



Phase 2 coming in 2026

Percheron Therapeutics (ASX:PER) has one of the most promising oncology assets in HMBD-002. HMBD-002 is an immune-oncology therapy (meaning it utilises a patient's immune system) that inhibits a pathway called VISTA that plays a key role in suppressing T-cell responses to cancer treatments. Following positive Phase 1 data, Percheron is taking HMBD-002 into Phase 2 in 2026.

Multiple indications to minimise downside risk

The Phase 2 trial will begin with one or two arms, but will ultimately have several that each explore different tumour types to determine which are most responsive for the drug. As was the case with Phase 1, there will be regular data read-outs to keep investors and other stakeholders informed.

Identified high priority targets include Triple-Negative Breast Cancer, EGFR-Mutant Non-Small Cell Lung Cancer, HER2-Negative Oesophageal Adenocarcinoma and Endometrial Cancer. The company hopes to have initial data as early as late 2026 with final data from all arms in mid-2028, at which point the company could file to the FDA for an accelerated approval.

A major market opportunity

Percheron needs to only obtain approval for one indication to unlock significant commercial potential. All of the aforementioned indications have a global addressable market in the billions, led by Triple-Negative Breast Cancer which has US\$9bn, half of which is in the US. All indications have treatments that cost well over US\$200k per annum. HMBD-002 may be able to be used in combination with other treatments such as Keytruda to increase their efficacy and expand their usage.

We see upside to \$0.064 per share

We think there is significant upside for Percheron Therapeutics since it is only at cash backing. We observe that its peers trade at an average market cap of \$78.8m – which would be \$0.064 per diluted Percheron share. We have also modelled various NPV scenarios for HMBD-002's ultimate commercialisation and these likewise suggest significant upside. We think a re-rating is plausible in the next 12 months subject to the company commencing Phase 2. Please see page 10 for the key risks.

Share Price: A\$0.007

ASX: PER/OTC:PERCF

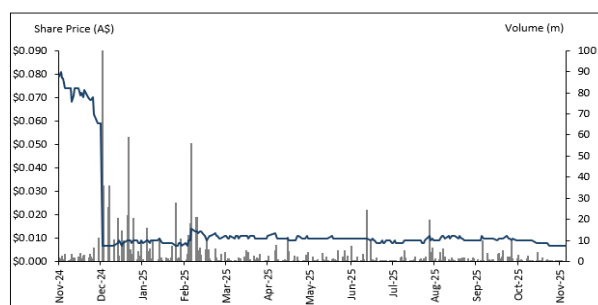
Sector: Biotechnology

27 November 2025

Market cap. (A\$ m)	7.6
# shares outstanding (m)	1,087.4
# shares fully diluted (m)	1,226.9
Market cap ful. dil. (A\$ m)	8.6
Free float	100%
52-week high/low (A\$)	0.135 / 0.007
Avg. 12M daily volume ('1000)	5.3
Website	https://percherontx.com

Source: Company, Pitt Street Research

Share price (A\$) and avg. daily volume (k, r.h.s.)



Source: Refinitiv Eikon, Pitt Street Research

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Percheron Therapeutics is an ASX-listed biotech commercialising HMBD-002.

HMBD-002 is a so-called checkpoint inhibitor, focused on VISTA.

A recap of Percheron Therapeutics and HMBD-002

Percheron Therapeutics is an ASX-listed biotech commercialising HMBD-002. The company picked it up following the failure of a previous asset (Avicursen that was focused on the treatment of Duchenne Muscular Dystrophy). After months of due diligence on several prospective assets, Percheron picked up HMBD-002 – licensing the drug on favourable terms with just US\$3m payment up front and with the liabilities for further milestone payments only arising when HMBD-002 has hit milestones. HMBD-002 has recorded very encouraging results in Phase 1, and the plan is to take it into Phase 2 in 2026.

HMBD-002: A checkpoint inhibitor targeting Vista

HMBD-002 is a so-called checkpoint inhibitor and a monoclonal antibody. Inhibiting immune 'checkpoints' which have a function to turn down immune responses, is a relatively new but popular immuno-oncology approach and revolutionary enough that the discoverers of inhibitors¹ won the 2018 Nobel Prize in Medicine. As outlined in our initiation report, 10 oncology 'checkpoint' drugs have come to market with the most popular being Merck's Keytruda which sold US\$29.5bn in the most recent calendar year.

While most drug development efforts have focused on a checkpoint called PD-1, or its ligand, PD-L1, HMBD-002 is focused on VISTA. Short for 'V-domain Ig suppressor of T cell activation', VISTA sits on various immune system cells and plays an important part in suppressing T-cell responses, especially where PD-1 focused drugs like Keytruda are used (Figure 1 and Figure 2). VISTA was previously considered 'undruggable' because of its extensive expression on myeloid cells, leading to safety issues such as cytokine release syndrome². But the data on HMBD-002 to date suggests it overcomes these limitations in a wide range of cancers.

Figure 1: The power of VISTA



Source: Company³

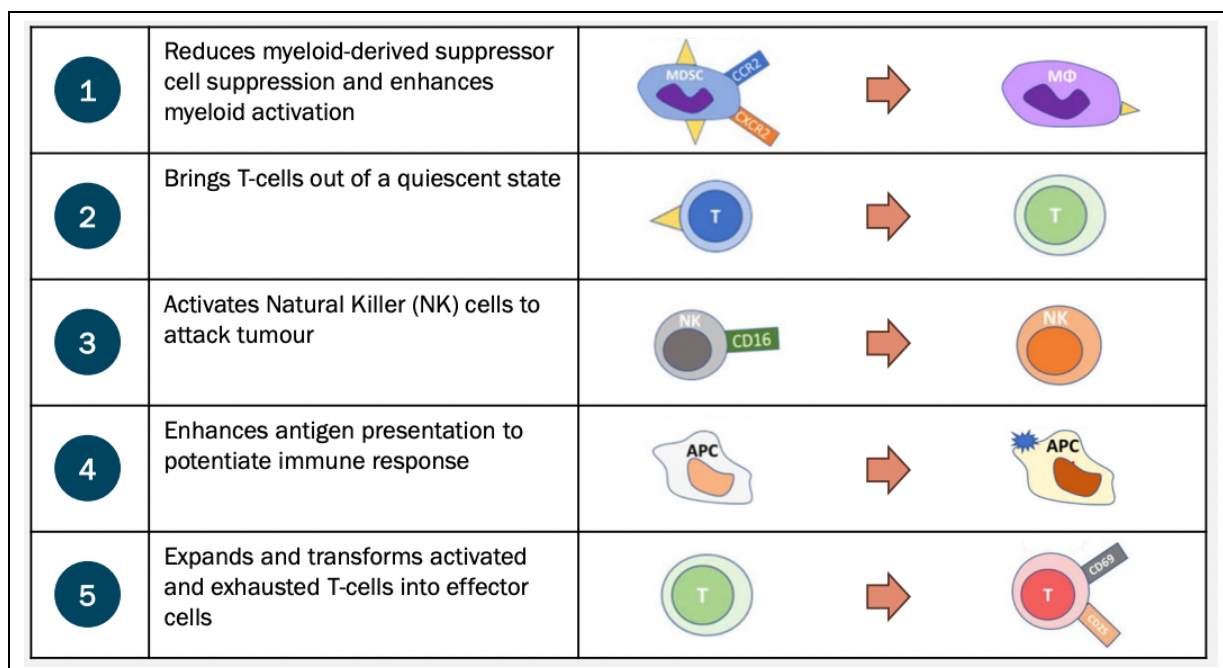
¹ Drs. James Allison and Tasuku Honjo

² <https://www.biospace.com/sensei-biotherapeutics-announces-nature-communications-publication-describing-mechanism-of-action-of-sns-101-selectively-targeting-the-active-form-of-vista-within-the-tumor-microenvironment>

³ D Nishizaki et. al. (2024) ESMO Open 9(4):102942 (panels 1 & 3); LF Kuklinski et al. (2018) Cancer Immunol, Immunother, 67:1113-1121 (panel 2).



Figure 2: How VISTA works



Source: Company

HMBD-002 is a monoclonal antibody.

HMBD-002 is a monoclonal antibody

It is also important to note that HMBD-002 is a monoclonal antibody. This means it is derived from immunoglobulin-based antibodies in the human immune system but uniformly specific for a particular molecular target. In other words, they are drugs that mimic the immune system's ability to fight off bacteria, viruses or other harmful pathogens; and crucially are designed to target a specific antigen. The term monoclonal derives from how they are produced from a single-clone of a B-Cell, meaning all antibodies are identical and bind to the same target.

This drug class is broader than checkpoint inhibitors with over 120 products on the market globally targeting various diseases. Importantly, antibodies are easy to develop against specific targets of interest, minimise (if not eliminate) collateral damage to healthy cells which happens with chemotherapy, and are easy to manufacture at low cost. These are normally administered via IV (intravenous) injection and can be very expensive for patients. But if HMBD-002 can provide a better chance of results, patients will 'pay up' for the drug.



Positive data so far

Percheron licensed HMBD-002 in June 2025, following a Phase 1 study. It was the first-in-human study for the drug and encouraging preliminary results offered confidence that it could be progressed further through the clinic. The final results, released in October 2025, confirmed HMBD-002's potential.

The Phase 1 study of HMBD-002 evaluated 48 patients in 6 locations across the USA. These patients had various tumours, including triple negative breast cancer, but in all instances were advanced (i.e. locally advanced and unresectable or metastatic)⁴. The patients evaluated received various dosages (ranging from 20 mg to 1,400 mg) but most had advanced tumours, had been heavily pre-treated, and many had failed previous rounds of immunotherapy drugs (some patients received four or five previous rounds). 28 patients just received HMBD-002 and 20 received HMBD-002 plus Keytruda.

HMBD-002 was safe with only 7% of patients in the monotherapy group and 5% in the combination group experiencing a treatment-related adverse event (TRAE) greater than grade 3 in severity. And ~60% of patients saw no TRAE whatsoever. The study's objective was to measure safety and optimal dosing for later studies. Nonetheless, both preliminary and final releases of data noted that several patients showed encouraging results including prolonged disease stabilisation and significant reductions in tumour size. Overall, 18% of patients in the monotherapy group and 30% in the combination group showed Stable Disease, meaning that the patients' tumour substantially ceased growing for a period of time.

Any figure below 50% may not sound encouraging to lay people (in that it may imply failure), but:

1. It is in line with or better than other drugs that have gone on to become blockbuster commercial products (Figure 3),
2. We would remind investors that these were very advanced patients who (after 4-5 treatments) may be resistant to almost any therapeutic intervention. One might imagine the figures would be stronger in patients that had less advanced cancer or had undergone fewer treatments,
3. Immunotherapy can take longer to show a benefit and it may not be reflected in early measures such as Overall Response Rate.

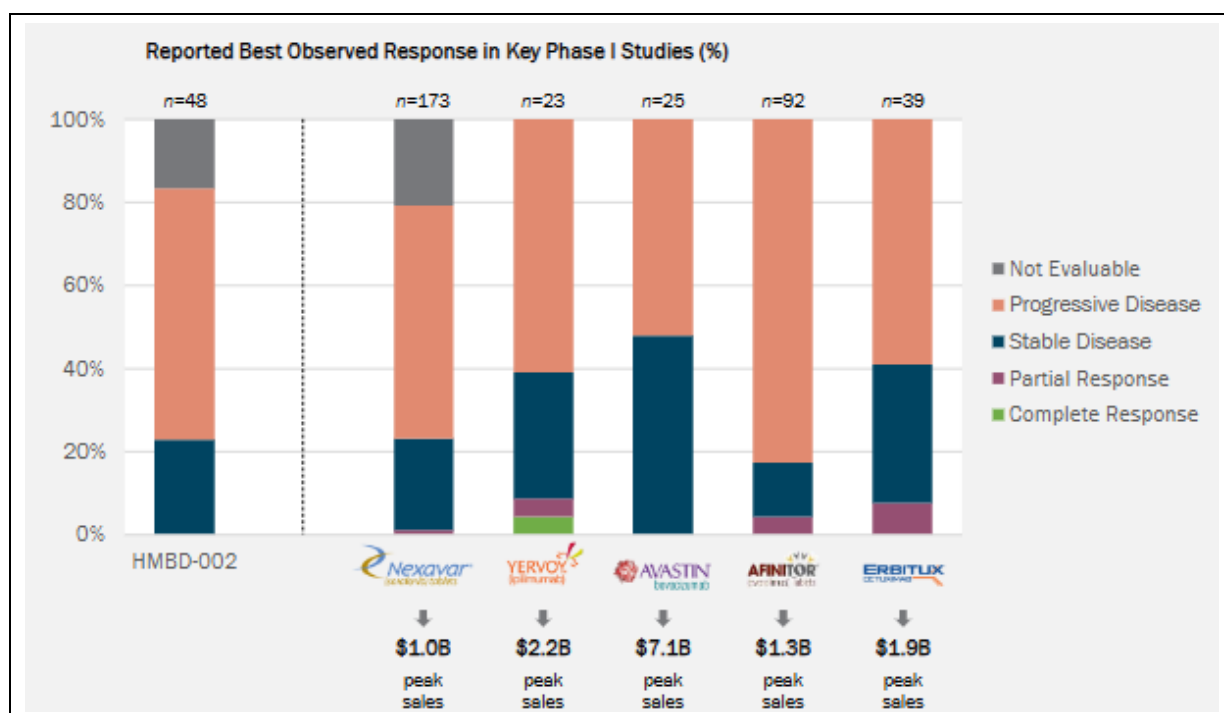
The promise of HMBD-002 lies not just in its clinical results, but also the fact that it can work at picomolar concentrations, has IP protection to at least 2038, and can be reliably manufactured at 500L scale with high yield and recovery, as well as with viable COGs.

Phase 1 showed HMBD-002 was safe and several patients showed encouraging results including prolonged disease stabilisation and significant reductions in tumour size.

⁴ <https://www.clinicaltrials.gov/study/NCT05082610>



Figure 3: HMBD-002 compared to its peers



Source: Company

Percheron's plans for Phase 2

Percheron plans to commence its Phase 2 trial in 2026.

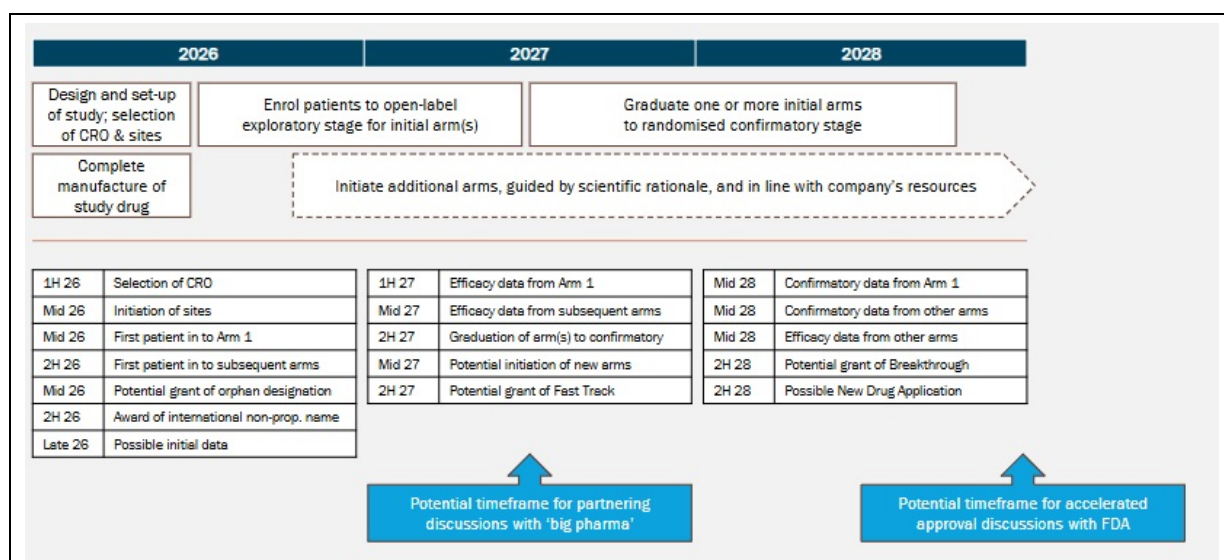
Percheron plans to commence its Phase 2 trial in 2026. The study will explore several tumour types in parallel arms to determine which indications HMBD-002 works best in. This reduces the 'all or nothing' binary risk that can come when a biotech runs a trial with just one indication. The study will be conducted in Australia and the US, with other countries potentially to be included too. The study will recruit patients in defined blocks, allowing for regular read-outs (i.e. reported data).

Arms may be dropped if interim data suggests an inferior response vs other arms; but combining each of them into one study will achieve substantial efficiencies and economies of scale. Each arm will start as an exploratory stage with 20-30 patients to provide early indication of efficacy before more time and money is invested into a confirmatory stage of 40-100 patients. The company estimates, based on industry benchmarks that each patient will cost approximately US\$150,000 and so a number of 20-25 patients in the exploratory stage would cost US\$3-3.5m, excluding any impact of R&D Tax Incentive Rebates.

Percheron hopes to have initial data as early as late 2026 with final data from all arms in mid-2028, at which point the company could file to the FDA for an accelerated approval (Figure 4).



Figure 4: Percheron's planned timeline



Source: Company

Possible targets

Percheron has indicated there are four high-priority targets.

The company is yet to confirm the specific targets for the trial (let alone which one will be first), but has indicated there are four high-priority targets:

- Triple-Negative Breast Cancer (TNBC)
- EGFR-Mutant Non-Small Cell Lung Cancer (NSCLC),
- HER2-Negative Oesophageal Adenocarcinoma, and
- Endometrial Cancer.

We covered these in detail in our initiation report, but we will state that all of these are resistant to drug treatments for various biological reasons. For example, TNBC lacks surface receptors for HER2, estrogen or progesterone, which makes it very resistant to drug treatment (including treatment with Keytruda). All of these have patient numbers in the tens of thousands per annum and a treatment cost of US\$250,000 per year would lead to significant addressable revenue opportunities (Figure 5).



Figure 5: Percheron's potential markets

	Triple-Negative Breast Cancer	EGFR-Mutant Non-Small-Cell Lung Cancer	HER2-Negative Oesophageal Cancer	Endometrial Cancer	
Estimated incident patients in United States, pa	36,000	15,000	10,000	6,500*	
Annualised treatment cost, US\$	\$250K	\$250K	\$250K	\$250K	Median treatment cost in 2020-24 was \$350K; reduced to \$250K for conservative estimate
Estimated time on treatment, months	6 months	4 months	4 months	6 months	Earlier stage patients, and patients in combination, may result in longer treatment durations
US addressable market, US\$ pa	\$4.5 billion	\$1.2 billion	\$0.8 billion	\$0.8 billion	
Global addressable market, US\$ pa	\$9.0 billion	\$2.4 billion	\$1.6 billion	\$1.6 billion	Assume that US represents 50% of global sales

* Endometrial cancer patients estimated at 10% of total pending further analysis of target sub-population

Source: Company

Licensing deals represent potential for upside too

Percheron has indicated there are four high-priority targets.

We also see possibility of partnering of licensing deals for HMBD-002 (Figure 6). Peer precedent suggests that this can happen even at the early-mid clinical stage (i.e. Phase I/II).

Figure 6: Immuno-oncology M&A precedent

Date	Asset	Licensor	Licensee	Target	Stage	Deal Terms
Early-Mid Clinical						
Oct 2018	COM701	COMPUGEN	Bristol Myers Squibb	PVRIG	Phase I / II	\$20M upfront; \$200M milestones; royalties
Jun 2021	EOS-448	ITEOS	GSK	TIGIT	Phase I / II	\$625M upfront; \$1.45B milestones; royalties
Dec 2022	XTX-101	xilio	GILEAD	CTLA-4	Phase I / II	\$30M upfront; \$604M milestones; royalties
Jan 2023	ICB-01	ImCheck	maruho medical	BTN3A	Phase I / II	Japan rights only €15M upfront; milestones; royalties
Late Clinical						
Jan 2021	Tislelizumab	BeiGene	NOVARTIS	PD-1	Phase III	Ex-China rights only \$650M upfront; \$1.55B milestones; royalties
Dec 2021	Ociperlimab	BeiGene	NOVARTIS	TIGIT	Phase III	\$300M upfront; \$700M milestones; royalties
Jul 2022	Cemiplimab	REGENERON	sonofi	PD-1	Phase III	\$900M upfront; \$1.5B milestones; profit split

Source: Company



We reiterate our valuation of \$0.064 per share which reflects a peer-weighted approach.

Valuation of \$0.064 per share reiterated

We reiterate our valuation of \$0.064 per share which reflects a peer-weighted approach. Our valuation is the average market capitalisation of PER's 5 closest peers which are Prescient (ASX:PTX), Radiopharm (ASX:RAD), Imugene (ASX:IMU), Amplia (ASX:ATX) and Arovella (ASX:ALA); which is ~\$78m.

Right now, Percheron is trading below cash backing, meaning the market is not ascribing any value whatsoever to this asset. It is true that HMBD-002 is at least a couple of human clinical trials away from development and shouldn't be valued at multiple billions of dollars right now. But Percheron trades at a discount relative to oncology companies at similar stages of development.

Even further upside is possible

In our initiation note, we also pointed to Immutep (ASX:IMM) as an example of what Percheron could get to eventually (i.e. after Phase 2 which would not be until mid-CY28 at the earliest and, of course, contingent on successful results). We singled out Immutep because its key asset, Eftilagimod Alfa, is in Phase 3 for NSCLC (one of PER's indications) and because it is the main listed play related to an immune checkpoint, in this case LAG-3, short for lymphocyte activation gene-3.

In our 19 August 2025 initiation report, we also modelled multiple NPV scenarios for eventual commercialisation of HMBD-002, and these all showed significant upside. For instance, we modelled the NPV of the TNBC opportunity at \$162.4m in our base case and \$207.7m in our bull case. As for the SCCHN opportunity, our NPV was \$329.3m base case and \$467.3m bull case or \$0.27-0.38 per share respectively. Of course, the per share figures should not be taken literally right now because there will need to be a lot of funding (and inevitably dilution) to bring this drug through the clinic and through to commercialisation, even if it can 'sub-license' the drug to another company to help bring it through the clinic.

But we hope this shows that there is upside in Percheron's opportunity and that it is wrong that it should be trading at cash backing. Although these valuations are a significant premium to the current valuation, a big pharma might consider these a bargain relative to other M&A deals done in the billions of dollars.

Catalysts for Percheron's re-rating

We foresee Percheron being re-rated driven by the following factors:

- Percheron's clinical advisory board determining the optimal clinical path forward for HMBD-002 (which should occur by the end of CY25);
- Initiating Phase II for HMBD-002,
- Applying for (and ultimately receiving) Orphan Drug Designation in the USA,
- Potential sub-licensing of HMBD-002, and
- Percheron pursuing further pipeline expansion opportunities.



Risks

We see the following key risks to our investment thesis:

- **Funding risk:** To get HMBD-002 to commercialisation, Percheron will continue to require external funding to support its plans. Raising funds on favourable terms (both debt and equity) along with timeliness may be a key challenge for the company.
- **Regulatory risk.** The company's ability to commercialise its products down the track is contingent on regulators maintaining approval where it already exists (including meeting ongoing regulatory compliance requirements) and giving approval to new products. A failure to give new products approval, or even a withdrawal of approval, could be catastrophic to its future ambitions.
- **Commercial risk.** There is the risk that the company may fail to execute its commercial objectives for a variety of reasons including clinical trial failure, a lack of regulatory approval, supply chain issues and a lack of ability to obtain Medicaid reimbursement among others.
- **Key personnel risk:** There is the risk the company may lose key personnel and be unable to replace them and/or their contribution to the business.

Risks related to pre-revenue Life Science companies in general.

The stocks of biotechnology and medical device companies without revenue streams from product sales or ongoing service revenue should always be regarded as speculative in character.

Since most biotechnology and medical device companies listed on stock exchanges in Australia fit this description, the term 'speculative' can reasonably be applied to the entire sector.

The fact that the intellectual property base of most biotechnology and medical devices lie in science not generally regarded as accessible to laypersons adds further to the riskiness with which the sector ought to be regarded.

Caveat emptor. Investors are advised to be cognisant of the abovementioned specific and general risks before buying shares in any company issued in this report, including Percheron.



Appendix I – Analysts' Qualifications

Stuart Roberts, lead analyst on this report, has been an equities analyst since 2002.

- Stuart obtained a Master of Applied Finance and Investment from the Securities Institute of Australia in 2002. Previously, from the Securities Institute of Australia, he obtained a Certificate of Financial Markets (1994) and a Graduate Diploma in Finance and Investment (1999).
- Stuart joined Southern Cross Equities as an equities analyst in April 2001. From February 2002 to July 2013, his research speciality at Southern Cross Equities and its acquirer, Bell Potter Securities, was Healthcare and Biotechnology. During this time, he covered a variety of established healthcare companies, such as CSL, Cochlear and Resmed, as well as numerous emerging companies. Stuart was a Healthcare and Biotechnology analyst at Baillieu Holst from October 2013 to January 2015.
- After 15 months over 2015–2016 doing Investor Relations for two ASX-listed cancer drug developers, Stuart founded NDF Research in May 2016 to provide issuer-sponsored equity research on ASX-listed Life Sciences companies.
- In July 2016, with Marc Kennis, Stuart co-founded Pitt Street Research Pty Ltd, which provides issuer-sponsored research on ASX-listed companies across the entire market, including Life Sciences companies.
- Since 2018, Stuart has led Pitt Street Research's Resources Sector franchise, spearheading research on both mining and energy companies.

Nick Sundich is an equities research analyst at Pitt Street Research.

- Nick obtained a Bachelor of Commerce/Bachelor of Arts from the University of Sydney in 2018 and the designation of Financial Modelling & Valuation Analyst by the Corporate Finance Institute. He has also completed the CFA Investment Foundations program.
- He joined Pitt Street Research in January 2022. Previously he worked for over three years as a financial journalist at Stockhead.
- While at university, he worked for a handful of corporate advisory firms

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