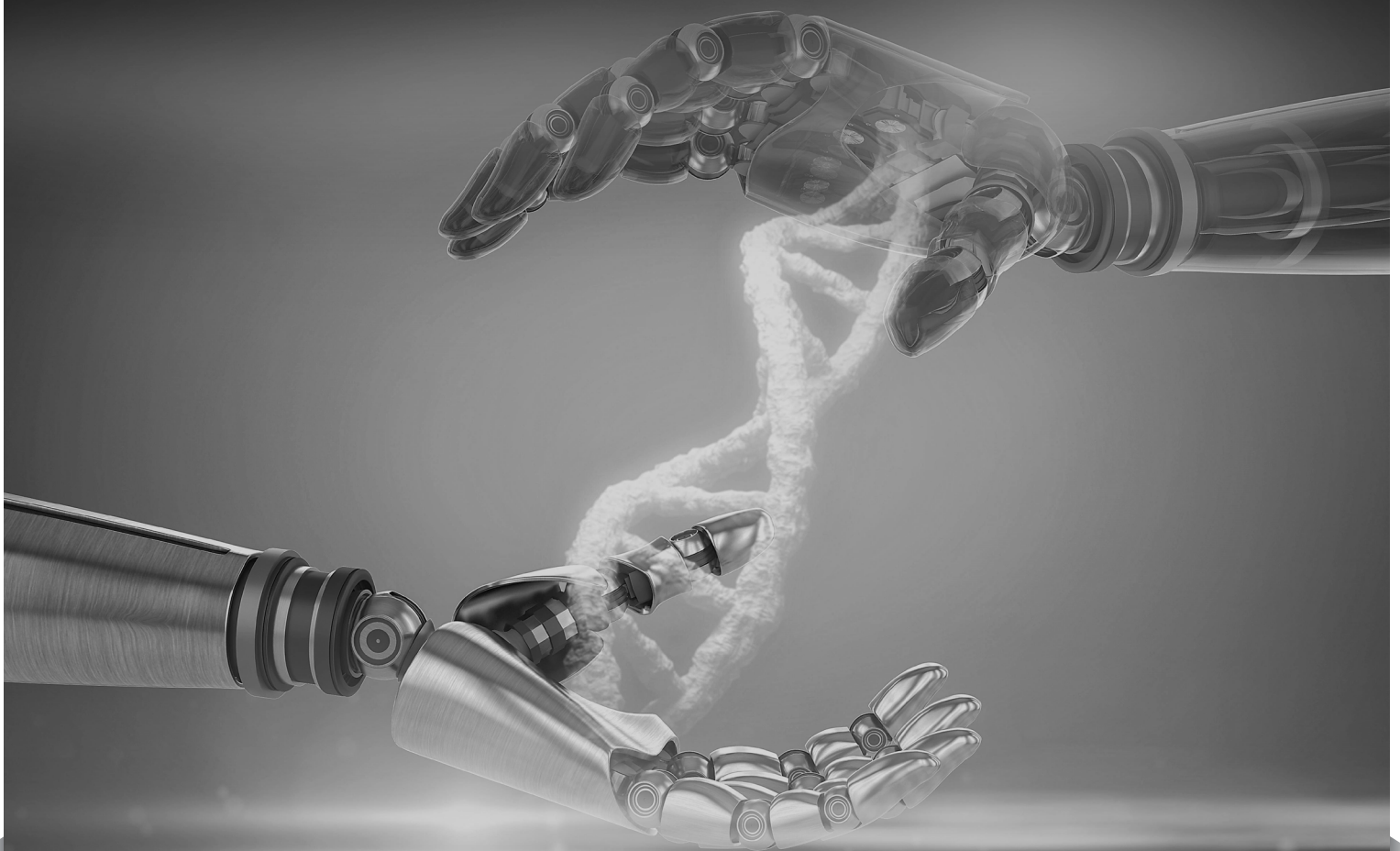




Emerging Stocks Down Under

🗨️ *Of course I know how to roll a joint.* 🗨️

- Martha Stewart (b. 1941), Founder of Martha Stewart Living Omnimedia



**ELIXINOL
GLOBAL**

Hemp turnaround

CALIX

Do you trust the tech?

MICRO-X

X-Ray vision

ELIXINOL GLOBAL

Hemp turnaround

Stocks Down Under rating: ★★★★★

ASX: EXL
Market cap: A\$ 61M

52-week range: A\$0.14 / A\$1.23
Share price: A\$ 0.19

The year 2020 was not kind to Elixinol Global, the Sydney-based supplier of hemp nutraceuticals and food products. The stock was \$1.30 on 20 January but by 28 September it was down to just 14 cents. We think, however, that there is life in this company yet. Cannabis and hemp stocks are making a comeback after two difficult years being out of favour and sales are improving for Elixinol under a new leadership team, while costs are coming down.

[READ MORE](#)

CALIX

Do you trust the tech?

Stocks Down Under rating: ★★★★★

ASX: CXL
Market cap: A\$ 154M

52-week range: A\$0.515 / A\$1.11
Share price: A\$ 1.05

Headquartered in the Sydney suburb of Pymble, Calix operations are based around its patented platform called the Calix Flash Calciner (CFC). The goal of this company is to take this platform and adapt it to many significant industries, including: food production, cement and lime production, and water and wastewater treatment. Calix is revenue producing through its commercial wastewater treatment in Victoria, its pre-commercial demonstration facility for CO2 capture during lime and cement production, and its magnesium carbonate mine in South Australia. We believe Calix is quite simply a bet on the Calix Flash Calciner platform, so what is its potential?

[READ MORE](#)

MICRO-X

X-Ray vision

Stocks Down Under rating: ★★★★★

ASX: MX1
Market cap: A\$ 133M

52-week range: A\$0.10 / A\$0.42
Share price: A\$ 0.37

The second half of 2020 was a good time to be in Micro-X, the Adelaide-based developer of portable X-Ray technology. The stock was only 11.5 cents on 12 June but by 17 December it had reached 38.5 cents. With the US Department of Homeland Security having selected Micro-X's technology to develop self-service security screening systems, the company must be doing something right.

[READ MORE](#)

ELIXINOL GLOBAL

Hemp turnaround

Stocks Down Under rating: ★★★★★

ASX: EXL
Market cap: A\$ 61M

52-week range: A\$0.14 / A\$1.23
Share price: A\$ 0.19

The year 2020 was not kind to Elixinol Global, the Sydney-based supplier of hemp nutraceuticals and food products. The stock was \$1.30 on 20 January but by 28 September it was down to just 14 cents. We think, however, that there is life in this company yet. Cannabis and hemp stocks are making a comeback after two difficult years being out of favour and sales are improving for Elixinol under a new leadership team, while costs are coming down.

Share price chart



Source: Tradingview

When cannabis started its long journey towards respectability back in the 1990s it carried on its coat tails a related product called hemp. They're not the same thing. Cannabis – what you and I used to call marijuana – comes from a plant with the scientific name *Cannabis indica*. It's valued today for its medicinal as well as its historic 'recreational' properties. Hemp comes from another plant of the same species called *Cannabis sativa*. That plant was never sought after by stoners because it has low-to-negligible strains of the tetrahydrocannabinols that get you high. What *Cannabis sativa* has historically been good for is its fibre. Hemp rope, for example. These days hemp entrepreneurs are focused on food. Hemp seeds, it turns out, contain a lot of protein and polyunsaturated fatty acids, including the famous omega-3.

A cool Byron outfit, dude...

Hemp as nutraceutical and food is Elixinol's bread and butter. You may know Elixinol because of Hemp Foods Australia, the people who can get you a kilo of organic hulled hemp seeds under the Essential Hemp brand for just A\$44.95. Hemp Foods Australia is one of the biggest suppliers of that sort of thing in the Southern Hemisphere. Admittedly hemp hasn't quite mainstreamed yet as far as most kitchen tables in Australia are concerned and the market is still a bit of a hipster thing. It probably won't surprise you to learn that Hemp

Foods Australia is run out of a small town in northern NSW called Bangalow. That's only half an hour's drive from Byron Bay, Australia's answer to Big Sur, where the locals tested a lot of tetrahydrocannabinol-based products back in the 1970s.

Food, however, was never the core part of the Elixinol Global story. This company's ticket to greatness is nutraceuticals, marketed under the Elixinol brand. Cannabis sativa has the same cannabidiol or CBD that the medicinal cannabis folks have been showing to be so therapeutically powerful. The Elixinol branded products see CBD sourced from hemp formulated into the kind of thing Blackmore's regular (and mainstream) customers buy every day of the week. A good example is Elixinol Omega Turmeric, which is CBD plus the herb often used in curries, which has known antioxidant properties. Elixinol Global doesn't just sell Elixinol-brand products in Australia but has sales channels in Europe and the US.

Coming off a bad trip

Once upon a time, in April 2019, you had to shell out \$5.69 a share if you wanted to invest in Elixinol because the company looked like its Elixinol range, with revenue in excess of \$30m, had become a genuine success story. Then it all fell apart. By the time the company was reporting its calendar 2019 results it only had \$27m in total sales and the company was losing heavily, with EBITDA at negative \$23m. A lot of low-margin private label contracts had been terminated and the company was also losing bulk sales to lower cost and (allegedly) lower quality products. Elixinol was still enjoying strong growth of its branded sales, but it hadn't brought its cost base under control. By the bottom of the Corona Crash Elixinol stock was down to 17.5 cents and the perception was this company was a has-been.

Not so fast, argues Elixinol's new CEO, Oliver Horn, appointed in April 2020. Under his leadership the company has sought to slim down its cost base and relaunch its Elixinol brand to cope with the imitators. 2020 was a bad time to be doing the latter given the difficult environment for retail in the early days of the COVID-19 pandemic. The uncertainty about whether it was possible to turn this company around was the reason the share price was only 14 cents in late September.

Lighting up again?

So why come back now? Well, the 22 September trading update was promising, indicating double digit sales growth on markedly lower costs. And by the end of September 2020 there was still \$12.8m cash and no debt, with the cash burn having progressively come down over the previous two quarters. Shortly after the 22 September update Oliver Horn and Elixinol Chair Helen Wiseman were both on-market buyers of stock. Then in December 2020 Elixinol was able to raise \$20.5m in a placement and SPP at 17 cents per share where the latter was heavily oversubscribed.

We think all this makes Elixinol worth taking a look at, if you're brave. The stock is not too much higher than the 15-16 cent level where Wiseman and Horn were buying, but since that time we've had Elixinol become fully funded, the UN's Commission on Narcotic Drugs voting to down-classify cannabis and Australia's TGA allowing CBD-based medicines to be sold over-the-counter without a prescription. Elixinol stock is still a little risky because we don't know how investors will react to the 2020 full year results in February. However, not only is the retail environment better than it was in mid-2020, the company is executing better on its opportunity. For those investors who like cannabis and hemp this is a four star opportunity. But watch carefully.

CALIX

Do you trust the tech?

Stocks Down Under rating: ★★★★★

ASX: CXL
Market cap: A\$ 154M

52-week range: A\$0.515 / A\$1.11
Share price: A\$ 1.05

Headquartered in the Sydney suburb of Pymble, Calix operations are based around its patented platform called the Calix Flash Calciner (CFC). The goal of this company is to take this platform and adapt it to many significant industries, including: food production, cement and lime production, and water and wastewater treatment. Calix is revenue producing through its commercial wastewater treatment in Victoria, its pre-commercial demonstration facility for CO₂ capture during lime and cement production, and its magnesium carbonate mine in South Australia. We believe Calix is quite simply a bet on the Calix Flash Calciner platform, so what is its potential?

Share price chart



Source: Tradingview

Check out that kiln

Calix is an emerging company currently in the innovation, development and proof of commercialisation stage. The company is based around the patented technology of its Calix Flash Calciner (CFC Process). The process works by grinding minerals down to particles approximately one thousandth of a millimetre in size. After this is achieved, the kiln flash heats the particles up to 1,000 degrees Celsius while the trapped gases that are extracted during this process are snap frozen in this high energy state. This leaves the particles in a honeycomb-like structure.

The CFC process has the potential to be used in a number of different ways across a large swath of industries. Some main examples are CO₂ neutral concrete production (using carbon capture), cheaply producing magnesium hydroxide (an environmentally friendly alternative for water treatment among other things) and battery recycling and advanced material production. This is just a sample of the product lines the company is looking to branch out into. The complete list of industries is as follows: advanced batteries, agriculture, aquaculture, cement and lime, food and beverage, mining, water utility and wineries.

There's a battery in my kiln

One of the main application areas for the CFC Process is the potential for the production of cheaper 'Advanced Hybrid Batteries.' The company plans to achieve this by producing the advanced materials necessary for their construction more efficiently and cheaper. The highly porous nano-active materials, like manganese oxide (Mn₃O₄) for cathodes, and titanium dioxide will be used to produce the electrodes found in the coin cells of the one to ten kWh battery pack prototypes.

These prototypes are being developed in partnership with Boron Molecular and Deakin University's Institute for Frontier Materials. In fact, Calix received \$3m in funding from the Federal Government as part of its efforts to support the Co-operative Research Centre Project for the development of Advanced Hybrid Batteries.

One other product line that this battery research is exploring is the recycling of batteries by separating the electrolyte from the solid components as part of the push to recycle batteries more efficiently.

Revenue, balance sheet, but no profit. Oh my!

Calix is still developing its technology and product lines. Therefore, it should come as no surprise that the company is not expected to generate a profit in the near future. During FY20, the company lost around \$7.1m forcing the issuance of \$15.3m in additional equity throughout the year. The company currently has \$11m in cash and while we believe this is enough to tide over one more year's worth of expenses it seems unlikely that there won't be additional dilution down the line.

One of the main sources of revenue for the company is the Australian Federal Government's research and development tax credit scheme. During FY20 alone, Calix received \$5.1m in from this scheme. Since the R&D scheme accounts for 21% of the company's annual revenue, the resulting focus of the post-COVID-19 recession recovery on broadening the tax scheme is a significant positive for Calix, in our view. Prior to COVID-19 the Australian Taxation Office was beginning to significantly crackdown on the use of this research funding scheme. The proposed \$4m cap on these payments has now been removed while the scheme has also been expanded.

It's all about the tech behind the patent

As we discussed above, Calix's edge is its patent on the Calix Flash Calciner technology. The question remains, how do you value a company in Calix's developmental stage? Well for one, the company has no debt on its balance sheet due to the funding of its operations through revenue, R&D tax credits and share issuance. Additionally, the company's developments are all patentable and Calix has built a portfolio of 27 different patent families covering everything from the CFC Process to its many applications. The cost to develop these patents was slightly over \$60m as of the end of FY20 and the net tangible asset per share at \$0.12. FY21 EV/EBITDA brings a valuation of 7.1x.

Calix's technology is certainly showing potential across a wide array of industries, but the company has yet to prove full commercialisation. An investment, therefore, has significantly higher risks than one in a company with a proven business model. However, we do believe the company is priced well within acceptable parameters for its level of risk v. Investors need to ask themselves if they believe in the technology. We for one believe the CFC Process has strong potential. Four stars.

MICRO-X

X-Ray vision

Stocks Down Under rating: ★★★★★

ASX: MX1

Market cap: A\$ 133M

52-week range: A\$0.10 / A\$0.42

Share price: A\$ 0.37

The second half of 2020 was a good time to be in Micro-X, the Adelaide-based developer of portable X-Ray technology. The stock was only 11.5 cents on 12 June but by 17 December it had reached 38.5 cents. With the US Department of Homeland Security having selected Micro-X's technology to develop self-service security screening systems, the company must be doing something right.

Share price chart



Source: Tradingview

We've had X-Ray machines for a long time now. It was the German physicist Wilhelm Röntgen (1845-1923) who got the first Nobel Prize for Physics way back in 1901 for figuring out, accidentally, there was such a thing as X-Rays. Almost immediately after Röntgen's discovery in 1895 physicians began using X-Ray machines clinically. However, in the intervening century better diagnostic imaging tools showed up – first Magnetic Resonance Imaging (MRI), then Computer-assisted Tomography (CT) and they tend to be the go-to modalities these days. So, why should investors get excited in 2021 by Micro-X and its X-Ray machines.

Micro-X's cold case

The reason to look at Micro-X is because of the size of those machines. Micro-X got its start with a type of technology called the 'cold cathode', which stood in sharp contrast to the hot cathode that was mostly used in X-Rays up to that time. Let us explain. Old Wilhelm got his X-Rays from a vacuum tube with a heated filament inside. He was tooling about with the so-called 'photoelectric effect', which is where electrons get emitted by a material when it is hit by light. X-Ray machines more or less relied on the heated filament from then on, with the last word on the subject seemingly coming in 1913 from the American William Coolidge (1873-1975, no relation to the 30th US President). With Coolidge's paradigm you hit the hot cathode with a high voltage and it throws off electrons onto a tungsten anode and those electrons generate X-Rays on impact.

Okay, stick with us on this cathode thing for one more paragraph. Cold cathode is where you don't heat the filament and the voltage potential is all that's needed to make the electrons flow. Cold cathode is nothing new – it's the way a lot of those retro neon lamps work. However, it's relatively new in X-Rays, with Micro-X achieving it with carbon nanotubes. Which brings us back to the size thing. Micro-X with its cold cathode carbon nanotube emitters can make X-Ray machines really small and therefore portable. Not only smaller, but lighter too, and not power hungry. Which brings X-Ray technology into the 21st century where just about every other electronic device is small, lightweight and lasts for a while without plugging it in Like the device you're likely reading this article on.

Heavyweight technology, lightweight product

Micro-X went public on the ASX in late 2015 to commercialise this cold cathode carbon nanotube emitter technology. It had two products in mind – an ultra-lightweight X-Ray machine called the DRX Revolution Nano and a 'ruggedised' version of that product hardy enough to be lugged into a war zone. The timing of the IPO was right because the DRX Revolution Nano was pretty much ready to go – indeed, it launched at the Radiological Society of North America's annual meeting in November 2016.

How light is this product? Well, the industry standard X-Ray machine you'll find in most hospitals today weighs in at 500 or 600 kg. The DRX Revolution Nano is just 85 kg and is so small you can fit one into the small spaces in intensive care areas. The product gained FDA approval in June 2017, while the ruggedised version of DRX Revolution Nano, which Micro-X decided to call 'Rover', was FDA approved in July 2020.

The year just finished was one in which Micro-X started to come into its own. COVID-19 was helpful because it highlighted the utility of the DRX Revolution Nano in an environment where a lot of patients' lungs needed to get imaged. At the same time the security folks started to pay increased attention to the utility of Micro-X's technology, as evidenced by the November 2020 announcement that America's Department of Homeland Security would provide up to US\$1.5m in funding for the design and manufacture of a prototype self-service airport baggage scanner. And a recent order from the Australian Defence Force for Rover shows that that product has legs. However, Micro-X stock is still trading below the 50 cents level at which the \$15m IPO was executed five years ago.

A declaration of independence

We think the problem is that Micro-X hasn't shot the lights out yet, in commercial terms that is. In FY20 revenue was only \$4m. Micro-X has, however, made a big change which it hopes can improve the situation. Up until recently DRX Revolution Nano was sold exclusively by a US company called Carestream Health. That's the old healthcare business of Eastman Kodak, a leader in X-Ray imaging technology, owned by a Canadian private equity firm called Onex (TSX: ONEX) these days. The original deal from early 2013 was for Carestream to have exclusive global sales rights for five years, sourcing the product from Micro-X as an OEM from its plant at Tonsley in Adelaide's southern suburbs. However, in November 2020 Micro-X and Carestream made a big change which ended the exclusivity arrangements. Micro-X is now working on new distribution channels.

As at September 2020 Micro-X held \$15m in cash, so it is well funded to make the transition to better managing distribution. With technology this good, in an environment that is discovering that technology and its utility, and virtually no competition, we see good things ahead. So, four stars from us.

Pitt Street Research Pty Ltd

95 Pitt Street, Sydney, NSW 2000, Australia

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

You are receiving this email because you subscribed to our Stocks Down Under newsletter.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission from Pitt Street Research Ltd Pty. All intellectual property relating to the Content vests with Pitt Street Research unless otherwise noted.

Stocks Down Under (Pitt Street Research AFSL 1265112) provides actionable investment ideas on ASX-listed stocks. The Content has been prepared for general information purposes only and is not (and cannot be construed or relied upon as) personal advice nor as an offer to buy/sell/subscribe to any of the financial products mentioned herein. No investment objectives, financial circumstances or needs of any individual have been taken into consideration in the preparation of the Content. Financial products are complex, entail risk of loss, may rise and fall, and are impacted by a range of market and economic factors, and you should always obtain professional advice to ensure trading or investing in such products is suitable for your circumstances, and ensure you obtain, read and understand any applicable offer document

