



Biotech Daily

Friday February 2, 2024

Daily news on ASX-listed biotechnology companies

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MARKET REPORT

The Australian stock market was up 1.47 percent on Friday February 2, 2024, with the ASX200 up 111.2 points to 7,699.4 points. Twenty-four of the Biotech Daily Top 40 stocks were up, nine fell and seven traded unchanged. All three Big Caps were up.

Actinogen was best, up 0.5 cents or 17.2 percent to 3.4 cents, with 3.4 million shares traded. Resonance climbed 13.5 percent; Opthea was up 9.4 percent; Paradigm rose 7.9 percent; Cynata was up 6.9 percent; Genetic Signatures, Polynovo, Syntara (Pharmaxis) and Telix were up five percent or more; Emvision and Pro Medicus improved more than four percent; Clinuvel, Mesoblast, Nova Eye, Percheron (Antisense) and Proteomics were up three percent or more; Avita, Micro-X and Orthocell rose two percent or more; Clarity, Cochlear, CSL, Medical Developments, Nanosonics, Prescient and Resmed were up by one percent or more; with SDI up by 0.7 percent.

Impedimed led the falls, down 0.9 cents or 8.6 percent to 9.6 cents, with 9.4 million shares traded. Atomo lost six percent; 4D Medical shed five percent; Curvebeam fell 4.2 percent; Alcidion was down 3.85 percent; Cyclopharm and Universal Biosensors shed more than two percent; Immutep was down 1.5 percent; with Neuren down by 0.2 percent.

[DR BOREHAM'S CRUCIBLE: RESMED](#)

By TIM BOREHAM

ASX, NYSE code: RMD (Chess depository interests or CDIs)

Share price: \$29.43; **CDI equivalents:** 1,470,881,550; **Market cap:** \$43.3 billion

Financials (six months to December 31, 2023): revenue \$US2.265 billion (\$A3.444 billion) (up 14%), net income (earnings) \$US518.5 million (\$A789.2 million (up 11%)

December quarter 2023: revenue \$US1,163 million (up 12%), net income (earnings) \$US209 million (down 7%), earnings per share \$US1.42 (down 7%), dividend per share US48 cents (up 9%), cash \$US210 million (down 7%) net debt \$US1,016 million (down 14%)

Executive chair: Michael Farrell

Board: Mr Farrell, Dr Peter Farrell (founder, emeritus chair), Carol Burt, Jan De Witte, Richard Sulpizio, Ron Taylor, Karen Drexler, Harjit Gill, Dr John Hernandez, Dr Desney Tan

Identifiable major shareholders (US stock): Vanguard 11.58%, Black Rock Inc 9.4%, management 1.21%

Okay, let's address the snoring elephant in the room right away: will GLP-1 drugs such as Ozempic (semaglutide) fundamentally harm Resmed's business?

Short for glucagon-like peptide 1, GLP-1 agonists were developed to control type 2 diabetes by better regulating blood sugar. But the smarties soon found out that the drug also helped to control weight.

With Resmed shares softening over the last 12 months, investors are betting the drugs will result in a damaging epidemic of non-obesity (damaging to the company's bottom line, that is).

The thesis goes that fewer obese patients will mean less demand for Resmed's pumps, masks and associated paraphernalia to diagnose and treat obstructive sleep apnoea (OSA, or snoring).

There's certainly a link between snoring and being overweight, but Resmed chief Mick Farrell is adamant that the fat-busting wonder drugs pose no harm to the business.

In fact, Resmed's 'real world' data from 529,000 patients suggests GLP-1 users are more likely to seek OSA treatment (see below).

Meanwhile, Resmed last week issued second quarter (and half year) results that exceeded the market's (subdued) expectations on revenue, earnings and market share trends.

About Resmed

Resmed is a leader in obstructive sleep apnoea (snoring) and other sleep-related respiratory disorders.

Its core product remains the continuous positive air pressure (CPAP) machine, a portable pump that delivers a steady flow of air to the user via a tightly-fitted mask. The CPAP devices are the hardware; the masks and tubes comprise the disposable components.

In recent years, Resmed has expanded into products that diagnose sleep apnoea, both in the clinic and at home. These include internet-connected devices for remote monitoring.

CPAP treatment had its roots in the 1980s, when Sydney sleep expert Dr Colin Sullivan converted a vacuum cleaner to deal with the deafening snores emitted by dogs with pushed-in faces. This pug-nacious effort saw the tech commercialised in the US by the Baxter Centre for Medical Research - and others - before Resmed acquired the rights.

Founded by Dr Peter Farrell in 1989, Resmed listed on the Nasdaq in 1995 and the ASX in late 1999.

Michael Farrell took over from his father Peter as CEO in 2013, with Farrell senior assuming the chair. In a “streamlining” measure unveiled in January 2023 Farrell junior took over both roles, with his old man remaining “emeritus chair”.

Via acquisitions over the last six years, Resmed has expanded aggressively into “connected care” - out-of-hospital software that enables the patient to use the devices at home, with data streamed to the clinician.

The chunkiest purchase was the debt-funded, October 2022 purchase of German software-as-a-service company Medifox Dan.

Resmed now claims to have 17 billion nights of anonymized patient sleep data stored in the internet cloud.

In the meantime, Resmed issues a stream of improved products, notably masks which are more comfortable to use. The “latest and greatest” is Airsense 11, which has a touch screen and other digital enhancements.

Readers also should not be surprised that Resmed is embracing “artificial intelligence” for functions such as gauging which customers are most likely to comply with treatment.

Where’s the evidence (1)?

Resmed’s real world evidence consisted of tracking the behaviour of 529,000 patients diagnosed with sleep apnoea and also on a GLP-1 drug. The upshot was that the GLP-1 users were 10 percentage points more likely than non-users to seek a full-rate CPAP prescription, and after a year they were three percentage points more likely to seek resupply (that is, order replacement masks). In other words, they were more compliant.

After two years they were five percentage points more likely to do so.

Nonetheless, some Resmed watchers remains unconvinced. Broker UBS reckons the weight drugs will result in the company losing 14 percent of its sales volumes by the 2030s.

Where's the evidence (2)?

Called Surmount, a study carried out by Eli Lilly is assessing the effect of the GLP-1 drug tirzepatide (sold by the drug maker as Zepbound) in participants with obstructive sleep apnoea and obesity.

The key objective is to ascertain whether tirzepatide is effective for treating OSA by inducing weight loss.

The 469 patients are evenly divided into those unable or unwilling to use CPAP and those on CPAP. The cohorts are then split further into placebo and non-placebo in terms of GLP-1 administration. A readout is expected in March.

Noting the study's small size, Mr Farrell says the trial is likely to hit its primary-endpoint of weight loss, but he echoes the principal investigators view that the idea of treating sleep apnoea with weight loss alone is "preposterous". The answer, of course, is pharmacotherapy combined with OSA treatment.

Meanwhile, the Mayo Clinic says it's not clear how GLP-1 results in weight loss. They may curb hunger and slow the movement of food from the stomach into the small intestine, resulting in patients feeling fuller.

Where's the evidence (3)?

Then there's the age-old nexus between snoring and heart disease.

In June last year, Resmed pointed to two retrospective studies showing CPAP adherence could reduce hospitalisations and operating room visits for OSA patients with systolic and diastolic heart failure.

After one year, this reduced costs by 18 percent for patients with diastolic heart failure and 40 percent for systolic heart failure. The results from the two studies were presented at last year's Sleep 2023 convention. Given the shindig was held in lively Rio de Janeiro, we're assured it wasn't a snooze fest.

The findings are a big deal, given three of four people with heart failure also have sleep apnoea.

The wrong sort of magnetic attraction

Last year, the US Food and Drug Administration issued a class 1 notice to Resmed, demanding the company update its instructions on its masks that contain magnetic clips.

The issue is that the magnets can interfere with the workings of implanted devices such as pacemakers. The notice didn't require the company to recall the masks and management is keen to avoid the 'r' word.

According to broker Citi, the company has sold around 20 million masks over 10 years, but as they have a useful life of six months most would have been chucked out already.

Then there's the matter of Philips Respironics returning to the market after being forced to withdraw one million of its ventilators from the market because the sound abatement foam used produced toxic gases.

This June 2021 recall was - indeed - a recall.

The FDA was unhappy with the replacement foam, which potentially could break off and clog the airpath (rather defeating the purpose of the therapy).

In October last year, Philips described its return-to-market strategy as encouraging and has resumed selling outside of the US. Philips has not indicated when it will return to the US market. Citi expects this to happen around July and estimates the company "eventually" will regain its original circa 20 percent market share: half of it from Resmed.

Mr Farrell dubs Philips as a "fair competitor" but adds: "We were taking share in 2019 and we are taking share in 2023-'24 as they come back to the market."

He's also unperturbed by a raft of second-tier rivals that have bobbed up to steal Philip's abandoned market share.

COPD: the next epidemic

Even if CPAP demand does plunge because of the obesity drugs, the increasing incidence of COPD looks likely to fill the void.

COPD refers to a range of lung conditions, notable emphysema, chronic bronchitis and non-reversible asthma.

As reported in the Australian Medical Association's Network Open journal, global COPD rates are expected to rise 23 percent between 2020 and 2050, notably in women in low and middle-income countries.

COPD is synonymous with smoking, but is also caused by poor air quality, including indoor pollution from burning biomass for cooking.

Finances and performance

While Resmed's reported profits were off the boil, the company's second quarter results (to December 31, 2023) were better than expected.

Resmed reported revenue of \$US1,162 million, up 12 percent for the three months. Net income (net profit) fell seven percent to \$US208.8 million.

Of the total turnover, the company derived 53 percent from devices (the generators) and 35 percent from masks and related stuff (such as clips). The 'out of hospital'/internet cloud subscription business contributed 13 percent.

While Resmed operates in 140 countries, it is primarily a US business, with the Americas contributing 68 percent of revenue and Europe/Asia/rest of the world 32 percent.

Resmed's Americas revenue grew nine percent: seven percent from devices and 10 percent from masks.

Elsewhere, revenue surged 16 percent: 19 percent from devices and nine percent from masks.

The company spent \$US73.9 million on research and development, 6.4 percent of net revenue.

Management notes the strong growth of the software-as-a-service business: up 24 percent, or up 10 percent excluding the Medifox Dan contribution.

Resmed reported cash of \$US210 million and net debt of \$US1016 million.

Over the last year, Resmed shares have meandered between \$21.44 (September 25 last year) and \$35.93 (May 1, 2023). The stock surged six percent after last Thursday's earnings proclamation and since then have advanced nine percent.

Dr Boreham's diagnosis:

If Mr Farrell is right about the fat pills being a tailwind rather than a threat, Resmed's nine percent share sell down after the last 12 months looks overcooked.

Add a still-winged competitor (Philips Respironics) into the mix and Resmed looks like having a dream run.

But as Covid showed, new threats can emerge out of the blue.

Having overcome the pandemic-related supply chain disruptions, chief financial officer Brett Sandercock says the Red Sea shipping disruptions have had a "definite" impact on the company, with lead times blowing out by two to three weeks.

Close to one billion citizens globally have sleep apnoea - almost half of them severely - with only 20 percent diagnosed.

But Mr Farrell argues the company has tapped only 10 percent of its addressable market across all the related maladies.

"We are the clear leader in OSA in a huge and growing market with more than one billion people impacted globally."

Still, management won't be caught napping in its quest to remain the market leader.

Disclosure: Dr Boreham is not a qualified medical practitioner and does not hold a doctorate of any sort – even in his dreams

THE WALTER AND ELIZA HALL INSTITUTE OF MEDICAL RESEARCH

WEHI says a 30-patient study shows that laboratory-grown organoids can predict how advanced bowel cancer patients will respond to treatment, with 83 percent accuracy. WEHI said that its clinical feasibility study tested chemotherapy drugs on miniature three-dimensional models of cancer grown in-vitro from a patient's tissue sample, called tumor organoids, which "mimic the characteristics of the cancer from which they were created, including sensitivity to drug treatment".

The Institute said because "hundreds of organoids" could be made from one patient tissue sample, it was possible to test a wide range of therapies in the laboratory.

WEHI said the trial aimed to help reduce the current "trial-and-error process" used to determine cancer treatment.

The Institute said the study was able to use the organoids to test the effectiveness of chemotherapy drugs not commonly used for bowel cancer patients and found two bowel cancer organoids were sensitive to a drug often used for breast and bladder cancers.

The Institute said it hoped to conduct a clinical trial in recently diagnosed bowel cancer patients at multiple Victorian hospitals this year, with funding from Cancer Australia and the Stafford Fox Medical Research Foundation.

The Institute said the study, titled 'Unified framework for patient-derived tumour organoid-based predictive testing of standard-of-care therapies in metastatic colorectal cancer', was published in Cell Reports Medicine and the full article was available at:

<https://doi.org/10.1016/j.xcrm.2023.101335>.

WEHI oncologist and co-lead study researcher Prof Peter Gibbs said "each time you give a patient an ineffective treatment, you lose [two to three] months on something that won't work".

"The window for successful treatment is often limited, so it is vital that we choose the options with the highest chance of success and avoid other treatments that are unlikely to work," Prof Gibbs said.

"Our findings show that organoid drug testing is a potential game-changer for cancer treatment, suggesting the possibility of revolutionizing personalized medicine and clinician-patient care through improved treatment selection," Prof Gibbs said.

"Many patients with advanced bowel cancer only get one or two chances at treatment... [and] knowing what is most likely to work before they start treatment would make a significant difference to their survival outcomes and quality of life," Prof Gibbs said.

AUSTRALIAN NATIONAL DIGITAL HEALTH, FEDERAL GOVERNMENT

AND Health says it will invest \$3.25 million in Baymatob, Macuject, Neurotologix and Weguide, through the Federal Government's Medical Research Future Fund.

AND Health said that the funding was part of its 'plus' program, which was funded by the Medical Research Future Fund, and it would distribute the funds over the coming 12 months.

The organization said Baymatob was developing a biometric monitor for mothers at risk of birth complications and that Macuject used machine learning to analyze macular scans for detect preventable vision loss in patients with macular degeneration.

AND Health said Neurotologix was building a portable device to assess dizziness and vertigo remotely, and Weguide was developing a platform for healthcare providers and institutes to accelerate the creation of cheap digital health applications.

AND Health said the funding would support the companies to meet "clinical and commercial milestones and gain regulatory and compliance approvals in Australia, the US and Europe".

FIVEPHUSION

Fivephusion says a 19-patient study of Deflexifol with 5-fluorouracil shows it “is safe and tolerable in solid tumor patients” at doses 40 percent higher than typically administered. Fivephusion said Deflexifol was a physiological pH (potential of hydrogen) formulation designed to co-administer the chemotherapeutic treatment 5-fluorouracil (5-FU), and the bio-modulator leucovorin which enhances 5-FU’s anti-cancer activity.

The company said that due to their chemical incompatibility current formulations of 5-FU and leucovorin were limited in their safety, tolerability and effectiveness which meant limited treatment response rates, unpleasant side effects, toxicities and a reduced quality of life experienced by cancer patients.

Fivephusion said the 19-patient study had 13 evaluable patients - nine colorectal cancer and four breast cancer – which showed the combination therapy administered with its Deflexifol achieved “disease control” in nine of 13 patients, or 69 percent, all of whom were end-stage and typically heavily pre-treated, including prior 5-FU treatment.

The company said one of the 13 patients showed partial response and eight patients demonstrated “stable disease” following treatment, median progression-free survival was 28.2 weeks.

A poster presentation provided by Fivephusion said one treatment-related death occurred at the highest dose level.

Fivephusion said the results from the study, titled ‘A phase I dose-escalation study of an all-in-one 5-fluorouracil and leucovorin co-formulation administered after failure of standard treatment’ were presented in a poster at the American Society of Clinical Oncology’s Gastrointestinal Cancers Symposium meeting in San Francisco, with an abstract available at: https://ascopubs.org/doi/10.1200/JCO.2024.42.3_suppl.140.

The company said it had received positive US Food and Drug Administration guidance on the clinical and regulatory paths for Deflexifol development and was progressing plans for a follow-on trial of Deflexifol in combination with oxaliplatin and bevacizumab in the first-line treatment of un-resectable metastatic colorectal cancer.

Fivephusion is a private company.

SYNCHRON INC

Synchron says it has bought an undisclosed equity stake in the Kiel, Germany-based technology manufacturer Acquandas.

In 2022, the Melbourne and New York-based Synchron said it raised \$110 million to accelerate the development of its Synchron Switch platform product, a brain-implanted computer interface (BD: Dec 16, 2022).

At that time, the company said its Switch device was a brain computer interface, implanted in the blood vessel on the surface of the motor cortex of the brain via the jugular vein, through a minimally-invasive endovascular procedure.

Today, Synchron said Acquandas manufactured “high-precision components for the healthcare industry”.

The company said as part of the transaction chief executive officer Tom Oxley would join the Acquandas governance council and its chief technical officer would join as an observer.

Mr Oxley said as the company pioneered “functional endovascular neurotechnology, this investment strengthens our technology innovation and supply chain for our unique product offerings, beginning with brain-computer interfaces”.

Synchron is a private company.

ALTERITY THERAPEUTICS

Alterity says it has raised \$2.0 million in its share plan at 0.35 cents a share, and has scaled back about \$577,000 in oversubscriptions.

Last year, Alterity said it had commitments for a \$4.8 million placement and hoped to raise \$2.0 million in a share plan, at 0.35 cents a share (BD: Nov 22, 2023).

Today, the company said it scaled-back the share plan to the maximum raise limit of \$2 million, which was approved by shareholders at its extraordinary general meeting.

Alterity said the scale-back had been applied on a pro-rata basis, based on the size of each applicant's shareholding on the record date of November 21, 2023, according to the \$30,000 maximum for each eligible shareholder, with the number of shares issued capped at about 31 times the number of shares held on the record date.

The company said the funds would be used for its phase II trials for multiple system atrophy, planning a potential phase III trial, research on neuro-degenerative diseases such as Parkinson's disease and general working capital.

Alterity was unchanged at 0.5 cents with 41.1 million shares traded.

IMRICOR MEDICAL SYSTEMS

Imricor says it hopes to raise \$15 million in a placement and entitlement offer at 45.0 cents a share, and has taken its trading halt to a suspension.

Imricor said it hoped to raise \$3.3 million from Chess depository interests (CDIs) in an institutional placement and about \$1.71 million in a US placement.

The company said that following the placements it hoped to raise about \$10.0 million in a one-for-7.5, pro-rata institutional and retail rights offer.

Imricor said the 45.0 cent offer price was a 25.1 percent discount to the five-day volume weighted average price of 60.1 cents.

The company said the funds would be used for its clinical and regulatory development, including for its magnetic resonance imaging (MRI)-guided cardiac catheter ablation for ventricular tachycardia, as well as US Food and Drug Administration clinical trials, sales and marketing costs, medical device regulation, payment of creditors and other working capital requirements.

Imricor said it had appointed Morgans Corporate as sole lead manager to the entitlement offer, which was not underwritten.

The company said the institutional entitlement offer would close on February 5 with the voluntary suspension lifted.

Imricor said the retail component of the offer had a record date of February 6, would open on February 8 and close on February 22, 2024.

Trading will resume on February 5, 2024, or on an earlier announcement.

Imricor last traded at 61.5 cents.

SYNTARA (FORMERLY PHARMAXIS)

Syntara says it has raised \$303,000 of a hoped-for \$2 million in a share purchase plan at 2.2 cents a share, taking the total raised with the placement to \$10.3 million.

Last year, Syntara said it raised about \$10 million in a placement at 2.2 cents a share, and hoped to raise a further \$2 million in a share purchase plan (BD: Dec 19, 2023).

The company did not state whether it would place the \$1,697,000 shortfall.

Syntara chief executive officer Gary Phillips said "the company now has a cash runway through to results from several clinical trials in mid-2025".

Syntara was up 0.1 cents or five percent to 2.1 cents with 1.1 million shares traded.

RHINOMED

Rhinomed says it has bought back 3,250,644 shares at 4.0 cents in unmarketable parcels worth \$500 or less, held by 690 shareholders.

In December, Rhinomed said it would hold an unmarketable parcel facility for holdings worth less than \$500 at the December 8, 2023 record date (BD: Dec 11, 2023).

Today, the company said the amount was equal to about one percent of its share capital, with payment to be made in the coming days.

Rhinomed fell 0.2 cents or 7.1 percent to 2.6 cents.

MELODIOL GLOBAL HEALTH (FORMERLY CRESO PHARMA)

Melodiol says it has completed its 20-to-one stock consolidation and it has 245,825,445 post-consolidation shares on issue.

Last month, Melodiol said its extraordinary general meeting approved its 20-to-one consolidation with 189,961,296 votes (33.65%) opposed (BD: Jan 23, 2024).

Melodiol fell 0.1 cents or 5.9 percent to 1.6 cents with 2.1 million shares traded.

ALTERITY THERAPEUTICS

Regal Funds Management says it has ceased its substantial shareholding in Alterity selling shares on-market and diluted in the recent capital raising (see above).

The Sydney-based Regal Funds said that between January 9 and 30, 2024 it sold 16,500,000 shares for \$76,000, or an average of 4.6 cents a share.

Last month, Regal Funds said it had become substantial in Alterity with 199,870,294 shares, or 5.24 percent (BD: Jan 21, 2024).

According to the company's most recent filing, it had 4,382,754,741 shares on offer and Biotech Daily calculates that Regal retains 183,370,294 shares (4.2%).

OPTHEA

Opthea says it appointed Dr Julie Clark head of clinical development and Dr Fang Li head of regulatory affairs, effective on February 1, 2024.

Opthea said Dr Clark had more than 15 years of experience in ophthalmology medical and clinical development, and had been the head of clinical development at Iveric Bio where she oversaw the development and US Food and Drug Administration approval of Izervay for macular degeneration.

According to her LinkedIn profile, Dr Clark held a Bachelor of Science and a Doctor of Medicine from the Winston-Salem, North Carolina-based Wake Forest University and a Master of Biotechnology from the Baltimore-based Johns Hopkins University.

The company said Dr Li had more than 20 years of experience in drug development and regulatory affairs, including previous roles at Novartis, Alcon Inc and Bausch and Lomb Corporation.

Opthea said Dr Li held a Doctor of Philosophy from Nanjing's China Pharmaceutical University.

Opthea was up 4.5 cents or 9.4 percent to 52.5 cents.

ECHO IQ

Echo IQ says joint company secretary Shannon Robinson has resigned, with Jessamyn Lyons remaining as the sole company secretary.

Echo IQ was up 0.5 cents or 3.7 percent to 14 cents.