



Biotech Daily

Friday August 18, 2023

Daily news on ASX-listed biotechnology companies

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- * **DR BOREHAM'S CRUCIBLE: MICRO-X**
- * **IMUGENE PLACEMENT RAISES \$35m; SHARE PLAN FOR \$30m MORE**
- * **MERCHANT BIOTECH FUND HOPES TO RAISE \$10m**
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- * **TRACY WEIMAR REPLACES BTC CO SEC SHARON PAPWORTH**

MARKET REPORT

The Australian stock market edged up 0.03 percent on Friday August 18, 2023, with the ASX200 up 2.1 points to 7,148.1 points. Eight of the Biotech Daily Top 40 stocks were up, 27 fell and five traded unchanged.

Resonance was the best, up 0.7 cents or 10.8 percent to 7.2 cents, with 3.4 million shares traded. Cochlear and Opthea climbed more than four percent; Compumedics and Kazia were up more than three percent; Nanosonics rose 2.6 percent; Amplia and Volpara were up more than one percent; with CSL and Telix up by less than one percent.

Imugene led the falls, down 1.5 cents or 16.0 percent to 7.9 cents, with 132.7 million shares traded. Pharmaxis fell 11.4 percent; Prescient lost 10.45 percent; Universal Biosensors was down 9.4 percent; Paradigm shed 6.4 percent; Dimerix and Patrys lost five percent or more; Proteomics fell 4.5 percent; Avita, Antisense, Atomo, Cynata, Genetic Signatures, Neuren, Polynovo and Starpharma were down more than three percent; 4D Medical, Medical Developments, Mesoblast, Orthocell and Resmed shed more than two percent; Immutep, Next Science, Pro Medicus and SDI were down more than one percent; with Clinuvel, Cyclopharm and Emvision down by less than one percent.

[DR BOREHAM'S CRUCIBLE: MICRO-X](#)

By TIM BOREHAM

ASX code: MX1

Share price: 11 cents; **Shares on issue:** 516,424,994; **Market cap:** \$56.8 million

Chief executive officer: Kingsley Hall

Board: David Knox (chair), Peter Rowland, Dr Alexander Gosling, Jim McDowell, Patrick O'Brien, Illona Meyer, Andrew Hartmann

Financials (Year to June 30, 2023): receipts \$3.89 million, net cash outflows \$11 million;

(June quarter 2023): customer receipts \$1.71 million, grant income \$1.54 million, net cash outflows \$2.89 million, cash of \$5.22 million, quarters of available funding: 1.8

Identifiable major holders: Varex Imaging 9.9%, Perennial Value Management 11.25%, Tiga Trading-Thorney 5.7%, Acorn Capital 9.3%, Australian Super 4.5%.

In an ideal Micro-X world strokes and field injuries will be better treated, snaking airport queues will be a thing of the past and bomb disposal will be safer.

But as with Barbieland, the company's behind-the-scenes workings have been less ideal than the glossy vision statement, leading to a sagging share price and investor frustration.

In May, CEO Peter Rowland stepped down in favour of chief financial officer Kingsley Hall. Chief scientific officer Dr Brian Gonzales was made head of the Americas and chief engineer Anthony Skeats was ordained as chief operating officer.

Not that Mr Rowland was a feckless Ken, good for only beach-going. Having founded Micro-X in 2011, he oversaw development of four separate uses for the company's revolutionary cold-cathode x-ray technology.

"Unlike the old tubes, they are electronically rather than heat controlled, which means they can be turned on and off instantaneously," Mr Hall says. "This benefits a range of applications [traditional x-rays] hitherto have been unable to access."

Micro-X already has commercialised two mobile digital radiology (DR) devices: the first-generation Nano and a sturdier iteration called Rover.

So, what's the problem?

"The company has been highly regarded for its development, engineering and manufacturing skills, but not so much for its commercial nous," Mr Hall says. "The challenge for the new management team is to raise its commercial capabilities, to at least the same level as the engineering capabilities - and they are large shoes to fill."

The bottom line was that the company was not seeing enough revenue from the DR devices, in a highly competitive market. Mr Hall initiated an operational review, covering “commercial and development products, customers, partners and finances.” Results are pending.

Management has already reduced costs by \$2 million a year and implemented a more aggressive sales approach to moving \$6 million of Rover inventory.

Micro-X marks the spot

Based in the Adelaide suburb of Tonsley, Micro-X has technology acquired from Xinray, a University of North Carolina spin-off company.

Micro-X listed on December 21, 2015, having raised \$20 million at 50 cents apiece.

In 2016, the company struck a five-year exclusive worldwide distribution agreement with Carestream Health Inc (formerly Kodak Medical Imaging). Carestream sold the Nano units under the name of Carestream DRX Revolution. In late 2020, this compact was “modified” to allow Micro-X to sell directly or via other agents.

In March 2022, the company struck a non-exclusive US distribution deal with the San Diego based MXR Imaging Inc, the country’s biggest independent provider of radiology equipment. Last year, Micro-X signed a collaboration and supply deal with French x-ray equipment manufacturer DMS Imaging SA, pertaining to an “innovative” product.

About the tech

In a process little changed for more than a century, x-rays are generated with a heated filament cathode that generates electrons in a vacuum tube.

These electrons are then accelerated by high voltage on to a tungsten anode target to produce x-rays on impact. The process is inefficient because of wasted heat and the electrons don’t all move in the right direction.

Micro-X’s cold cathode technique is based on an array of four-nanometre wide carbon tubes, under an electrified fine mesh structure.

While standard computed tomography (CT) scanners use only one x-ray source to rotate around an object, these electronically-controlled tubes enable x-ray beams to be fired from different angles and with no moving parts. The upshot is the tubes can be made substantially smaller and 95 percent lighter - one kilogram compared with 20 kilograms.

Good boy, Rover

Micro-X’s first bedside digital radiology/imaging tool Carestream DRX Revolution Nano is already approved in more than 30 countries. The Rover has FDA approval.

The “ruggedized” version, Rover (and an FDA approved variant called Rover Plus) was designed at the request of the Australian Defence Force (ADF). These units weight 95 kilograms, compared with 350kg to 600kg for a traditional mobile x-ray unit.

In July, the company delivered its first Rover to the ADF’s deployable hospital program, in a \$1.3 million deal under the auspices of prime contractor Saab Australia.

In the Ukraine, 13 Rovers are in use on the front line, having been supplied via two charities for the frontline hospitals. COO Anthony Skeats says the feedback from Ukraine surgeons is that reliability has been “unbelievable,” with one unit carrying out 6,000 images in the first month.

If all that sounds too earnest, some Rover units are being used in the US by the Major League Baseball and the National Hockey League and “this is intended to drive awareness and future sales opportunities”.

Stroke of fortune

Three-quarters of strokes result from clots rather than bleeding and they can be effectively treated if help - and drugs - are administered swiftly.

This is best done within the first hour - the so-called Golden Hour - but the medicos need to know whether the stroke is a clot or a bleed. If the blood thinning drugs are administered to the latter patients, they will probably die.

Backed by the Australian Stroke Alliance (ASA) and the Australian Medical Research Future Fund (MRFF), Micro-X has developed a lightweight computed tomography (CT) scanner for in-ambulance stroke diagnosis.

The standard-of-care is an eight-slice helical (or spiral) CT scanner, but these units weigh 600kg and needs to be stabilised on a flat surface to spin properly. They also cost \$1.5 million and require a crew of five.

Called a ring scanner, the Micro-X device weights 75kg, is much cheaper and emits 85 percent less radiation. The device has 29 miniature cold cathode tubes, measuring 40mm rather than the usual 150mm. The company hopes to launch its first human trial at the Royal Melbourne Hospital in early 2024, with patients having both the proposed and traditional imaging methods, with no consent required.

The ASA and the MRFF have advanced \$40 million to further the program, with a fourth milestone payment of \$8 million received in June this year.

The company says the addressable market is more than \$US5 billion, assuming they are put only in road ambulances (the Royal Flying Doctor Service is also interested).

The stroke imaging platform is also a potential springboard into other computed tomography markets such as full body pathology, super lightweight CT and spectral CT (the later at a fraction of the price of current units on the market).

Argus - read all about it!

Micro-X is developing an imaging camera, called Argus, for remote one-sided-viewing of suspected improvised explosive devices (IEDs). Weighing a mere 15kg, Argus is of a self-contained camera carried by a robot.

In 10 seconds, the device can determine whether a suspicious object such as a backpack contains a bomb or something even more dangerous, such as a rotten tuna sandwich.

Argus was field tested in Adelaide last year. From up to 1,500 metres away, it generated high-definition images of an anti-personnel mine and a simulated bomb in a car door.

The company cites a total addressable market of \$US1.8 billion for Argus, which it hopes to launch by the end of 2023.

Landing at an airport near you

Fed up with airport queues? You are not alone ...

Micro-X is developing a self-directed screening portal called Checkpoint, which integrates passport scanning, photometric identification, body scans and luggage CT scans.

The big selling points are fewer staff and better detection.

Micro-X had a \$4 million funding development compact with the US Department of Homeland Security (DHS), which overlooks the agency responsible for airport screening, the US Transportation Safety Administration (TSA).

In June, the company completed a critical design review, which must have pleased the DHS/TSA bigwigs because the contract has been extended by up to \$US14 million (\$A21 million). The funds will help advance the airport screening to live airport testing.

The company cites a total addressable market of \$US24 billion for airports alone: \$US8 billion in the US and \$US16 billion for the rest of the world.

Not off beam at all

In September 2022, Micro-X announced a strategic partnership with Varex Imaging Corp, a Nasdaq-listed supplier of medical x-ray components.

The deal involved Varex handing over \$7.5 million in cash and investing \$7.5 million in Micro-X shares for a 9.9 percent equity stake (at a 10 percent premium).

Varex will access Micro-X's multi-beam technology, which is cool because Micro-X is focused on its single-beam methods.

"We haven't sold the farm," Mr Hall says. "We have leased the bit down the back we don't use anyway."

Finances and performance

Micro-X recorded June quarter customer receipts of \$1.71 million, with a further \$1.54 million of inflows from Varex and the airport screening and stroke partners.

The company had end-of-quarter cash of \$5.5 million in cash, enough for only 1.8 quarters.

But this financial year the company expects \$13 million project payments from partners, as well as a \$5.5 million Federal Research and Development Tax Incentive in the current quarter. At least some of the Rover inventory should also turn into cash.

“We are well funded in to 2024,” Mr Hall says.

The company aims to reduce the unfunded portion of its development costs to 48 percent of this financial year’s budgeted \$25.2 million, compared with a 65 percent unfunded portion last year and 81 percent in the 2021-22 year.

Over the last 12 months Micro-X shares have traded between 17 cents (late September last year) and a record low of nine cents in late May this year. The stock peaked at 56 cents shortly after listing.

Dr Boreham’s diagnosis:

Management and investors alike are frustrated by the company’s lowly share price, with a nice 45 percent fillip after the July airport funding extension deal quickly evaporating.

“The challenge of a small [cap] stock is that when you do get good news, some people choose to get out and that is their right,” Mr Hall says. “But none of our major shareholders has been selling.”

Micro-X has done well to attract the non-dilutive partnership funding and management won’t be afraid to do more deals in the short to mid-term.

“But we can’t rely on third parties all the time,” Mr Hall says. “We need to take some responsibility for commercializing our technology at some point.”

The company is super-excited about the potential of the stroke imaging - and so are we.

After all, strokes are the second biggest cause of death, afflicting 13.5 million people annually and killing five million of them. Of the survivors, 65 percent will be left with a severe disability.

“But we need to get on with it,” Mr Hall says. “We need to get our products into market and do it profitably.”

Disclosure: Dr Boreham is not a qualified medical practitioner and does not possess a doctorate of any sort. So, when it comes to upgrading his skills, he needs to get on with it or he will end up like a Ken – fit only for the beach.

IMUGENE

Imugene says it has “firm commitments” for a \$35 million placement at 8.4 cents a share, and hopes to raise a further \$30 million through a share purchase plan.

Imugene said the share plan was not underwritten and would be at the lower of 8.4 cents, or a 2.5 percent discount to the five-day volume weighted average price.

The company said participants under the placement and share plan would receive one option for every share acquired, exercisable at 11.8 cents by August 31, 2026.

Imugene said the share plan had a record date of August 17, would open on August 28 and close on September 14, 2023.

The company said that about \$840,000 of the placement would come from directors and management, subject to shareholder approval.

Earlier this week, Imugene said it would pay the Durham, North Carolina-based Precision Biosciences up-to \$US227 million (\$A352 million) for its autologous “azer-cell” CD19 Car T-cell therapy for blood cancers (BD: Aug 16, 2023).

Today, the company said the funds would be used for its acquisition of the licencing rights to the azer-cell technology and the associated trial costs.

Imugene said Bell Potter Securities was the lead manager to the capital raising.

Imugene fell 1.5 cents or 16.0 percent to 7.9 cents with 132.7 million shares traded.

MERCHANT BIOTECH FUND

Merchant Biotech Fund principal Andrew Chapman says he hopes to raise \$10 million to invest in ASX-listed and pre-initial public offer biotechnology companies.

Mr Chapman said that in its first full financial year to June 30, 2023, the Biotech Fund returned 21.62 percent after fees.

Mr Chapman told Biotech Daily that investors could buy units in the fund on a monthly basis and at the end of the financial year receive a distribution from any capital gain.

He said that unit-holders could redeem their investment on a quarterly basis.

Mr Chapman said that despite inflation, interest rates and a tight money-market it was a good time to invest in the sector.

“It’s the best time to invest in biotech because it’s the worst time,” Mr Chapman said.

Mr Chapman said the Fund was established in 2021 and run with Reece O’Connell.

He said that similar to the Merchant Opportunities Fund the Biotech Fund did “extensive research and take early, sizeable positions and hold for the longer term”.

Mr Chapman said the Merchant Opportunities Fund had returned 20.89 percent over 10 years, 8.15 percent over five years, 7.83 percent over three years, but lost 0.11 percent in the year to June 30, 2023.

The Biotech Daily Top 40 Index (BDI-40) rose 52.6 percent in the year to June 30, but there is no associated fund (BD: Jul 3, 2023).

“The Merchant Biotech Fund is looking to be the preferred supplier of capital for growth biotech companies outside the ASX Top 20,” Mr Chapman said.

“Our track record in this space is strong with past successful investments such as Polynovo, Rhythm Biosciences, Inoviq and Race Oncology all producing 10 times type returns,” Mr Chapman said.

Mr Chapman said that the companies in the fund “change all the time” but it currently included Arovella Therapeutics, Bcal Diagnostics and Inoviq, among others.

Mr Chapman said that he was the largest unit-holder in the Merchant Biotech Fund with 15 percent of the units on issue.

He said that fees were 1.35 percent per annum.

To apply to the Fund, contact Michelle Went: mwent@merchantgroup.com.au.

RESONANCE HEALTH

Resonance says it has a \$6.33 million contract with Mumbai's Sun Pharmaceutical Industries to provide laboratory analysis and imaging services for a clinical trial.

Resonance said the 18-month contract was through its wholly-owned subsidiary CRO Services Pty Ltd which would act as a clinical research organization and local sponsor to Sun and engage and make payment to the institutions, trial sites and vendors needed to conduct the trial.

The company said the first payment of \$1,055,000 was due within 30-days of the agreement, subject to Sun receiving regulatory approvals to start its Australian trial. Resonance said it would provide its imaging analysis services for the clinical trial as well as exploratory laboratory biomarker assessment services.

Resonance chief executive officer Andrew Harrison said the agreement was "a direct outcome of the 'Resonance Clinical' initiative announced in October 2022 and I acknowledge the enormous amount of work performed over the past couple of years to position the company and enable the successful procurement of a pharma services agreement of this magnitude".

"In revenue and range of services terms, this is a very material agreement for the company," Mr Harrison said.

Last year, Resonance says it has launched 'Resonance Clinical', to "capitalize on the... rapidly expanding global clinical trial marketplace" and provide clinical research services (BD: Oct 25, 2022).

Resonance and CRO Services director Mitchell Wells said that the Resonance Clinical initiative was "about capability expansion and growth acceleration, targeted specifically at the prolific global clinical trial marketplace and leveraging Australia's attractiveness as a place to perform clinical trials for global pharma companies".

"This clinical trial is hopefully the first of more to follow with this important customer," Mr Wells said.

Resonance was up 0.7 cents or 10.8 percent to 7.2 cents with 3.4 million shares traded.

ARGENICA THERAPEUTICS

Argenica has told the ASX that it delayed publishing a study due to additional data being generated and the need for an appropriate review by the board.

In the ASX Aware query, the ASX said the study, titled 'ARG-007 Prevents Uptake and Aggregation of Key Protein' was first published in Biomedicine on Tuesday July 25, 2023, Argenica made its announcement on Tuesday August 1, 2023, and that Argenica chief scientific officer Prof Bruno Meloni was a co-author of the study.

The ASX noted that the August 1 announcement was marked as "market sensitive" and the company's share price increased 9.59 percent to 40 cents on that day.

In its response, Argenica said "the published study commenced in 2019, before Argenica's incorporation ... and there was a long period between its commencement and the paper being finalized and subsequently submitted and then accepted for publication".

The company said once it had been made aware of the study being published online, Prof Meloni "confirmed that an additional, non-published study ... was complete and data was imminently being generated".

"In order to present the most up-to-date, relevant and accurate information to investors, this additional data should be finalized and included," Argenica said.

Argenica said it then had to work with Prof Meloni to draft this revised announcement, and have it approved by the board which was only completed on July 31, 2023.

Argenica was unchanged at 38 cents.

STARPHARMA HOLDINGS

Allan Gray Australia Pty Ltd has reduced its substantial shareholding in Starpharma from 56,519,698 shares (13.77%) to 51,965,719 shares (12.66%).

The Sydney-based Allan Gray said that between August 12 and August 15, 2023, it sold 4,553,979 shares for \$714,371, or 15.7 cents a share.

Starpharma fell half a cent or 3.1 percent to 15.5 cents.

STARPHARMA HOLDINGS

FIL Limited (Fidelity Investment) says it has reduced its substantial shareholding in Starpharma from 29,778,237 shares (7.31%) to 25,777,420 shares (6.28%).

The Hong Kong-based FIL said it bought and sold shares in more than 150 transactions between March 30, 2022 and August 15, 2023, with the highest purchase price 90.28 cents a share and the lowest sale price 16.17 cents a share.

MEDIBIO

FIL Limited (Fidelity Investment) says it has increased its substantial holding in Medibio and been diluted from 414,644,320 shares (9.99%) to 506,334,415 shares (8.30%).

The Hong Kong based FIL said that on February 28, 2023 it sold 3,574,367 shares for 0.1 cents a share.

FIL said that on June 30, 2023 it bought 95,264,462 shares for 0.15 cents a share.

In May, Medibio said its share plan at 0.15 cents a share raised \$246,000 of a hoped for \$1,500,000 and in February, said that it had commitments for a \$1,245,000 placement (BD: Feb 15, May 29, 2023).

Medibio was up 0.1 cents or 100 percent to 0.2 cents with 1.3 million shares traded.

TRAJAN GROUP HOLDINGS

Trajan says it will release 57,352,941 shares from voluntary escrow on August 28, 2023, the day it releases its preliminary results for the year to June 30, 2023.

According to its most recent filing, following the release from escrow, Trajan would have 152,083,865 shares available for trading.

Trajan fell five cents or 2.8 percent to \$1.76.

PHARMAUST

Pharmaust says it has requested a trading halt "pending an announcement of neuro-filament light chain results from the motor neuron disease phase I/II clinical trial".

Trading will resume August 22, 2023, or on an earlier announcement.

Pharmaust last traded at 7.3 cents.

INVEX THERAPEUTICS

Invex says it has requested a trading halt in relation to a report on the idiopathic intercranial hypertension market as part of a review of its phase III trial.

Trading will resume August 22, 2023, or on an earlier announcement

Invex was untraded at 18 cents.

BTC HEALTH

BTC says Tracy Weimar will replace out-going chief financial officer and company secretary Sharon Papworth, as company secretary, effective from today.

In May, BTC said Ms Papworth was made redundant due to a “broader organizational restructure” and would leave the company on July 31, 2023 (BD: May 11, 2023).

Today, the company said Ms Weimar was from corporate services organization Vistra Australia.

BTC was untraded at 2.1 cents.