



Emerging Stocks Down Under

“ Human progress has always been driven by a sense of adventure & unconventional thinking. ”

- Andre Geim (b. 1958), Winner of the Nobel Prize in Physics for work on graphene



FIRST GRAPHENE

New materials riches,
beyond the dreams of
avarice

UNIVERSAL BIOSENSORS

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ADACEL TECHNOLOGIES

Get ready for takeoff

FIRST GRAPHENE

New materials riches, beyond the dreams of avarice

Stocks Down Under rating: ★★★★★

ASX: FGR
Market cap: A\$ 131M

52-week range: A\$0.06 / A\$0.28
Share price: A\$ 0.25

Imagine a material 100 times stronger than steel, tougher than diamonds, highly conductive of heat and electricity, very flexible and, potentially, almost transparent. That is graphene. Everyone agrees that there's very little you couldn't do with this hot new material once it can be manufactured at a reasonable price. The Perth-based First Graphene believes that it has cracked that last puzzle and is working towards commercialisation.

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UNIVERSAL BIOSENSORS

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Stocks Down Under rating: ★★★★★

ASX: UBI
Market cap: A\$ 74.5M

52-week range: A\$0.13 / A\$0.50
Share price: A\$ 0.41

It's been a good year for the Melbourne-based medical device developer Universal Biosensors. The stock was at just 13 cents on 25 March but it has since made it to 50 cents on 3 December. This company is now busting out of its traditional medical diagnostics space and is working on a diagnostic to improve the productivity of the wine industry.

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ASX: ADA
Market cap: A\$ 71M
Dividend yield: 2.7% (0% Franked)

52-week range: A\$0.30 / A\$0.98
Share price: A\$ 0.92

Headquartered in Melbourne, Adacel Technologies is the developer behind Aurora Air Traffic Management, one of the world's most extensively used air traffic technology. Currently, over 21% of worldwide airspace is managed by Adacel's technology. The company also produces air traffic control simulation for both civilian and military use. COVID-19 has not slowed this company down with the Chairman effectively saying Adacel has significant cash reserves and strong growth prospects. The stock has rallied 177% since its 24 March 2020 low of \$0.30, but does this rally still have any legs?

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Share price chart



Source: Tradingview

On 4 November our sister company Pitt Street Research published an issuer-sponsored research report on First Graphene headlined 'A pioneer, on the cusp'. That report is great background for this article, where we want to sketch why investors should pay attention and why we think First Graphene is a four star opportunity.

Not transparent aluminum, but almost as good

Graphene is an 'allotrope' (i.e. alternative matrix) of carbon that has had everyone in the new materials world excited since its 2004 discovery. Graphene won its discoverers the 2010 Nobel Prize in Physics. The question a decade later is who can make the material at a reasonable price and can therefore unlock the vast potential of this material. Not long ago, pure graphene was being sold for the equivalent of US\$720m a tonne. First Graphene believes that within a year or two at a plant at Henderson, near Perth, it can make it for perhaps US\$50,000 a tonne and sell it for US\$200,000 a tonne.

First Graphene originated from an effort to develop graphite mines in Sri Lanka where they have vein graphite whose graphitic content is so high there's virtually nothing else in the ore except graphite. First Graphite, as First Graphene was then called, had a bright idea around 2015 – why not use the graphite to make graphene and sell a truly value-added product? First Graphite went to the University of Adelaide where the laboratory of

Professor Dusan Losic established that the vein graphite could easily yield graphene. The Perth company then took this process and started scaling it up, to the point where it now has a plant at Henderson with 100 tonnes per annum production capacity, using vein graphite bought commercially from a Sri Lankan supplier. The graphene isn't the ultra-pure single-atom thick graphene that is the Holy Grail of the graphene community, but at 5-10 atoms thick it is actually better suited for commercialisation. More importantly, it has been designed to have enough of an oxygen edge on the product to be dispersed easily when it is added to someone else's formulations.

A product that improves everything it's added to

Over the last couple of years, First Graphene has worked with a range of potential customers of the Henderson plant on uses of its graphene, which it is marketing as PureGRAPH. It has worked on ways to drive down its own production costs and it has made sure that the graphene has the requisite approvals to allow it to be sold in all the important markets. The company has also joined various graphene academic-industry consortiums, including the Graphene Engineering and Innovation Centre (GEIC) in Manchester, to be at the technological cutting edge and be seen by all the potential users.

First Graphene has yet to secure the breakthrough volume commercial relationship that suddenly makes Henderson economic, but believes that it is not far off, because every time a small amount of its graphene is added to someone else's product it tends to improve a particular property in that product by 30-50%.

Ongoing collaborations

Currently, First Graphene has collaborations ongoing with makers and users of polymers, elastomers, glass fibre and carbon fibre composite, fire retardants and concrete. The potential applications are as diverse as industrial safety boots and reclaimer buckets for iron ore miners. Hardly a month goes by without some product breakthrough being announced to ASX and these usually show the upside for the customers. For example, the reclaimer buckets now last twice as long as they are supposed to, suggesting a big commercial upside both for the makers as well as the buyers, like Rio Tinto. However, it hasn't mattered what the announcement was – the market has, until recently, been relatively unimpressed and while in recent days the response has been better, you can still acquire First Graphene for under A\$150m.

A 9 December 2020 announcement from First Graphene is worth paying attention to because it shows how cutting edge this story has become. Two years ago First Graphene took 50% of a spinout from the Flinders University, called 2D Fluidics Pty Ltd. This company is commercialising a 'Vortex Fluidic Device' from the laboratory of Professor Colin Raston, which harnesses fluid dynamics to allow chemical reactions to take place without some of the harsh chemicals more conventional approaches would need. The 9 December announcement told the market that 2D Fluidics had been able to make balls of a carbon molecule called the 'buckminsterfullerene' that could be used as supercapacitors. What does that mean? For one thing, First Graphene may have found a way to replace the spherical graphite used in lithium-ion battery anodes, with a much cleaner manufacturing process. For another, it may have found a way to cost-effectively make the supercapacitors widely regarded as the Next Big Thing in batteries.

What is this stock worth once it has significant offtake from Henderson and it can talk confidently about achieving its goal of a US\$50,000 a tonne production price? With future demand in the billions, we believe there's still a lot of upside in First Graphene even after the recent re-rating. Four stars.

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Those of us who have been around the Life Sciences sector for a while knew to sit up and take notice on 6 March 2020 when it was announced that John Sharman would become the new CEO of Universal Biosensors. In his previous role, as CEO of Medical Developments (ASX: MVP) from 2010, he'd taken that company from a \$7m market capitalisation to over A\$700m as it reintroduced methoxyflurane to the world, brand name Pentrox, as a safe and effective treatment for acute pain. If you want some background on that achievement, check out the 7 February edition of Stocks Down Under.

Can Sharman do it again?

In early 2020 Universal Biosensors was not unlike Medical Developments in 2010. In each case the companies had superior technology that worked and products on the market, but those products hadn't gotten very far. In Universal's case the technology was a disposable, multi-layer test strip, that could rapidly and accurately measure biomarkers in the blood using a proprietary electrochemical sensing system. It was better than comparable technologies and had led to two products - a blood glucose monitoring product marketed by J&J's LifeScan business from 2010, and a blood coagulation analyser marketed by Siemens Healthcare from 2014. However, neither product had created much shareholder value for Universal. In calendar 2019 revenue was a mere \$6.9m.

Those products had, however, still created some value. Lifescan had been paying quarterly service fees and in September 2018 J&J had given notice that it was buying out this obligation. Accordingly the Melbourne company received A\$44.9m in a lump sum in February 2019. Some of that cash was used in early 2020 to restructure the Siemens relationship, giving Universal ownership of the relevant assets and therefore the chance to develop other commercial pathways for the product. However, by March 2020, shortly after the Sharman appointment was made, Universal still had A\$34.9m cash, which was about 20 cents per share. At the lows of the Corona Crash you could buy Universal and all that juicy technology, for less than cash backing.

A medical diagnostic...only for wine

Then came the rebuild. John Sharman started work at Universal in early June. One of his first priorities was to oversee the use of the company's platform in the wine industry, a programme that had started under his predecessor. Why the heck would wine makers need a medical diagnostic, we can hear you ask. Well, Universal's technology isn't just for medicine. It can allow all sorts of chemicals to be detected in a sample. The new Sentia product that this company has developed will provide wine makers with a hand-held device to test the levels of sulphur dioxide (SO²) in their wine.

SO² is added periodically throughout the winemaking process and plays a critical role in quality winemaking. Sulphur serves two main purposes in wine. It prevents the wine from reacting with oxygen, which can cause browning and oxidation. And it inhibits the growth of bacteria and undesirable wild yeasts. With Sentia, wine makers have a diagnostic that can tell the concentration of free SO² while they are standing at the barrel within 60 seconds, with no messy reagents required and virtually no training. That in itself is a pretty big deal. However, Universal Biosensors will soon add other tests to Sentia, allowing wine makers to check for the levels of glucose, fructose and malic acid in their wine. The first Sentia analysers are expected to ship in 2021.

A validated product, ready to ship next year

Sentia is the main reason for the post-March re-rating of this stock. Suddenly Universal's market reach is so much bigger than before and it's so much easier to enter new markets when you don't have to jump through the regulatory hurdles required by the likes of the FDA. Not that Universal is out of the medical game. Indeed, in October the company announced its first distribution arrangement for Xprecia Stride, the coagulation analyser product, that didn't involve Siemens. Okay, it was only for the Czech Republic and Slovakia, but you've got to start somewhere, right?

But to return to Sentia. There is already a product out there called Winescan, from a Danish company called Foss, that can test for SO² by distilling the wine and analysing the gas. That product is fine, but it's not handheld, like Universal's. And as of November 2020 the Melbourne company has the validation data, from the Fresno Campus of California State University, showing that Sentia is as good as Winescan, analytically speaking. According to the Fresno folks it's also as good as an older method called 'Ripper', which detects SO² using iodine and starch. So, Universal is well placed to address the US\$300bn global market for wine that so many of us value very highly.

As at September 2020 Universal was well placed to launch Sentia, with \$28.4m cash remaining. Obviously, the stock is no longer below cash backing, but with a new and powerful product hitting the streets as of next year, Universal Biosensors can now lay claim to having innovative technology with widespread application across multiple industries. This one now gets four stars from us.

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Keeping an eye on the sky

Adacel has two divisions: systems and services. These divisions are spread across the United States, Canada and Australia with total revenue declining 4% to \$39.7m during FY20. Despite the slight revenue decline, management managed to cut costs and generate a Profit Before Tax of \$2.2m during FY20, compared to a Loss Before Tax of \$2m during FY19. The systems revenue division was still operating at a loss during FY20 and saw a decline in revenue of 27% to \$9.7m. This decline is not truly surprising once you realise that this is the division responsible for selling the company's hardware and software. It is important to note that the company finished a number of projects before FY20 started and we believe the standstill the world went into during COVID-19 was the main reason for this division's revenue decline. These products cover operational air traffic management and simulation and training applications. Despite the sharp decline in annual revenue, the company managed to bring down its expenses even more and limit its loss to \$3.6m for FY20.

With \$30m in revenues, the services division generated around 75% of Adacel's total revenue during FY20. This division saw increases in both gross margins and revenue of 12.8% and 7.2%, respectively. The services division is responsible for software and system maintenance, support, field services and on-site technical

services. Importantly, this division represents a recurring revenue stream because switching to a new system requires retraining and the purchase of all new equipment, no easy endeavour. When Adacel's systems division makes a sale, the services division is likely to receive a new client as well.

The awakening of the Australian military machine

On 1 July 2020, the Australian Government announced a massive new defence budget totalling \$270bn to be spent over the next decade. While this is certainly a fascinating subject, and we highly recommend our readers review the Australian Government's 2020 Defence Strategic Update, we simply don't have the space to go into the details of this massive policy shift. Brass tacks, Australia is awakening the military machine and Australia's domestic defence industry will be the main benefactors.

What does this mean for Adacel? Well, the Royal Australian Air Force is slated to receive approximately \$65bn out of the \$270bn, to be spent mainly on six specific areas: Air Combat, Intelligence, Surveillance, Reconnaissance and Electronic Warfare, Air Mobility, Combat Air Support, Integrated Air and Missile Defence, and Maritime Patrol and Response. The part that specifically relates to Adacel is Combat Air Support, which highlights air traffic management and training as a main area for spending. Adacel already has strong ties to the Royal Australian Air Force with its products and services in around 11 different military facilities around Australia. We believe there is a strong possibility that this company will be a significant beneficiary of Australia's new military reality.

Help! We have too much cash

During his 17 November 2020 Annual General Meeting (AGM) address, Chairman Michael McConnell stated "the Company requires very little day to day liquidity to operate; approximately \$2m to \$3m... Given our current strategy, the Board has determined that it will pay out to shareholders between 50% and 60% of PBT in the form of a dividend, return of capital or combination of both."

To go from a Profit Before Tax loss of \$882,000 during FY19 to a predicted increase in cash and cash equivalents of around \$5m during FY21 alone, we believe is truly a sign of strong executive leadership. The stock may have already rallied 177% from its 24 March 2020 low, but we believe this cash 'problem' is likely to provide a healthy boost over the remainder of FY21.

177% rally and still undervalued

Adacel is one of the few companies to have issued a strong profit guidance update for FY21. On 17 November 2020, management issued an minor update on its previous FY21 Profit Before Tax guidance of between \$6.3m and \$6.8m. It now expects a Profit Before Tax between \$6.5m and \$7m. Management has estimated that the company will have around \$10m in cash as of 30 June 2021.

Despite the market predicting a 29.5% increase in EBITDA and Profit Before Tax growth between 195% and 218%, Adacel is currently trading at an FY21 EV/EBITDA ratio of only 7.2x and Price/Earnings ratio of 12.8x.

Based on the valuation alone, we believe this is a four star company, but investors have, what we believe to be, strong dividends to look forward to as well. Management has stated that it will pay out between 50% and 60% of Profit Before Tax to shareholders in the form of a dividend and share buybacks. So this is definitely a four-star stock in our book.

Pitt Street Research Pty Ltd

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Pitt Street Research Pty Ltd is founded on more than 40 years of combined experience researching companies in a range of different sectors.

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