

Analyst

Dr Anubhav Saxena 612 8224 2846

Authorisation

John Hester 612 8224 2871

Cogstate (CGS)

Mind games

Recommendation

Hold (unchanged)

Price

\$1.41

Target (12 months)

\$1.60 (previously \$1.70)

GICS Sector

Healthcare Equipment and Services

Expected Return

Capital growth	13.5%
Dividend yield	0.0%
Total expected return	13.5%

Company Data & Ratios

Enterprise value	A\$203.9m
Market cap	A\$244.2m
Issued capital	173.2m
Free float	66.6%
Avg. daily val. (52wk)	\$472,712
12 month price range	\$1.14-\$2.46

Price Performance

	(1m)	(3m)	(12m)
Price (A\$)	1.64	1.69	1.80
Absolute (%)	-7.32	-10.06	-15.56
Rel market (%)	-5.25	-8.63	-16.77

Absolute Price



SOURCE: IRESS

FY23 Result

All figures in US\$m. Key financial results were largely ahead of guidance released in May 2023 and our previous forecasts. Revenue \$40.5m (10% decrease YoY, FY22 \$45.0m), EBITDA \$5.3m and NPAT \$3.6m. Significant decrease in contribution margin to 52.5% (FY22 59.3%) and profitability with EBITDA margin of 13.1% (FY22 28.9%) and EBIT margin of 6.7% (FY22 23.8%). FY23 performance has been impacted by clinical trial patient enrolment delays, higher staffing costs prior to the restructure in May 2023 and decrease in high margin licensing mix (historically ~ 17%-19%). Clinical Trials sales contracts of \$34.0m executed during FY23 were below recent years performance (FY20 \$46.0m, FY21 \$47.3m, FY22 \$82.5m). Future contracted backlog decreased from \$139.1m at the end of FY22 to \$132.6m at the end of FY23. Net cash balance of \$27.8m as at 30 June 2023.

Alzheimer's Disease momentum

The company has indicated that momentum is starting to build following the significant developments with the first FDA traditional approval announced in July 2023 (lecanemab) with donanemab expected to follow later this year. The Cogstate customer base is already expanding with 3 new large pharma customers in FY24 and additional clinical trial engagement expected from the current network. Clinical trial enrolment delays experienced during FY23 have been resolved and these revenues are now expected to be recognised over FY24/25. Launch of *Cognigram* within the US market is targeted by late CY23 or early CY24 to support the commercialisation of new therapies (lecanemab/donanemab).

Investment View: Hold, Price Target \$1.60

We maintain our Hold recommendation with price target of \$1.60. Whilst we recognise that Cogstate is well positioned to capitalise on momentum in the Alzheimer's Disease sector, we have downgraded revenue/earnings across FY24/25/26. This takes into account further potential patient enrolment delays and macroeconomic headwinds with respect to the availability of capital for R&D amongst biotech companies.

Earnings Forecast

June Year End US\$m	FY23a	FY24e	FY25e	FY26e
Revenues	40.5	43.7	57.6	62.5
EBITDA \$m	4.8	10.5	14.6	17.3
EBIT \$m	2.4	8.0	12.2	14.9
NPAT \$m	3.6	5.8	8.9	10.8
EPS (cps)	2.1	3.4	5.1	6.3
EPS growth %	-53%	63%	53%	22%
PER (x)	47.2	29.0	19.0	15.6
Price/FCF (x)	NM	14.2	18.3	15.1
EV/EBITDA (x)	45.0	19.3	13.3	11.7
Dividend (cps)	0.0	0.0	0.0	0.0
Franking	0.0	0.0	0.0	0.0
Yield %	0.0	0.0	0.0	0.0
ROE %	9%	13%	17%	17%

SOURCE: BELL POTTER SECURITIES ESTIMATES

FY23 Result & Commentary

FY23 Performance

Table 1 - FY23 Result Overview vs. FY22 and BPe						
Year end 31 December	Result vs PCP			Result vs Forecast		Comment
	FY22	FY23	Change	FY23e	Variance	
US\$m						
Total revenue	45.0	40.5	-10%	39.4	3%	Marginal beat vs. BPe
Clinical Trials	40.3	35.7	-11%	34.4	4%	In line with BPe
Healthcare	4.5	4.4	-1%	4.5	-1%	In line with BPe
Research	0.2	0.3	64%	0.5	-40%	Below BPe
Total expenses	-7.0	-15.9	126%	-15.8	0%	In line with BPe
Expenses as % of revenue	16%	39%	151%	40%	-2%	In line with expectations
EBITDA	7.3	5.3	-27%	4.3	23%	Above BPe. Cost restructuring and slight beat at revenue
Depreciation & Amortisation	-1.1	-2.6	130%	-2.7	-3%	In line with BPe
EBIT	6.1	2.7	-56%	1.6	65%	Above BPe. Cost restructuring and slight beat at revenue
Net interest expense	0.0	0.7	-2316%	0.0	NM	Net interest expense above BPe
Profit before tax	6.1	3.0	-51%	1.6	85%	Above BPe. Cost restructuring and slight beat at revenue
Income tax expense	2.0	0.5	-73%	-0.5	-221%	Income tax benefit recognised in FY23
NPAT	4.1	3.6	-13%	1.2	201%	Above BPe. Cost restructuring and slight beat at revenue
EBITDA margin	16.1%	13.1%	-19%	11.0%	19%	Significant margin compression due to high staff costs with revenue impacted
EBIT margin	13.6%	6.7%	-51%	4.2%	60%	Significant margin compression due to high staff costs with revenue impacted

SOURCE: COMPANY DATA AND BELL POTTER SECURITIES ESTIMATES

The key points from the FY23 result are:

- **Revenue decrease driven by Clinical Trials segment.** Patient enrolment delays and decreased contracts due to limited capital availability for R&D for biotech companies. Associated with macroeconomic environment.
- **Stable Healthcare segment.** No change in healthcare segment revenues with the minimum revenue recognition of ~\$4.4m.
- **Impacted profitability due to high staff costs.** The EBIT and EBITDA margin compression observed in FY23 with higher-than-expected staff costs along with decreased revenue.
- **Restructuring charge of \$0.5m in FY23.** Non-recurring charge for staff restructuring. Profitability is expected to improve in FY24 following this process with technological efficiencies implemented.

Clinical Trial Contract Execution

Clinical Trial contract signings are critical for the pipeline growth and have been the key growth driver over the past five years. With the significant investment into Alzheimer's Disease, Cogstate has been ideally positioned to support multiple clinical trials with established relationships with the majority of large pharmaceutical companies involved in this sector. Key points from the FY23 result are:

- FY23 contract signings of \$34.0m was weaker than preceding years (FY20 \$46.0m, FY21 \$47.3m, FY22 \$82.5m);
- Future contracted backlog decreased from \$139.1m at the end of FY22 to \$132.6m at the end of FY23;
- Request for Proposal volumes are reportedly returning to FY22 levels. With two potential therapies coming to market for Alzheimer's Disease, there is the potential for combination studies along with greater focus on other potential treatments; and
- There are 33 Phase I, 99 Phase II and 55 Phase III trials in Alzheimer's Disease and these numbers have continued to increase since CY20.

Earnings & Valuation

Earnings

Table 2 - Change in earnings FY24 to FY26

	2024			2025			2026		
	New	Old	% change	New	Old	% change	New	Old	% change
Revenues	43.7	53.1	-18%	57.6	63.5	-9%	62.5	77.7	-20%
EBITDA	10.5	12.4	-15%	14.6	15.8	-7%	17.3	20.9	-17%
EBIT	8.0	9.3	-13%	12.2	12.5	-2%	14.9	17.4	-14%
NPAT	5.8	6.7	-13%	8.9	9.0	-2%	10.8	12.6	-14%
EPS	3.4	3.9	-13%	5.1	5.2	-1%	6.3	7.3	-14%

SOURCE: BELL POTTER SECURITIES ESTIMATES

Based on the current contracted revenue run-off, the revenue backlog is \$31.9m for FY24, \$34.5m for FY25 and \$22.4m for FY26. Taking into account historical in-period additions, the macroeconomic environment, availability of capital for biotech companies and clinical trial trends we have downgraded revenues across FY24/25/26. We recognise the staff restructuring strategies implemented by Cogstate and expect this to translate to improved operating efficiencies over the short to medium term. It will be critical to monitor patient enrolment rates in Alzheimer's Disease trials over FY24, commencement of new studies and the progress of lecanemab & donanemab towards commercialisation. Whilst we expect *Cognigram* to be launched into the US market during FY24, we expect the minimum revenues from Eisai until there is further clarity regarding the payor pathway for this digital tool.

Valuation

Our blended valuation for Cogstate is generated from our DCF and EV/EBITDA methodology. There are no changes in underlying assumptions in our DCF (WACC 11.5%, TGR 3.0%) and we apply a flat 12.5x multiple to our FY24 EBITDA forecasts. There is a higher weighting to the DCF methodology as we believe this more effectively captures the longer term earnings potential of the company.

Table 3 - Blended price target for Cogstate

	Valuation	% Weighting	Valuation
Methodology			
DCF	\$1.71	70%	\$1.19
EV/EBITDA	\$1.34	30%	\$0.40
Total			\$1.60

SOURCE: BELL POTTER SECURITIES ESTIMATES

Our price target for Cogstate is \$1.60 (from \$1.70) and we maintain our Hold recommendation.

Company Overview

Cogstate is a neuroscience technology company that provides computerised cognitive testing & consulting services for trials (Clinical trials segment) and assessment tools for evaluation of cognitive impairment in patients (Healthcare segment).

Utilisation of Cogstate test batteries in clinical trials has been driven by the rapidly expanding focus on potential Alzheimer's disease therapies. These tests have also been used to examine therapies for other neurodegenerative conditions, delirium and in brain health monitoring for contact sports.

The Healthcare strategy has been strengthened with the Eisai partnership (October 2020) who are currently marketing the cognitive testing tools in Japan (*Nou Know*) and Taiwan/Hong Kong (*CogMate*). This important commercial agreement provides Cogstate with US\$45m in guaranteed revenue over 11 years.

Investment thesis

Our investment thesis for Cogstate is based on:

- **Industry disruption with early positioning in adoption curve:** Majority of clinical trials are still utilising analogue/paper-based methods of cognitive assessment. There is a definite shift towards computerised assessments and CGS is one of the key players in this growing market especially within Alzheimer's Disease.
- **Optimised for decentralised clinical trials:** During the peak of SARS-CoV-2, the importance of remote consultations and research services became apparent. Cogstate tests allow clinical trial participants to complete assessments remotely with instructional inputs from trained raters. Rater training, central monitoring and data analytics are also performed by Cogstate.
- **Validated technology with broad potential market:** Significant validation with Cogstate assessments used in over 2,000 clinical studies. These batteries are available in ~ 100 languages and suitable for patients with ages 6 – 99. Over 2 million tests have been completed to date.
- **Alzheimer's Disease remains at the centre stage:** Represented 84.2% of clinical trial revenue in FY22. The FDA granted lecanemab traditional approval in July 2023 and a decision regarding donanemab is expected by the end of CY23.
- **Existing relationships with multinational pharmaceutical companies:** Cogstate is currently working with Eli-Lilly (largest customer), Biogen, AbbVie and Eisai. As trials progress from Phase 1 to 4, Cogstate is ideally positioned to capture these contracts.
- **Wider application across multiple indications:** Cognitive assessment plays an important role in multiple conditions. 79% of total clinical trials customers have been outside Alzheimer's Disease. Neurodegenerative conditions (chronic traumatic encephalopathy) and post-operative delirium are growing areas of interest.
- **Healthcare agreement with Eisai strengthens portfolio:** Key partnership which will allow greater expansion potential and provides guaranteed revenue. Initiatives in place within key regions including Japan, Taiwan, Hong Kong (*NouKnow*, *CogMate*).
- **Integration into health assessment in contact sports.** NRL, NBA, WNBA players all complete testing with Cogstate tools on league registration. This extensive utilisation validates the technology and increases awareness amongst clinicians and KOLs.

Key Risks

Product and technology risks

The Cogstate cognitive assessments have been validated through internal and external studies and reported in multiple peer-reviewed medical journals. However, failure of these tests due to technology or product issues could impact the performance and clinical utilisation in clinical trials moving forward.

Regulatory risks

Cognigram received FDA notification for 510k clearance in July 2017 as a digital cognitive assessment. Our forecasts for revenue growth assume there are no regulatory changes in terms of FDA approval.

Commercial strategy risks – Clinical Trials segment

Ongoing revenue growth will be based upon the ability of Cogstate to secure new clinical trials contracts and effectively roll-out the Healthcare business through the partnership with Eisai.

A key component of the clinical trials segment is Alzheimer's disease which represented 84.2% of total revenue in FY22. There is significant interest within this space and multiple therapies are currently being investigated. Failure to demonstrate therapeutic benefit may reduce the extensive funding allocation towards clinical trials and impact our forecasts for sustained growth. There is also customer concentration risk as Eli Lilly and Eisai represent ~ 10% of revenue.

Commercial strategy risks – Healthcare segment

There is a reliance upon Eisai to drive the commercial roll-out of the Cogstate technology. Recent initiatives include the strategic partnership with Polaris to integrate the Cogstate tests in the Raku-Raku smartphone and the launch of the *NouKnow* and *CogMate*.

Eisai is a much larger and more mature company with market capitalisation of US\$11.6b and multiple operating segments. Accordingly, the commercialisation of Cogstate technology may be a lower priority for Eisai. In the Eisai Consolidated Financial Report for FY21 (published 13/5/22), there is only one reference to *Cogmate/NouKnow*.

SARS-CoV-2 and clinical trial risks

Cogstate tests were designed for remote access which has allowed strong growth during SARS-CoV-2. However, a portion of clinical trials have been delayed or postponed due to pandemic restrictions. Emergence of another highly virulent strain may impact future clinical trials and needs to be taken into account.

Competitor risks

A key competitor within the Clinical Trials segment is Cambridge Cognition (LON:COG) who have developed CANTAB with 30 years data and application in over 2500 peer-reviewed papers. Cambridge Brain Sciences (CBS) provide an online tool for cognitive assessment and have a similar strategy with clinical trial and healthcare solutions.

Increasing validation, effective marketing strategies and superior design & trial integration of competing computerised cognitive assessments may threaten the Cogstate market share across clinical trials and the healthcare segments.

WIRB-Copernicus Group (WCG) is another important competitor that provides complete clinical trial solutions specifically within the field of neurology. Strategic acquisitions of VeraSci, MedAvante-ProPhase and Analgesic Solutions have consolidated their portfolio and ability to target the clinical trials market.

The eCOA (electronic Clinical Outcome Assessment) market is driving the shift towards decentralised clinical trials. This involves remote collection/collation of trial data from patients, physicians and allied health personnel. Cogstate has partnered with companies such as Clario who provide an eCOA platform. However, WCG-VeraSci is also active within this space with their eCOA and ePRO (Patient Reported Outcomes) platform services. The unique combination of cognitive assessment tools with rater training services differentiates the Cogstate portfolio. Important competitors include MedAvante (acquired by WCG) and Signant Health.

MedAvante have developed the Virgil Platform to provide rater qualification & certification, clinical data analytics and independent review of assessments. Similar to CGS, independent raters are available from their network of expert clinicians. The combined eCOA and rater services may provide a more integrated service than CGS and impact market penetration. Signant also has a well-developed eCOA platform and central rating services (rater training and central monitoring). SmartSignals cognitive assessments available which can be administered in ~ 25 minutes.

The computerised cognitive assessment landscape within the healthcare setting is highly saturated with competing tools including MemTrax, Lumosity, BrainCheck and Philips IntelliSpace. More effective marketing strategies and user-friendly interfaces for these technologies would impact the utilisation of Cogstate tools (*Cognigram/Cogmate/NouKnow*).

Intellectual property protection

There is no current patent protection for Cogstate technology. Previous US patents covering methods of psychological and cognitive function testing have expired.

Whilst it is possible for another company to design similar cognitive testing tools, the strength of Cogstate technology is within its long-standing validation, familiarity amongst clinical researchers and the key relationships with established pharmaceutical companies which it continues to leverage through ongoing operations.

Table 4 - Financial summary

Cogstate (ASX:CGS)

Share price: \$1.41 Target price: \$1.60
No. of issued shares: 173.2m Market cap: \$244.2m

Profit & Loss (US\$m)

	2022a	2023e	2024e	2025e	2026e
Year end 30 Jun					
Total revenue (excl. int.)	45.0	40.5	43.7	57.6	62.5
Change	38%	-10%	8%	8%	32%
Cost of Sales	-18.7	-19.8	-18.6	-24.3	-26.0
Gross Profit	26.3	20.6	25.1	33.3	36.5
Gross Margin	58%	51%	57%	58%	58%
Total expenses (excl. D&A, int.)	-13.6	-15.9	-14.6	-18.6	-19.2
EBITDA	12.7	4.8	10.5	14.6	17.3
Total D&A	-1.9	-2.4	-2.5	-2.4	-2.3
EBIT	10.7	2.4	8.0	12.2	14.9
Net finance income/(expenses)	0.0	-0.1	0.0	0.0	0.0
Pre-tax profit	10.7	3.0	8.0	12.2	14.9
Income tax expense	-3.2	0.5	-2.2	-3.4	-4.1
NPAT	7.5	3.6	5.8	8.9	10.8
Change	44%	-53%	63%	53%	22%

Cash Flow (US\$m)

	2022a	2023e	2024e	2025e	2026e
Year end 30 Jun					
EBITDA	12.7	4.8	10.5	14.6	17.3
Change in working capital	-4.1	-7.3	2.9	-0.5	0.2
Gross cash flow	9.1	1.7	13.4	14.1	17.5
Finance costs	0.0	0.0	0.0	0.0	0.0
Net pass through	0.0	0.0	0.0	0.0	0.0
Income tax refunded/(paid)	0.0	0.0	0.7	-2.7	-4.1
Operating cash flow	9.7	0.7	14.1	11.4	13.4
Non government grants received	0.0	0.0	0.0	0.0	0.0
Purchase of PPE	-0.4	-0.1	-0.1	-0.2	-0.2
Capitalised software development costs	-3.1	-2.1	-2.1	-2.1	-2.1
Draw-down/(repayment) of short term loans	0.0	0.0	0.0	0.0	0.0
Investing cash flow	-3.5	-1.7	-2.2	-2.2	-2.3
Proceeds from issue of shares	1.4	0.2	0.0	0.0	0.0
Proceeds from borrowings (US PPP loan)	0.0	-0.6	0.0	0.0	0.0
Principal portion of lease payments	-0.6	-0.5	0.0	0.0	0.0
Transaction costs of issue of shares	0.0	0.0	0.0	0.0	0.0
Financing cash flow	0.8	-0.9	0.0	0.0	0.0
Net change in cash	7.0	-1.9	11.9	9.2	11.2
Cash at start of period	23.6	30.6	28.7	40.6	49.8
Effect of exchange rate changes	0.0	0.0	0.0	0.0	3.0
Cash at end of period	30.6	28.7	40.6	49.8	60.9

Balance Sheet (US\$m)

	2022a	2023e	2024e	2025e	2026e
Year end 30 Jun					
Cash and cash equivalents	30.6	28.7	40.6	49.8	60.9
Trade and other receivables	8.1	7.5	8.7	11.5	12.5
Other current assets	3.3	2.6	2.6	2.6	2.6
Property, Plant and equipment	0.9	0.4	0.2	0.2	0.2
Intangibles	10.8	11.1	11.0	10.9	10.8
Lease assets	1.1	0.2	0.2	0.2	0.2
Deferred tax assets	3.7	3.6	0.7	0.0	0.0
Total assets	58.4	54.1	64.0	75.1	87.2
Trade and other payables	10.2	4.6	10.9	14.4	15.6
Deferred revenue	4.6	5.0	5.0	5.0	5.0
Short-term borrowings	0.2	0.1	0.1	0.1	0.1
Provisions	2.6	2.3	2.3	2.3	2.3
Lease liabilities (current)	0.6	0.2	0.2	0.2	0.2
Deferred revenue	6.1	3.5	1.2	0.0	0.0
Lease liabilities (non-current)	0.6	0.0	0.0	0.0	0.0
Deferred tax liabilities	0.6	0.7	0.7	0.7	0.7
Total liabilities	25.5	16.4	20.5	22.7	24.0
Net Assets	32.9	37.7	43.5	52.4	63.2
Share capital	36.1	36.3	36.3	36.3	36.3
Other reserves	0.0	1.5	1.5	1.5	1.5
Retained Earnings	-3.3	-0.2	5.6	14.5	25.4
Total shareholder's equity	32.9	37.7	43.5	52.4	63.2

SOURCE: BELL POTTER SECURITIES ESTIMATES

Valuation data

	2022a	2023e	2024e	2025e	2026e
Year end 30 Jun					
NPAT (US\$m)	7.5	3.6	5.8	8.9	10.8
Diluted EPS (US\$ cps)	4.3	2.1	3.4	5.1	6.3
Change		-53%	63%	53%	22%
P/E ratio (x)	22.4	47.2	29.0	19.0	15.6
CFPS (US\$ cps)	3.6	-0.9	6.9	5.3	6.5
Price/FCF *	27.3	NM	14.2	18.3	15.1
DPS (cps)	0.0	0.0	0.0	0.0	0.0
Yield	0%	0.0%	0.0%	0.0%	0.0%
Franking	0%	0%	0%	0%	0%
EV/Revenue	4.5	5.0	4.6	3.5	3.2
EV/EBITDA (x)	16.9	45.0	19.3	13.3	11.7
NTA per share (US\$ cps)	12.8	15.3	18.8	24.0	30.3
Price/NTA (x)*	7.6	6.3	5.2	4.1	3.2

Performance ratios

	2022a	2023e	2024e	2025e	2026e
Year end 30 Jun					
EBITDA margin	28%	12%	24%	25%	28%
EBIT margin	24%	6%	18%	21%	24%
Return on assets	13%	7%	9%	12%	12%
Return on equity	23%	9%	13%	17%	17%
Payout ratio	0.0%	0.0%	0.0%	0.0%	0.0%
Effective tax rate	29.7%	-17.9%	27.5%	27.5%	27.5%

Leverage ratios

	2022a	2023e	2024e	2025e	2026e
Year end 30 Jun					
Net debt/(cash)	-30.4	-28.6	-40.5	-49.7	-60.8
Net debt/equity	NM	NM	NM	NM	NM
Gearing	NM	NM	NM	NM	NM
Net debt/EBITDA (x)	NM	NM	NM	NM	NM
Net interest cover (x)	NM	NM	NM	NM	NM

Segmentals (US\$m)

	2022a	2023e	2024e	2025e	2026e
Year end 30 Jun					
Clinical Trials	40.3	35.7	39.0	52.3	54.7
Healthcare	4.5	4.4	4.4	4.8	7.3
Research Consulting Services	0.2	0.3	0.4	0.5	0.6
Total revenue	45.0	40.5	43.7	57.6	62.5

Interims (US\$m)

	1H23a	2H23a	1H24e
Year end 30 Jun			
Revenue	19.5	20.9	
Change		0.1	
Expenses	-8.0	-7.8	
Change		0.0	
EBITDA (statutory)	1.0	3.8	
Change		3.0	
EBIT	-0.2	2.6	

Recommendation structure

Buy: Expect >15% total return on a 12 month view. For stocks regarded as 'Speculative' a return of >30% is expected.

Hold: Expect total return between -5% and 15% on a 12 month view

Sell: Expect <-5% total return on a 12 month view

Speculative Investments are either start-up enterprises with nil or only prospective operations or recently commenced operations with only forecast cash flows, or companies that have commenced operations or have been in operation for some time but have only forecast cash flows and/or a stressed balance sheet.

Such investments may carry an exceptionally high level of capital risk and volatility of returns.

Research Team

Staff Member	Title/Sector	Phone	@bellpotter.com.au
Chris Savage	Head of Research/Industrials	612 8224 2835	csavage
Analysts			
John Hester	Healthcare	612 8224 2871	jhester
Anubhav Saxena	Healthcare	612 8224 2846	asaxena
Thomas Wakim	Healthcare	612 8224 2815	twakim
Michael Ardrey	Industrials	613 9256 8782	mardney
Marcus Barnard	Industrials	618 9326 7673	mbarnard
Sam Brandwood	Industrials	612 8224 2850	sbrandwood
Olivia Hagglund	Industrials	612 8224 2813	ohagglund
Joseph House	Industrials	613 9325 1624	jhouse
Daniel Laing	Industrials	612 8224 2886	dlaing
Hayden Nicholson	Industrials	613 92351757	hnicholson
Chami Ratnapala	Industrials	612 8224 2845	cratnapala
Jonathan Snape	Industrials	613 9235 1601	jsnape
Regan Burrows	Resources	618 9236 7677	rburrows
David Coates	Resources	612 8224 2887	dcoates
Stuart Howe	Resources	613 9325 1856	showe
Brad Watson	Resources	618 9326 7672	bwatson
Associates			
Connor Eldridge	Associate Analyst	612 8224 2893	celdridge
Baxter Kirk	Associate Analyst	613 9235 1625	bkirk
Ritesh Varma	Associate Analyst	613 9235 1658	rvarma
James Williamson	Associate Analyst	613 9235 1692	jwilliamson

Disclosures**Research Coverage & Policies**

For Bell Potter Securities' Research Coverage Decision Making Process and Research Independence Policy please refer to our company website: <https://bellpotter.com.au/research-independence-policy/>.

Authoring Research Analyst's Certification

The Authoring Research Analyst is responsible for the content of this Research Report, and, certifies that with respect to each security that the Analyst covered in this Report (1) all the views expressed accurately reflect the Analyst's personal views about those securities and were prepared in an independent manner and (2) no part of the Analyst's compensation was, is or will be, directly or indirectly, related to specific recommendations or views expressed by that Research Analyst in the Research Report.

Research Analyst's Compensation

Research Analyst's compensation is determined by Bell Potter Securities Research Management and Bell Potter Securities' Senior Management and is based upon activities and services intended to benefit the investor clients of Bell Potter Securities Ltd. Compensation is not linked to specific transactions or recommendations. Like all Company employees Research Analysts receive compensation that is impacted by overall Company profitability.

Prices

The Price appearing in the Recommendation panel on page 1 of the Research Report is the Closing Price on the Date of the Research Report (appearing in the top right hand corner of page 1 of the Research Report), unless a before midday (am) time appears below the Date of the Research Report in which case the Price appearing in the Recommendation panel will be the Closing Price on the business day prior to the Date of the Research Report.

Availability

The completion and first dissemination of a Recommendation made within a Research Report are shortly after the close of the Market on the Date of the Research Report, unless a before midday (am) time appears below the Date of the Research Report in which case the Research Report will be completed and first disseminated shortly after that am time.

Disclosure of Interest**Dissemination**

Bell Potter generally disseminates its Research to the Company's Institutional and Private Clients via both proprietary and non-proprietary electronic distribution platforms. Certain Research may be disseminated only via the Company's proprietary distribution platforms; however such Research will not contain changes to earnings forecasts, target price, investment or risk rating or investment thesis or be otherwise inconsistent with the Author's previously published Research. Certain Research is made available only to institutional investors to satisfy regulatory requirements. Individual Bell Potter Research Analysts may also opt to circulate published Research to one or more Clients by email; such email distribution is discretionary and is done only after the Research has been disseminated.

The level and types of service provided by Bell Potter Research Analysts to Clients may vary depending on various factors such as the Client's individual preferences as to frequency and manner of receiving communications from Analysts, the Client's risk profile and investment focus and perspective (e.g. market-wide, sector specific long term and short term etc.) the size and scope of the overall Client relationship with the Company and legal and regulatory constraints.

Disclaimers

This Research Report is a private communication to Clients and is not intended for public circulation or for the use of any third party, without the prior written approval of Bell Potter Securities Limited.

The Research Report is for informational purposes only and is not intended as an offer or solicitation for the purpose of sale of a security. Any decision to purchase securities mentioned in the Report must take into account existing public information on such security or any registered prospectus.

This is general investment advice only and does not constitute personal advice to any person. Because this Research Report has been prepared without consideration of any specific client's financial situation, particular needs and investment objectives ('relevant personal circumstances'), a Bell Potter Securities Limited Broker (or the financial services licensee, or the representative of such licensee, who has provided you with this report by arrangement with Bell Potter Securities Limited) should be made aware of your relevant personal circumstances and consulted before any investment decision is made on the basis of this Research Report.

While this Research Report is based on information from sources which are considered reliable, Bell Potter Securities Limited has not verified independently the information contained in this document and Bell Potter Securities Limited and its directors, employees and consultants do not represent, warrant or guarantee expressly or impliedly, that the information contained in this Research Report is complete or accurate.

Nor does Bell Potter Securities Limited accept any responsibility for updating any advice, views, opinions or recommendations contained in this Research Report or for correcting any error or omission which may have become apparent after the Research Report has been issued.

Bell Potter Securities Research Department has received assistance from the Company referred to in this Research Report including but not limited to discussions with management of the Company. Bell Potter Securities Policy prohibits Research Analysts sending draft Recommendations, Valuations and Price Targets to subject companies. However, it should be presumed that the Author of the Research Report has had discussions with the subject Company to ensure factual accuracy prior to publication.

All opinions, projections and estimates constitute the judgement of the Author as of the Date of the Research Report and these, plus any other information contained in the Research Report, are subject to change without notice. Prices and availability of financial instruments also are subject to change without notice.

Notwithstanding other departments within Bell Potter Securities Limited advising the subject Company, information obtained in such role is not used in the preparation of the Research Report.

Although Bell Potter Research does not set a predetermined frequency for publication, if the Research Report is a fundamental equity research report it is the intention of Bell Potter Research to provide research coverage of the covered issuers, including in response to news affecting the issuer. For non-fundamental Research Reports, Bell Potter Research may not provide regular updates to the views, recommendations and facts included in the reports.

Notwithstanding that Bell Potter maintains coverage on, makes recommendations concerning or discusses issuers, Bell Potter Research may be periodically restricted from referencing certain Issuers due to legal or policy reasons. Where the component of a published trade idea is subject to a restriction, the trade idea will be removed from any list of open trade ideas included in the Research Report. Upon lifting of the restriction, the trade idea will either be re-instated in the open trade ideas list if the Analyst continues to support it or it will be officially closed.

Bell Potter Research may provide different research products and services to different classes of clients (for example based upon long-term or short term investment horizons) that may lead to differing conclusions or recommendations that could impact the price of a security contrary to the recommendations in the alternative Research Report, provided each is consistent with the rating system for each respective Research Report.

Except in so far as liability under any statute cannot be excluded, Bell Potter Securities Limited and its directors, employees and consultants do not accept any liability (whether arising in contract, in tort or negligence or otherwise) for any error or omission in the document or for any resulting loss or damage (whether direct, indirect, consequential or otherwise) suffered by the recipient of the document or any other person.

In the USA and the UK this Research Report is only for institutional investors. It is not for release, publication or distribution in whole or in part in the two specified countries. In Hong Kong this Research Report is being distributed by Bell Potter Securities (HK) Limited which is licensed and regulated by the Securities and Futures Commission, Hong Kong. In the United States this Research Report is being distributed by Bell Potter Securities (US) LLC which is a registered broker-dealer and member of FINRA. Any person receiving this Research Report from Bell Potter Securities (US) LLC and wishing to transact in any security described herein should do so with Bell Potter Securities (US) LLC.

Biotechnology Risk Warning

The fact that the intellectual property base of a typical biotechnology company lies in science not generally regarded as accessible to the layman adds further to the riskiness with which biotechnology investments ought to be regarded. Clinical and regulatory risks are inherent in biotechnology stocks. Biotechnology developers usually seek U.S. FDA approval for their technology which is a long and arduous three phase process to prove the safety, effectiveness and appropriate application or use of the developed drug and even after approval a drug can be the subject of an FDA investigation of subsequently discovered possible links between the drug and other diseases not previously diagnosed. Furthermore, the Australian exchange listed biotechnology sector is subject to influence by the global biotechnology sector, particularly that in the USA. Consequently, Australian exchange listed biotechnology stocks can experience sharp movements, both upwards and downwards, in both valuations and share prices, as a result of a re-rating of the sector both globally and in the USA, in particular. Investors are advised to be cognisant of these risks before buying such a stock.

Bell Potter Securities Limited
 ABN 25 006 390 772
 Level 29, 101 Collins Street
 Melbourne, Victoria, 3000
 Telephone +61 3 9256 8700
 www.bellpotter.com.au

Bell Potter Securities (HK) Limited
 Room 1701, 16/F
 Prosperity Tower, 39 Queens
 Road Central, Hong Kong, 0000
 Telephone +852 3750 8400

Bell Potter Securities (US) LLC
 Floor 39
 444 Madison Avenue, New York
 NY 10022, U.S.A
 Telephone +1 917 819 1410

Bell Potter Securities (UK) Limited
 16 Berkeley Street London, England
 W1J 8DZ, United Kingdom
 Telephone +44 7734 2929