# Biotech Daily

Monday June 30, 2008

*Daily news on ASX-listed biotechnology companies*

*** ASX, BIOTECHS DOWN: NEUREN UP 47%, PORTLAND DOWN 38.5%**

*** ANTISENSE, TEVA DATA SHOWS PHASE II MS DRUG SUCCESS**

*** NEUREN EXPECTS RESULTS 6 MONTHS SOONER**

*** MARC SINATRA'S BIOGUIDE BRIEFS: NEUREN, ANTISENSE**

*** VIRALYTICS MOVES TO US ANTI-CANCER VIRUS DRUG PRODUCTION**

*** BIOLAYER, PRINCE OF WALES INSTITUTE DEVELOP PARKINSON'S TEST**

*** USCOM SAYS RESEARCH BACKS USE IN .LIVER TRANSPLANT SURGERY**

*** ELANCO COMPLETES TRIAL OF ACRUX DOG PRODUCT**

*** BIOSIGNAL'S $US1.5m HAWKEN DEALS FALL THROUGH**

*** ANADIS WINS $US500k VISTECH GRANT**

*** AVEXA'S CEO DR JULIAN CHICK: 'WE HAVE 12 MONTHS CASH'**

*** BONE PLACEMENT TO RAISE UP TO $2m**

## MARKET REPORT

The Australian stock market closed down 0.3 percent on Monday June 30, 2008 with the All Ordinaries down 16.5 points to 5,332.9 points. Thirteen of the Biotech Daily Top 40 stocks were up, 21 fell and six traded unchanged.

Neuren was best, up 3.5 cents or 46.67 percent to 11 cents on moderate volumes, followed by Antisense up 1.4 cents or 23.33 percent to 7.4 cents. Sunshine Heart and Cathrx were up more than 14 percent; Optiscan climbed 9.3 percent; Ventracor was up 8.7 percent; Impedimed rose 6.12 percent; Prana was up five percent; Acrux was up 4.27 percent; Progen climbed 2.99 percent; with Mesoblast up 1.11 percent.

Portland led the falls, down one cent or 38.46 percent to 1.6 cents on modest volumes, followed by Stem Cell down 14.29 percent to 30 cents. Novogen lost 7.2 percent; Bionomics and Clinuvel fell more than six percent; Benitec, Tissue Therapies and Universal Biosensors were down five percent or more; Genetic Technologies, Peplin, Phosphagenics and Phylogica fell more than four percent; Avexa, Heartware, Living Cell and Polartechnics were down more than three percent; Biota, Cellestis and Cytopia shed more than two percent; with Arana and Starpharma down more than one percent.

ANTISENSE

Antisense and its Israeli partner Teva Pharmaceutical say that ATL/TV1102 “significantly reduced disease activity in patients with relapsing-remitting multiple sclerosis”.

A randomized, double-blind, placebo-controlled phase IIa study met its primary endpoint showing a significant reduction by 54.4 percent (p = 0.01) in the cumulative number of new active brain lesions in patients taking ATL/TV1102 for eight weeks, compared to placebo, as measured by magnetic resonance images.

Based on the results, Teva said it intended to conduct additional pre-clinical and clinical research before continuing to a phase III study with the molecule.

The trial’s principal investigator Dr Volker Limmroth who is chairman of the Department of Neurology at Cologne City Hospitals said the results were “very encouraging and demonstrate a highly significant effect for ATL/TV1102 on disease activity in MS patients”.

Teva's group vice-president of innovative resources Moshe Manor said Teva planned to continue the development of the molecule to confirm its efficacy, a decision that triggers a $US4 million milestone payment to Antisense.

Antisense chief executive officer Mark Diamond was “very pleased” with the results.

“Achieving the primary endpoint to such a significant degree vindicates our efforts in developing this unique drug, the first to use antisense technology in the treatment of [multiple sclerosis],” Mr Diamond said.

“We now look forward to continuing the development of ATL/TV1102 for MS with one of the leading pharmaceutical companies in the world,” Mr Diamond said.

The ATL/TV1102 phase IIa trial was a randomized, double-blind, placebo-controlled clinical trial of ATL/TV1102.

Seventy-six patients received either ATL/TV1102 or placebo injections subcutaneously at a dose of 200 mg three times a week for the first week and twice weekly over an additional seven weeks after which they were monitored for an additional eight weeks.

Assessment was by monthly magnetic resonance imaging (MRI) brain scans.

The goal of the trial was to obtain preliminary evidence of ATL/TV1102’s effectiveness in reducing multiple sclerosis-related MRI brain lesions and assess its safety profile.

For the study’s primary endpoint, ATL/TV1102 showed a significant 54.4 percent reduction in the cumulative number of new active lesions on weeks four, eight and 12 (p = 0.01).

In addition, patients taking ATL/TV1102 experienced a 65 percent reduced cumulative number of brain lesions on weeks four, eight, and 12 (p = 0.0053).

ATL/TV1102 demonstrated an increasing effect with time on the reduction of new active lesions over 12 weeks, namely one month after the completion of dosing. This extended duration of activity post-dosing was anticipated based on the drug’s long (more than three weeks) half-life and would support the proposition of less frequent dosing than the twice weekly dosing employed in the current trial though this would need to be confirmed in future clinical studies.

In general, ATL/TV1102 was well-tolerated. Potentially attributable adverse events included injection site reactions which were mild to moderate and thrombocytopenia. Thrombocytopenia was reversible after treatment interruption returning to within normal ranges and was not accompanied with any clinical consequences.

The companies plan to present the results of this study at future scientific meetings.

Multiple sclerosis is the leading cause of neurological disability in young adults. It is estimated that 400,000 people in the US are affected by the disease and that more than two million people are affected worldwide.

It is a progressive, demyelinating disease of the central nervous system affecting the brain, spinal cord and optic nerves.

Antisense was 2.5 cents before closing up 1.4 cents or 23.33 percent to 7.4 cents.

NEUREN

Neuren says it expects to have “top level trial results” released in late 2008, six months ahead of schedule.

Neuren said an independent review of data from the first 99 completed patients in the phase III trial of Glypromate indicated the trial would be able to definitively assess the efficacy of the drug with complete data from 320 patients rather than the 606 originally targeted.

The original sample size of the study was based on statistics from previous studies conducted in the field.

A routine review of data quality and completeness conducted by the study statistician as part of the recently completed positive safety review showed significantly better data quality as well as fewer missing observations than expected.

As a result, a decision was made to conduct an independent, blinded review of the statistical assumptions underlying the trial.

The review showed that Neuren will be able to complete the study with the same power and precision with only 320 completed patients, with top level efficacy and safety results released by the end of 2008, six months ahead of schedule, the company said.

The change in protocol has been submitted to the US Food and Drug Administration as an amendment to the investigational new drug application.

Neuren’s co-chief executive officer Dr Parmjot Bains said the company was focused on reducing the time and cost of taking its promising drug compounds for central nervous system disorders and brain injury closer to registration.

Dr Bains said the revised patient numbers would allow the company to announce the safety and efficacy results for Glypromate later this year ahead of the published milestone of the second quarter of 2009 and at a lower cost than originally forecast.

Neuren’s chairman Dr Robin Congreve said it was a credit to Neuren staff, the Glypromate team and the sites conducting the trial that the quality of the data was better than in comparable studies.

“For shareholders and patients, these results mean that we will be able to determine the effect of Glypromate in cardiac surgery patients sooner than we had planned,” Dr Congreve said.

“This will permit us to speed the development of Glypromate and assemble the resource base necessary to advance our other clinical programs for Motiva and NNZ-2566 which we believe offer the potential to significantly enhance shareholder value,” he said.

The analysis showed that variance in the data was lower and that fewer patients had been lost to follow-up than originally estimated when calculating the sample size.

Variance is a measure of the average distance between a set of data points and their mean value.

This measure dictates the sensitivity of the comparison of efficacy results between patients receiving the drug and those receiving the placebo.

The smaller the variance, the more sensitive is the comparison between active and placebo patients and the fewer patients that are required to achieve the trial end points.

The initial sample size was based on a variance of 4.87 in the endpoint assessing change in cognitive function.

The actual variance in the first 99 patients analyzed was about half this, at 2.75.

In addition, the initial projections on loss to follow up were based on losing 10 percent of patients, whereas, the actual loss to follow up was seven percent of patients.

As a result of this improvement in data quality and variance, the sample size requirement based on the same power and precision has been recalculated at 320 completed patients.

Neuren climbed 3.5 cents or 46.67 percent to 11 cents.

## NEUREN, ANTISENSE

Two of biotech's battlers produced good news, today.

Neuren Pharmaceuticals announced it would be in a position to release the results of its first phase III Glypromate trial in cardiac surgery patients before the end of the year, six months ahead of schedule.

The company said it would be able to do this because of lower than expected variance in a key endpoint and a higher than expected retention of patients in the clinical trial.

But neither of the factors that have allowed the trial to report early really improve the chances of a positive outcome for Glypromate. They only speak to the spread of data overall and the multi-factorial issue of keeping tabs on patients.

Where it really helps Neuren is that it brings significant news six months closer. Obviously, if cash flow is six months closer the share price should increase accordingly. More important is that it gives Neuren that imminence of results that often spurs investor interest and share prices.

Two issues have plagued Neuren: the development paths for its compounds; and its inability to place itself in a strong financial position. While the clarity of its development paths improved over 2007, its financial position hasn't.

Its last capital raising, in December 2008, was undertaken at a 40 percent discount to market price, ended up 70 percent subscribed, sent their share price plummeting and left the company with only enough money to get through 2008.

Neuren's news today should increase its chance of raising a significant amount of capital at a price much more tolerable for investors than the last capital raising. A significant capital raising will help Neuren in a wide range of areas, not the least of which is when they sit down to negotiate deals.

Once it has completed such a raising, Neuren will likely return to being the promising stock that it once was.

Antisense Therapeutics has clearly produced the news of the day with the announcement that ATL/TV1102 has reduced the activity of disease in patients with relapsing remitting multiple sclerosis.

Although the news has brought an expected and deserved increase in the company's share price, it may lose ground over the coming months.

Antisense's partner Teva Pharmaceuticals has stated that they will "conduct additional pre-clinical and clinical research before continuing to a phase III study…." and, since Antisense's other projects are also a way from producing clinical trial results, investors may lose interest and the share price may stagnate or retreat a bit.

Marc Sinatra owns shares in Neuren Pharmaceuticals

## VIRALYTICS

Viralytics says it will move production of its anti-cancer product Cavatak to a US manufacturer specializing in therapeutic virus production.

Based on preliminary clinical trial data the company is undertaking the necessary preparations to conduct phase II clinical trials with Cavatak as announced on June 19, 2008 (See Biotech Daily; June 20, 2008).

Viralytics said the decision to move production of Cavatak, to an industry-recognized supplier will enable production of commercial quantities at appropriate standards required by American and European regulatory authorities.

Viralytics said dedicated manufacturing facilities were not available in Australia.

The selected manufacturing company cannot be disclosed due to confidentiality agreements.

Viralytics' clinical research and regulatory affairs director Dr Phillip Altman said that with the clinical program "accelerating towards phase II studies" the move to [good manufacturing practice] compliance is a major step forward for the development of Cavatak".

He said the production and US Food and Drug Administration endorsement of the toxicology program were "critical elements in moving forward to commencing vital clinical efficacy studies next year".

Viralytics fell 0.5 cents or 9.09 percent to five cents with 3.5 million shares traded.

## BIOLAYER

Biolayer and the Prince of Wales Medical Research Institute will develop diagnostic tools for the early detection of neurodegenerative diseases, including Parkinson's disease.

The collaboration has been facilitated by Bio-Link, a commercialization company with experience in the biomedical and diagnostic areas.

Under the collaboration, Sydney's Prince of Wales Medical Research Institute will grant Biolayer an option for a licence to develop the Institute's intellectual property and to collaborate on further research and development and the development of a marketable assay and other diagnostic tools.

The collaboration will build on research by a team led by the Institute's senior research fellow Dr Kay Double who has developed a blood test which provides early detection for the loss of neuromelanin, which may predict the onset of Parkinson's disease.

Biolayer will apply its intellectual property relating to the development of assays, including biomarker development capabilities and the application of its proprietary coatings.

Parkinson's disease has no known cure and few indicators prior to physical symptoms.

The potential size of the market for a diagnostic is being investigated but early indications suggest this could be in excess of $500 million globally.

The Institute's executive director Prof Peter Schofield said Dr Double's work had created the opportunity to commercialize the medical research and provide the path to early detection and diagnosis and improved clinical management of Parkinson's disease.

Biolayer chief executive officer, Joe Maeji said the collaboration was "a significant opportunity to apply Biolayer's end-to-end assay development capabilities to an advanced research project.

Biolayer was unchanged at four cents.

## USCOM

Uscom says two research publications and an editorial have supported its monitor during liver transplantation surgery as an alternative to the pulmonary artery catheter.
Uscom said the two studies were from the Queen Mary Hospital in Hong Kong and the Chang Gung Memorial Hospital in Taiwan, “both world-recognized centres of excellence in liver transplantation”.
Uscom said the two studies compared results from the pulmonary artery catheter and ultra-sonic cardiac output monitor (Uscom) and concluded the methods were interchangeable, with the benefit that Uscom was entirely non-invasive while PAC involved a catheter inserted into the heart and was associated with serious complications.
Uscom said the studies confirmed the accuracy of Uscom in high and low cardiac outputs (2.14 litres/min to 18.7 litres/min) as well as the normal range of 5-6 litres/min.
Uscom said the results suggested the device would be useful in assessment and monitoring not only of acute cardiovascular disease in the emergency department and intensive care, but also the pandemic diseases of heart failure and hypertension.
Uscom chief executive officer Paul Butler said the studies further confirmed the monitor’s use in a variety of clinical applications and helped build the evidence for re-imbursement.
Uscom fell 1.5 cents or 7.5 percent to 18.5 cents.

## ACRUX

Acrux says Elanco has completed a late stage clinical trial of the first animal health product under a mutual licence, development and commercialization agreement.
Acrux chief executive officer Dr Richard Treagus told Biotech Daily the undisclosed transdermal product was for use in dogs and had a market potential of $50-100 million a year.
Dr Treagus said he expected the product to be on the market in the first half of 2010.
Elanco is a division of Eli Lilly and Company and is developing products using Acrux’s liquid technology to deliver drugs across the skin of animals.
The study completion puts Elanco on track for Center of Veterinary Medicine submission and review.
Acrux expects a milestone payment from Elanco in the second half of 2009.
Acrux was up five cents or 4.27 percent to $1.22.

## BIOSIGNAL

Biosignal says the spinning out of oil and gas and hospital applications will not proceed.
Negotiations were based on two memoranda of understanding signed in March 2008 (see Biotech Daily March 11, 2008).
Agreement could not be reached with entrepreneur Paul Hawken on terms consistent with those in the memoranda.
Mr Hawken was not in a position to make a reasonable alternative offer by the extended deadline.
Biosignal will continue with its existing industrial collaborations and keeps open the option of structuring one or more spin out companies in the near term.
In March the deal was describing as “unique” for the Australian biotechnology sector, by Biosignal’s chief executive officer Prof Peter Steinberg.
The two deals included non-refundable, non-diluting up-front fees of $US1 million for the industrial applications licence and $US500,000 for the wound and hospital hygiene licence, along with 50 percent shares of all revenues and proceeds.

The funding was dependent on signing the final contracts.
Prof Steinberg said at the time the final contracts were being negotiated but any sub-licence agreed would return a 50 percent share of the total take to Biosignal.
The agreements specified the new entities must raise a minimum of $US4 million within 12 months for the industrial applications and $US2 million for the wound and hospital hygiene applications.
Mr Hawken was to be the executive chair of the new entities and would personally invest in the vehicles as part of the capital raising.
In a media release to the ASX today Prof Steinberg said the company was "disappointed that the deals with Paul Hawken could not be finalized".
"We will continue our various industrial product collaborations, concentrating on our core oil and gas anti-bacterial corrosion product," Prof Steinberg said.
"Development of this technology is continuing on a number of fronts and shareholders should expect further product development news," he said.
"We will be reviewing our cost structure based on the loss of the income anticipated from the upfront payments in the Hawken deals," Prof Steinberg said.
Biosignal fell 0.8 cents or 8.16 percent to nine cents.

## ANADIS

Anadis and Maya-Biotech in Israel will receive $US500,000 in government support to develop an integrated mucositis therapy.
The therapy is for the treatment of ulcers associated as a side-effect of chemotherapy and radiotherapy, described as a persistent condition that causes pain, weight loss, diarrhoea and serious bacterial infections and can lead to patients withdrawing too early from cancer treatment.
The project brings together know-how from Anadis and Maya to reduce the triggers to mucositis, based on a barrier material and Anadis's dairy derived antibodies.
The Victoria-Israel Science and Technology Research and Development Fund (Vistech) has provided $970,000 for the Anadis project and two non-biotechnology projects and has called for more applications.
Launched in 2006, Vistech is a three-year program with Israel and Victoria each providing US$3 million and providing matching grants of up to $US500,000 to help innovative Victorian companies commercialize their research and development and break into Australian, Israeli and world markets.
A Victoria Government media release said Vistech had awarded $2 million to Victorian companies supporting eight projects worth around $7.8 million.
Innovation Minister Gavin Jennings the Vistech grants demonstrated the value of international partnerships in commercializing research.
Fifth round Vistech project applications have opened and will close on September 5, 2008.
"Vistech offers Victorian companies access to additional skills, capital, technology transfer and knowledge, and assists them to find Israeli technology partners," Mr Jennings said.
"Companies working across the life sciences sector as well as advanced manufacturing, nano, water, environment, information communications and synchrotron technologies are encouraged to apply.
For more information on Vistech grants go to: www.business.vic.gov.au/vistech or email Roland Diggens at roland.diggens@iird.vic.gov.au or telephone +613 9651 8170.
Anadis was unchanged at 5.2 cents.

AVEXA

Avexa's chief executive officer Dr Julian Chick says the company has 12 months' cash and will need to secure a partner for its lead drug apricitabine for HIV by December.

On Friday Biotech Daily reported that a partner would be needed by September or the company would be forced to either slow down its phase III trials or seek alternative funding.

The company had a negative net operating cash flow of $19,225,000 for the quarter ending March 31, 2008 with $53,469,000 cash at the end of that quarter, implying the company sufficient funds for a little more than two quarters, as disclosed in its Appendix 4C document filed to the ASX on April 22, 2008.

Avexa's chief financial officer Alan Boyd told Biotech Daily on June 27, 2008 that the March quarter figures included significant start-up costs for the phase III trial as well as drug manufacturing costs.

Dr Chick told Biotech Daily today that Avexa "has 12 months cash".

"Our goal is to find a partner by the end of the year and we believe we are well on-track," Dr Chick said.

Dr Chick said today that further funding would not be required.

Avexa fell one cent or 3.13 percent to 31 cents.

BONE

Bone Medical is hoping to raise up to $2 million in a private placement with strategic investors including major shareholder Proxima Concepts.

Bone says $1 million of shares at 25 cents a share had been subscribed so far, excluding the contribution from Proxima which is a conversion of outstanding obligations of $250,000 and will be subject to shareholder approval at an extraordinary general meeting.

The company said funds raised were for working capital and to support the commercialization of biopharmaceutical projects.

Bone said it was working with strategic investors to finalize commitments and expects to complete the private placement by the end of July.

Bone was unchanged at 24 cents.