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**18th Bioshares
Biotech Summit**12–13 July 2024
Fremantle, WA**BIOSHARES**

Australia's Independent Biotech Investment Resource, est. 1999

25 January 2024
Edition 951

	Bioshares Portfolio
Year 1 (May '01 - May '02)	21.2%
Year 2 (May '02 - May '03)	-9.4%
Year 3 (May '03 - May '04)	70.6%
Year 4 (May '04 - May '05)	-16.3%
Year 5 (May '05 - May '06)	77.8%
Year 6 (May '06 - May '07)	17.4%
Year 7 (May '07 - May '08)	-35.8%
Year 8 (May '08 - May '09)	-7.4%
Year 9 (May '09 - May '10)	50.2%
Year 10 (May '10 - May '11)	45.4%
Year 11 (May '11 - May '12)	-18.0%
Year 12 (May '12 - May '13)	3.1%
Year 13 (May '13 - May '14)	26.6%
Year 14 (May '14 - May '15)	23.0%
Year 15 (May '15 - May '16)	33.0%
Year 16 (May '16 - May '17)	16.8%
Year 17 (May '17 - May '18)	-7.1%
Year 18 (May '18 - May '19)	-2.3%
Year 19 (May '19 - May '20)	39.5%
Year 20 (May '20 - May '21)	86.8%
Year 21 (May '21 - May '22)	-15.6%
Year 22 (May '22 - Dec '22)	-2.2%
Year 23 (CY2023)	-15.4%
Year 24 (CY2024)	-0.2%

Volatile Half for Australian Biotech Sector

The biotech indices were mostly flat over the second half of 2023, aside from the botanical product companies which fell by 31% on a weighted basis. The Large Cap Index was down just 0.3% and the Bioshares Index (126 companies) fell by just 1.9%.

However, looking within those stocks, of the 150 listed companies, 58% experienced at least a 20% decline (49 companies) or a 20% growth (38 companies). This can be compared against the Nasdaq Biotech Index which rose by 7.2% in the second half of this year, and the ASX 300 Index which was up 5.3% for the period. Whilst investor appetite has returned to the sector for some stocks, it is matched by caution regarding the ostensibly heightened risk of investing in companies that allow their funds to fall below six months cash which has resulted in severely discounted raises.

During 2H23 there were five share consolidations, reflecting the sustained downward pressure on many biotech stocks. The following companies consolidated the number of shares on issue: Imagion, Genetic Technologies, Adherium, MGC Pharmaceuticals and Trivarx.

There were also two acquisitions announced, that of Blackmores for \$1.9 billion by Kirin Holdings (now completed) and the proposed acquisition of Volpara Health Technologies by Lunit for \$296 million. More acquisitions can be expected in 2024.

Nine Companies Delisted from the ASX in 2023

In the second half of 2023, six companies delisted from the ASX, with two of these instances categorized as involuntary. This contrasts against three de-listings in 1H23. However, 2H23 also saw three new listings, whereas 1H23 saw no new listings.

The companies subject to involuntary delisting were the Asian American Medical Group and Analytica, removed in accordance with listing rules 17.12 and 17.15, respectively.

The voluntary delisting of Kazia Therapeutics and Bionomics was attributed to cost minimisation. Both companies have maintained their listings on the NASDAQ exchange due to higher trading volumes.

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Companies covered: **Half Year Review**

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Index Performance

	1H 2022	2H 2022	1H 2023	2H 2023
Bioshares Index	-41.5%	8.1%	-7.0%	-1.9%
Bioshares Large Cap Index	-10.9%	5.8%	0.6%	-0.3%
Bioshares Botanicals Index	-53.3%	9.1%	-27.1%	-31.0%
Nasdaq Biotech Index	-20.7%	12.4%	-3.3%	7.2%
ASX 300 Index	-12.2%	7.0%	2.2%	5.3%

Additionally, Incannex delisted voluntarily due to re-domiciliation from Australia to the U.S. Incannex also intends to shift its shares to the NASDAQ exchange.

Finally, in light of the Kirin Health Sciences acquisition of Blackmores for \$1.9 billion, Blackmores has been removed from the S&P index in addition to its voluntary ASX delisting. Shareholders were sent \$91.71 cash for each Blackmores share held on October 8, 2023.

In addition, Rhinomed disclosed its intention to delist from the ASX on 11 December 2023. Reasons cited by the company include cost, the use of debt funding, and the lack of value recognition of the Rhinomed stock.

Volpara Health Technologies is also expected to delist from the ASX pending its successful acquisition by Lunit Inc for \$296 million.

Lowest Capital Raised in Four Years

Since the record capital raising in 2020 (\$1.7 billion raised) and 2021 (\$1.66 billion raised), the biotech sector capital raisings declined slightly over 2022 (\$1.45 billion raised), hitting a low during 2023 (\$1.13 billion raised).

This marks a decline of \$570 million (-33.5%) from the peak in 2020 to the nadir in 2023. This signifies a four-year low for the sector, since \$1.06 billion was raised in 2019.

Sixty-one biotech companies raised a total of \$668 million in 2H23. Those capital raisings comprised an increase of \$208 million (+45.2%) over the 1H23, in which a total of \$460 million was raised.

A large portion of the capital raised in 2H23 is attributed to the \$178 million raised by Sigma Healthcare (ASX: SIG) via a Rights Issue which may fund part of the company's imminent acquisition of the Chemist Warehouse Group. This deal, that would grant Chemist Warehouse a back door listing on the ASX, is still pending approval which will likely be attained by 2H24.

The other notably significant capital raising in the second half was a Rights Issue and Placement by Opthea (ASX: OPT), raising \$90 million. Due to strong demand, the company accepted \$10 million in oversubscriptions. The funds raised by Opthea will go towards the completion of the current Phase III trials of sozinibercept (OPT-302).

These two raises - by Sigma and Opthea - were the largest in 2023, followed by Immutep (\$80 million raise in 1H23) and Mesoblast (\$60.2 million raised in 1H23). In total, Sigma and Opthea raised \$268 million of the \$668 million raised in 2H23, totalling 40% of the total funds raised in this last half of 2023.

The remaining 59 biotechs that conducted capital raises in 2H23 collectively raised \$400 million (60% of the total funds raised). Of these 59 biotechs, a majority of 33 biotechs (56%) raised between \$1-5 million each. Seven companies raised under \$1 million; five companies raised between \$10-20 million, and four companies raised between \$30-35 million.

Funds Raised by Australian Listed Biotechs

Calendar Year	Total
2023	\$1.13 billion
2022	\$1.45 billion
2021	\$1.66 billion
2020	\$1.70 billion
2019	\$1.06 billion

Biotech De-listings 1H FY2024

Company	Code	Date of removal from the official list	Voluntary/Involuntary	Reason for delisting
Blackmores	BKL	11/08/2023	Voluntary	Blackmores has been acquired by Kirin Health Science Australia Pty Ltd. Shareholders were sent \$91.71 cash (10/8/23) for each share.
Kazia Therapeutics	KZA	15/11/2023	Voluntary	The company cites cost minimisation. The company maintained its listing on the NASDAQ exchange.
Bionomics	BNO	28/08/2023	Voluntary	The company cites cost minimisation and minimising administrative burden. The company maintained its listing on the NASDAQ exchange due to a higher volume of trading.
Asian American Medical Group	AJJ	24/11/2023	Involuntary	Removed by the ASX pursuant to listing rule 17.12
Analytica	ALT	29/08/2023	Involuntary	Sale of assets to Statos MedTech
Incannex	IHL	29/11/2023	Voluntary	Re-domiciliation from Australia to the United States. The company intends to shift shares to the NASDAQ exchange.

Forthcoming De-listings

Rhinomed	RNO	February 2024	Voluntary	Reduce costs. Using debt funding. Underlying value not reflected in share price.
Volpara Health Technologies	VHT	Q2 2024	Voluntary	To be acquired by Lunit Inc for \$296 million.

Continued over

Capital Raisings by ASX-listed Life Science Companies, 2H 2023

Company	Code	Investment Manager or Investor	Type of Raising	Funds Raised (\$M)	Share price
Sigma Healthcare	SIG		Rights Issue	\$178.0	\$0.7
Ophthea Limited	OPT	MST Financial Services Limited	Rights Issue, Placement	\$90.0	\$2.01
Imugene	IMU	Bell Potter Securities	Placement	\$35.0	\$0.1
4D Medical Limited	4DX	E&P Corporate Advisory Pty Limited and Bell Potter Securities Limited	Placement	\$35.0	\$0.96
Anteris	AVR		Placement	\$30.8	\$20.00
Paradigm Biopharma	PAR	Bell Potter Securities	Rights Issue	\$30.1	\$0.43
Imugene	IMU		SPP	\$18.2	\$0.1
Botanix Pharmaceuticals LTD	BOT	Euroz Hartleys Limited	Placement	\$13.5	\$0.13
MGC Pharmaceuticals	MXC	Oberon Capital	Placement	\$11.8	\$0.40
Recce Pharmaceuticals Ltd	RCE		Placement, Rights Issue	\$11.0	\$0.44
Actinogen Medical Limited	ACW		Rights Issue	\$10.0	\$0.017
Somnomed Limited	SOM	TDM Growth Partners Ltd	Rights issue, Placement	\$9.5	\$0.60
Optical Imaging Limited	OIL	Peters Investments Pty Ltd and Orchid Capital Investments	Rights Issue	\$8.8	\$0.080
Genetic Signatures Ltd	GSS	Bell Potter Securities & Taylor Collison Limited	Placement	\$8.0	\$0.370
Microba Life Sciences Limited	MAP		Rights Issue	\$7.7	\$0.23
Anteris	AVR		Conversion of convertible note	\$7.5	\$15.00
Respiri Limited	RSH	Partners Wealth Group	Placement	\$6.5	\$0.030
Anteotech Ltd	ADO		SPP, Rights Issue	\$6.0	\$0.03
Avecho	AVE	CPS Capital, Ignite Equity and Peak Asset Management	Placement	\$6.0	\$0.006
Somnomed Limited	SOM	TDM Growth Partners Ltd	Rights issue	\$5.7	\$0.600
Lumos Diagnostics	LDX	Lind Global Fund and SBC Global Investment Fund	Placement, SPP	\$5.4	\$0.07
Alterity Therapeutics	ATH	MST Financial Services Pty Ltd.	Placement	\$4.8	\$0.00
Lumos Diagnostics	LDX		Placement	\$4.8	\$0.07
Chimeric Therapeutics Limited	CHM		Rights issue	\$4.5	\$0.028
Cann Group Limited	CAN		Rights issue	\$4.5	\$0.12
Imricor Medical Limited	IMR		Placement	\$4.3	\$0.50
LBT Innovations Limited	LBT	Candour Advisory Pty Ltd	Rights issue	\$4.0	\$0.01
Paincheck Ltd	PCK	Canaccord Genuity (Australia) Limited	Placement	\$3.6	\$0.03
PharmAust Limited	PAA	Blue Ocean Equities Pty Limited	Placement	\$3.5	\$0.100
Antisense Therapeutics Limited	PER		SPP	\$3.3	\$0.05
Respiri Limited	RSH	Evolution Capital Pty Ltd	SPP	\$3.0	\$0.07
Imricor Medical Limited	IMR		Rights Issue	\$2.8	\$0.61
Hydralyte Pharmaceuticals	HPC	Pure Asset Management	Rights issue, Placement	\$2.7	\$0.05
EBR Systems	EBR		SPP	\$2.7	\$0.91
Lumos Diagnostics	LDX		Placement	\$2.7	\$0.07
Heramed Limited	HMD	Clarity Capital Advisors Pty Ltd	Placement	\$2.6	\$0.07
Anteris	AVR		Placement	\$2.5	\$20.00
BCAL Diagnostics Limited	BDX	PAC Partners Securities Pty Ltd and MST Financial Services Pty Ltd	Placement	\$2.4	\$0.10
Visioneering Technologies Inc	VTI		Rights Issue	\$2.4	\$0.22
HITIQ Limited	HIQ		Rights Issue	\$2.3	
Arovela Therapeutics	ALA		SPP	\$2.2	\$0.04
Radiopharm Theranostics Limited	RAD		Rights Issue	\$2.1	\$0.07
IDT Australia Limited	IDT		Placement	\$2.0	\$0.065
Cann Group Limited	CAN	Everblu Capital Corporate Pty Ltd	Convertible Securities Facility	\$2.0	-
Adalta Limited	1AD	Peak Asset Management	Placement	\$1.7	\$0.03
Bluechip Limited	BCT	MST Financial Services Pty Ltd.	Placement	\$1.6	\$0.021
Control Bionics Limited	CBL		Rights Issue	\$1.6	\$0.40
Bod Science	BOD	Taylor Collison Limited	Placement	\$1.6	\$0.08
Trivarx (formerly Medibio)	TRI	JP Equity Partners	Placement	\$1.4	\$0.00
Allegra Orthopedics Limited	AMT	Robinwood Investments Pty Ltd	Rights Issue	\$1.4	\$0.09
Heramed Limited	HMD		Placement	\$1.3	\$0.02
Atomo	AT1		Placement	\$1.3	\$0.036
Anatara Life Sciences Limited	ANR	Taylor Collison Limited	Rights Issue	\$1.1	\$0.02
Imricor Medical Limited	IMR	HR Global Investments	Placement	\$1.0	\$0.51
Respiri Limited	RSH		Placement	\$0.9	\$0.03
BTC Health	BTC	KingFisher Medical, GLK Medical, Tau Medical.	Placement	\$0.9	\$0.02
Anteotech Ltd	ADO		SPP	\$0.7	\$0.03
The Calmer Co International Limited	CCO		Convertible Note Issuance	\$0.7	-
Alcidion Group Limited	ALC		SPP	\$0.4	\$0.08
The Calmer Co International Limited	CCO		Placement	\$0.3	\$0.004
BioGene Technology Limited	BGT		SPP	\$0.1	\$0.084
				total	\$623.8

IPOs: Capital Raisings by ASX-listed Life Science Companies

Company	Code	Investment Manager or Investor	Type of Raising	Funds Raised (\$M)	Share price
Cleo Diagnostics	COV	Taylor Collison Limited	IPO	\$12.0	\$0.2
CurveBeam AI	CVB	Bell Potter Securities Limited and Lodge Corporate Pty Ltd	IPO	\$25.0	\$0.5
LTR Pharma	LTP	Alpine Capital Pty Ltd	IPO	\$7.0	\$0.2
				\$44.0	

Total raised in 1H 2023

\$460

Total raised in 2H 2023

\$668

Total raised 2023

\$1,128

New Listings

Cleo Diagnostics Limited (ASX: COV)

Cleo Diagnostics (ASX: COV) is currently developing a simple blood test (CleoDX) for the early diagnosis of ovarian cancer. The company's technology is not yet commercially available and remains subject to further testing and regulatory approval.

CleoDX technology consists of two key components. First, the CLEO test kit has been designed to detect a novel protein biomarker CXCL10 in the blood. CXCL10 is present very early on in ovarian cancer and also throughout later stages. Second, Cleo's proprietary algorithm performs a risk evaluation of the patient's blood sample. Additionally, an easy-to-understand report is prepared and sent to the patient's doctor.

The company's current share price is \$0.16. Cleo Diagnostics is capitalised at \$21 million.

CurveBeam AI (ASX: CVB)

CurveBeam AI (ASX: CVB) is a fully integrated MedTech supplying specialised weight bearing and non-weight bearing CT equipment along with associated cloud-based AI-driven assessment software. CurveBeam claims estimated US market opportunities of A\$10 billion in capital sales and A\$4+ billion per annum in software sales.

CurveBeam has installed 170+ CT devices globally and continues to develop new products. Currently, CurveBeam is developing SkyRise™, a next-generation CT imaging platform with neck to foot capability. These features differentiate SkyRise™ from other CT scanners on the market.

CurveBeam AI's CEO, Greg Brown, was a founder and former CEO of Impedimed (ASX: IPD). The company's current share price is \$0.34. CurveBeam AI is capitalised at \$109 million.

LTR Pharma (ASX: LTP)

LTR Pharma (ASX: LTP) is pioneering a novel intranasal technology (SPONTAN®) which is a 'First-in-Class' rapid treatment for erectile dysfunction (ED). The maximum onset time for SPONTAN® is 10 minutes. The global ED market is expected to generate a revenue of USD\$7.10 billion by the end of 2026. LTR Pharma achieved a rapid two-year timeline for the fast-track submission of its New Drug Application (NDA) in the US.

LTR's business model centres around the 505(b)(2) NDA drug repurposing program, which consists of a 2-3 year process. This results in a significantly reduced time to approval and lower cost of development compared to traditional drug repurposing, which spans 3-5 years.

LTR's executive chairman, Lee Rodne, was formerly the CEO of Anteris Technologies (ASX AVR). Additionally, Julian Chick, an independent non-executive director of LTR, was formerly the CEO of Avexa (ASX: delisted).

The company's current share price is \$0.33. LTR Pharma is capitalised at \$69 million.

IPO Performances

The share prices of Cleo Diagnostics (ASX: COV) and CurveBeam AI (ASX: CVB) fell slightly since their IPO by 13% and 8% respectively in 2023. On the other hand, the share price of LTR Pharma (ASX: LTP) rose 73% since their IPO, comprising the company's strong debut.

Outperformers

The top performing stock in the sector in 2H23 was Lumos Diagnostics. After receiving a knockback from the FDA in July 2022 for its rapid FebriDx test which claimed to differentiate between bacterial and viral infections, the company appealed the decision and was knocked back again in October that year with the original decision upheld. Lumos held another meeting with the FDA in early 2023, filed a new marketing application which was finally successful in July 2023. Lumos's share price increased by 564% for the year, after a downward spiral assisted by selling from its convertible note facility.

Biotron shares were up 273% for 2H23 after the company announced it was closing in on completing three Phase II studies in HIV and HIV-1 with its lead drug candidate BIT-225.

Dimerix was up 231% after securing a licensing deal for DMX-200 for the kidney disease FSGS, which included a \$10.9 million upfront payment. Early results from its first 72 patients in its Phase III study are expected in mid-March.

Biome Australia, which develops and sells evidenced-based, live probiotics and complementary medicines, announced that sales were up 70% from July to November to \$5 million with FY2024 sales expected to reach \$11.5 million.

The radiopharmaceutical company Clarity Pharmaceuticals was up 171% in 2H23. It has been making good progress with its prostate cancer diagnostics and therapeutics. The company's Phase II study with its prostate cancer diagnostic has completed Phase II recruitment of 50 patients. This diagnostic for prostate cancer targets the GRPr (Gastrin Releasing Peptide receptor) and is being positioned for patients who are PSMA negative. This differenti-

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Top 10 Outperformers - 2H FY2023

Company	Code	Share price Gain
Lumos Diagnostics	LDX	564%
Biotron	BIT	273%
Dimerix	DXB	231%
Biome Australia	BIO	185%
Clarity Pharmaceuticals	CU6	171%
The Calmer Co International	CCO	133%
Arovella Therapeutics	ALA	130%
Neuren Pharmaceuticals	NEU	104%
Biotech Capital	BTC	100%
Phylogica	PYC	96%

ates the Illuccix product from Telix Pharmaceuticals which targets PSMA. Pending positive results, the company plans to move this program into Phase III.

In November last year, Clarity Pharmaceuticals started its Phase III (registration) study for its prostate cancer diagnostic that targets PSMA (unlike its Phase II candidate which targets GRPr). The company is seeking to recruit 383 patients, with the primary completion date of February next year. And in a Phase I/IIa study of its prostate cancer therapeutic targeting PSMA (seeking to recruit 44 patients), the first patient who received two doses of its radiotherapy, which uses Cu-67 as the agent to irradiate the tumour, achieved undetectable PSA levels and a near complete response of the tumours.

The Calmer Co International stock price increased by 133% off a very low base (market cap \$3 million).

Arovella Therapeutics increased by 130% over the half year. Its main development over the period was the in-licensing of a monoclonal antibody sequence (targeting Claudin 18.2) which Arovella will incorporate into its iNKT cell therapy platform. The first antibody for this target, zolbetuximab from Astellas Pharma, failed to receive FDA approval earlier this month due to manufacturing issues. However once approved, the drug is expected to generate revenue of up to US\$1.3 billion for the treatment of gastric and esophageal cancers.

Neuren Pharmaceuticals has continued its strong run (up 104% for the half) following a very lucrative expansion of its licensing deal with Acadia Pharmaceuticals for trofinetide (US\$100 million upfront) and positive Phase II trial results in Phelan-McDermid syndrome.

Listed biotech investment fund BTC health doubled its share price during the half, building its suite of in-licensed products for distribution in Australia and New Zealand. Further products are expected to be added to its Specialty Health, Pharma and Cardio fully-owned investee businesses.

Phylogica is seeking to target genetic-based diseases with its cell penetrating technology with RNA therapeutics. It can achieve a 100-fold increase in target engagement with its therapeutic RNA drug candidates compared to RNA alone. The company has completed dosing of the second cohort of patients in a Phase I study in the blinding eye disease Retinitis Pigmentosa type II. A Phase II study is expected to start next quarter. And a Phase I study with its second drug candidate is expected to enter the clinic this quarter for the treatment of another genetic-based eye condition, Autosomal Dominant Optic Atrophy.

Underperformers

Three botanical products companies were in the top 10 underperforming stocks. These were MGC Pharmaceuticals (down 76%), Melodioli Global Health (down 71%) and Bod Australia (down 65%). Interest in the medicinal cannabis space has dropped substantially with the Botanical Products index down 31% for the half.

Top 10 Underperformers - 2H FY2023

Company	Code	Change - Half
MGC Pharmaceuticals	MXC	-76%
Mesoblast	MSB	-73%
Melodioli Global Health	ME1	-71%
Firebrick Pharma	FRE	-68%
Rhythm Biosciences	RHY	-67%
Bod Australia	BOD	-65%
LBT Innovations	LBT	-63%
Heramed	HMD	-63%
Invex Therapeutics	IXC	-60%
Synatara	SNT	-59%

Mesoblast fell by 73% after receiving its second Complete Response Letter from the FDA for its stem cell drug candidate remestemcel-L for the treatment of GvHD in children. The company has been informed by the regulator that it will need to conduct a study in the highest risk adult population with GvHD. The FDA has previously cited issues with Mesoblast's potency assay yet has acknowledged 'improvements' in the assay. At the end of June last year, Mesoblast had accumulated losses of US\$821 million. The company recently raised US\$60 million, with US\$53 million in funds at the end of September. Its net operating cash outflow for FY2023 was US\$63 million.

Firebrick Pharma's share price plummeted in September after announcing that its Nasodine treatment for the common cold performed worse than the placebo in a Phase III study. "The company is concerned that the results are so confounding, unexpected and at odds with previous data that there may be a systematic error or other issue in the data." Following a secondary analysis, no error was detected. However, an expert analysis believes there were unidentifiable 'major inaccuracies' in the 2023 results compared to trial findings from 2019. The company's stock was down 68% for 2H23.

Rhythm Biosciences was down 67% with the company due to resubmit its TGA application for its colon cancer screening test. A new CEO is yet to be appointed and other executive retirements have been announced including Trevour Lockett (Technical Director) and Otto Buttula (Executive Chairman) who will both move to non-executive roles.

LBT Innovations was down 63% for the half, after the company's failure to sell any APAS Independence instruments in the period, and a capital raising which was conducted at a heavy discount (\$0.005 per share). Funding pressures in the US healthcare market have had a strong impact also on Nanosonics, which recently reported a 22.5% drop in Trophon system upgrades and a 13.4% drop in new system sales due to "hospital capital budgetary pressures." LBT is expecting a strong interest in the instrument in sales to pharmaceutical for use in drug manufacturing clean rooms. First orders are expected in this half year.

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The ASX-Listed Life Sciences Sector

31 December 2023: Capitalisation \$220 billion, 150 companies

Bioshares Large Cap. Index

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 31/12/23
CSL	CSL	139,131	Manufactures pharmaceutical products including vaccines and human plasma fractions	3.3%	-0.4%	\$286.65
Resmed Inc.	RMD	37,422	Manufactures diagnostic and treatment equipment for sleeping disordered breathing	-22.5%	-17.8%	\$25.44
Cochlear	COH	19,623	Manufactures cochlear hearing implants	30.4%	46.3%	\$298.67
Telix Pharmaceuticals	TLX	3,392	Development of molecularly-targeted radiation (MTR) therapies and diagnostics. Selles Illuccix for prostate cancer imaging.	-10.2%	38.7%	\$10.08
Neuren Pharmaceuticals	NEU	3,238	Developing neuroprotective therapeutics. First product, DayBue, on market.	103.8%	214.1%	\$24.97
Nanosonics	NAN	1,351	Developing a novel disinfection technology. The first product, on the market, is a point of care ultrasound probe disinfection unit, branded Trophon EPR	-7.2%	2.6%	\$4.40
Polynovo	PNV	1,142	Developing and selling novel polymer-based products for treating wounds and burns	7.1%	-18.1%	\$1.66
Clinuvel Pharmaceuticals	CUV	833	Markets an analogue of the alpha-MSH protein, named Scenesse, as a photo-protective agent	-10.5%	-26.2%	\$16.00

Capitalisation Total 206,133

Bioshares Index

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 31/12/23
Sigma Pharmaceuticals	SIG	1,903	Pharmaceutical manufacturing and wholesaling	19.6%	64.8%	\$1.01
Imugene	IMU	789	Developing two B-Cell cancer vaccines, HER-Vaxx and PD1-Vaxx, and an oncolytic virus technology, CF33	20.9%	-24%	\$0.11
Avita Medical	AVH	609	Markets ReCell, a skin repair product. Redomiciled to the US. Now Nasdaq listed and trades as CDIs. (20:1 share consolidation)	-17.3%	118.9%	\$4.29
Mayne Pharma Group	MYX	555	Manufactures, develops and markets generic drugs, with operations in Australia and the USA	40%	54%	\$6.15
Clarity Pharmaceuticals	CU6	498	A clinical stage radiopharmaceutical company focusing on the use of targeted copper theranostics. (Listed Q3 2021)	171%	92%	\$1.90
Immutep	IMM	414	Developing immuno-oncology drug candidates IMP761 and IMP321 (eftilagimod alpha)	9.5%	25.5%	\$0.35
PYC Therapeutics	PYC	411	Developing VP-001 to treat retinitis pigmentosa	96.4%	59.4%	\$0.11
Opthea	OPT	380	Developing OPT-302 to treat wet AMD (an eye disease)	3.6%	-37.7%	\$0.57
Anteris Technologies	AVR	342	Application of proprietary ADAPT technology to treat tissue used in the manufacture of cardiovascular prostheses	-10.4%	-13.7%	\$19.15
AFT Pharmaceuticals	AFP	340	Development and sale of pharmaceuticals in Australasia and Rest-of-World	-4.4%	-4.4%	\$3.25
Botanix Pharmaceuticals	BOT	306	Developing BTX1503 for the treatment of acne. BTX1503 combines synthetic cannabidiol with a transdermal drug delivery system, Permetrex.	46.2%	258.5%	\$0.19
Impedimed	IPD	296	Markets products that aid the diagnosis of secondary lymphoedema, muscle wasting and other disorders	-19.4%	83.5%	\$0.15
Aroa Biosurgery	ARX	285	Manufacture and sale of wound healing and soft tissue reconstruction products	-10.3%	-23.1%	\$0.83

Continued over

Bioshares Index (cont'd)

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 31/12/23
Volpara Health Technologies	VHT	282	Markets breast density assessment tools and analytics, for use with breast x-ray screening programs	47.3%	110.5%	\$1.11
4D Medical	4DX	280	Commercialising a lung function imaging technology (XV) which uses existing x-ray imaging systems combined with image processing methods to image the lung in motion	6.7%	70.2%	\$0.72
Mesoblast	MSB	258	Developing cellular medicines to treat advanced heart failure, chronic low back pain and acute graft versus host disease	-72.7%	-64.4%	\$0.31
Cogstate	CGS	251	Markets cognitive performance diagnostic products	-12.4%	-26.3%	\$1.45
Probiotec	PBP	243	Manufacturer, marketer and distributor of a range of over the counter (OTC) pharmaceuticals, complementary medicines and speciality ingredients	3.6%	33.6%	\$2.90
EBR Systems	EBR	197	Developing wireless cardiac pacing system. (Listed Q4 2021)	-32.2%	32.6%	\$0.61
Mach 7 Technologies	M7T	191	Development and sales of an enterprise imaging management platform	27.4%	38.6%	\$0.79
Trajan Group Holdings	TRJ	188	Develops and manufactures scientific instruments for life sciences sector (Listed Q2 2021)	-31.8%	-29.4%	\$1.24
Cyclopharm	CYC	181	A nuclear medicine company that markets the Technegas lung imaging system	-3.8%	64.5%	\$1.93
Paradigm Biopharm.	PAR	150	Developing pentosan polysulphate sodium to treat bone marrow oedema, joint pain and mucopolysaccharidosis type I	-57.1%	-69.8%	\$0.43
Emvision Medical Devices	EMV	142	Exploiting low energy non-ionising microwave radiation to create 3D images, with the goal of developing a device to support the diagnosis of the two main types of stroke	44.9%	-8.4%	\$1.70
Clovercorp	CLV	138	Development and production of omega-3 food additives from tuna oil	-31.3%	-33.5%	\$0.83
Race Oncology	RAC	137	Completing the development of a chemotherapy drug, called Bisantrene, which was the subject of more than 40 phase II clinical studies during the 1980s and 1990s.	-31.4%	-58.2%	\$0.84
Medadvisor	MDR	118	Medication adherence software platform company	-14.0%	-17.3%	\$0.22
Recce	RCE	114	Development of broad spectrum antibiotics	-14.4%	-18.9%	\$0.54
Immuron	IMC	111	Sales and development of hyper-immune bovine colostrum products for therapeutic use	9.5%	25.5%	\$0.35
INOVIQ	IIQ	110	Developing cancer diagnostics and therapies. (30 for 1 share consolidation conducted). Formerly Bard1. Acquired Sienna Cancer Diagnostics in 2020.	-21.8%	3.9%	\$1.20
Proteomics International	PIQ	110	Provider of protein chemistry analytical services. Seeking to commercialise a diabetic kidney disease diagnostic.	4.1%	-5.8%	\$0.90
Arovella Therapeutics (Formerly Suda Pharm.)	ALA	105	Developing drugs for oro-mucosal administration. Recently acquired IP for anagrelide, with intent to develop it as an anti-cancer therapy	130.0%	400.0%	\$0.12
Alcidion	ALC	102	Specialist health IT solution provider	-21.1%	-48.3%	\$0.08
Vita Life Sciences	VLS	101	Development, manufacture and distribution of prescription and OTC medicines as well as complementary and alternative medicines, dietary supplements and health foods	14.1%	31.4%	\$1.78
Imricor	IMR	98	Design, manufacture and sales of MRI-compatible products for cardiac ablation procedures to treat arrhythmias	72.7%	56.2%	\$0.57
Next Science	NXS	91	Commercialisation of anti-biofilm products	-41.4%	-50.4%	\$0.34
Biotron	BIT	88	Developing a drug to treat HIV. Testing drug library against SARS-CoV-2	273.1%	259.3%	\$0.10
Dimerix	DXB	87	Developing a combination therapy, DMX200, to treat chronic kidney disease.	230.6%	41.4%	\$0.205
SDI	SDI	86	Manufacture & distribution of amalgam (fillings) & other dental materials and product R&D	-12.1%	-19.4%	\$0.73
Orthocell	OCC	82	Developing and marketing regenerative medicine products	17.1%	0.0%	\$0.41
Genetic Signatures	GSS	81	Development and sale of molecular diagnostics (MDx) kits and products.	-17.1%	-50.6%	\$0.44
Microba LifeSciences	MAP	81	Developing therapeutics using microbiome derived drug candidates. Provides personalised microbiome testing and assessment. (Listed in 1H 2022)	-40.0%	-45.8%	\$0.18

Continued over

Bioshares Index (cont'd)

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 31/12/23
Pacific Edge	PEB	80	Commercialising a suite of bladder cancer test, to diagnose, triage and monitor patients. (Listed Q3 2021, primary listing in NZ)	27.3%	-78.2%	\$0.10
AnteoTech	ADO	79	Developer of a biological coatings technology that can be applied to immunoassays, bio-separations, drug delivery and other medical devices	-10.0%	-36.8%	\$0.04
Optiscan Imaging	OIL	70	Manufactures confocal microscopes for clinical diagnosis	5.0%	-16.0%	\$0.08
Medical Developments	MMP	66	Commercialising the Pentrox inhaler for temporary pain relief. Used widely in ambulances across Australia.	-1.9%	-48.6%	\$0.76
CurveBeam AI	CVB	63	Combines PoC diagnostic cone beam CT imaging solutions with AI and deep-learning AI expertise to assess bone fragility for fracture prevention. (Listed 2H 2023 at \$0.48)	-17.7%	-17.7%	\$0.40
Micro-X	MX1	57	Development of a mobile medical x-ray imager for hospitals, a version for deployed military use and a mobile security back-scatter imager	-12.5%	-19.2%	\$0.11
Somnomed	SOM	54	Markets oral devices for the treatment of sleep apnea and snoring	-47.6%	-61.2%	\$0.50
Painchek	PCK	54	Commercialising a smartphone app which uses facial recognition technology to detect indications of pain. TGA cleared and CE Marked.	48.0%	8.8%	\$0.04
Antisense Therapeutics	PER	53	Developing antisense compounds to treat multiple sclerosis and Duchenne Muscular Dystrophy	0.0%	-39.2%	\$0.059
Actinogen Medical	ACW	51	Developing Xanamem for the treatment of dementia in Alzheimer's disease patients	-45.0%	-78.0%	\$0.02
Argenica Therapeutics	AGN	51	Developing therapeutics to reduce brain damage following stroke (Listed Q2 2021)	36.0%	13.3%	\$0.51
Prescient Therapeutics	PTX	50	Developing compounds to treat various cancers	-23.5%	-54.1%	\$0.06
Compumedics	CMP	50	Develops, manufactures and markets sleep diagnostic and monitoring equipment.	55.6%	40.0%	\$0.28
Nova Eye Medical	EYE	46	Developing devices to treat glaucoma	-9.4%	-14.3%	\$0.24
Universal Biosensors	UBI	44	Development, manufacture and commercialisation of a range of in vitro diagnostic tests for point-of-care use	-23.1%	-11.1%	\$0.20
Biome Australia	BIO	43	Develops and sells evidence-based complementary medicines, including probiotics, 10 at listing. (Listed Q4 2021)	184.7%	192.9%	\$0.21
PharmAust	PAA	43	Developing a veterinary anti-parasitic compound (PPL-1) as a human and animal cancer therapy	53.3%	79.7%	\$0.12
IDT Australia	IDT	39	Manufacturer of pharmaceutical ingredients to international standards for major pharmaceutical groups.	69.2%	37.5%	\$0.11
Lumos Diagnostics	LDX	35	Develops and sells POC diagnostics for inflammatory diseases and infections. Lead product, FebriDx, is a finger prick test to differentiate between bacterial & viral infection.	564%	52%	\$0.07
Invion	IVX	32	Development of Photosoft, a photosensitiser derived from chlorophyll, which it is believed can accumulate selectively in tumours and be manipulated for therapeutic purposes.	25.0%	-44.4%	\$0.01
Respiri	RSH	32	Respiratory and pulmonary devices company. Markets Airsona, an ehealth product	-21.1%	-34.8%	\$0.03
Rhythm Biosciences	RHY	30	Developing Colostat, a blood test for the early detection of colorectal cancer	-67.1%	-86.4%	\$0.14
Cryosite	CTE	30	Provides specialised storage services, especially for umbilical cord blood	-3.2%	-17.1%	\$0.61
Resonance Health	RHT	29	Markets FerriScan, a non-invasive tool for measuring liver iron levels	42.9%	0.0%	\$0.06
IMEXHS	IME	29	Markets a radiology and imaging platform, in Latin and South America, and uses SaaS and PaaS revenue models. (Completed 50:1 consolidation)	11.7%	45.7%	\$0.67
EZZ Life Science Holdings	EZZ	28	Distributor of skin care products (EAORON brand) and develops consumer health products for Au, NZ and China. (Listed Q2 2021)	30%	73%	\$0.65

Continued over

Bioshares Index (cont'd)

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 31/12/23
Radiopharm Theranostics	RAD	28	Developing radiopharmaceutical products for diagnosis and treatment of disease. (Listed Q4 2021)	-29.5%	-29.5%	\$0.07
Chimeric Therapeutics	CHM	26	Developing CART T therapy for solid cancers licensed from the City of Hope Cancer Center (Listed Q1 2021)	-7.9%	-56.3%	\$0.035
BCAL Diagnostics	BDX	25	Developing an in vitro diagnostic for breast cancer using fingerprints of lipid biomarkers. (Listed Q3 2021)	41%	65%	\$0.10
Cynata Therapeutics	CYP	22	Stem cell technology company aiming to produce unlimited uniform, pharmaceutical grade MSCs from a single donor.	0.0%	-58.3%	\$0.13
LTR Pharma	LTP	21	Clinical-stage biopharmaceutical company developing a novel intranasal drug delivery platform for erectile dysfunction. (Listed 2H 2023 at \$0.20)	72.5%	72.5%	\$0.35
Noxopharm	NOX	21	Developing a cancer treatment, NOX66, a formulation of idronoxil, which targets NADH oxidase 2.	65.1%	-51.0%	\$0.07
Star Combo Pharma	S66	20	Develops, manufactures and markets nutritional and OTC products	31.8%	-3.3%	\$0.15
Alterity Therapeutics	ATH	20	Developing PBT434 for synucleinopathies	0.0%	-30.0%	\$0.01
CardieX	CDX	19	Development of wearable blood pressure measurement devices	-12.9%	-62.5%	\$0.14
Adherium	ADR	19	Commercialising personal digital medication monitoring systems to improve patient compliance and medication efficacy (15 for 1 share consolidation 2H 2023)	86.7%	-6.7%	\$0.06
Oncosil Medical	OSL	18	Developing Oncosil, a brachytherapy for pancreatic cancer and liver cancer	-25.0%	-80.0%	\$0.01
Syntara (formerly Pharmaxis)	SNT	17	Developer of Bronchitol, which is approved in Europe and the USA for the management of cystic fibrosis. Developing a suite of compounds from amine oxidase platform.	-59.2%	-67.2%	\$0.020
Patrys	PAB	16	Developing novel antibody therapies for a range of oncology indications. Focussed on 3E10, a cell penetrating antibody.	-20.0%	-70.4%	\$0.008
Algorae Pharmaceuticals	1AI	16	Development of NTCELL for the treatment of Parkinson's Disease, and potentially for eye and ear diseases	-33.3%	-16.7%	\$0.01
Memphasys	MEM	16	Developing a sperm separation technology, SpermSep	-14.3%	-14.3%	\$0.01
Vectus Biosystems	VBS	16	Developing an anti-fibrotic compound, VB0004, with applications in heart and kidney disease	-31.8%	-58.9%	\$0.30
Genetic Technologies	GTG	16	Markets cancer risk tests (100 for 1 share consolidation 2H 2023)	-32.5%	-55.0%	\$0.14
Amplia Therapeutics	ATX	16	Developing drug candidates to treat fibrotic cancers and fibrosis. Formerly Innate Immunotherapeutics.	5.3%	0.0%	\$0.08
Atomo Diagnostics	AT1	14	Manufactures rapid diagnostic test devices for OEM customers	0.0%	-59.3%	\$0.02
LBT Innovations	LBT	14	Developer of innovative products which deliver productivity benefits across a range of life science settings	-63.3%	-81.0%	\$0.011
Acrux	ACR	13	Developer of topical generic drugs	4.8%	-37.1%	\$0.044
Tissue Repair	TRP	13	Developing a biologically active pharmaceutical to stimulate wound repair pathways. Phase III trials to start in 2022. (Listed Q4 2021)	-18.5%	-4.3%	\$0.22
Bluechiip	BCT	13	Development, manufacture and commercialisation of a tracking system for biological samples	-23.8%	-48.4%	\$0.02
Visionering Technologies	VTI	13	Markets a next-generation contact lens (100:1 share consolidation)	0.0%	-37.5%	\$0.25
Cleo Diagnostics	COV	12	Developing a blood test for ovarian cancer diagnosis (Listed 2H 2023 at \$0.20)	-12.5%	-12.5%	\$0.18
Adalta	1AD	12	Developing AD-214 for the treatment of idiopathic pulmonary fibrosis (IPF) and other human fibrotic diseases	0.0%	-41.5%	\$0.02
Bio-Gene Technology	BGT	12	Commercialisation of the insecticides Flavocide (synthetic) and Qcide (plant-derived), in the fields of human health and crop protection.	-23.1%	-40.0%	\$0.06
Imagion Biosystems	IBX	12	Developing MagSense, a diagnostic technology which exploits the principles of superparamagnetic relaxometry (40 for 1 share consolidation 2H 2023)	-44.5%	-63.0%	\$0.36
Starpharma Holdings	SPL	11	Developer of pharmaceutical chemical scaffolds known as 'dendrimers'	-45.2%	-69.1%	\$0.17
Trivarx (formerly Medibio)	TRI	10	Commercialising a test for depression and anxiety (20 for 1 share consolidation 2H 2023)	50.0%	-25.0%	\$0.030
Avecho Biotechnology	AVE	10	Commercialising a drug delivery system	-40.0%	-80.0%	\$0.00
Firebrick Pharma	FRE	9	Developing nasal spray treatment for common cold.	-67.7%	-78.3%	\$0.05

Continued over

Bioshares Index (cont'd)

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 31/12/23
Rhinomed	RNO	9	Developing nasal stent technologies with applications for sport performance, sleep and drug delivery	-57.1%	-73.9%	\$0.030
USCOM	UCM	8	Markets Uscom, a non-invasive heart output function monitor, BP+ non-invasive central blood pressure product and digital ultrasonic spirometry products	-10.9%	-8.9%	\$0.04
Island Pharmaceuticals	ILA	8	A drug repurposing company that focuses on the development of antivirals for infectious diseases (Listed Q2 2021)	0.0%	-48.6%	\$0.10
Heramed	HMD	8	Commercialising a home pregnancy monitoring technology	-63.1%	-80.8%	\$0.02
Truscreen	TRU	8	Commercialising cervical cancer screening device for real time detection of cancerous and pre-cancerous tissue	0.0%	-47.5%	\$0.02
Osteopore	OSX	7	Manufacture of 3D bioresorbable implants. Three products are FDA cleared and CE Marked for cranio-facial indications	-48.2%	-70.7%	\$0.04
Anagenics (formerly Cellmid)	AN1	7	Health and beauty business focusing on sale of anti-aging and wellness products.	11.8%	-24.0%	\$0.02
Bioxyne	BXN	7	Sale and distribution of probiotics	-45.0%	-54.2%	\$0.01
Dorsavi	DVL	7	Commercialising a wireless sensor movement monitoring system and products for use in the Elite Sports, OL&S and medical/physiotherapy markets	9.1%	0.0%	\$0.01
HitIQ	HIQ	7	Develops and sells head impact mouthguards to assist in assessment of sport related concussion injuries	22.2%	-12.0%	\$0.02
The Hydration Pharmaceutical Co.	HPC	7	Sells hydration liquids, powders and tablets in North America. Sold ANZ rights to Hydralyte in 2014 to Care Pharmaceuticals. (Listed Q4 2021)	-57.9%	-73.3%	\$0.02
Neuroscientific Biopharm.	NSB	6	Developing EmtinB, an LRP-1 receptor agonist for the treatment of Alzheimer's disease	-45.0%	-64.8%	\$0.04
Invex Therapeutics	IXC	6	Developing a formulation of the diabetes drug exanatide to treat idiopathic intracranial pressure and other indications	-59.5%	-85.1%	\$0.08
Singular Health Group	SHG	6	Developing medical imaging software (Listed Q1 2021)	5.6%	-67.0%	\$0.04
Allegra Orthopedics	AMT	5	A developer and manufacturer of prosthetic implants and medical devices.	-18.2%	-57.1%	\$0.05
InhaleRx (formerly Lifespot Health)	IRX	5	Commercialising the Bodytel diagnostic software, which is deployed with its Medihale medical cannabis vaporiser system, as well as with patients with metabolic syndrome	-27.5%	-51.7%	\$0.03
Exopharm	EX1	5	Development of technology for improving the purification of exosomes, which are extra-cellular vesicles which transport bioactive molecules through out the body.	37.5%	-81.7%	\$0.01
Control Bionics	CBL	5	Design, manufacture and sale of wireless wearable electromyography (EMG) based augmentative and alternative communication (AAC) technology (Listed Dec 2020)	-47.1%	-72.1%	\$0.05
Anatara Life Sciences*	ANR	4	Developing a complementary medicine for the restoration and maintenance of gut health.	-21.4%	-35.3%	\$0.02
Nutritional Growth Solutions	NGS	4	Development and sale of nutritional supplements for children. (Listed Q4 2020)	40.0%	-76.7%	\$0.01
Nyrada	NYR	3	Developing drugs to treat cardiovascular, neurological and chronic inflammatory diseases	-21.4%	-84.8%	\$0.02
TALI Digital	TD1	3	Software company developing tools for assessment and improvement of attention in children. Formerly Novita Healthcare.	0.0%	-50.0%	\$0.00
Hexima	HXL	3	Developing HXP124 to treat fungal infection of toenails (Re-listed Q4 2020). Program cancelled due to poor results (July 2022).	-14.3%	-10.0%	\$0.02
Holista Colltech	HCT	3	Markets dietary supplements and disinfectant products	0.0%	-65.5%	\$0.01
Jayex Healthcare	JTL	2	Commercialisation of the Enlighten patient workflow platform	0%	-18%	\$0.01
Regeneus	RGS	1	Commercialisation of autologous adipose derived stem cells and factors. Markets HiQCell for human use and CryoShot for veterinary use.	-57.1%	-93.8%	\$0.00

Capitalisation Total 13,231

Continued over

Botanical Product Companies (Cultivated Production)

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 31/12/23
Elixinol Global	EXL	170	A supplier of hemp and medicinal cannabis products. To Acquire CansaCare Health GmbH	-9.4%	-14.3%	\$0.24
Vitura Health	VIT	147	Medicinal cannabis health and wellness business. (Formerly Cronos Australia)	-50.5%	-56.4%	\$0.26
Neurotech International	NTI	62	Has acquired proprietary cannabis strains for treating autism, epilepsy and ADHD	72.5%	0.0%	\$0.07
Little Green Pharna	LGP	44	Sale and distribution of medicinal cannabis products	-9.7%	-22.2%	\$0.14
Cann Group	CAN	42	Medicinal cannabis company focused on the breeding, cultivation and production stages. Holds Australian ODC cultivation (MC) and research license (CR). Acquired Satipharm in 2021.	-19.2%	-52.7%	\$0.10
Auscans Group Holdings	AC8	18	Developing medical cannabis products for the Australian market. (Acquired CansPal Animal Therapeutics in 2021)	0.0%	0.0%	\$0.04
MGC Pharmaceuticals	MXC	17	A medical and cosmetic cannabis company with growing operations in Slovenia. Acquired Czech company Panax Pharma. (1000 for 1 share consolidation 2H 2023)	-76.3%	-95.7%	\$0.48
Althea Group	AGH	15	Supply of branded medicinal cannabis products in Australia. To cultivate, extract and manufacture medicinal cannabis. Holds ODC manufacturing license.	-9.3%	-36.1%	\$0.04
Medlab Clinical	MDC	15	Development, production and marketing of nutraceuticals cannabis product to treat cancer patients with intractable pain	0.0%	-1.5%	\$6.60
Zelira Therapeutics	ZLD	12	Developer of medicinal cannabis therapeutic products (175 for 1 consolidation 1H 2022)	-40.4%	-10.0%	\$0.90
Melodiol Global Health	ME1	10	Development of cannabis and hemp derived therapeutic, nutraceutical, and life style products with wide patient and consumer reach for human and animal health. (Formerly Creso Pharma)	-71.4%	-90.0%	\$0.00
Epsilon Healthcare (Formerly named THC Global Group)	EPN	7	A diversified global cannabis company with operations in Australia and Canada	14.3%	-4.0%	\$0.02
Cann Global	CGB	6	Operates a hemp seeds business and conducts medical cannabis research (25 for 1 share consolidation 2022)	0.0%	0.0%	\$0.02
Bod Australia	BOD	4	Developer and distributor of natural, evidence-based cosmetics and natural medicines. Holds medicinal cannabis import license. Overseas partner is Linsea SA.	-65.2%	-84.0%	\$0.02
The Calmer Co Int	CCO	3	Cultivation and development of kava (piper methysticum) as an alternative treatment for anxiety, pain and insomnia. (Formerly Fiji Kava)	133.3%	-53.3%	\$0.01

Capitalisation Total 572

Listed Biotech Investment Funds or Companies

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 30/6/23
BTC Health	BTC	17	Provides capital and management expertise to high-growth Australian biotech, medtech and pharmaceutical companies	100%	41%	\$0.05

Capitalisation Total 17

Capitalisation Total - All Indices 219,953

Bioshares

Bioshares Model Portfolio (25 January 2024)

Company	Code	Price (current)	Price added to portfolio	Recommendation	Cap'n (\$M)	Date added	Adjusted Survival Index**
Telix Pharmaceuticals	TLX	\$11.30	\$7.85	Buy	\$3,603	December 2021	CF positive
Neuren Pharmaceuticals	NEU	\$23.46	\$3.25	Hold	\$3,026	December 2021	CF positive
Clinuvel Pharmaceuticals	CUV	\$15.65	\$20.31	Buy	\$773	November 2020	CF positive
Immutep	IMM	\$0.34	\$0.32	Spec Buy A	\$398	March 2019	2.1
Opthea*	OPT	\$0.49	\$0.16	Spec Buy A	\$325	November 2014	1.7
Volpara Health Technologies	VHT	\$1.12	\$0.74	Spec Buy A	\$285	November 2023	CF positive
Anteris Technologies	AVR	\$16.19	\$21.50	Spec Buy A	\$278	September 2022	1.00
Aroa Biosurgery	ARX	\$0.73	\$1.11	Spec Buy A	\$250	November 2021	1.9
Cogstate	CGS	\$1.23	\$0.24	Buy	\$212	April 2019	CF positive
Cyclopharm*	CYC	\$1.85	\$2.87	Spec Buy A	\$174	October 2023	3.1
Dimerix	DXB	\$0.170	\$0.09	Spec Buy A	\$67	December 2018	CF positive
Microba Life Sciences	MAP	\$0.17	\$0.30	Spec Buy A	\$59	June 2023	1.9
Somnomed	SOM	\$0.45	\$2.05	Spec Buy A	\$54	January 2022	0.6
Micro-X	MX1	\$0.105	\$0.38	Spec Buy A	\$54	May 2017	0.5
Percheron Therapeutics (formerly Antisense Therapeutics)	PER	\$0.058	\$0.22	Spec Buy B	\$49	November 2021	1.7
Respiri	RSH	\$0.023	\$0.034	Spec Hold B	\$22	August 2023	0.9
Acrux	ACR	\$0.068	\$0.053	Spec Buy B	\$20	January 2024	0.5
LBT Innovations	LBT	\$0.015	\$0.09	Spec Buy C	\$17	April 2022	1.2
Immuron*	IMC	\$0.076	\$0.08	Spec Buy A	\$17	May 2023	4.5
Patrys	PAB	\$0.008	\$0.013	Spec Buy B	\$16	July 2020	2.7
Syntara (formerly PXS)	SNT	\$0.019	\$0.26	Spec Buy A	\$16	December 2016	1.9

* These companies report on a half yearly basis.

** Includes subsequent raises, raises in progress where funds have been committed or tax rebates received from last financial report

IN:
None

OUT:
None

– Underperformers cont'd from page 5

Heramed fell 63% in 2H23, with a slow build in sales (cash receipts of just \$33,000 in the September quarter). Its CEO resigned to implement a "change in leadership skill set".

Invex therapeutics fell by 60%, with the company closing its lead Phase III program and delivering a \$14 million capital return to shareholders.

Syntara (formerly Pharmaxis) was down 59% for the half. Although the company achieved encouraging results in its Phase II myelofibrosis study, its falling cash balance resulted in a capital raise being conducted at just \$0.022 per share. The company is currently raising up to \$12 million through a placement and SPP.

(Both Syntara and LBT Innovations remain in the Bioshares Model Portfolio.)

Name Changes

Several companies are seeking a fresh start with six name changes in 2023. Pharmaxis has been renamed Syntara (ASX: SNT) following the disposal of its mannitol business. Antisense Therapeutics has been renamed Percheron Therapeutics (ASX: PER). Medibio has been renamed Trivarx (ASX: TRI). Creso Pharma is now Melodiol Global Health (ASX: ME1). Fiji Kava has become The Calmer Co International (ASX: CCO). And Living Cell Technologies is now Algorae Pharmaceuticals (ASX: 1AI).

Bioshares

How Bioshares Rates Stocks

For the purpose of valuation, Bioshares divides biotech stocks into two categories. The first group are stocks with existing positive cash flows or close to producing positive cash flows. The second group are stocks without near term positive cash flows, history of losses, or at early stages of commercialisation. In this second group, which are essentially speculative propositions, Bioshares grades them according to relative risk within that group, to better reflect the very large spread of risk within those stocks. For both groups, the rating “Take Some Profits” means that investors may re-weight their holding by selling between 25%-75% of a stock.

Group A

Stocks with existing positive cash flows or close to producing positive cash flows.

- Buy** CMP is 20% < Fair Value
- Accumulate** CMP is 10% < Fair Value
- Hold** Value = CMP
- Lighten** CMP is 10% > Fair Value
- Sell** CMP is 20% > Fair Value
(CMP–Current Market Price)

Group B

Stocks without near term positive cash flows, history of losses, or at early stages of commercialisation.

Speculative Buy – Class A

These stocks will have more than one technology, product or investment in development, with perhaps those same technologies offering multiple opportunities. These features, coupled to the presence of alliances, partnerships and scientific advisory boards, indicate the stock is relative less risky than other biotech stocks.

Speculative Buy – Class B

These stocks may have more than one product or opportunity, and may even be close to market. However, they are likely to be lacking in several key areas. For example, their cash position is weak, or management or board may need strengthening.

Speculative Buy – Class C

These stocks generally have one product in development and lack many external validation features.

Speculative Hold – Class A or B or C

Sell

Corporate Subscribers: Cogstate, Syntara Dimerix, Patrys, Imugene, Chimeric Therapeutics, Neuren Pharmaceuticals, Aroa Biosurgery, Anteris Technologies, EBR Systems, Immuron, Respiro, Clinuvel Pharmaceuticals

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