

18th Bioshares Biotech Summit

Starts Thursday...

**12–13 July 2024
Fremantle, WA**



Australia's Independent Biotech Investment Resource, est. 1999

**8 July 2024
Edition 958**

A Record \$1.2 Billion Raised in First Half 2024

The first half of 2024 was a very strong period for the Australian biotech sector. The Bioshares Index, which tracks the small-medium cap companies, increased by 8.3%, outperforming even the Nasdaq Biotech Index which was up just 4%. The broader market, as measured by the ASX300 Index, was up just 2.3%.

The large caps were up 7.1% for the half, and the Bioshares Botanicals Index continued its decent, falling by 42% over the six months.

A major contributor to the performance of the small-medium cap sector was the increase in value of Clarity Pharmaceuticals by almost \$1.2 billion over the half. Clarity was the second-best performing stock over the six month period, up 185%. The best performer in the larger cap stocks was also a radiopharmaceutical company, Telix Pharmaceuticals, which was up 85%.

Not surprisingly, with the strong return of sentiment to the sector, a record level of capital was raised of \$1.2 billion. This follows the four year low of funds raised with just \$1.13 billion for the full year in 2023.

However the gains were not across the sector, with just one third (40 stocks) achieving a price gain over the last six months.

Funds Raised by Australian Listed Biotechs

Calendar Year	Total
2024 1H	\$1.2 billion
2023	\$1.13 billion
2022	\$1.45 billion
2021	\$1.66 billion
2020	\$1.70 billion
2019	\$1.06 billion

IPOs

There was just the one IPO over the period, Blinklab, which raised \$7 million and finished up 33% from its listing price.

Index Performance

	1H 2022	2H 2022	1H 2023	2H 2023	1H 2024
Bioshares Index	-41.5%	8.1%	-7.0%	-1.9%	8.3%
Bioshares Large Cap Index	-10.9%	5.8%	0.6%	-0.3%	7.1%
Bioshares Botanicals Index	-53.3%	9.1%	-27.1%	-31.0%	-42%
Nasdaq Biotech Index	-20.7%	12.4%	-3.3%	7.2%	4.0%
ASX 300 Index	-12.2%	7.0%	2.2%	5.3%	2.3%

Continued over

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)	19.6%
Cumulative Gain	1599%
Av. Annual gain (23 yrs)	16.6%

Companies covered: **Half Year Review,
BOT, CGS, CUV, ILA, RAD**

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Capital Raisings

It's been a very good half for biotech companies and investment banks with respect to capital raisings. A record \$1.19 billion was raised in the half, which excludes the \$63 million received from grants and R&D tax rebates, and the \$70 million that Radiopharm Theranostics is raising (in process, part pending shareholder approval).

Major Capital Raises in 1H 2024

Company	Amount Raised \$M
Sigma	223
Opthea	172
Clarity Pharmaceuticals	121
Mesoblast	97
Immutep	100
PYC Therapeutics	74.5
Botanix Pharmaceuticals	70

At the top of the list was Sigma, completing its \$400 million raise which started last year. Opthea has raised \$171.5 million, Clarity Pharmaceuticals has raised \$121 million with its share price having double since that raise, Mesoblast has raised \$97 million, Immutep has raised \$100 million, PYC Therapeutics \$74.5 million, and Botanix Pharmaceuticals raised \$70 million following FDA approval of its drug Sofdra for the treatment of excessive underarm sweating.

The \$1.19 billion raised in the first half of 2024 is more than the total raised in calendar year 2023, reflecting the increased interest in the biotech sector. This is driven by breakthroughs in the global pharmaceutical industry, including the stunning market potential of the new obesity treatments, and the strong success that has been achieved by local biotechs.

Outperformers

Stem cell company Mesoblast (MSB: \$1.12) topped the list for the best outperforming stock for the half. The stock was up 219% after the FDA notified the company that its clinical data now "appears sufficient" to support a Biologics License Application for the treatment of GvHD using its stem cell therapy Ryoncil. This follows two Complete Response Letters from the regulator. The

Top 10 Outperformers - 1H 2024

Company	Code	Share price Gain
Mesoblast	MSB	219%
Clarity Pharm.	CU6	185%
EZZ Life Sciences	EZZ	184%
Biome Australia	BIO	183%
Actinogen Medical	ACW	182%
Optiscan Imaging	OIL	180%
Nyrada	NYR	168%
Dimerix	DXB	149%
Cynata Therapeutics	CYP	136%
LTR Pharma	LTP	126%

company intends to resubmit its application for regulatory approval shortly.

Radiopharmaceutical company Clarity Pharmaceuticals (CU6: \$5.12) was up 185% after positive results in one of its patients in its Phase I/II study in patients with prostate cancer (mCRPC). After a request by the patient's doctor, the patient received a second dose of Clarity's therapy, which is the first time this (a second dose) has been explored. The patient went into complete remission with the cancer being undetectable following the second dose. This followed multiple therapies, including hormone therapy, chemotherapy and treatment with a PARP inhibitor. Prior to that the company raised \$121 million at \$2.55 per share. At the end of June the company's market capitalisation was \$1.7 billion. The stock was up an impressive 674% for the year.

EZZ Life Science Holdings (EZZ: \$1.71) sells a range of cosmetic and other healthcare products, some of which are powered by its 'eucalyptus stem cells'. It sells into China as well as Australia and New Zealand. Cash receipts have surged, up 184% to \$23.6 million in the March quarter, with strong growth in the previous quarter as well. A driver of sales was the launch of its products onto the Douyin (Tik Tok equivalent) ecommerce platform in China.

Microbiome products company Biome Australia (BIO: \$0.625) experienced a 183% gain in its share price over the half. This largely followed a upgrade to its revenue forecast for the current financial year from \$11.5 million to \$12.5 million. Cash receipts for the first nine months were \$8.2 million with a cash outflow from operations of just \$0.6 million.

Actinogen Medical (ACW: \$0.069) was up 182% following publication of previously reported results in the Journal of Alzheimer's Disease. Those results showed that patients with the pTau181 biomarker in their blood progressed more rapidly in their Alzheimer's disease than those with lower levels. In the 34 patients with high levels of pTau181, Actinogen previously reported a 0.6 unit benefit (as measured by CDR-SB) which is clinically meaningful. The company is due to report final results from the Phase IIa depression study (167 patients) this quarter, with interim results from the first 100 patients in its Phase IIb Alzheimer's disease study by mid next year.

Optiscan Imaging (OIL: \$0.24) increased by 180% for the half. It signed an agreement with the Mayo Clinic to combine Optiscan's flexible endomicroscope technology and expertise with the Mayo's

Top 5 Biotech Stocks Over Last 12 Months

Company	Change over 12 months
Dimerix	723%
Biome Australia	706%
Clarity Pharmaceuticals	674%
LTR Pharma	290%
EZZ Lifed Sciences	269%
Optiscan Imaging	194%

Continued over

expertise in surgery robotics. The company also revealed its next generation technology, called InVue, which will provide surgeons with the capacity to put into effect real-time pathology insights during operations.

Nyrada (NYR: \$0.058), is developing small molecule drugs to treat neurological and cardiovascular diseases. It reported positive pre-clinical results in its drug candidate in protecting from secondary brain injury, functioning as a neuroprotective agent. The stock was up 168%. Nyrada expects to move the program into a Phase I clinical study this year.

Dimerix (DXB: \$0.44) was up 149% having completed a second licensing deal for its lead drug candidate DMX-200 with Taiba for the Middle East. Whilst it's a smaller deal than the first licensing deal secured with Advanz Pharma, it is a confirmatory deal around interest in DMX-200. DMX-200 is currently in a pivotal program for the treatment of the kidney disease FSGS. The next assessment point is expected in mid next year on the first 144 patients in the study.

Another stem cell company, Cynata Therapeutics (CYP: \$0.25), was up 136% benefiting from the increased optimism around stem cell technology following Mesoblast's progress with the FDA. The company has been making progress across all of its clinical programs, including the first patient treated in the Phase II GvHD study (60 patients) and completion of enrolment into its diabetic foot ulcer study (30 patients).

And LTR Pharma (LTP: \$0.86), which listed in December last year at \$0.20 per share, was up 126% for the half. This was largely due to results from its bioequivalence study (in 18 subjects), comparing its nasal spray version of a PDE5 inhibitor against other drugs on the market that inhibit the same enzyme, including Cialis and Viagra. The company's drug candidate, Spontan, delivered a similar amount of drug at half the dose with a faster onset of action than the oral alternatives (12 minutes compared to 56 minutes).

Underperformers

The bottom 10 performing stocks are listed in the table below.

Top 10 Underperformers - 1H 2024

Company	Code	Change - Half
Jayes Technology	JTL	-89%
Nutritional Growth Solutions	NGS	-86%
Imagion Biosystems	IBX	-76%
Elixinol Global	EXL	-75%
Vectus Biosystems	VBS	-74%
Cann Group	CAN	-71%
Zelira Therapeutics	ZLD	-69%
Bluechiip	BCT	-69%
Adherium	ADR	-68%
Vitura Health	VIT	-66%

Acquisitions

There were two acquisitions in the half. Lunit Inc from South Korea completed the acquisition of Volpara Health Technologies for \$293 million. And Pyridam from Indonesia bought Probiotec for \$251 million.

Acquisitions 2H FY2024

Company	Code	Acquiror	Value \$M	Premium
Volpara Health Technologies	VHT	Lunit Inc	293	47%
Probiotec	PBP	Pyridam (Indonesia)	251	30%

Change in Operations, De-listings and Changes Business Names

Cann Global (CGB) has been de-listed by the ASX. Rhinomed has voluntarily delisted, partly to reduce its cost base, as well as believing that its value has not been adequately acknowledged by the market.

Exopharm has been renamed Tryptamine Therapeutics and trades under the code TYP following a backdoor listing of the Tryptamine asset. The company raised \$6.5 million in the process at \$0.02 per share. Regeneus has changed its name to Cambium (CMB) focusing on the development of biologics for the treatment of eye conditions and tissue repair.

Bioshares

Botanix raises \$70 million with Sofdra FDA approval

Botanix Pharmaceuticals (BOT: \$0.32) has received FDA approval for Sofdra, a prescription medicine for primary axillary hyperhidrosis (PAH), or excessive underarm sweating. It is the first novel chemical entity approved for this indication.

Following the approval, Botanix has launched a capital raise for \$70 million at \$0.30 per share which has been completed.

Sofdra (sofipirionium bromide) was acquired by Botanix in May 2022 from Bricknell Biotech Inc. Botanix paid an upfront fee of US\$3 million plus milestones, and is required to pay a royalty from product sales starting at 12% and up to 20% once sales exceed US\$500 million a year. This obligation has since been extinguished with a cash payment.

Botanix stated that the global market for medical hyperhidrosis treatment is valued at US\$1.4 billion a year, with the US comprising two-thirds of that market.

FDA Approval Pathway

Botanix first submitted its NDA for marketing approval in September 2022. In September last year it received a Complete Response Letter from the FDA relating to the patient instructions only. In December it met with the FDA with an agreed path forward, completed a human factors study that month. It resubmitted its NDA in December. In June it had final labelling discussions with the regulator prior to receiving approval shortly after.

Commercial Launch & Market

Botanix expects to start an early patient experience program with first revenue expected in the December quarter this year. Of the \$70 million raised, \$17.5 million will be used to build a direct sales force of between 20-30 people.

A further \$17.5 million will be used for digital marketing and its telemedicine platform. Last month there were just under 400,000 people sharing their 'sweat stories' on social media according to the Kick Health social listening survey. According to the company, telemedicine platforms have become a mainstream tool to help the pharmaceutical industry to access patients.

In the company's Phase III study, both primary endpoints were met with highly statistically significant results.

Sofdra is sold under the name Ecclock in Japan through a licensee, having been approved in 2020. Japan has one third of the population of the US. In the last 12 months around 350,000 units were sold in Japan. Learnings from Japan will be applied to the US market. The company said that the reimbursement process was well advanced in the US.

Bioshares recommendation: **Speculative Buy Class A**

Bioshares

Radiopharm to Raise \$70 Million Following Transformational Lantheus Deal

Radiopharm Theranostics (RAD: \$0.043), a radiopharmaceutical therapeutic-diagnostic company focusing on a range of cancers, has announced an institutional placement of \$70 million.

This is underpinned by the news that global radiopharmaceutical developer Lantheus Holdings, which sells the diagnostic Pylarify, that competes with Telix Pharmaceuticals' Illucix, will initially invest \$7.5 million as part of that placement, as a 'strategic investment'.

Radiopharm agreed to assign and sublicense two preclinical oncology assets to Lantheus. In return, Lantheus will pay a \$3 million upfront fee. One of those targets TROP2 and the other LRRC15, both of which are combined with a radioisotope to destroy tumour cells.

Placement offer details

Radiopharm is raising \$70 million via issuing 1.7 billion shares in two allotments, constituting 372% of Radiopharm's current shares on issue.

Tranche 1 involved a \$23.9 million placement of 597 million shares, issued at \$0.04, a premium of 17.6% to the prior trading day. Par-

ticipants will receive one free option for every two new shares subscribed, at a strike price of \$0.06 and an expiry date of 7 August 2026.

Tranche 2 will raise \$46.1M with 368.8 million shares to be issued. Radiopharmaceutical developer Lantheus has agreed to invest \$7.5 million at a price of \$0.05 per share, which is a 47% premium to the June 19 closing price, with shares escrowed for 12 months. Lantheus will receive one option for four shares and bought the rights to purchase another \$7.5M at \$0.05 within 6 months.

Subject to shareholder approval, executive chairman Paul Hopper will also participate with \$3 million under the offer.

It is a transformational deal for Radiopharm, with the commercial validation of the company's technologies that provides crucial and substantial funding to Radiopharm.

Bioshares recommendation: **Speculative Buy Class B**

Bioshares

Donanemab Approved for Alzheimer's Disease; Positive News for Cogstate

Eli Lilly has received FDA approval for donanemab (Kisunla) for the treatment of early-stage Alzheimer's disease. It joins Leqembi from Eisai/Biogen as the first effective, disease modifying treatments for the disease.

In the Phase III study, patients showed 40% less decline over 18 months in the ability to perform daily activities, and 47% of patients (29% on placebo) showed no cognitive decline over a year.

The approval is good news for Cogstate (CGS: \$1.135), which specialises in cognitive assessments for the disease, having recently regained rights to its Cognigram test, which will continue to also be used by Eisai.

The uptake of the new Alzheimer's disease therapies is expected to grow as clinicians better understand how to use the therapies

and the side effects. Earlier intervention is expected to have less side effects, however identifying patients at early stages of cognitive decline with a sensitive test such as Cognigram will increase in importance and value.

Kisunla is prescribed as an infusion every four weeks. However of interest is that therapy can be stopped when amyloid plaques reduce to 'minimal levels' as assessed by PET imaging. This will also increase the need to ongoing monitoring of cognitive function.

Cogstate's test is used by Eisai in the US to help identify patients for treatment, and by Eli Lilly in its Alzheimer's disease studies.

Bioshares recommendation (Cogstate): **Buy**

Bioshares

Clinuvel Pharmaceuticals Continues Expansion of Portfolio into Parkinson's Disease

Clinuvel Pharmaceuticals (CUV: \$15.51) is continuing to expand the applications for its core therapeutic, afamelanotide (Scenesse for the treatment of EPP). In preclinical models it has been shown that afamelanotide can have a positive impact on neurological conditions, including Parkinson's disease.

Afamelanotide binds to MICR. Activating this receptor provides protection from the toxic alpha-synuclein in the brain that destroys neurons and is found to be elevated in patients with Parkinson's disease.

Towards the end of this year, Clinuvel will start the first trial in six patients with Parkinson's disease with afamelaanotide as a potential therapy for this disease.

Endpoints in the study will be whether there is a reduction alpha-synuclein levels, as well as changes in cognition. Patients in the study will receive 11 doses of afamelanotide over two months.

The core program ahead for Clinuvel is the extension of the use of Scenesse for the treatment of vitiligo. However, new indications for the company's growing assets around melanocortins remain important.

Clinuvel is currently conducting Phase III studies with Scenesse for the treatment of vitiligo. The first of its Phase III studies is expected to reach the primary completion point at the end of this year in 200 patients.

Existing Distribution Network

Clinuvel intends to use its existing distribution network in which Scenesse is delivered for EPP for the label expansion to vitiligo. To date 85 clinics have been trained and accredited in the US with a

target of 120 centres. Those centres are expected to have a capacity to treat 6,000 new patients a year.

We estimate that currently less than 800 patients are treated globally with Scenesse. While there may be a modest product price drop if Scenesse is approved for the treatment of vitiligo, it represents a potential step change in revenue for the company.

Bioshares recommendation: **Buy**

Bioshares

Bioshares Model Portfolio (8 July 2024)

Company	Code	Price (current)	Price added to portfolio	Recommendation	Cap'n (\$M)	Date added	Adjusted Survival Index
Telix Pharmaceuticals	TLX	\$18.00	\$7.85	Accumulate	\$5,739	December 2021	CF positive
Neuren Pharmaceuticals	NEU	\$19.99	\$3.25	Hold	\$2,578	December 2021	CF positive
Clinuvel Pharmaceuticals	CUV	\$15.51	\$20.31	Buy	\$766	November 2020	CF positive
Immutep**	IMM	\$0.30	\$0.32	Spec Buy A	\$428	March 2019	5.4
Anteris Technologies	AVR	\$18.20	\$21.50	Spec Buy B	\$349	September 2022	0.40
Opthea*	OPT	\$0.36	\$0.16	Spec Buy A	\$239	November 2014	1.7
Dimerix	DXB	\$0.440	\$0.09	Spec Buy A	\$242	December 2018	2.7
Aroa Biosurgery	ARX	\$0.65	\$1.11	Spec Buy A	\$221	November 2021	3.1
Cogstate*	CGS	\$1.14	\$0.24	Buy	\$197	April 2019	16.9
Cyclopharm*,**	CYC	\$1.68	\$2.87	Spec Buy A	\$182	October 2023	4.2
Microba Life Sciences	MAP	\$0.18	\$0.30	Spec Buy A	\$81	June 2023	1.5
Cynata Therapeutics	CYP	\$0.250	\$0.19	Spec Buy B	\$45	March 2024	0.9
Somnomed	SOM	\$0.40	\$2.05	Spec Buy A	\$86	January 2022	1.9
Micro-X	MX1	\$0.080	\$0.38	Spec Buy A	\$45	May 2017	2.4
Syntara (formerly PXS)	SNT	\$0.029	\$0.26	Spec Buy A	\$35	December 2016	1.1
Acrux	ACR	\$0.060	\$0.053	Spec Hold B	\$17	January 2024	2.4
Immuron	IMC	\$0.082	\$0.09	Spec Buy A	\$19	May 2024	4.1
Amplia Therapeutics	ATX	\$0.062	\$0.061	Spec Buy B	\$17	April 2024	1.5
LBT Innovations	LBT	\$0.016	\$0.09	Spec Buy C	\$21	April 2022	0.75
Patrys	PAB	\$0.007	\$0.013	Spec Buy B	\$14	July 2020	2.1

* 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

Island Pharmaceuticals to In-License New Asset

Island pharmaceuticals (ILA: \$0.066) has signed a non-binding term sheet with antiviral drug developer BioCryst to acquire rights to the compound galidesivir for the treatment of a number of dangerous viruses, including Ebola, Zika and Marburg viruses.

The compound has a known safety profile and has shown activity against these viruses. Two of the attractive features relate to the commercialisation pathway. The program is eligible to receive a Priority Review Voucher if the compound gains approval (valued

at approximately US\$100 million), and the compound could be developed under the 'FDA Animal Rule' which means that clinical studies (in people) are unethical and therefore not required.

Island has a 12 month option to acquire the asset.

Bioshares recommendation: Not Formally Covered

Bioshares

Capital Raisings by ASX-listed Life Science Companies, 1H 2024

Code	Investment Manager or Investor	Type of Raising	Funds Raised (\$M)
SIG	HMC Capital Partners	Entitlement offer (institutional)	223
OPT	MST Financial Services Pty Ltd	Entitlement offer (institutional)	171.5
CU6	Bell Potter, Wilsons Corporate Finance	Entitlement offer (institutional)	121
MSB		Entitlement offer	97
IMM	Bell Potter Securities, Canaccord Genuity, Wilsons Corporate Finance, co-managed by CLSA Australia	Entitlement offer (institutional)	89.6
IMM	Bell Potter Securities, Canaccord Genuity, Wilsons Corporate Finance, co-managed by CLSA Australia	Entitlement offer (retail)	10.6
BOT	Euroz Hartleys Limited acted as Sole Lead Manager and E&P Corporate Advisory Pty Ltd acted as Co-Lead Manager	Placement	70
PYC	E&P Corporate Advisory and Wilsons Advisory	Entitlement offer (institutional)	40
PYC	E&P Corporate Advisory and Wilsons Advisory	Entitlement offer (retail)	13.4
PYC	E&P Corporate Advisory and Wilsons Advisory	Placement (entitlement shortfall)	21.1
AVR		Placement	23
SOM	Wilsions Corporate Finance, TDM	Entitlement offer (retail)	22.6
SOM	Wilsions Corporate Finance, TDM	Entitlement offer (institutional)	5.8
CYC	Macquarie Capital, Bell Potter Securities	Placement	20
CYC	Macquarie Capital, Bell Potter Securities	SPP	4
DXB	Euroz Hartleys	Placement	20
GSS	Bell Potter Securities and Taylor Collison	Entitlement offer	15.5
GSS	Bell Potter Securities and Taylor Collison	Placement	6
ALA	MST and Blue Ocean Equities	Placement	12.5
AGN	Euroz Hartleys Limited and Petra Capital Pty Limited	Placement	12
BDX	Supported by Spark Plus Pte Ltd and PAC Partners Securities Pty Ltd	Placement	10.5
NTI	MST Financial, Blue Ocean Equities	Placement	10
PAA	Morgans Corporate Limited	Entitlement offer (institutional)	10
UBI	Viburnum Finds Pty Ltd	Entitlement offer	10
IMR	Morgans Corporate Limited	Entitlement offer (institutional)	8
IIQ		Placement	7
IDT	Taylor Collison Limited	Entitlement offer	7
PIQ	Jefferies (Australia) Pty Ltd	Placement	6.5
IMR	Morgans Corporate Limited	Placement (entitlement)	6.47
ADO		Placement	5.4
EYE	Taylor Collison Limited, E&P Corporate Advisory Pty Ltd and MST Financial Services Pty Ltd	Placement	5.1
ATX	Taylor Collison Limited	Entitlement offer	4.27
RHY	PAC Partners Securities Pty	Placement (entitlement)	4.15
CDX	C2 Ventures	Placement	4
MX1	Morgans Corporate Limited and Hawkesbury Partners Pty Limited	Placement	4
CDX	C2 Ventures	Entitlement offer	4
OCC		Placement	3.5
CMB		Placement	3.48
OSL		Entitlement offer	3.3
ATH	MST Financial Services Pty Ltd	Placement	3.25
1AD		Placement	3
EYE	Taylor Collison Limited, E&P Corporate Advisory Pty Ltd and MST Financial Services Pty Ltd	Entitlement offer	2.9
OSX	Advance Capital Partners Pte Ltd	Entitlement offer	2.9
PCK	Canaccord Genuity	SPP	2.5
TRI	JP Equity Partners	Placement (institutional)	2.5
UBI	Viburnum Finds Pty Ltd	Placement (entitlement)	2.5

Continued over

Capital Raisings by ASX-listed Life Science Companies, 1H 2024 (cont'd)

Code	Investment Manager or Investor	Type of Raising	Funds Raised (\$M)
PCK	Canaccord Genuity	Placement	2.5
ADR	MST Financial Services Pty Ltd	Entitlement offer	2.5
RHY	PAC Partners Securities Pty	Rights issue	2.48
IVX		Placement (institutional)	2.4
ACW		Entitlement offer	2.01
CCO	Mahe Capital Pty Ltd	Rights issue	2
GTG	HC Wainwright & Co	Direct offering	2
ILA	PAC Partners Securities Pty Limited	Rights issue	1.95
MX1		SPP	1.92
1AD		Option exercise	1.9
ACW		SPP	1.87
NYR	Canary Capital Pty Limited	Placement	1.755
OSL		Placement (entitlement)	1.7
RSH		Placement	1.6
NGS	MST Financial Services Pty Ltd	SPP	1.525
ADO		SPP	1.4
AN1		Placement	1.3
HIQ	Lynx Advisors Pty Ltd	Rights issue	1.27
IME		Placement	1.25
ME1	Oakley Capital Partners Pty Ltd	Placement	1.08
CBL	Lynx Advisors Pty Ltd	Placement	1.04
ADR	MST Financial Services Pty Ltd	Placement	1
ANR	Taylor Collison Limited as Lead Manager, Candour Advisory Pty Ltd acted as Advisor	Placement	1
RSH		Placement	1
HIQ	Lynx Advisors Pty Ltd	Placement (entitlement shortfall)	0.914
CCO	Mahe Capital Pty Ltd	Rights issue	0.88
FRE	GZ Family Holdings Pty Ltd	Placement	0.8
1AD		Placement	0.7
IMR	Morgans Corporate Limited	Entitlement offer (retail)	0.639
ADR	MST Financial Services Pty Ltd	Entitlement offer	0.57
TRU		Placement	0.52
CCO	Novus Capital	Placement	0.515
TRU		Placement	0.5
NGS		Placement (loan note)	0.475
NGS	TAKE Global	Placement (convertible notes)	0.4
BCT		Placement	0.367
IBX	Mercer Street Global Opportunity Fund	Placement (convertible notes)	0.22
Total			\$1,183

IPOs and Backdoor Listings

Company	Investment Manager or Investor	Type of Raising	Funds Raised (\$M)	Share price
Blinklab	Westar Capital	IPO	\$7.0	\$0.2
Tryptamine Therapeutics	Alto Capital	Backdoor listing	\$6.5	\$0.02
			\$13.5	

Total raised in 2H 2023	\$668
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Total raised in 1H 2024	\$1,196
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Total raised FY2024	\$1,864
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The ASX-Listed Life Sciences Sector

30 June 2024: Capitalisation \$236 billion, 147 companies

Bioshares Large Cap. Index

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 30/6/24
CSL	CSL	143,285	Manufactures pharmaceutical products including vaccines and human plasma fractions	3%	6%	\$295.21
Resmed Inc.	RMD	42,806	Manufactures diagnostic and treatment equipment for sleeping disordered breathing	14%	-11%	\$29.10
Cochlear	COH	21,823	Manufactures cochlear hearing implants	11%	45%	\$332.15
Telix Pharmaceuticals	TLX	6,276	Development of molecularly-targeted radiation (MTR) therapies and diagnostics. Selles Illuccix for prostate cancer imaging.	85%	66%	\$18.65
Neuren Pharmaceuticals	NEU	2,758	Developing neuroprotective therapeutics. First product, DayBue, on market.	-15%	74%	\$21.27
Nanosonics	NAN	918	Developing a novel disinfection technology. The first product, on the market, is a point of care ultrasound probe disinfection unit, branded Trophon EPR	-32%	-37%	\$2.99
Sigma Pharmaceuticals	SIG	2,081	Pharmaceutical manufacturing and wholesaling	27%	52%	\$1.28
Polynovo	PNV	1,691	Developing and selling novel polymer-based products for treating wounds and burns	48%	59%	\$2.45
Clinuvel Pharmaceuticals	CUV	800	Markets an analogue of the alpha-MSH protein, named Scenesse, as a photo-protective agent	-4%	-14%	\$15.37

Capitalisation Total **222,439**

Bioshares Index

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 30/6/24
Clarity Pharmaceuticals	CU6	1,689	A clinical stage radiopharmaceutical company focusing on the use of targeted copper theranostics. (Listed Q3 2021)	185%	674%	\$5.42
Mesoblast	MSB	1,131	Developing cellular medicines to treat advanced heart failure, chronic low back pain and acute graft versus host disease	219%	-13%	\$0.99
Botanix Pharmaceuticals	BOT	624	Commercialising Sofdra for the treatment of excessive underarm sweating. Asset acquired in 2022.	82%	165%	\$0.35
Opthea	OPT	572	Developing OPT-302 to treat wet AMD (an eye disease)	-39%	-36%	\$0.35
PYC Therapeutics	PYC	560	Developing VP-001 to treat retinitis pigmentosa	9%	114%	\$0.12
Immutep	IMM	429	Developing immuno-oncology drug candidates IMP761 and IMP321 (eftilagimod alpha)	-14%	-6%	\$0.30
Mayne Pharma Group	MYX	425	Manufactures, develops and markets generic drugs, with operations in Australia and the USA	-23%	7%	\$4.71
Imugene	IMU	409	Developing two B-Cell cancer vaccines, HER-Vaxx and PD1-Vaxx, and an oncolytic virus technology, CF33	-48%	-37%	\$0.06
Anteris Technologies	AVR	352	Application of proprietary ADAPT technology to treat tissue used in the manufacture of cardiovascular prostheses	-4%	-14%	\$18.31
Avita Medical	AVH	344	Markets ReCell, a skin repair product. Redomiciled to the US. Now Nasdaq listed and trades as CDIs. (20:1 share	-44%	-53%	\$2.42
EBR Systems	EBR	340	Developing wireless cardiac pacing system. (Listed Q4 2021)	72%	17%	\$1.05

Continued over

Bioshares Index (Cont'd)

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 30/6/24
AFT Pharmaceuticals	AFP	299	Development and sale of pharmaceuticals in Australasia and Rest-of-World	-12%	-16%	\$2.85
Race Oncology	RAC	298	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.	117%	49%	\$1.83
Dimerix	DXB	281	Developing a combination therapy, DMX200, to treat chronic kidney disease.	149%	723%	\$0.510
Medadvisor	MDR	273	Medication adherence software platform company	133%	100%	\$0.50
Aroa Biosurgery	ARX	205	Manufacture and sale of wound healing and soft tissue reconstruction products	-28%	-35%	\$0.60
4D Medical	4DX	203	Commercialising a lung function imaging technology (XV) which uses existing x-ray imaging systems combined with	-27%	-22%	\$0.52
Optiscan Imaging	OIL	196	Manufactures confocal microscopes for clinical diagnosis	180%	194%	\$0.24
Cogstate	CGS	194	Markets cognitive performance diagnostic products	-22%	-32%	\$1.12
Cyclopharm	CYC	183	A nuclear medicine company that markets the Technegas lung imaging system	-12%	-16%	\$1.69
Emvision Medical Devices	EMV	181	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	27%	85%	\$2.16
Genetic Signatures	GSS	178	Development and sale of molecular diagnostics(MDx) kits and products.	66%	37%	\$0.72
Actinogen Medical	ACW	166	Developing Xanamen for the treatment of dementia in Alzheimer's disease patients	182%	55%	\$0.06
Trajan Group Holdings	TRJ	156	Develops and manufactures scientific instruments for life sciences sector (Listed Q2 2021)	-17%	-43%	\$1.03
Mach 7 Technologies	M7T	155	Development and sales of an enterprise imaging management platform	-19%	3%	\$0.64
Impedimed	IPD	147	Markets products that aid the diagnosis of secondary lymphoedema, muscle wasting and other disorders	-50%	-60%	\$0.07
Arovella Therapeutics (Formerly Suda Pharm.)	ALA	147	Developing drugs for oro-mucosal administration. Recently acquired IP for anagrelide, with intent to develop it as an anti-cancer therapy	22%	180%	\$0.14
Vita Life Sciences	VLS	129	Development, manufacture and distribution of prescription and OTC medicines as well as complementary and alternative medicines, dietary supplements and health foods	28%	46%	\$2.28
Recce	RCE	127	Development of broad spectrum antibiotics	12%	-4%	\$0.60
INOVIQ	IIQ	126	Developing cancer diagnostics and therapies. (30 for 1 share consolidation conducted). Formerly Bard1. Acquired Sienna Cancer Diagnostics in 2020.	-16%	-34%	\$1.20
Biome Australia	BIO	123	Develops and sells evidence-based complementary medicines, including probiotics, 10 at listing. (Listed Q4 2021)	183%	706%	\$0.58
Proteomics International	PIQ	115	Provider of protein chemistry analytical services. Seeking to commercialise a diabetic kidney disease diagnostic.	-2%	2%	\$0.88
Imricor	IMR	108	Design, manufacture and sales of MRI-compatible products for cardiac ablation procedures to treat arrhythmias	-7%	61%	\$0.53
Argenica Therapeutics	AGN	96	Developing therapeutics to reduce brain damage following stroke (Listed Q2 2021)	53%	109%	\$0.78
Immuron	IMC	95	Sales and development of hyper-immune bovine colostrum products for therapeutic use	-14%	-6%	\$0.30
SDI	SDI	93	Manufacture & distribution of amalgam (fillings) & other dental materials and product R&D	8%	-5%	\$0.79

Continued over

Bioshares Index (Cont'd)

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 30/6/24
Paradigm Biopharm.	PAR	90	Developing pentosan polysulphate sodium to treat bone marrow oedema, joint pain and mucopolysaccharidosis type I	-40%	-74%	\$0.26
PharmAust	PAA	87	Developing a veterinary anti-parasitic compound (PPL-1) as a human and animal cancer therapy	70%	160%	\$0.20
Clovercorp	CLV	84	Development and production of omega-3 food additives from tuna oil	-39%	-58%	\$0.50
EZZ Life Science Holdings	EZZ	79	Distributor of skin care products (EAORON brand) and develops consumer health products for Au, NZ and China. (Listed Q2 2021)	184%	269%	\$1.85
Percheron Therapeutics	PER	77	Developing antisense compounds to treat multiple sclerosis and Duchenne Muscular Dystrophy	44%	44%	\$0.085
Orthocell	OCC	74	Developing and marketing regenerative medicine products	-13%	1%	\$0.36
Microba LifeSciences	MAP	72	Developing therapeutics using microbiome derived drug candidates. Provides personalised microbiome testing and assessment. (Listed in 1H 2022)	-11%	-47%	\$0.16
Pacific Edge	PEB	67	Commercialising a suite of bladder cancer test, to diagnose, triage and monitor patients. (Listed Q3 2021, primary listing in NZ)	-15%	8%	\$0.08
Alcidion	ALC	65	Specialist health IT solution provider	-36%	-49%	\$0.05
Next Science	NXS	63	Commercialisation of anti-biofilm products	-31%	-59%	\$0.24
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)	-59%	-67%	\$0.16
Cryosite	CTE	61	Provides specialised storage services, especially for umbilical cord blood	105%	98%	\$1.24
Compumedics	CMP	59	Develops, manufactures and markets sleep diagnostic and monitoring equipment.	20%	86%	\$0.34
Somnomed	SOM	54	Markets oral devices for the treatment of sleep apnea and snoring	-50%	-74%	\$0.25
Cynata Therapeutics	CYP	53	Stem cell technology company aiming to produce unlimited uniform, pharmaceutical grade MSCs from a single donor.	136%	136%	\$0.30
Nova Eye Medical	EYE	50	Developing devices to treat glaucoma	-8%	-17%	\$0.22
AnteoTech	ADO	49	Developer of a biological coatings technology that can be applied to immunoassays, bio-separations, drug delivery and other medical devices	-44%	-50%	\$0.02
Micro-X	MX1	48	Development of a mobile medical x-ray imager for hospitals, a version for deployed military use and a mobile security back-scatter imager	-21%	-31%	\$0.08
Universal Biosensors	UBI	45	Development, manufacture and commercialisation of a range of in vitro diagnostic tests for point-of-care use	-25%	-42%	\$0.15
Painchek	PCK	44	Commercialising a smartphone app which uses facial recognition technology to detect indications of pain. TGA cleared and CE Marked.	-27%	8%	\$0.03
BCAL Diagnostics	BDX	39	Developing an in vitro diagnostic for breast cancer using fingerprints of lipid biomarkers. (Listed Q3 2021)	26%	79%	\$0.13
IDT Australia	IDT	39	Manufacturer of pharmaceutical ingredients to international standards for major pharmaceutical groups.	0%	69%	\$0.11
Medical Developments	MVP	35	Commercialising the Pentrox inhaler for temporary pain relief. Used widely in ambulances across Australia.	-47%	-48%	\$0.41
Biotron	BIT	34	Developing a drug to treat HIV. Testing drug library against SARS-CoV-2	-61%	46%	\$0.04
Prescient Therapeutics	PTX	31	Developing compounds to treat various cancers	-39%	-53%	\$0.04

Continued over

Bioshares Index (Cont'd)

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 30/6/24
Respiri	RSH	29	Respiratory and pulmonary devices company. Markets Airsona, an ehealth product	-13%	-32%	\$0.03
Resonance Health	RHT	29	Markets FerriScan, a non-invasive tool for measuring liver iron levels	-2%	40%	\$0.06
Invision	IVX	26	Development of Photosoft, a photosensitiser derived from chlorophyll, which it is believed can accumulate selectively in tumours and be manipulated for therapeutic purposes.	-20%	0%	\$0.00
Blinklab	BB1	26	Developing a phone application to neurometrically diagnose autism via blinking. Listed 1H 2024	33%	33%	\$0.27
IMEXHS	IME	22	Markets a radiology and imaging platform, in Latin and South America, and uses SaaS and PaaS revenue models. (Completed 50:1 consolidation)	-27%	-18%	\$0.49
LTR Pharma	LTP	21	Clinical-stage biopharmaceutical company developing a novel intranasal drug delivery platform for erectile dysfunction. (Listed 2H 2023 at \$0.20)	126%	290%	\$0.78
Alterity Therapeutics	ATH	21	Developing PBT434 for synucleinopathies	-43%	-43%	\$0.00
Acrux	ACR	21	Developer of topical generic drugs	57%	64%	\$0.069
Syntara (formerly Pharmaxis)	SNT	21	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.	20%	-51%	\$0.024
CardieX	CDX	21	Development of wearable blood pressure measurement devices	-48%	-55%	\$0.07
Noxopharm	NOX	19	Developing a cancer treatment, NOX66, a formulation of idronoxil, which targets NADH oxidase 2.	-7%	53%	\$0.07
LBT Innovations	LBT	19	Developer of innovative products which deliver productivity benefits across a range of life science settings	36%	-50%	\$0.015
Radiopharm Theranostics	RAD	17	Developing radiopharmaceutical products for diagnosis and treatment of disease. (Listed Q4 2021)	-49%	-64%	\$0.04
Amplia Therapeutics	ATX	17	Developing drug candidates to treat fibrotic cancers and fibrosis. Formerly Innate Immunotherapeutics.	-23%	-18%	\$0.06
Algorae Pharmaceuticals	1AI	16	Development of NTCELL for the treatment of Parkinson's Disease, and potentially for eye and ear diseases	0%	-33%	\$0.01
Atomo Diagnostics	AT1	16	Manufactures rapid diagnostic test devices for OEM customers	14%	14%	\$0.03
Singular Health Group	SHG	16	Developing medical imaging software (Listed Q1 2021)	161%	175%	\$0.10
Adalta	1AD	15	Developing AD-214 for the treatment of idiopathic pulmonary fibrosis (IPF) and other human fibrotic diseases	8%	8%	\$0.03
Rhythm Biosciences	RHY	15	Developing Colostat, a blood test for the early detection of colorectal cancer	-54%	-85%	\$0.06
Lumos Diagnostics	LDX	15	Develops and sells POC diagnostics for inflammatory diseases and infections. Lead product, FebriDx, is a finger prick test to differentiate between bacterial & viral infection.	-58%	182%	\$0.03
Star Combo Pharma	S66	15	Develops, manufactures and markets nutritional and OTC products	-24%	0%	\$0.11
Chimeric Therapeutics	CHM	15	Developing CART T therapy for solid cancers licensed from the City of Hope Cancer Center (Listed Q1 2021)	-43%	-47%	\$0.020
Patrys	PAB	14	Developing novel antibody therapies for a range of oncology indications. Focussed on 3E10, a cell penetrating antibody.	-13%	-30%	\$0.007
Tissue Repair	TRP	14	Developing a biologically active pharmaceutical to stimulate wound repair pathways. Phase III trials to start in 2022. (Listed Q4 2021)	2%	-17%	\$0.23
Oncosil Medical	OSL	13	Developing Oncosil, a brachytherapy for pancreatic cancer and liver cancer	-56%	-67%	\$0.00
Adherium	ADR	13	Commercialising personal digital medication monitoring systems to improve patient compliance and medication efficacy (15 for 1 share consolidation 2H 2023)	-68%	-40%	\$0.02
Cleo Diagnostics	COV	12	Developing a blood test for ovarian cancer diagnosis (Listed 2H 2023 at \$0.20)	94%	70%	\$0.34

Continued over

Bioshares Index (Cont'd)

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 30/6/24
Nyrada	NYR	11	Developing drugs to treat cardiovascular, neurological and chronic inflammatory diseases	168%	111%	\$0.06
Trivarx (formerly Medibio)	TRI	10	Commercialising a test for depression and anxiety (20 for 1 share consolidation 2H 2023)	-17%	25%	\$0.025
Firebrick Pharma	FRE	10	Developing nasal spray treatment for common cold.	12%	-64%	\$0.06
Genetic Technologies	GTG	10	Markets cancer risk tests (100 for 1 share consolidation 2H 2023)	-44%	-63%	\$0.08
Island Pharmaceuticals	ILA	10	A drug repurposing company that focuses on the development of antivirals for infectious diseases (Listed Q2 2021)	-19%	-19%	\$0.08
Bio-Gene Technology	BGT	10	Commercialisation of the insecticides Flavocide (synthetic) and Qcide (plant-derived), in the fields of human health and crop protection.	-18%	-37%	\$0.05
Avecho Biotechnology	AVE	10	Commercialising a drug delivery system	0%	-40%	\$0.00
Memphasys	MEM	9	Developing a sperm separation technology, SpermSep	-42%	-50%	\$0.01
Control Bionics	CBL	9	Design, manufacture and sale of wireless wearable electromyography (EMG) based augmentative and alternative communication (AAC) technology (Listed Dec 2020)	13%	-40%	\$0.05
Truscreen	TRU	9	Commercialising cervical cancer screening device for real time detection of cancerous and pre-cancerous tissue	-24%	-24%	\$0.02
Heramed	HMD	7	Commercialising a home pregnancy monitoring technology	-4%	-65%	\$0.02
HitIQ	HIQ	7	Develops and sells head impact mouthguards to assist in assessment of sport related concussion injuries	-5%	17%	\$0.02
Anatara Life Sciences*	ANR	7	Developing a complementary medicine for the restoration and maintenance of gut health.	91%	50%	\$0.04
Visioneering Technologies	VTI	7	Markets a next-generation contact lens (100:1 share consolidation)	-46%	-46%	\$0.14
Dorsavi	DVL	7	Commercialising a wireless sensor movement monitoring system and products for use in the Elite Sports, OL&S and medical/physiotherapy markets	-8%	0%	\$0.01
Osteopore	OSX	7	Manufacture of 3D bioresorbable implants. Three products are FDA cleared and CE Marked for cranio-facial indications	32%	-32%	\$0.06
Starpharma Holdings	SPL	6	Developer of pharmaceutical chemical scaffolds known as 'dendrimers'	-44%	-69%	\$0.10
Bluechiip	BCT	6	Development, manufacture and commercialisation of a tracking system for biological samples	-69%	-76%	\$0.01
Neuroscientific Biopharm.	NSB	6	Developing EmtinB, an LRP-1 receptor agonist for the treatment of Alzheimer's disease	-9%	-50%	\$0.04
Invex Therapeutics	IXC	5	Developing a formulation of the diabetes drug exenatide to treat idiopathic intracranial pressure and other indications	-26%	-70%	\$0.06
InhaleRx (formerly Lifespot Health)	IRX	4	Commercialising the Bodytel diagnostic software, which is deployed with its Medihale medical cannabis vaporiser system, as well as with patients with metabolic syndrome	-14%	-38%	\$0.03
Vectus Biosystems	VBS	4	Developing an anti-fibrotic compound, VB0004, with applications in heart and kidney disease	-74%	-83%	\$0.08
Anagenics (formerly Cellmid)	AN1	4	Health and beauty business focusing on sale of anti-aging and wellness products.	-58%	-53%	\$0.01
Tryptamine Therapeutics	TYP	4	Developing a oral and intravenous psilocin as a psychedelic therapy (TRP-8803, Phase 2) to treat eating disorders and chronic pain.	-24%	5%	\$0.02
Allegra Orthopedics	AMT	3	A developer and manufacturer of prosthetic implants and medical devices.	-36%	-47%	\$0.03
Bioxyne	BXN	3	Sale and distribution of probiotics	-55%	-75%	\$0.01
TALI Digital	TD1	3	Software company developing tools for assessment and improvement of attention in children. Formerly Novita Healthcare.	0%	0%	\$0.001

Continued over

Bioshares Index (Cont'd)

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 30/6/24
USCOM	UCM	3	Markets Uscom, a non-invasive heart output function monitor, BP+ non-invasive central blood pressure product and digital ultrasonic spirometry products	-63%	-67%	\$0.02
Imagion Biosystems	IBX	3	Developing MagSense, a diagnostic technology which exploits the principles of superparamagnetic relaxometry (40 for 1 share consolidation 2H 2023)	-76%	-87%	\$0.09
The Hydration Pharmaceutical Co.	HPC	3	Sells hydration liquids, powders and tablets in North America. Sold ANZ rights to Hydralyte in 2014 to Care Pharmaceuticals. (Listed Q4 2021)	-63%	-84%	\$0.01
Hexima	HXL	2	Developing HXP124 to treat fungal infection of toenails (Re-listed Q4 2020). Program cancelled due to poor results (July 2022).	-39%	-48%	\$0.01
Holista Colltech	HCT	1	Markets dietary supplements and disinfectant products	-50%	-50%	\$0.01
Nutritional Growth Solutions	NGS	1	Development and sale of nutritional supplements for children. (Listed Q4 2020)	-86%	-80%	\$0.00
Jayex Healthcare	JTL	0	Commercialisation of the Enlighten patient workflow platform	-89%	-89%	\$0.001
Cambium Bio	CMB	0	Developing biologics for the treatment of eye diseases and tissue repair.			

Capitalisation Total 13,312

Botanical Product Companies (Cultivated Production)

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 30/6/24
Neurotech International	NTI	64	Has acquired proprietary cannabis strains for treating autism, epilepsy and ADHD	1%	75%	\$0.07
Vitura Health	VIT	50	Medicinal cannabis health and wellness business. (Formerly Cronos Australia)	-66%	-83%	\$0.09
Little Green Pharna	LGP	30	Sale and distribution of medicinal cannabis products	-32%	-39%	\$0.10
Auscans Group Holdings	AC8	18	Developing medical cannabis products for the Australian	0%	0%	\$0.04
The Calmer Co Int	CCO	15	Cultivation and development of kava (piper methysticum) as an alternative treatment for anxiety, pain and insomnia. (Formerly Fiji Kava)	14%	167%	\$0.01
Medlab Clinical	MDC	15	Development, production and marketing of nutraceuticals cannabis product to treat cancer patients with intractable pain	0%	0%	\$6.60
Cann Group	CAN	12	Medicinal cannabis company focused on the breeding, cultivation and production stages. Holds Australian ODC cultivation (MC) and research license (CR). Acquired Satipharm in 2021.	-71%	-77%	\$0.03
MGC Pharmaceuticals	MXC	11	A medical and cosmetic cannabis company with growing operations in Slovenia. Acquired Czech company Panax Pharma. (1000 for 1 share consolidation 2H 2023)	-37%	-85%	\$0.30
Althea Group	AGH	9	Supply of branded medicinal cannabis products in Australia. To cultivate, extract and manufacture medicinal cannabis. Holds ODC manufacturing license.	-41%	-47%	\$0.02
Epsilon Healthcare (Formerly named THC Global Group)	EPN	7	A diversified global cannabis company with operations in Australia and Canada	0%	14%	\$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.	0%	-65%	\$0.02
Zelira Therapeutics	ZLD	4	Developer of medicinal cannabis therapeutic products (175 for 1 consolidation 1H 2022)	-69%	-81%	\$0.28
Elixinol Global	EXL	2	A supplier of hemp and medicinal cannabis products. To Acquire CansaCare Health GmbH	-75%	-77%	\$0.003
Melodiol Global Health	ME1	1	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)	-93%	-98%	\$0.00

Capitalisation Total 241

Continued over

Listed Biotech Investment Funds or Companies

Company	Code	Cap. \$m	Principal Activities	Change - Half	Change - Year	Price 30/6/23
BTC Health	BTC	12	Provides capital and management expertise to high-growth Australian biotech, medtech and pharmaceutical companies	-27%	46%	\$0.04

Capitalisation Total12

Capitalisation Total - All
Indices236,005

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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