells compared to the delivery of purified Cavatak particles, which are in phase I clinical evaluation in patients with late stage melanoma, breast, prostate and head/neck cancer.

Viralytics was unchanged at 3.4 cents with 3.4 million shares traded.

### ACUVAX

Acuvax says it has received a meeting requisition to replace Keong Chan as a director with Rocco Tassone.

Acuvax said a meeting must be called within 21 days after the request and the meeting must be held no later than two months after the notice has been received.

The company said the notice did not contain a requesting shareholder statement that was "normally required to be circulated to all members of the company with the notice of meeting".

Acuvax has recently had a significant change in ownership (BD: Nov 16, 19; Dec 3, 13, 2010).

Acuvax fell 0.1 cents or 25 percent to 0.3 cents with 51 million shares traded.

### FLUOROTECHNICS

Fluorotechnics says James Walker will cease to as managing director and chief executive officer but continue as an executive director.

Fluorotechnics said that with the introduction of new capital, the winding down of its global business and looking for new opportunities, and board restructure Mr Walker would supervise the transition of the German manufacturing business and the ongoing Australian business, including pursuing opportunities for the sale of that business.

The company said Mr Walker would remain the primary contact point and, with all directors, would be responsible for the consideration of acquisition proposals.

Fluorotechnics sold its US subsidiary the Gel Company as part of the scaling back of its operations and selling some or all of its assets (BD: Oct 6, 26, 2010; Jan 16, 2011) .

SeparatelyM Mr Walker told Biotech Daily that he had been appointed chief financial officer and chief operating officer of the Melbourne-based Optalert.

Mr Walker said the Optalert Alertness Monitoring System was the only scientifically validated, real-time safety system that detects the early onset of drowsiness during a journey by accurately measuring a person's level of alertness and quantifying to both driver and company their fatigue risk profile.

Fluorotechnics has been suspended from trading and last traded at 3.8 cents.

Optalert is a private company.

### MEDICAL DEVELOPMENTS INTERNATIONAL

Novaport Capital has become a substantial shareholder in Medical Developments with the acquisition of 4,769,957 shares or 8.37 percent of the company.

The initial substantial shareholder notice from the Pitt Street, Sydney-based Novaport said the company acquired the shares for \$1,860,283 or 39 cents a share on January 26, 2011.

Novaport is an independent boutique investment group, related to the Challenger group. Medical Developments was untraded at 39 cents.