

Biotech Daily

Friday July 1, 2016

Daily news on ASX-listed biotechnology companies

- * 10-YEAR BDI-40 UP 163%, ASX UP 3%, BIG CAPS UP 308%, NBI UP 262%
- YEAR-TO-JUNE 30: BDI-40 UP 8%, ASX200 DOWN 4%; BIG CAPS UP 27%
- * TODAY: ASX, BIOTECH UP: MESOBLAST UP 15%, CELLMID DOWN 6%
- * WEHI: 'PROTEIN HOPE FOR MALARIA VACCINE'
- * MESOBLAST \$120m KENTGROVE FACILITY, OCTOBER HEART RESULTS
- * OVENTUS RAISES \$12m, TO LIST ON JULY 14
- * MEDADVISOR, BRISTOL-MYERS SQUIBB EDUCATION COLLABORATION
- * REGAL FUNDS TAKES 5% OF IMPEDIMED
- * BRAIN LOSES FOUNDING DIRECTOR NESTOR HINZACK

MARKET REPORT

The Australian stock market was up 0.25 percent on Friday July 1, 2016 with the ASX200 up 13.2 points to 5,246.6 points. Twenty of the Biotech Daily Top 40 stocks were up, 12 fell, seven traded unchanged and one was untraded.

Mesoblast was the best, up 16.5 cents or 15.3 percent to \$1.24 with 4.1 million shares traded, followed by Living Cell up 12.2 percent to 8.3 cents with 2.2 million shares traded.

Antisense climbed 9.7 percent; IDT was up 8.9 percent; Bionomics and Compumedics were up more than five percent; Impedimed, Osprey and Prima improved more than four percent; Avita, Opthea and Orthocell were up more than three percent; Ellex, Factor, Nanosonics, Sirtex and Starpharma rose more than two percent; Benitec, Biotron, Resmed and Viralytics were up more than one percent; with Cochlear up 0.03 percent.

Cellmid led the falls, down 0.2 cents or 6.1 percent to 3.1 cents with 2.8 million shares traded.

Clinuvel and Genetic Technologies lost more than five percent; Reva and Uscom fell four percent or more; Admedus and Universal Biosensors were down more than three percent; Acrux and Actinogen shed more than two percent; Medical Developments and Polynovo were down more than one percent; with CSL and Pro Medicus down by less than one percent.

BIOTECH DAILY TOP 40 INDEX (BDI-40)

They say that biotechnological development moves at a glacial pace and today's data proves that this sector is more for decade-traders than day-traders.

The Biotech Daily Top 40 Index (BDI-40) - which does not include the three Big Caps of Cochlear, CSL and Resmed - is 10 years old today and it is up 163.4 percent compared to June 30, 2006, while the ASX200 has improved just 3.1 percent in 10 years, with the Big Caps up a collective 307.5 percent from \$17,156 million on June 30, 2006 to \$69,910 million last night. The Nasdaq Biotech Index (NBI) climbed 262.4 percent in the decade.

For the year to June 30, 2016, the BDI-40 was up a respectable 8.4 percent, the ASX200 fell 4.1 percent, the NBI lost 30.3 percent, but the Big Caps improved 27.1 percent, but the month of June was bad for everyone, with the BDI-40 down 11.1 percent, the ASX200 down 2.7 percent and even the Big Caps retreated 1.9 percent.

The June BDI-40 saw many small falls and a few small rises, but Teva returning Mesoblast's cardiac program wiped \$343 million from the Index, and along with Sirtex easing \$340 million, accounting for most of the loss. For the month to June 30, 2016, 27 of the BDI-40 companies fell, 10 were up and three were unchanged.

Living Cell was the best, up 37.0 percent to \$37 million followed by Uscom (28.6%), Airxpanders (25.1%), Cellmid (24.0%), Prana (20.5%) and Universal Biosensors (14.3%).

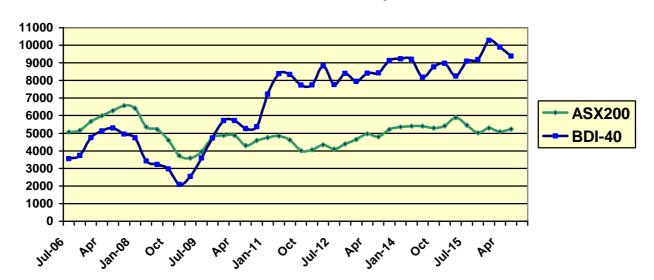
Mesoblast led the falls, down 45.6 percent to \$410 million, followed by Antisense (28.6%), Orthocell (24.0%), IDT (23.4%), Psivida (21.0%), Actinogen (20.0%) and Sirtex (18.8%).

Cochlear was up \$33 million to \$6,936 million, CSL eased 1.2 percent from last month's high to \$51,323 million and Resmed edged up 2.2 percent to \$11,651 million.

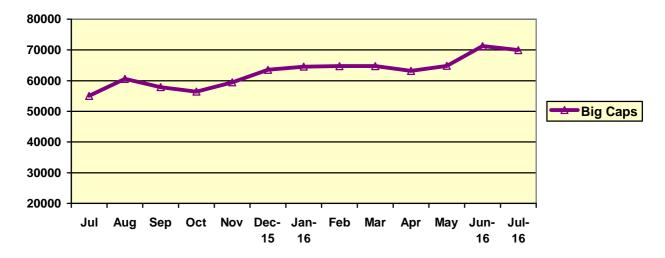
The Nasdaq Biotech Index fell 7.9 percent in June, with former Australian companies Heartware up 90.9 percent to \$1,359, Aviragen (Biota) down 7.6 percent to \$73 million and Sunshine Heart losing 33 percent to a low of \$12 million.

Outside the BDI-40, Cyclopharm, Innate, OBJ and Resapp continued to improve, while generics manufacturer Mayne Pharma jumped 19.8 percent to \$1,543 million.

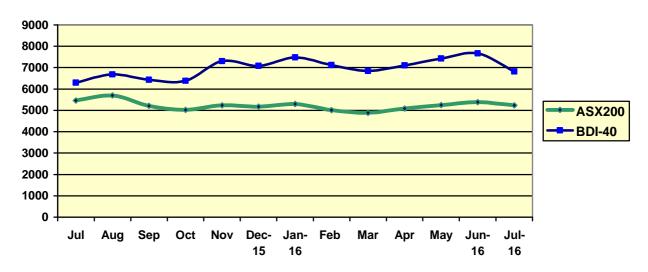
BDI-40 v ASX200 Jun 30, 2006 to Jun 30, 2016 - Adjusted



Big Caps \$m (Cochlear, CSL, Resmed) Jun 30, 2015 – Jun 30, 2016



BDI-40 (\$m) v S&P ASX 200 – Jun 30, 2015 – Jun 30, 2016



THE WALTER AND ELIZA HALL INSTITUTE OF MEDICAL RESEARCH

The Walter and Eliza Hall Institute says in-vitro research shows that deleting key proteins prevents the malaria parasite from penetrating human red blood cells.

The Institute said that research led by Prof Alan Cowman discovered that three proteins, Rh5, Ripr and CyRPA, formed a complex that played "a vital role in the ability of the Plasmodium falciparum parasite to invade healthy human blood cells".

WEHI said that removing or knocking-out the Ripr or CyRPA proteins, meant that the malaria parasite was unable to invade the red blood cell, stopping malaria infection. The Institute said that the research, entitled 'Essential Role of the PfRh5/PfRipr/CyRPA Complex during Plasmodium falciparum Invasion of Erythrocytes' was published in the journal Cell Host & Microbe and an abstract was available at:

http://www.cell.com/cell-host-microbe/fulltext/S1931-3128(16)30255-4.

The Institute said that the malaria parasite had developed resistance to most of the antimalarial drugs on the market and new treatments were urgently needed. WEHI said that about half the world's population was at risk of contracting malaria each year, with more than 200 million people infected and up to 450,000 people dying each year, predominantly children under the age of five.

MESOBLAST

Mesoblast says it has an up to \$120 million equity facility with Kentgrove Capital, but only needs \$17.4 million to reach interim heart failure trial results in October.

In June, Mesoblast went into a 14-day trading halt, suspension and extended suspension to announce that Israel's Teva Pharmaceuticals had handed back its phase III cardiac stem cell program (BD: Jun 14, 2016).

The company said at that time that it had an equity facility to continue the trial but in a teleconference chief executive Prof Silviu Itescu declined to provide details of the arrangement.

Today, Mesoblast said the agreement with Melbourne's Kentgrove was for up to \$60 million over 18 months, with the option to increase it to \$120 million over 36 months. Mesoblast said it would determine when the placement occurred, the placement period, the maximum amount of the placement and the minimum share price.

The company said that for each placement, it would receive funds via the issue of shares at a 4.5 percent discount to the volume weighted average price (VWAP), "which cannot be less than the minimum issue price determined by Mesoblast".

Mesoblast said that Kentgrove would be granted 1,500,000 incentive rights with a three year exercise period at an exercise price equivalent to 200 percent of the 10-day VWAP to the date of the facility.

The company said it could terminate the facility on 14 days' notice, but Kentgrove could only terminate the facility in specified circumstances, such as a material breach of the facility by Mesoblast which was not remedied.

In 2015, Genetic Technologies agreed to a \$24 million 24-month standby equity facility with Kentgrove (BD: Jan 22, 2015).

In March Kentgrove acquired 19.9 percent of Alchemia and its founder and managingdirector David Lamm was appointed a director of Alchemia (BD: Mar 4, 7, 2016). Mesoblast said that it expected to conduct an interim analysis of its lead phase III heart

failure program by October 2017, with the expected costs to the analysis about \$US13 million (\$A17.4 million).

The company said that its annualized cash burn would be "materially reduced through cost reductions and a strategic prioritization of core assets" and existing cash reserves of about \$US80 million would provide an operational runway for 12 to 15 months.

Mesoblast said that it had funds to maintain its priority programs for degenerative disc disease, graft versus host disease and biologic-refractory rheumatoid arthritis.

Prof Itescu said the company could "obtain meaningful data by performing a blinded interim analysis to assess the heart failure trial's primary endpoint" by October 2017.

"The results will inform our subsequent strategic decisions regarding the program," Prof Itescu said. "Importantly, we are implementing a series of material cost-cutting measures and have realigned existing company resources to focus on our key value drivers." Mesoblast said that 240 patients had been enrolled in the phase III heart failure trial to

date comparing its MPC-150-IM mesenchymal precursor cells treatment to a control group with the primary endpoint a comparison of recurrent heart failure-related major adverse cardiovascular events.

The company said that the results would be used to provide evidence-based support for strategic decisions regarding the phase III program, on-going cardiovascular partnering discussions and informed use of funds.

Mesoblast said that during the coming 12 to 18 months it expected "key data readouts from each of its tier 1 programs" and it would continue discussions with potential strategic partners to deliver non-dilutive funding.

Mesoblast climbed 16.5 cents or 15.3 percent to \$1.24 with 4.1 million shares traded.

OVENTUS MEDICAL

Oventus says it has raised \$12 million and closed its fully subscribed initial public offer at 50 cents a share (BD: Jun 20, 2016).

Oventus said it expected to begin trading on the ASX under the code OVN on July 14, 2016.

The company said that the initial public offer was underwritten by Bell Potter and "received strong support from institutional and sophisticated investors as well as brokers Ord Minnett, Baillieu Holst and Peloton Capital".

Oventus said that the funds raised would be used to continue the commercialization and distribution of its O2vent range of devices in Australia, develop additional devices, and begin expansion into other jurisdictions commencing with the US later this year. Oventus Chairman Dr Mel Bridges said the company had "a unique product targeted to

disrupt the multi-billion dollar global market for treating sleep apnoea and snoring".

MEDADVISOR

Medadvisor says it has a collaboration with the New York-based Bristol-Myers Squibb for a 12-month patient engagement and education program.

Medadvisor chief executive officer Robert Read said his company's medication compliance mobile telephone application helped patients "receive the important educational information they need to ensure the quality use of medications".

"This information can be critical to patients and we are pleased that [Bristol-Myers Squibb has] recognized that the Medadvisor platform can help patients take their medication safely, effectively and on time," Mr Read said.

Medadvisor was up 0.4 cents or 10.5 percent to 4.2 cents with 10.2 million shares traded.

IMPEDIMED

Regal Funds Management has become a substantial shareholder in Impedimed with 18,682,335 shares or 5.00 percent of the company.

The Sydney-based Regal Funds said that it acquired the shares between February 29 and June 28, 2016 at prices ranging from 86 cents to 96.5 cents a share and the registered holders were UBS Nominees, Credit Suisse Securities Europe, Merrill Lynch (Australia) Nominees and HSBC Custody Nominees (Australia).

Earlier this week, Regal became substantial in Prescient and previously said it was a substantial shareholder in Oncosil, Adherium and Airxpanders and in 2014 underwrote \$1.4 million of Suda options (BD: Jul 1, 2014; Feb 10, Mar 31, Jun 14, 27, 2016). Impedimed was up four cents or 4.2 percent to 98.5 cents.

BRAIN RESOURCE

Brain says that founding director Nestor Hinzack resigned effective from June 30 2016, as foreshadowed on March 2, 2016.

Brain said that Mr Hinzack was appointed a director on May 6, 2001 and the company thanked him "for his significant contribution and service".

Brain was unchanged at 13.5 cents.

BIOTECH DAILY TOP 40 WITH MARKET CAPITALIZATION AT JUNE 30, 2016

Company \$Am	Jul-15	Jun-16	Jul-16
Cochlear	4,575	6,903	6,936
CSL	40,194	52,961	51,323
Resmed	10,240	11,398	11,651
BDI-20		400	400
Acrux	142	120	120
Admedus	129	73	64
Bionomics	174	139	137
Clinuvel	127	221	203
Ellex	36	115	109
Impedimed	254	351	353
Medical Developments	155	362	354
Mesoblast	1,267	753	410
Nanosonics	481	713	648
Neuren	129	115	94
Opthea	27	71	74
Pharmaxis	69	84	81
Polynovo	38	154	156
Prima	110	93	85 480
Pro Medicus	216	486 476	482
Psivida Psys	147	176 479	139
Reva	158	478	470
Sirtex	1,642 49	1,804	1,464
Universal Biosensors		49	56
Viralytics Second 20	140	208	235
Actinogen	44	55	44
Actinogen	109	175	219
Anteo	67	45	42
Antisense	20	7	5
Atcor	33	, 26	25
Avita	31	56	49
Benitec	80	15	14
Biotron	37	22	19
Cellmid	24	25	31
Compumedics	45	71	61
Factor (TIS)	10	25	25
Genetic Technologies	48	38	33
IDT	44	64	49
Living Cell	21	27	37
Oncosil	36	64	64
Orthocell	18	25	19
Osprey	92	38	34
Prana	80	44	53
Starpharma	233	262	237
Uscom	16	21	27
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^{*} Biotech Daily editor, David Langsam, owns shares in Acrux, Admedus, Benitec, Mesoblast, Nanosonics, Neuren, Volpara and non-biotechnology stocks. Through Australian Ethical Superannuation he has an indirect interest in a range of other biotechnology companies: http://www.australianethical.com.au/who-we-invest-in. These holdings are liable to change.