



Biotech Daily

Wednesday May 1, 2019

Daily news on ASX-listed biotechnology companies

- * **ASX UP, BIOTECH DOWN: OPTISCAN UP 9%; AVITA DOWN 13%**
- * **APRIL BDI-40 UP 18%, ASX200 UP 2%, BIG CAPS UP 3%, NBI DOWN 5%**
- * **BRANDON \$210m FOR MRCF5; 'AUSTRALIA'S BIGGEST VC FIRM'**
- * **NOVITA TALI ATTENTION FOR OREGON SCHOOL**
- * **4DX: LUNG HEALTH INITIATIVE \$960k FEDERAL GRANT**
- * **POLYNOVO US DEFENCE NOVOSORB CONTRACTS**
- * **ORTHOCELL TAKES CELGRO FOR LIGAMENT REPAIR TO TGA**
- * **US PATENT FOR BARD1 CANCER DIAGNOSTICS**
- * **RECCE RECEIVES \$204k RADIUM R&D TAX INCENTIVE LOAN**
- * **GENERA HAS \$50k CASH; 'LOANS, PLACEMENT'**
- * **ADHERIUM HAS LESS THAN ONE QUARTER CASH**
- * **INVITROCUE HAS LESS THAN ONE QUARTER CASH; PLACEMENT**
- * **NUHEARA HAS LESS THAN TWO QUARTERS CASH; 'MORE COMING'**
- * **MICRO-X HAS LESS THAN ONE QUARTER CASH; THALES \$10m NOTE**
- * **FIL BELOW 5% IN STARPHARMA**

MARKET REPORT

The Australian stock market was up 0.8 percent on Wednesday May 1, 2019, with the ASX200 up 50.4 points to 6,375.9 points. Nine of the Biotech Daily Top 40 stocks were up, 19 fell, eight traded unchanged and four were untraded. All three Big Caps were up.

Optiscan was the best for the third day in a row on no news, up 0.4 cents or 8.9 percent to 4.9 cents, with 278,360 shares traded. Impedimed climbed 7.7 percent; Compumedics and Proteomics were up more than five percent; Orthocell and Prescient improved more than four percent; Medical Developments rose 2.5 percent; Cochlear and Resmed were up more than one percent; with Clinuvel, CSL and Starpharma up less than one percent.

Avita led the falls, down five cents or 13.0 percent to 33.5 cents, with 10.2 million shares traded. Volpara lost 8.1 percent; Antisense lost 7.3 percent; Kazia and Pharmaxis were down more than five percent; Neuren and Patrys fell more than four percent; Immutep Oncosil and Pro Medicus retreated more than three percent; Cynata, Mesoblast and Universal Biosensors shed more than two percent; Genetic Signatures, LBT, Nanosonics, Polynovo and Telix were down one percent or more; with Paradigm down 0.3 percent.

[BIOTECH DAILY TOP 40 INDEX \(BDI-40\)](#)

April was truly excellent for Australian biotechnology - one of the best months on record.

The Biotech Daily Top 40 Index (BDI-40) climbed 18.1 percent, again out-performing the ASX200 which was up 2.3 percent, while the Nasdaq Biotechnology Index (NBI) fell a further 4.8 percent.

The three Big Caps of Cochlear, CSL and Resmed (which are not included in the BDI-40) rose a collective 2.9 percent in April.

For the year to April 30, 2019 the BDI-40 was up 20.9 percent, the ASX200 rose 5.7 percent, the Big Caps improved 14.5 percent and the NBI was up 2.7 percent.

In April, Cochlear improved 8.6 percent to \$10,812 million, CSL rose 2.6 percent to \$89,972 million and Resmed was up 1.5 percent to \$21,019 million.

In April, 24 of the BDI-40 stocks were up; 17 by more than 10 percent and seven by more than 30 percent; while 11 fell, with just two losing more than 10 percent; and five were unchanged.

While Pro Medicus added \$581 million to the index, Volpara was the best by percentage, up 48.7 percent for the month and 243.3 percent for the year to \$333 million, followed by Antisense up 43.75 percent for the month and 360.0 percent for the year to \$23 million.

Polynovo was up 40.7 percent, followed by Alterity (Prana) up 40 percent, Pro Medicus (37.8%), Avita (37.5%), Oncosil (36.0%), Starpharma (31.1%), Impedimed (20.7%), Mesoblast (18.4%), Nanosonics (14.6%), Universal Biosensors (14.3%), Medical Developments (13.9%), Cyclopharm (13.3%), Osprey (12.5%), Benitec (12.1%) and Pharmaxis (10.7%).

Immutep led the falls, down \$17 million or 15.2 percent to \$95 million, followed by Patrys (11.1%), Orthocell (8.3%), Uscom (8.0%), Dimerix (7.1%) and Imugene (5.8%).

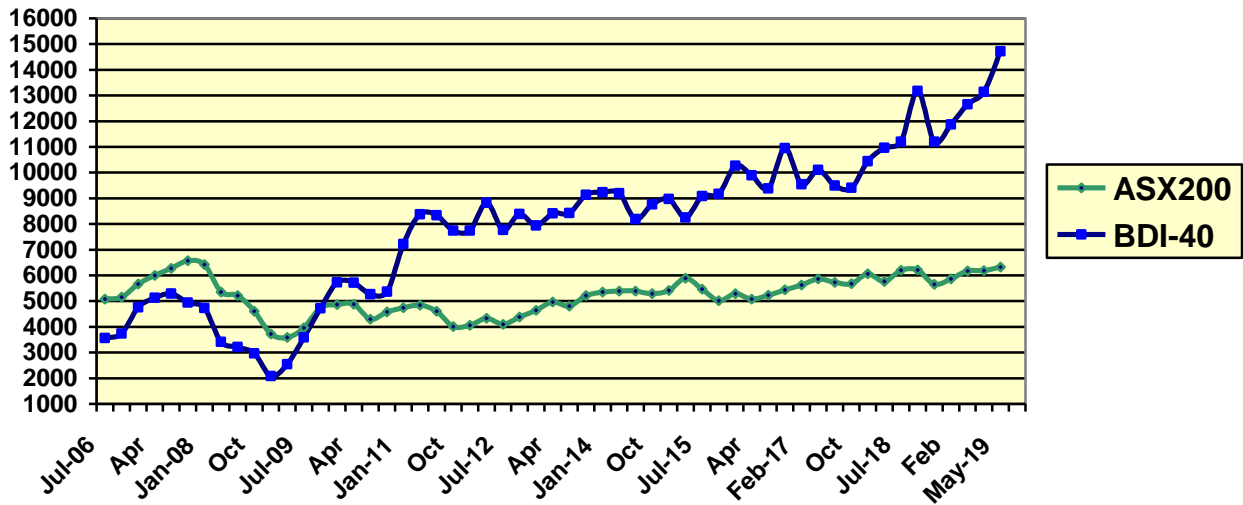
Outside the Top 40, Acrux was at its best since September 2017, Resonance continued its record run, up a further 40.5 percent to \$52 million, with Alcidion, Elixinol, Medadvisor, Painchek and Recce all contenders for promotion.

The 16 stocks in Cannabis Corner were up 5.1 percent to a collective market capitalization of \$1,614 million, with 11 companies up, three down and two unchanged.

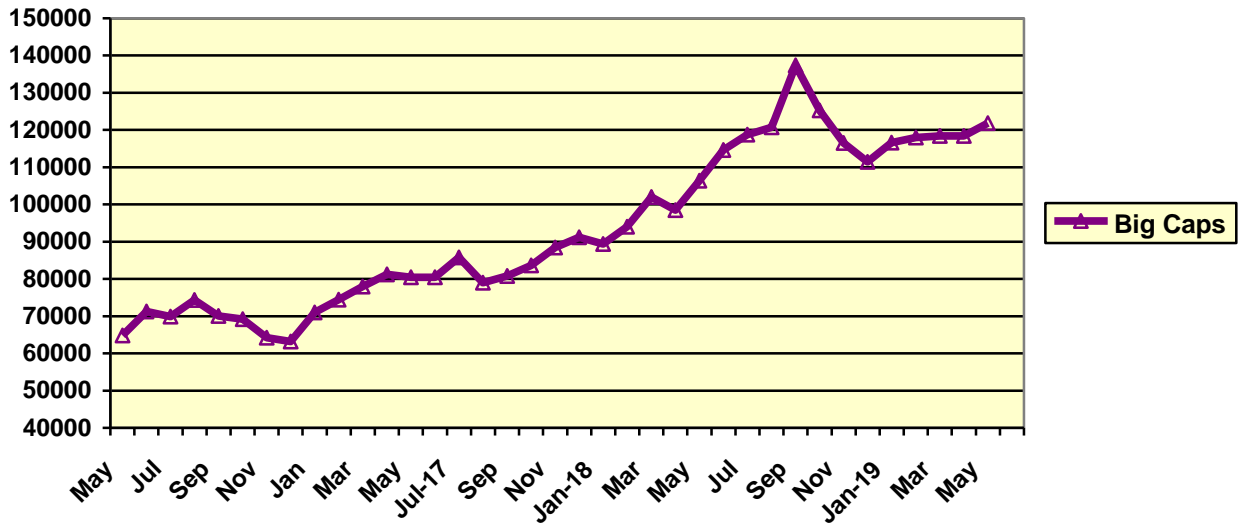
On the Nasdaq, Vaxart (Biota) was at an all-time low tumbling 60.9 percent on a capital raising to \$9 million, Queensland's Protagonist lost 17.6 percent to \$341 million; Israel's Redhill (with Australian assets) shed 5.4 percent to \$314 million and Eyepoint (Psivida) fell 4.1 percent to \$231 million.

There are some changes to the BDI-40 this month with Cynata, Genetic Signatures and Paradigm earning their promotions from the Second 20 to the Top 20, swapping places with Impedimed, LBT and Reva.

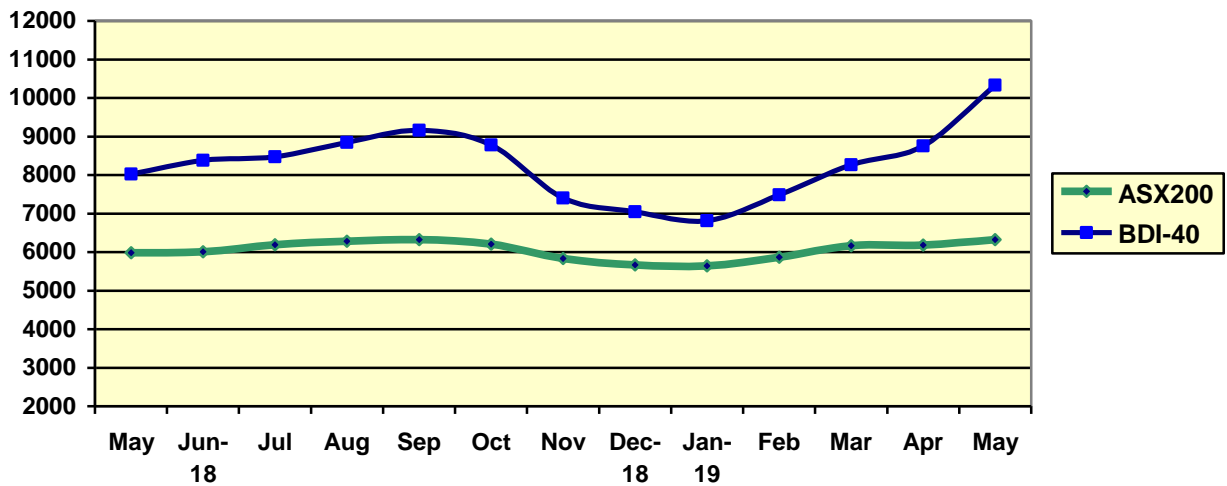
BDI-40 v ASX200 Jun 30, 2006 to Apr 30, 2019- Adjusted



Big Caps \$m (Cochlear, CSL, Resmed) Apr 30, 2016 – Apr 30, 2019



BDI-40 (\$m) v S&P ASX 200 – Apr 30, 2018 - Apr 30, 2019 (current, raw data)



BRANDON CAPITAL PARTNERS

Brandon says that raising \$210 million for its fifth Medical Research Commercialization Fund for early stage research has made it Australia's biggest venture capital firm.

The Melbourne-based Brandon Capital company said that with \$700 million in funds under its management it was Australia's largest venture capital firm as well as the largest life sciences fund, and it was looking to raise a further up to \$250 million for the MRCF5.

The company said that it had identified the first early stage medical research investments for the MRCF5 fund, for MRCF members in its network of more than 50 Australian and New Zealand-based medical research institutions and hospitals.

Brandon said its fifth fund would replace the MRCF3, which backed 16 start-up companies over the last four years and was fully committed and reserved.

The company said that its \$230 million MRCF4, supported by the Federal Government, would continue to invest in later-stage biomedical companies that had progressed to clinical studies.

MRCF chief executive officer and Brandon Capital managing director Dr Chris Nave said the fifth fund was an opportunity "to continue to capitalize on the world-leading medical research capabilities in Australia and New Zealand, developing homegrown biomedical innovations into lifesaving therapies and supporting the local innovation ecosystem".

"Our previous early-stage fund, MRCF3, has now built a portfolio of 16 exciting new companies, eight of which have progressed their assets from the pre-clinical stage to human trials," Dr Nave said.

"The capital remaining in MRCF3 has been reserved to support the existing portfolio and therefore, it was time for us to raise our next early-stage fund, MRCF5," Dr Nave said.

Incoming MRCF chairman and former Queensland Premier Peter Beattie said the MRCF collaboration was "unique in that it is made up of a network of member institutes, which provide the medical innovations and technical and development capabilities".

"We assist by providing the capital and expertise to help guide them through the development and commercialization pathways," Mr Beattie said.

"This often involves establishing a company and putting in place a management team, in addition to providing the funding well before clinical trials or commercialization," he said.

"Our research institutes boast some of the world's best biomedical researchers, but historically there has been a lack of capital available for early-stage biotechnology companies and a limited amount of commercialization expertise within the academic sector," Mr Beattie said.

"The MRCF provides companies with vital capital through various stages of development and works hand-in-hand with researchers and technology transfer groups to commercialize research into therapies that benefit public health globally," Mr Beattie said.

NOVITA HEALTHCARE

Novita says the Portland, Oregon-based Faubion public school has adopted and will use its Tali Train for attention disability.

Last month, Novita said the Idaho-based Nampa school district was the first in the US to use its Tali Train (BD: Apr 18, 2019).

Today, Novita chief executive officer Glenn Smith told Biotech Daily the agreements "are expected to lead to confirmed sales and revenue-generating licences in the near future".

The company said that the Faubion public school had identified 20 children for early intervention to assess and strengthen core attention and the Portland public schools provided public education to nearly 50,000 students from kindergarten to Grade 12.

Novita fell 0.2 cents or 10 percent to 1.8 cents.

4DX

4DX says the Australian Lung Health Initiative has received \$960,000 from the Federal Government to develop a zero-dose paediatric lung scanner.

In 2016, 4DX said Cedars-Sinai Medical Centre received a US grant of \$US600,000 (\$A796,727) to buy its pre-clinical lung scanner (BD: Jul 29, 2016).

Today, the company said the Melbourne-based Australian Lung Health Initiative (ALHI) would develop a paediatric zero-dose lung screening and treatment scanner over six years, based on its technology for four-dimensional lung function imaging analysis.

4DX said the Initiative would deliver a walk-through device suitable for adults and children as young as three and a second generation “near-zero” radiation dose unit for more challenging patients, such as infants and children.

The company said Prof David Parsons and Dr Tim Kuchel from the Adelaide-based Large Animal Research and Imaging Facility would conduct pre-clinical testing across a range of models and the Telethon Kids Institute would conduct stage two clinical research, led by Prof Stephen Stick.

4DX said the Initiative would receive between \$10 million and \$20 million for the second stage of its program through the Medical Research Future Fund.

The company said that the project would provide an export opportunity of more than \$40 billion a year, create 1,000 jobs and provide \$1 billion to the Australian economy within seven years.

4DX founder and chief executive officer and the head of the Australian Lung Health Initiative’s scientific committee Prof Andreas Fouras said that “paediatric lung health is a recognized issue, and currently we don’t have the tools available to help”.

“This grant will enable the development of a technology that specifically targets this currently neglected area,” Prof Fouras said. “Our aim is to transform the lives of children afflicted with chronic lung disease, while developing world-leading technology that will generate significant export income and directly create jobs in high-tech manufacturing, science and clinical fields.”

The company said that the Australian Lung Health Initiative was a partnership including Micro-X, Monash University, Telethon Kids Institute, the University of Adelaide and the South Australia Health and Medical Research Institute.

4DX is a public unlisted company. For more information go to: <http://4dx.com>.

POLYNOVO

Polynovo says it has access to US Department of Defence contracts through a Defence Acquisition and Program Administration and Veteran’s Affairs contract.

Polynovo said the contract would allow the Department of Defence and its health facilities to buy its Novosorb biodegradable temporizing matrix (BTM) wound treatment for serving military, veterans and their families.

The company said it had a Federal supply services contact, allowing access to Medicare and Medicaid patients and the contract would allow reimbursement for both inpatient and outpatient treatments using its Novosorb BTM.

Polynovo chief executive officer Paul Brennan said the access was a “significant opportunity for Novosorb BTM in a large network of military health care facilities in the US and globally”.

“The US military [has] been very supportive of Polynovo’s work with [the Biomedical Advanced Research and Development Authority] so it is very satisfying to now have the opportunity to supply the military with our products,” Mr Brennan said.

Polynovo fell one cent or 1.0 percent to \$1.025 with 7.2 million shares traded.

ORTHOCELL

Orthocell says it has submitted an application to the Australian Therapeutic Goods Administration for its Celgro collagen device for ligament repair.

In 2017, Orthocell said it received Conformité Européenne (CE) mark approval for Celgro as a dental scaffold (BD: Nov 9, 2017).

The company said Celgro was a collagen medical device used as a barrier membrane in various dental procedures such as dental implants.

Orthocell managing director Paul Anderson said the application was “a very important milestone ... as we continue to commercialize our collagen medical device platform and prepare for entry to additional strategic markets”.

Orthocell was up half a cent or 4.35 percent to 12 cents.

BARD1 LIFE SCIENCES

Bard1 says it has been granted a US patent relating to its non-invasive cancer diagnostics.

Bard1 said the patent, titled ‘Regulation of Bard1 expression by non-coding RNA’ would protect its intellectual property until July 12, 2035.

The company said that the patent protected small interfering RNA, or siRNA, that target and reduce the expression of the therapeutic target Bard1 9’L in cancer.

Bard1 was up 0.2 cents or 11.8 percent to 1.9 cents with 22.3 million shares traded.

RECCE PHARMACEUTICALS

Recce says it has received \$204,408 from Radium Capital as a loan against future Federal Research and Development Tax Incentive funds.

Last year, Recce said it had an agreement with Radium to receive an upfront payment of \$543,699 and on-going advances equivalent of 80 percent of its research and development expenditure (BD: Sep 13, 2018).

Recce fell half a cent or 2.2 percent to 22.5 cents.

GENERA BIOSYSTEMS

Genera says its net cash burn for the three months to March 31, 2019, following a Federal Tax Incentive was \$12,000, with cash and cash equivalents at March 31 of \$50,000.

In an Appendix 4C quarterly cash flow statement filed to the ASX at 12.49pm today, Genera said its net operating cash burn for the three months to June 30, 2019 was expected to be \$3,375,000.

The company said it hoped to raise up to \$3,575,000 at 13 cents a share in a placement and in the mean-time it would fund operations through “mezzanine loan funds”.

In March, Genera says it had applications for \$243,062 of the hoped-for \$11,446,428 in its four-for-five non-renouncement entitlement issue at 13 cents a share, it had the right to place the shortfall of 86,179,833 shares by June 19 and if it reached the minimum subscription by April 30, it would issue new shares by May 7, but if it did not receive minimum subscription by April 30, it would repay application amounts without interest or would issue a supplementary or replacement prospectus and allow applicants one month to withdraw applications (BD: Feb 1, Mar 26, 2019).

Today, Genera said it had not been able to place the minimum subscription of shortfall shares by April 30.

Genera remained in a suspension at 16 cents.

ADHERIUM

Adherium says its cash burn for the three months to March 31, 2019 was \$2,110,000 with cash and cash equivalents at March 31 of \$1,951,000.

Adherium said its cash burn for the three months to June 30, 2019 was expected to be \$2,579,000 with receipts from customers for the three months to March 31 of \$405,000.

Adherium was up 0.1 cents or 2.9 percent to 3.6 cents.

INVITROCUE

Invitrocue says its cash burn for the three months to March 31, 2019 was \$1,207,000 with cash and cash equivalents at March 31 of \$531,000.

Invitrocue said its cash burn for the three months to June 30, 2019 was expected to be \$1,030,000, with receipts from customers for the three months to March 31 of \$128,000.

Invitrocue told Biotech Daily it reported a \$974,095 placement in an Appendix 3B new share announcement, yesterday, and was expecting a revenue increase.

Invitrocue was untraded at seven cents.

NUHEARA

Nuheara says its cash burn for the three months to March 31, 2019 was \$1,571,000 with cash and cash equivalents at March 31 of \$5,681,000.

Nuheara said its net operating cash burn for the three months to June 30, 2019 was expected to be \$4,750,000.

The company said that receipts from customers for the three months to March 31, 2019 was \$641,000.

Nuheara chief executive officer Justin Miller told Biotech Daily that the company was reducing costs, expected increasing revenues in the coming months, along with a Federal Research and Development Tax Incentive payment.

Nuheara fell 0.6 cents or 7.6 percent to 7.3 cents with 6.7 million shares traded.

MICRO-X

Micro-X says its cash burn for the three months to March 31, 2019 was \$2,467,000 with cash and cash equivalents of \$1,481,000 at March 31.

Micro-X said its net operating cash burn for the three months to June 30, 2019 was expected to be \$4,308,000.

The company said that receipts from customers for the three months to March 31, 2019 was \$670,000.

In April, Micro-X said that the Thales Group would subscribe for \$10 million worth of its stock in a six-year convertible bond (BD: Apr 1, 2019).

Micro-X fell two cents or 6.1 percent to 31 cents.

STARPHARMA

FIL Limited says it has reduced its substantial shareholding in Starpharma from 18,729,813 shares (5.04%) to 18,511,410 shares (4.98%).

The Hong Kong and Bermuda-based FIL said that between January 10 and March 14, it bought 737,642 shares at prices ranging from \$1.01 to \$1.15 a share and sold 956,045 shares at prices ranging from 95.0 cents to \$1.33 a share.

Starpharma was up half a cent or 0.4 percent to \$1.265.

BIOTECH DAILY TOP 40 WITH MARKET CAPITALIZATION AT APR 30, 2019

Company \$Am	May-18	Apr-19	May-19
Cochlear	11,168	9,959	10,812
CSL	77,071	87,719	89,972
Resmed	18,119	20,704	21,019
BDI-20			
Avita	59	522	718
Clinuvel	561	1,217	1,170
Compumedics	68	80	87
Cyclopharm	74	75	85
Cynata	116	125	123
Ellex	90	85	85
Genetic Signatures	33	117	120
Immutep	73	112	95
Medical Developments	409	317	361
Mesoblast	693	691	818
Nanosonics	721	1,293	1,482
Neuren	303	118	119
Opthea	100	175	173
Paradigm	47	267	273
Pharmaxis	101	103	114
Polynovo	340	486	684
Pro Medicus	827	1,537	2,118
Starpharma	441	357	468
Telix	124	183	190
Volpara	97	224	333
Second 20			
Actinogen	32	59	58
Airxpanders	42	19	20
Alterity (Prana)	22	25	35
Antisense	5	16	23
Benitec	38	33	37
Dimerix	16	14	13
Impedimed	212	82	99
Imugene	88	69	65
Kazia (Novogen)	35	29	30
LBT Innovations	28	16	16
Oncosil	80	25	34
Optiscan	30	19	19
Orthocell	26	12	11
Osprey	53	56	63
Patrys	35	27	24
Prescient	21	12	12
Proteomics	17	24	23
Reva	157	71	71
Universal Biosensors	39	35	40
Uscom	28	25	23

* Biotech Daily editor, David Langsam, owns shares in Acrux, Amplia, Benitec, Mesoblast, Nanosonics, Neuren, Patrys, Polynovo, Prana, Telix, 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.

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