



Biotech Daily

Monday May 3, 2021

Daily news on ASX-listed biotechnology companies

- * APRIL BDI-40 UP 7% TO RECORD \$19,731m, ASX200 UP 3.5%, BIG CAPS UP 4%
- * TODAY: ASX, BIOTECH EVEN: IMUGENE UP 8%; LBT DOWN 8%
- * IMAGION, PATRYS COLLABORATE ON BRAIN CANCER IMAGING
- * PHARMAXIS: TEO \$187k FOR PRE-CLINICAL PXS-5505 GBM STUDY
- * WEHI: NATURAL ANTIBODIES BLOCK MALARIA PARASITES
- * BIONOMICS REPAYS \$6m EQUIPMENT, BANK LOAN EARLY
- * RACE REQUESTS 'CAPITAL RAISING' TRADING HALT
- * TOTAL BRAIN REQUESTS 'COMMERCIAL CONTRACT' TRADING HALT
- * VERITAS BELOW 5% IN COCHLEAR
- * PERENNIAL TAKES 15% OF GENETIC SIGNATURES
- * INOV8 INCREASES, DILUTED TO 7.8% OF ANALYTICA
- * CHAIR DR MICHAEL MONSOUR DILUTED TO 19.99% OF ANALYTICA
- * TELIX PROMOTES, APPOINTS EXECUTIVES FOR APAC, EMEA

MARKET REPORT

The Australian stock market edged up 0.04 percent on Monday May 3, 2021, with the ASX200 up 3.0 points to 7,028.8 points. Eighteen of the Biotech Daily Top 40 stocks were up, 18 fell, three traded unchanged and one was untraded. All three Big Caps fell.

Imugene was the best, up 1.5 cents or 7.9 percent to 20.5 cents, with 16.4 million shares traded. Starpharma climbed 6.5 percent; Impedimed improved 4.35 percent; Avita, Patrys, Universal Biosensors and Uscom were up more than three percent; Clinuvel, Cyclopharm, Medical Developments, Optiscan, Orthocell, Pharmaxis, Polynovo, Telix and Volpara rose one percent or more; with Opthea and Paradigm up by less than one percent.

LBT led the falls, down 0.7 cents or 8.2 percent to 7.8 cents, with 2.1 million shares traded, followed by Proteomics down 8.0 percent to \$1.04. Antisense, Osprey and Resonance lost five percent or more; Actinogen, Mesoblast and Resmed fell more than four percent; Oncosil was down 3.1 percent; Cynata, Genetic Signatures, Immutep, Next Science and Prescient shed two percent or more; Compumedics, Nanosonics and Pro Medicus were down one percent or more; with Cochlear, CSL, Kazia and Neuren down by less than one percent.

BIOTECH DAILY TOP 40 INDEX (BDI-40)

The Biotech Daily Top-40 Index (BDI-40) was up 6.7 percent in April - the third month in a row in record territory - to \$19,731 million.

The benchmark S&P ASX200 was up 3.5 percent to 7,026 points, up 27.2 percent compared to 12 months ago, but still below the pre-Covid 7,017 points (see charts below).

The BDI-40 was 17.5 percent above its pre-Covid record high and 39.9 percent above April 30, 2020 (see charts below).

The collective market capitalization of the three Big Caps of Cochlear, CSL and Resmed (which are not included in the BDI-40) was up 3.7 percent in April, with Cochlear up 6.5 percent to \$14,774 million, Resmed up 3.6 percent to \$38,079 million and CSL up 3.3 percent to \$124,471 million.

For the 12 months to April 30, the Big Caps were down 0.6 percent.

In the US, the Nasdaq Biotech Index (NBI) climbed 3.0 percent in April, 24.7 percent above April 30, 2020.

Twenty-one of the BDI-40 stocks were up, 11 by more than 10 percent; 17 companies fell in April, seven by more than 10 percent; with two unchanged.

It was a tale of two indices, with the Second 20 seeing some extraordinary rises from small bases. Last month's 91.2 percent best, Actinogen, was second best in April to Optiscan's 114.7 percent jump to \$277 million, eclipsing Actinogen's 69.2 percent rise to \$110 million.

Imugene was up 58.8 percent to \$907 million, Universal Biosensors was up 40.7 percent and Next Science improved 29.8 percent, with Pharmaxis the best of the Top 20, up 18.75 percent, followed by Pro Medicus (14.3%), Immutep (13.6%), Polynovo (12.6%), Amplia (10.7%) and Clinuvel (10.5%).

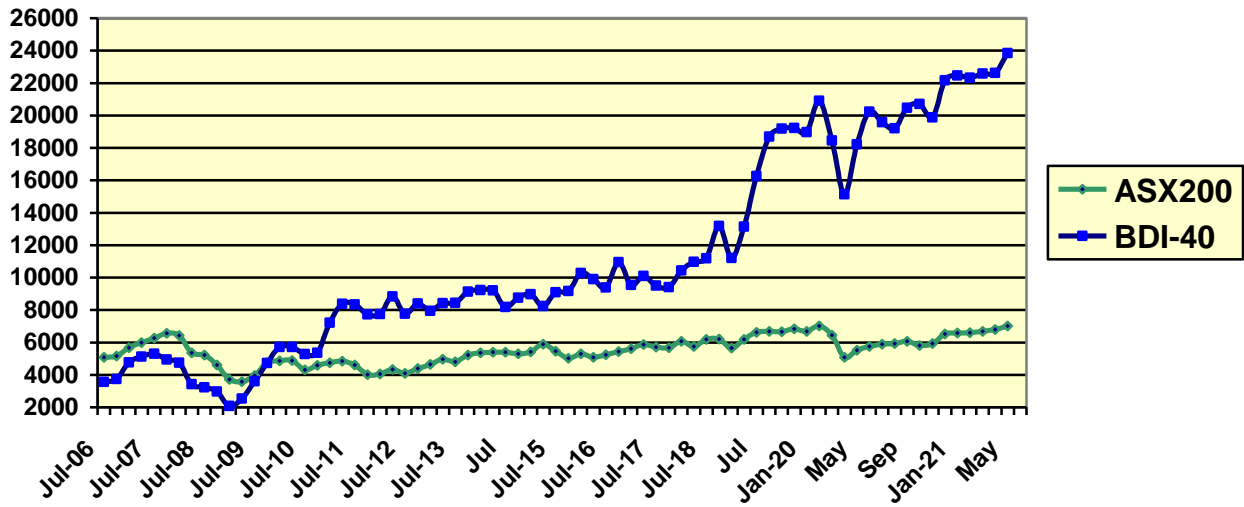
Mesoblast led the falls, down 15.7 percent to \$1,187 million, followed by Telix (12.6%), Genetic Signatures (11.7%), Prescient (11.4%), Patrys (11.3%), Starpharma (10.8%) and Kazia (10.4%).

Outside the BDI-40, Anteo was the star, up 74.1 percent to \$815 million, with Alcidion and Emvision continuing strong growth and three marijuana companies – Creso, Ecofibre and Incannex – also impressive.

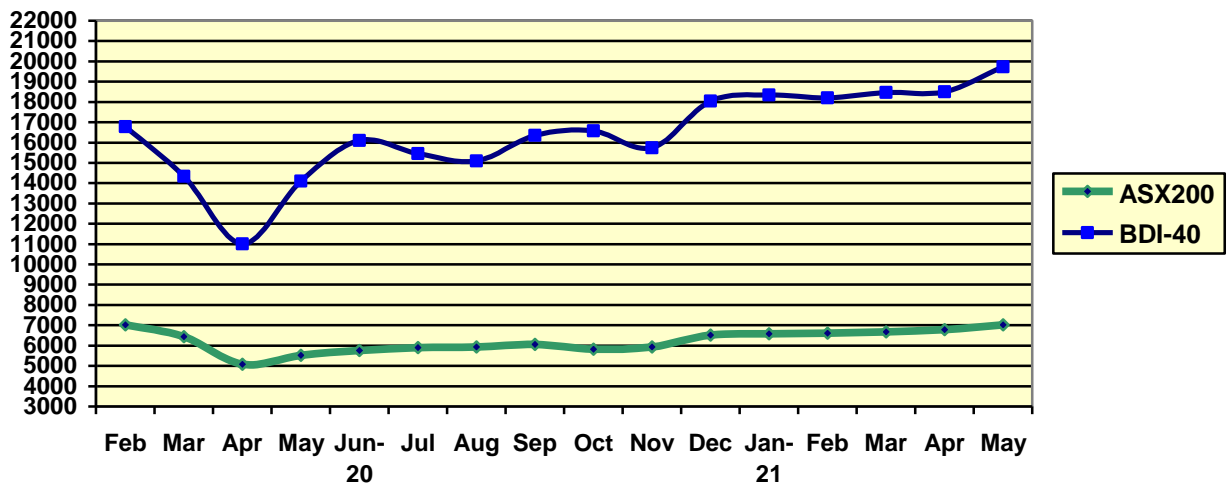
The 22 companies in Cannabis Corner were up 10.8 percent to a collective market capitalization of \$1,973 million, eclipsing the February record high of \$1,945 million.

On the Nasdaq, Queensland's Protagonist climbed a further 10.2 percent to \$1,647, - 475.9 percent above April 30, 2020. Eyepoint (formerly Psivida) was up 3.6 percent to \$398 million and Redhill (with Australian assets) fell eight percent to \$412 million.

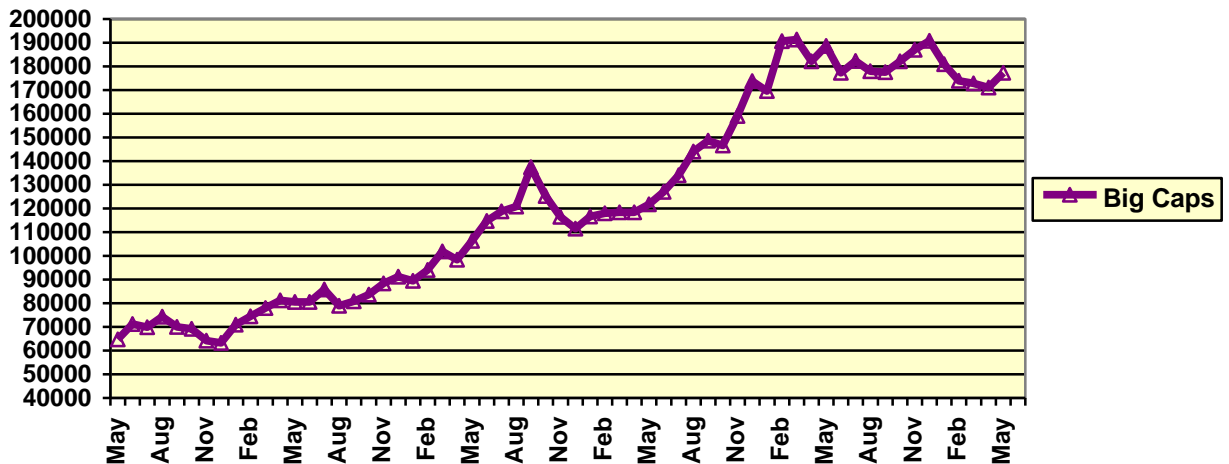
BDI-40 v ASX200 Jun 30, 2006 to Apr 30, 2021- Adjusted



BDI-40 (\$m) v S&P ASX 200 – Jan 31, 2020 – Apr 30, 2021 (current, raw data)



Big Caps \$m (Cochlear, CSL, Resmed) Apr 30, 2016 – Apr 30, 2021



IMAGION BIOSYSTEMS, PATRYS

Imagion and Patrys say they will collaborate on brain tumor imaging and diagnosis.

Patrys said its deoxymabs were attracted to the deoxy-ribonucleic acid (DNA) fragments released by dying tumor cells and were able to penetrate and kill tumor cells.

The companies said the collaboration aimed to pair the targeting specificity of deoxymabs with the imaging capabilities of Imagion's Magsense technology for an effective imaging agent that has high specificity for hard-to-diagnose cancers, like brain cancer.

Patrys said preliminary research had shown that its Pat-DX1 molecule could be conjugated with Magsense nanoparticles to provide bio-functionality for targeting "certain cancer cell lines".

The companies said if the collaborative work showed positive results, Imagion would have an exclusive option to a future licence agreement to commercialize the imaging agent, and under the collaboration both parties would bear their own expenses.

Patrys chief executive officer Dr James Campbell said, "the potential for our deoxymab antibodies to home-in on a range of different cancer types due to their affinity for DNA is one of the properties that makes them unique and opens up a range of different clinical applications for their use."

Dr Campbell said that the company was "very excited to be leveraging the cancer-targeting ability of deoxymabs, by partnering with Imagion and its innovative Magsense imaging technology, to potentially develop new ways to visualize and diagnose cancer".

"This is the first step of multiple potential applications of our deoxymab platform, and while our focus is on advancing our novel cancer therapeutics to the clinic, we are actively engaged in business development efforts for the broader platform to leverage the unique attributes of deoxymabs," Dr Campbell said.

Imagion executive chair Bob Proulx said there was "potential for Patrys' deoxymabs to be paired with our Magsense nanoparticles for many types of solid tumors".

"We are very keen to investigate the potential for brain tumor imaging, since there is such a high unmet need for differentiating cancerous tumors in the brain, like glioblastoma, as well as metastatic disease that has spread to the brain from other primary tumors," Mr Proulx said.

Imagion was up 0.1 cents or 1.1 percent to 9.4 cents with 38.0 million shares traded.

Patrys was up 0.1 cents or 3.85 percent to 2.7 cents with 4.5 million shares traded.

PHARMAXIS

Pharmaxis says Sydney's Charlie Teo Foundation has provided a grant of \$186,837 for pre-clinical studies of its lysyl oxidase inhibitor PXS-5505 for glioblastoma.

Pharmaxis said the grant would fund work at the Houston-based University of Texas MD Anderson Cancer Center by Prof Y Alan Wang.

The company said lysyl oxidase enzymes played "a critical role" in glioblastoma multiforme (GBM) because they attract inflammatory cells that accelerate tumor growth and reduce survival.

Pharmaxis said PXS-5505 had demonstrated a good safety profile in healthy volunteer studies and the current research was to validate the effectiveness of PXS-5505 in brain cancer models.

Pharmaxis chief executive officer Gary Phillips said the company was "delighted the Charlie Teo Foundation has awarded this grant to enable [the] study of PXS-5505".

"I lost my own father to glioblastoma, so this project is close to my heart," Mr Phillips said.

Mr Phillips said the study would run for a year and could lead to clinical trials in 2022.

Pharmaxis was up 0.1 cents or 1.2 percent to 8.6 cents with 1.4 million shares traded.

THE WALTER AND ELIZA HALL INSTITUTE OF MEDICAL RESEARCH

WEHI says it has identified how natural human antibodies can block malaria parasites from entering red blood cells, showing potential for protective therapies.

The Institute said the research provided insight into how antibodies blocked the entry of Plasmodium vivax malaria parasites into reticulocytes, or young red blood cells, building on an earlier discovery that Plasmodium vivax latches onto the transferrin receptor 1 (TfR1) to enter cells.

WEHI said the research article, titled 'Naturally acquired blocking human monoclonal antibodies to Plasmodium vivax reticulocyte binding protein 2b', was published in Nature Communications and was at: <https://www.nature.com/articles/s41467-021-21811-2>.

The Institute said the research was led by Prof Wai-Hong Tham and student Li-Jin Chan.

WEHI said that antibodies from people with a history of malaria infection showed that antibodies could block Plasmodium vivax from latching onto TfR1 on reticulocytes, preventing parasite proteins from getting close enough to the cell to allow parasite entry. The Institute said the malaria parasite was a complex single-celled organism, with diverse proteins helping it invade red blood cells, reproduce and spread, and adhesins on the parasite's surface were key-like proteins that unlocked cells, allowing parasites to enter. Prof Tham said that previous studies showed that antibodies against Plasmodium vivax adhesins were correlated with protection against infection and disease.

"We wanted to understand how these human antibodies in natural infection block the parasite from getting in," Prof Tham said.

Prof Tham said that by extracting antibodies from people who had infections, researchers identified the different ways antibodies against Plasmodium vivax worked, one of which was by stopping the parasite adhesins from getting close to the reticulocyte membrane, denying the parasite entry.

"This discovery opens the door to potentially preventing not only P vivax malaria, but also P falciparum malaria, another significant cause of deaths globally," Prof Tham said.

BIONOMICS

Bionomics says it has repaid \$6,155,674 of loans and has no outstanding debt.

Bionomics said the debt obligation was to a \$172,963 equipment loan and a \$5,982,711 bank loan, both taken out in March 2021 and the repayment dates were due in March 2023 and January 2022, respectively, but by accelerating repayment it saved \$98,537.

Bionomics chair Dr Errol De Souza said that following a recent fundraising, "pre-payment of our outstanding debt obligations signifies another step in fortifying our balance sheet"/ Bionomics was up half a cent or 2.1 percent to 24.5 cents.

RACE ONCOLOGY

Race has requested a trading halt "pending an announcement regarding a capital raising". Trading will resume on May 5, 2021 or on an earlier announcement.

Race last traded at \$3.07.

TOTAL BRAIN

Total Brain has requested a trading halt pending an announcement "in relation to a non-binding material commercial contract".

Trading will resume on May 5, 2021 or on an earlier announcement.

Total Brain last traded at 27 cents.

COCHLEAR

Veritas Asset Management says it has ceased its substantial holding in Cochlear, reducing from 3,574,042 shares (5.57%) to 3,258,132 shares (4.96%).

The London-based Veritas said between April 3, 2020 and April 30, 2021, it bought and sold shares, with the single largest sale on April 14, 2021, of 275,479 shares for \$57,724,217 or \$209.54 a share.

Cochlear fell 95 cents or 0.4 percent to \$221.55 with 75,691 shares traded.

GENETIC SIGNATURES

Sydney's Perennial Value Management says it has increased its shareholding in Genetic Signatures from 19,259,534 shares (13.48%) to 21,313,482 shares (14.92%).

Perennial said between October 26, 2020 and April 28, 2021 it bought and sold shares, with the single largest purchase 374,566 shares for \$646,988 or \$1.73 a share.

Perennial said the shares were held by National Asset Servicing, Northern Trust, BNP Paribas Securities Services, and Citicorp Nominees.

Genetic Signatures fell four cents or 2.9 percent to \$1.34.

ANALYTICA

Inov8 says it has increased its substantial shareholding but been diluted in Analytica from 320,702,362 shares (12.58%) to 360,790,157 shares (7.82%).

The St Thomas, US Virgin Islands-based Inov8 said on October 19, 2017 it bought 40,087,795 shares for \$200,439 or 0.5 cents a share and was diluted in a placement.

In April, Analytica said it had commitments to raise \$3.83 million in a placement at 0.35 cents a share (BD: Apr 23, 2021).

Analytica was up 0.05 cents or 16.7 percent to 0.35 cents with 3.1 million shares traded.

ANALYTICA

Chair Dr Michael Monsour says his 879,475,914 shares in Analytica have been diluted from 24.99 percent to 19.99 percent following a placement (see above).

TELEX PHARMACEUTICALS

Telex says it has promoted and appointed several executives for its Asia Pacific region and Europe, Middle East, and Africa regions.

Telex said it has appointed chief business officer and head of investor relations Dr David Cade as head of the Asia Pacific region.

The company said that general counsel Jonathan Barlow would take on the role of chief business development officer as well as general counsel, and it had appointed an unnamed head of investor relations expected to join the company in July 2021.

Telex said Dr Tracey Brown had been appointed head of product portfolio management, with research and development director Dr Michael Wheatcroft promoted to chief scientist.

The company said Richard Valeix was appointed head of Europe, Middle East, and Africa, replacing Ludovic Wouters who would remain on European business development team.

Telex said Mr Valeix previously worked for Novartis, Ipsen and Roche and held a Diploma in Pharmacy from Pharmaceutical University Marseille and a Master of Management from the Fontainebleau-based Institut Européen d'Administration des Affaires.

Telex was up four cents or 1.1 percent to \$3.78 with 474,055 shares traded.

BIOTECH DAILY TOP 40 WITH MARKET CAPITALIZATION AT APR 30, 2021

Company \$Am	May-20	Apr-21	May-21
Cochlear	11,717	13,870	14,774
CSL	143,298	120,447	124,471
Resmed	33,642	36,741	38,079
BDI-20			
Avita	928	630	647
Clinuvel	1,052	1,338	1,479
Compumedics	87	81	81
Cyclopharm	103	240	262
Cynata	69	89	90
Ellex	88	48	47
Genetic Signatures	271	223	197
Immutep	67	272	309
Medical Developments	495	371	393
Mesoblast	1,698	1,408	1,187
Nanosonics	2,020	1,716	1,837
Neuren	150	164	148
Opthea	638	551	506
Paradigm	421	580	531
Pharmaxis	35	32	38
Polynovo	1,362	1,792	2,017
Pro Medicus	2,605	4,307	4,921
Starpharma	384	780	696
Telix	340	1,204	1,052
Volpara	301	326	334
Second 20			
Actinogen	23	65	110
Alterity	17	67	63
Amplia	5	28	31
Antisense	23	121	115
Dimerix	35	50	50
Impedimed	39	157	172
Imugene	112	571	907
Kazia	36	202	181
LBT Innovations	25	29	25
Next Science	329	258	335
Oncosil	68	74	78
Optiscan	18	129	277
Orthocell	61	94	100
Osprey	5	44	46
Patrys	15	53	47
Prescient	18	70	62
Proteomics	28	124	119
Resonance	60	92	90
Universal Biosensors	35	91	128
Uscom	34	25	23

* Biotech Daily editor, David Langsam, owns shares in Acrux, Actinogen, Alcidion, Alterity, Amplia, BTC Health, Cochlear, Control Bionics, Cynata, Nanosonics, Neuren, Patrys, Polynovo, Telix, Volpara and non-biotech stocks. Through Australian Ethical Superannuation he has an indirect interest in other companies: <https://www.australianethical.com.au/personal/ethical-investing/companies-we-invest-in/>. These holdings are liable to change.

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