



# Biotech Daily

Monday August 2, 2010

*Daily news on ASX-listed biotechnology companies*

- \* **HEARTWARE DRAGS DOWN JULY BDI-40**  
- ANTISENSE UP 25%, QRX DOWN 20.7%, HEARTWARE DOWN 18.1%
- \* **TODAY: ASX UP, BIOTECH DOWN: NOVOGEN UP 13%; CELLMID DOWN 10%**
- \* **WEHI SAYS MISSING PUMA GENE A KEY TO CANCER**
- \* **PATRY'S BEGINS ROYAL ADELAIDE PAT-SM6 MELANOMA PHASE I TRIAL**
- \* **CAPITAL GROUP CLIENTS CONTINUE EXIT FROM COCHLEAR**
- \* **BPH CORP 1-FOR-2 RIGHTS ISSUE TO RAISE UP TO \$8.3m**
- \* **GIACONDA HAS LESS THAN ONE QUARTER CASH**
- \* **KARMELSONIX LESS THAN TWO QUARTERS CASH; EQUITY DRAW DOWN**
- \* **COCHLEAR APPOINTS YASMIN ALLEN DIRECTOR**
- \* **LIVING CELL APPOINTS DR ROSS MACDONALD MANAGING DIRECTOR**

## MARKET REPORT

The Australian stock market climbed 1.07 percent on Monday August 2, 2010 with the S&P ASX 200 up 48.1 points to 4541.6.

Ten of the Biotech Daily Top 40 stocks were up, 15 fell, nine traded unchanged and six were untraded. All three Big Caps were up.

Novogen was best, up two cents or 13.3 percent to 17 cents with 46,385 shares traded followed by Viralytics up 11.4 percent to 3.9 cents and Patrys up 11.1 percent to 11 cents.

Prana and QRX climbed more than three percent; with Biota, Chemgenex and CSL up more than one percent.

Cellmid led the falls, down 0.2 cents or 9.5 percent to 1.9 cents with 415,333 shares traded, followed by Genetic Technologies down 8.8 percent to 3.1 cents with 150,000 shares traded.

Benitec lost 6.9 percent; Compumedics and Prima were both down 4.2 percent; Bionomics was down 3.1 percent, Alchemia, Heartware, Living Cell, Tissue Therapies and Virax shed more than two percent; with Mesoblast down 1.55 percent.

## [BIOTECH DAILY TOP 40 INDEX](#)

The Biotech Daily Top 20 Index (BDI-20) fell 2.2 percent in July, compared to the S&P ASX 200 up 4.5 percent, despite 15 of the Top 20 companies improving.

Heartware's 18.1 percent (\$215 million) fall accounted for nearly all the BDI-20's decline.

The Second 20 had a sharper seven percent decline with six companies up, 11 down and three unchanged, taking the broader BDI-40 down 2.8 percent for the month.

For the year to July 31, 2010, the ASX200 was up 5.9 percent compared to the BDI-40 up 24.2 percent, with the BDI-20 up 24.4 percent and the Second 20 up 23.3 percent.

In July, the three Big Caps of Cochlear, CSL and Resmed (which are not included in the BDI-40) climbed 0.4 percent. For the year to July 31, the Big Caps rose 10.5 percent.

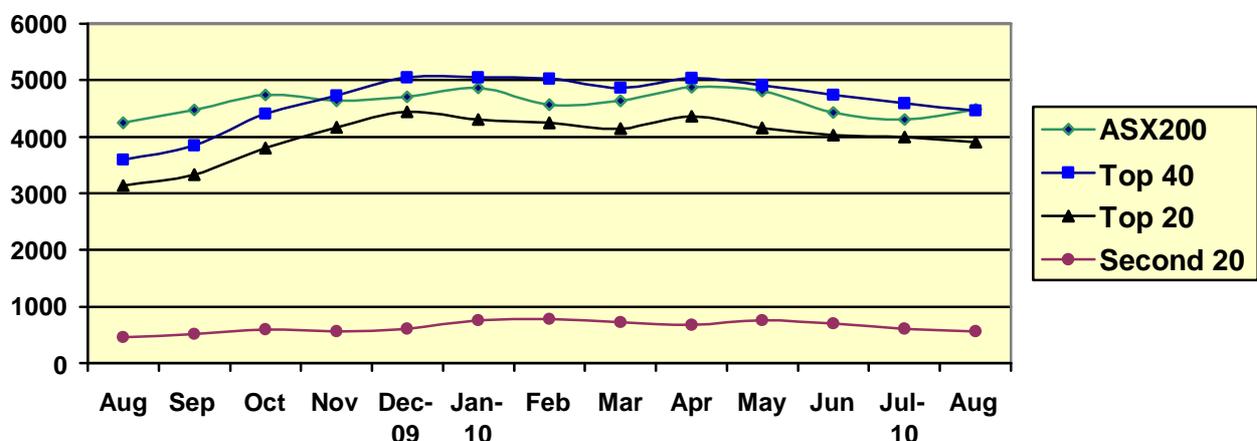
July was generally a quiet month with the Third 20 up 5.8 percent to \$349 million with no companies moving significantly. Of the 61 companies followed by Biotech Daily outside the BDI-40 and the Big Caps, 23 were up, nine fell and 29 were unchanged.

Antisense was the month's best, from a very low base, climbing 25 percent to \$10 million, followed by Impedimed up 22.9 percent on small volumes to \$86 million. Bionomics was up 18.6 percent to \$102 million, with Circadian up 17.4 percent, Cellmid and LBT both up 16.6 percent and Chemgenex recovering a further 13.1 percent.

QRX led the falls, retreating 20.7 percent to \$96 million on the need for another European trial (BD: Jul 26, 2010), followed by Heartware down 18.1 percent or \$215 million to \$976 million. Cathrx fell 15.8 percent to \$32 million, followed by Sunshine Heart down 15 percent to \$17 million, Optiscan (14.3%), Novogen (11.8%) and Bone (11.1%).

Biotechs raised \$3.146 million in July. Acuvax and Giaconda reported less than one quarter's cash at June 30, 2010, while Bioprospect, Fluorotechnics, Imugene, Karmelsonix, Phylogica, Stirling and Sunshine Heart had less than two quarters cash.

Biotech Daily Top 40 (\$m) v S&P ASX200 2009-'10  
(Market capitalization on the last trading day of the month.)



## [THE WALTER AND ELIZA HALL INSTITUTE FOR MEDICAL RESEARCH](#)

The Walter and Eliza Hall Institute says its scientists have made a discovery that has “upended the understanding of programmed cell death and its role in tumor formation”. A media release from the Institute said programmed cell death, or apoptosis, removed unwanted and damaged cells and protected against cancer and autoimmune disease. The Walter and Eliza Hall Institute (WEHI) said the discovery, by a research team led by Prof Andreas Strasser, had implications for the understanding of how cancers developed and would inform the development of a class of anti-cancer drugs called BH3 mimetics. “Until now everybody believed that a failure of damaged cells to undergo suicide allowed mutated cells to proliferate, which contributes to tumor development,” Prof Strasser said. “That’s certainly still true but we discovered that, in certain settings, the opposite holds: the body’s natural cell-suicide program can fuel tumor development,” Prof Strasser said. The Institute said the research team’s experiments showed that repeated cycles of cellular depletion and tissue regeneration, by activating stem cells, could promote tumor development.

Where the DNA in many cells was damaged, as when the body was repeatedly exposed to low doses of radiation, there were repeated cycles of cell death in the body’s tissues.

“Attempts by the body’s stem cells to repopulate the depleted tissue can then actually drive the tumor development,” Prof Strasser said.

“That’s because the radiation, while killing many cells within a tissue, will create mutations in some of the surviving stem cells,” he said.

“When such abnormal or mutated stem cells repopulate the tissue, they will divide many times and this can promote the development of tumors,” Prof Strasser said.

The research paper entitled 'Apoptosis-promoted tumorigenesis: gamma-irradiation-induced thymic lymphomagenesis requires Puma-driven leukocyte death' was expected to be published today in the journal *Genes & Development*:. <http://genesdev.cshlp.org>. WEHI said that what happened to mice without the p53 upregulated modulator of apoptosis (Puma) gene exposed to radiation was crucial to the research.

“If normal mice, which have the Puma gene, are given a low dose of radiation it destroys around 80 percent of the white blood cells,” Prof Strasser said.

Prof Strasser said that did not kill the mouse but meant the bone marrow stem cells had to work harder to replenish the blood system, which could lead to tumors of white blood cells, or leukaemias, if the stem cells doing the repopulating had cancer-causing mutations.

“The surprise was that mice that don’t carry the Puma gene are protected from this type of tumor development,” Prof Strasser said.

“Puma is essential for the death of cells that have damaged DNA,” he said.

“If mice don’t have the Puma gene when they receive low doses of radiation the white blood cells are not destroyed, so you don’t force mutated stem cells to become activated and divide to replenish the blood system,” Prof Strasser said.

Prof Strasser said the research suggested the risk of cancer was increased in people who experienced cycles of tissue destruction followed by tissue re-population by stem cells.

“Such cycles may account for the liver cancers frequently associated with viral hepatitis C infection or alcohol-related liver damage,” Prof Strasser said.

He said the research helped explain the secondary cancers in patients who were cured of their primary cancer by chemotherapeutic drugs that cause DNA damage.

“Chronic exposure to such drugs could lead to the death of large numbers of normal cells that would then need to be replaced,” Prof Strasser said. “In certain circumstances this could promote the development of secondary cancers, particularly if patients are receiving treatments such as chemotherapy or gamma-radiation that can lead to cancer-causing mutations in stem cells,” Prof Strasser said.

## PATRYS

The Royal Adelaide Hospital has approved Patrys's human clinical trial of natural human antibody PAT-SM6 as a treatment for melanoma, targeting glucose-regulated protein 78. Patrys said PAT-SM6 had shown "great promise in laboratory and animal testing as a potential treatment for multiple types of cancer, with a particularly strong potency against melanoma".

The company said the trial was the first to target glucose-regulated protein 78 (GRP78) as a treatment for melanoma.

Patrys said glucose-regulated protein 78 was a protein over-expressed on the surface of cancer cells that played a role in the aggressiveness of the disease.

In contrast, glucose-regulated protein 78 was not present on the surface of normal cells, the company said, making PAT-SM6 "a novel treatment with a potentially potent yet safe profile".

Patrys chief executive officer Dan Devine said the start of the trial was "exciting on a number of levels".

"First, PAT-SM6 offers a potentially new treatment for melanoma, where current therapies are largely ineffective," Mr Devine said.

"In addition, this is the first trial of a product produced using Patrys' proprietary manufacturing platform for natural human antibodies, which is groundbreaking and which sets a precedent for advancing other clinical candidates from our pipeline," Mr Devine said.

Patrys said the primary endpoint for the 10-patient trial was to measure the safety of PAT-SM6 with multiple secondary endpoints aimed at measuring the anti-tumor activity of PAT-SM6.

The company said the first patient data from the trial was expected to be available by the end of 2010 and the trial was expected to take about 12 months to be completed, including collation of results.

Patrys said that should PAT-SM6 prove safe and well-tolerated in its first on-human study, it expected an immediate start of a second trial that would target up to 25 patients with metastatic melanoma and additional types of cancer.

The company said the production process for the larger trial had begun.

Patrys said melanoma was a serious global medical problem, with an expected doubling of incidence every 15 years.

Patrys said Australia had the highest rate of skin cancer in the world, with about 10,000 cases diagnosed each year.

The company said that current treatments for metastatic melanoma were largely ineffective, resulting in a five-year survival rate of 16 percent.

Patrys was up 1.1 cents or 11.1 percent to 11 cents.

## COCHLEAR

The US based Capital Group Companies has further reduced its substantial shareholding in Cochlear from 5,618,543 shares (9.94%) to 5,050,049 shares (8.93%).

Capital Group increased its holding in Cochlear to as much as to 7,322,475 shares (13.03%) on September 11, 2009, before beginning reductions in May (BD: May 11, 2010).

Capital Group said it did not own shares in Cochlear but held them on account for Capital Research and Management Company.

The 568,494 shares were sold at an average price of \$73.673.

Cochlear climbed 61 cents or 0.9 percent to \$71.29.

### BPH CORPORATE

BPH (formerly Biopharmica) hopes to raise up to \$8,278,170 through a one-for-two non-renounceable share rights offer at eight cents a share.

BPH said it would issue up to 103,477,123 shares in the rights issue and currently had 310,431,369 shares on offer.

The company said the offer was underwritten by Grandbridge Securities.

BPH chairman David Breeze is the executive chairman of Grandbridge.

BPH said the proceeds would be used to fund the company's unlisted oil and gas exploration investee company Advent Energy as well as the company's biotechnology investee entities Cortical Dynamics and Molecular Discovery Systems.

BPH said the record date was August 11, 2010, the opening date was August 16 and the closing date was August 31, 2010.

BPH fell 0.3 cents or 3.5 percent to 8.3 cents with 4.1 million shares traded.

### GIACONDA

Giaconda says its net operating cash burn for the three months to June 30, 2010 was \$59,000 with cash at the end of the quarter of \$17,000 but provided no further information. Giaconda was untraded at three cents.

### KARMELSONIX

Karmelsonix said its net operating cash burn for the three months to June 30, 2010 was \$1,517,000 with cash at the end of the quarter of \$2,297,000.

Karmelsonix said it had an as yet unused loan and equity draw down facility of \$7.2 million and was "confident that the next 12 months will see strong sales growth".

Karmelsonix was unchanged at 2.1 cents.

### COCHLEAR

Cochlear has appointed Yasmin Allen as a director.

Cochlear said Ms Allen had more than 20 years' experience in business, investment banking and as a company director.

The company said Ms Allen was an independent non-executive director of Insurance Australia Group, chair of Macquarie Specialised Asset Management and is a member of the advisory board of the Salvation Army.

### LIVING CELL TECHNOLOGIES

Living Cell has appointed Dr Ross Macdonald to the new position of managing director.

Living Cell said Dr Macdonald would work closely with chief executive officer Dr Paul Tan.

The company said Dr Macdonald had 22-years experience in the pharmaceuticals industry and most recently was the UK-based Sinclair Pharmaceuticals vice-president of business development.

Living Cell said he was Stiefel Laboratories' vice-president of corporate development, acquired by Glaxosmithkline in 2009 for GBP2.25 billion (\$A3.9 billion).

Dr Macdonald was the vice-president of business development at the Palo Alto California-based Connetics Corp when it was acquired by Stiefel.

He was previously vice-president of research and development with FH Faulding & Co.

Living Cell fell half a cent or 2.2 percent to 22.5 cents.

## BIOTECH DAILY'S TOP 40 WITH MARKET CAPITALIZATION

<b>Company \$Am</b>	<b>Aug-09</b>	<b>Jul-10</b>	<b>Aug-10</b>
Cochlear	3,128	4,202	3,996
CSL	18,391	17,909	18,217
Resmed	3,643	5,586	5,594
<b>Top 20</b>			
AcruX	190	291	313
Alchemia	60	98	103
Antisense	21	8	10
Bionomics	63	86	102
Biota	328	183	177
Cellestis	343	264	267
Chemgenex	169	84	95
Clinuvel	97	68	71
Genera	25	28	29
Heartware	204	1,191	976
Impedimed	60	70	86
Living Cell	43	59	65
Mesoblast	155	286	299
Nanosonics	88	120	133
Pharmaxis	519	464	497
Sirtex	250	273	280
Starpharma	70	129	127
Sunshine Heart	18	20	17
Tissue Therapies	14	25	26
Universal Biosensors	132	244	231
<b>Second 20</b>			
Benitec	10	13	12
Bone Medical	15	9	8
Cathrx	23	38	32
Cellmid	6	6	7
Circadian	34	23	27
Compumedics	21	21	19
Genetic Tech	24	14	14
LBT Innovations	18	6	7
Novogen	80	17	15
Optiscan	5	7	6
Patrys	19	19	19
Phosphagenics	86	74	70
Phylogica	11	17	18
Prana	38	36	33
Prima	32	73	68
Psivida	50	65	66
QRX Pharma	41	121	96
Uscom	28	15	14
Viralytics	10	17	18
Virax	5	12	12

\* Biotech Daily editor, David Langsam, owns shares in Alchemia, Bionomics, Biota, Chemgenex, Impedimed, Neuren, Optiscan, Pharmaxis and non-biotechnology stocks and has an indirect interest via Australian Ethical trusts in Cochlear, Impedimed, Pharmaxis, QRX, Resmed and Tissue Therapies. These holdings are liable to change at any time.

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