



# Biotech Daily

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*Daily news on ASX-listed biotechnology companies*

## Dr Boreham's Crucible: Hydrix

By **TIM BOREHAM**

**ASX code:** HYD

**Share price:** 1.8 cents

**Market cap:** \$4.6 million

**Shares on issue:** 254,218,847

**Financials (December half 2023):** revenue \$5.97 million (down 17.5%), loss of \$3.82 million (\$1.96 million deficit previously), cash of \$847,277 (down 73.5%) (after balance date the company entered a \$1 million loan agreement with directors Paul Lewis and Julie King, which is undrawn).

**Executive chair:** Gavin Coote

**Board:** Mr Coote, Julie King, Paul Lewis, Paul Wright

**Identifiable major shareholders:** John W King Nominees 10.3%, Pusen Medical Tech Australia 4.72%, Invia Custodian (the Paj account) 4.23%, Invia Custodian (the Paj Lewis super fund) 3.26%, Roger Allen and Maggie Gray 2.05%, Indigenous Capital 2.05%

The reception area of Hydrix's south eastern Melbourne HQ proudly displays a 'museum' of gadgets the medical device company has developed.

These include Memphisys' Felix sperm-separation tool, Universal Biosensor's multi-layer test strip handheld device, Analytica Medical's Pericoach pelvic floor exerciser and Sunshine Heart's C-Pulse implantable heart-assist device.

There's even a Bluetooth-enabled controller for Cochlear implants.

If space allowed the company could also have showcased Nanosonics' Trophon disinfectors, LBT Innovation's culture plate automation devices and Micro-X's portable x-ray device.

Deeper within the bowels of the building, an army of 40 scientists and engineers are beavering away on an array of hush-hush, early-stage projects.

Given their potential to revolutionise healthcare - especially cardiac care - they won't remain anonymous forever.

Executive chair Gavin Coote says Hydrix's remit is to design class-three medical devices that are vital for sustaining life.

Put another way, if they malfunction, they "could have severe consequences, including loss of life".

He says: "We help clients to bring world first technologies to market - the hard stuff that hasn't been done before."

Hydrix endured some lean years during the pandemic, with the company's shares losing three-quarters of their value over the last four years.

But Mr Coote says the company is enjoying a new lease of life after honing its strategy to focus on the cardiovascular sector.

## **Hyd-history**

Hydrix began its listed life as Panorama Synergy, a tech tearaway that soared 4,000 percent in 2013 on the back of its micro-electromagnetic (MEMS) technologies.

In September 2017, the company acquired the private Hydrix Services, builder of the aforementioned medical devices as well as industrial and defence related systems.

Panorama changed its name to Hydrix - and its code from PSY to HYD - in November 2018.

A corporate wheeler and dealer, Mr Coote spent 12 years in the US and then returned to his native Australia, where he executed small business turnarounds for a Melbourne-based family office. Mr Coote became a Hydrix director in 2017 and then executive chair in January 2020.

While Hydrix Services remains the core revenue business for the business, Hydrix has also created Hydrix Medical to distribute disruptive cardiac devices.

Its third arm, Hydrix Ventures, invests in high-potential medical technology ventures for which the company has developed products.

## **Hydrix Medical**

The medical division has three market-ready products with distribution rights:

In 2022-'23, the company signed agreements with two companies – France's Implicity and the ASX-listed Echo IQ - pertaining to cardiovascular health.

The Implicity product is an artificial intelligence (A.I.)-based remote patient monitoring and cardiac data management platform, enabling cardiology practices to keep tabs on devices including pacemakers, defibrillators, loop recorders and cardiac resynchronisers.

Because heart device makers such as Abbott and Medtronic have their own platforms, managing patients across different device brands is complex.

Unlike old Renaults, Implicity actually works.

Echo IQ's internet cloud-based Echosolv platform analyzes electro-cardiogram measurements, to improve the detection and diagnosis of structural heart diseases including aortic stenosis. On a deeply pragmatic note, it helps clinicians to avoid litigation because of missed diagnoses.

The third product is Avertix (formerly Angel Medical) Guardian, the world's only real-time, implanted device to warn the wearer of an imminent heart attack (see below).

Hydrix Medical also plans to distribute a new outpatient ambulatory cardiac wearable patch, which won local Therapeutic Goods Administration (TGA) approval last month.

While the medical division is in its infancy, management expects it to generate revenue within the next six to 12 months.

## **Keepin' it real**

As a former systems engineering manager at Cochlear, Hydrix Services head Michael Trieu knows that novel devices will remain such if they are difficult to use. For example, battery changing needs to be made easy for an 85-year-old user.

"It may be a great tech but if users can't use it adoption may never take off," he says. "Our ... 'human factors' engineering and user experience design are capabilities we are very proud of."

While the services arm charges on an hourly fee basis, jobs are based on 'adaptive scoping'. In other words, a project might last for five years or more so the company can't provide an up-front quote. Instead, the projects are costed over their various stages.

Hydrix has some likeness to the well-known, unlisted device developer Planet Innovation. A key difference is that Planet Innovation does contract manufacturing and does not focus on class-three devices.

## **Nothing Ventured, nothing gained ...**

Hydrix Ventures investments are:

- \* 14 percent in Gyder Surgical (a surgical navigation tool for hip replacement surgery);
- \* An approximate five percent stake in Cyban (non-invasive brain tissue continuous blood oxygen monitor); and
- \* Avertix Guardian.

Mr Coote expects Cyban and Gyder to obtain US Food and Drug Administration approval within the next 12 months. Both companies also aspire to list on the ASX.

“We want to invest in products that can be commercialized in less than five years and we are on track with that,” he says.

Mr Coote says the division aims to help investee companies avoid the “valley of death” of a lack of seed funding.

“We are prepared to put our money where our mouths are and invest in them but we are also very selective about what we invest in,” he says. “We don’t tend to do follow-on rounds, so there is a natural dilution. But we acquire at attractive valuations and are well placed to achieve returns of five times [on our investment] or more.”

## **Avertix Medical Guardian**

Avertix Medical Guardian is the world’s only real-time, implanted device to warn the wearer of an imminent heart attack. Like a pacemaker, the Guardian detects changes in the heart’s electrical conductivity. These patients have had a coronary episode already, or have co-morbidities such as diabetes or dodgy kidneys.

Mr Coote says the heart device can detect a pending episode 40 percent better than patient-recognized symptoms alone. Almost half of attacks have no discernible symptoms - as shown by the premature ‘dismissal’ of cricket legend Shane Warne.

In March 2020, Hydrix acquired the exclusive Asia Pacific rights to distribute Guardian, owned by New Jersey’s Avertix Medical (previously Angel Medical Systems).

Hydrix built the upgrades under a multi-million-dollar service agreement.

Guardian has been approved by the US FDA and also can be sold in other jurisdictions including Singapore, Malaysia, and Thailand.

In the US, a 1,000-patient trial was carried out to support the application, while 200 implants have been done commercially in the last 18 months.

Eight implants have been done in the Lion City (Singapore) but lack of reimbursement is a hurdle. The devices sell in the US for about \$US10,000 and then there’s \$US10,000 to \$US15,000 for the surgeon’s toil and hospital costs.

Last year the TGA knocked back the Guardian device, saying it was not “convinced that the patient benefits sufficiently outweigh potential risks” - despite the FDA’s imprimatur.

Mr Coote says the TGAs stance is “incongruous with the rest of the world” but adds: “it is their jurisdiction and they can set the bar wherever they like.”

Hydrix has also invested \$US1 million for a 4.6 percent stake in Avertix Medical, paid in a mix of cash and services. In October, Avertix canned Nasdaq plans and will stay private for the near term.

## **What’s new?**

The Hydrix HQ houses about a dozen projects being undertaken for fee-paying clients. While some of them look like improvised school projects, others are more advanced.

The Swedish-based Scandinavian Real Heart has contracted Hydrix to develop the control systems for a four-chamber artificial heart - a world first.

In December last year, Hydrix was also awarded a contract with a US based cardiac company to develop a next-gen version of their existing product.

Confidential projects include:

- \* a connected, wearable medical device for a large European-based company that will “disrupt the market”;
- \* hardware and software design for a unique robot-assisted surgical application (for a US start-up); and
- \* a technology for controlling and driving a new type of intra-aortic ballon pump (for a European company)

Beyond cardiac technology, Hydrix is also developing devices for orthopaedics, point-of-care diagnostics, drug delivery and traumatic brain injury monitoring.

## **Finances and performance**

Hydrix’s December half results were off the pace because of wages and inflation pressure and cautious customers. Revenue shrunk eight percent to \$5.9 million and the loss expanded to \$3.8 million from \$1.96 million previously.

But Hydrix Services had an “increased level of customer activity, coupled with pricing and operational cost adjustments.”

The company has guided to revenue of \$12 million to \$12.5 million and cash breakeven status for the current year. Overall, the company cites a record \$300 million potential revenue pipeline across 200 “opportunities”, with “active discussions” accounting for \$100 million. More tangibly, the company expects \$30 million of revenue from 14 clients already signed up.

“Two of Hydrix Ventures portfolio assets are making significant progress towards obtaining regulatory approvals, which could significantly increase net asset values in the 2024-'25 year,” management chirps.

At December's end Hydrix had slender cash of \$847,000. Post balance date, kindly directors Paul Lewis and Julie King agreed to lend \$500,000 each, at a 10-11 percent interest rate. There's also an available \$1.1 million trade debt facility.

In late 2019, the company carried out a one-for-10 share consolidation. Accounting for this, Hydrix shares have traded between 27 cents in November 2018 and its current lows.

### **Dr Boreham's diagnosis:**

Mr Coote says: “We are not just a ‘me-too’ design and engineering firm. Our track record and capability in technologies are globally recognised.”

He concurs that investors view Hydrix needing more funds - with the shares marked down accordingly.

It's some discount given the three ventures investments have a net value of \$5.1 million - more than the company's \$4.3 million market cap.

But Mr Coote promises a “tsunami” of revenue is imminent: “We are generating a sales pipeline that is larger than at any time in the company's history.”

Meanwhile cardiovascular disease is the leading cause of death in the world – accounting for about one-third of deaths.

“It is a large addressable market and it is not going away any time soon,” he says.

***Disclosure: Dr Boreham is not a qualified medical practitioner and does not possess a doctorate of any sort. He hopes a tsunami of revenue will head his way but suspects it will be little more than a trickle, and hopes he's not going away any time soon.***