Biotech Daily

Friday April 16, 2021

Daily news on ASX-listed biotechnology companies

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MARKET REPORT

The Australian stock market edged up 0.07 percent on Friday April 16, 2021, with the ASX200 up 4.9 points to 7,063.5 points.

Sixteen of the Biotech Daily Top 40 stocks were up, 16 fell, seven traded unchanged and one was untraded.

Imugene was the best, up 1.5 cents or 8.6 percent to 19 cents, with 33.2 million shares traded. Universal Biosensors climbed 6.7 percent; Next Science, Paradigm, Patrys and Proteomics were up more than three percent; Cyclopharm, Cynata, Medical Developments, Nova and Starpharma improved more than one percent; with CSL, Mesoblast, Opthea, Orthocell, Pro Medicus and Volpara up by less than one percent.

Actinogen led the falls, down 0.3 cents or 5.4 percent to 5.3 cents, with 14.85 million shares traded. Resonance lost five percent; Alterity and Immutep were down more than three percent; Amplia, Antisense, LBT, Pharmaxis and Telix shed two percent or more; Dimerix, Nanosonics, Oncosil and Polynovo fell more than one percent; with Avita, Clinuvel, Cochlear, Neuren and Resmed down by less than one percent.

DR BOREHAM'S CRUCIBLE: VOLPARA HEALTH TECHNOLOGIES

By TIM BOREHAM

ASX code: VHT

Share price: $1.42

Shares on issue: 251,019,081

Market cap: $356.4 million

Chief executive officer (and co-founder): Dr Ralph Highnam

Board: Paul Reid (chairman), Dr Highnam, Dr Monica Saini (chief medical officer), Roger Allen, John Diddams, John Pavlidis, Karin Lindgren

Financials* (December quarter 2020): customer receipts $NZ4.6 million (up 2%), operating outflows $NZ3 million (previously $NZ3.5 million), cash of $NZ60.6 million**

* One $NZ1.00 equals $A0.92

** $NZ35 million after $US22 million CRA Health purchase

Major shareholders: Harbour Asset Management 9.2%, Roger Allen 7.4%, Dr Highnam 6.5%

With the dastardly effects of the coronavirus first becoming apparent a year ago, the breast cancer imaging play beat the rush and raised $28 million in a placement, plus $9 million in an oversubscribed share purchase plan.

Given the uncertainties, it was simply a prudent thing to raise as much funds as possible - but eventually so much idle moolah can burn a hole in one's corporate pocket.

A few months later, management was much more confident about where things were headed and turned its thoughts to potential acquisitions.

The result is the $US22 million ($A33 million) purchase of CRA (Cancer Risk Assessment Co), a US quasi rival that plays strongly in genetic testing and has close ties with the powerful electronic health record (EHR) providers.

Management knows the acquisition playbook well: in late 2019, the company acquired US group MRS Systems for $NZ21 million ($A19 million), funded by an $NZ55 million capital raising.

Volpara founder and CEO Dr Ralph Highnam says it's always preferable to carry out due diligence physically, but the border bans meant the company's Wellington, New Zealand-based management was going nowhere.

“We had worked closely with [CRA] over the last five years and that gave us enough confidence about who we were buying,” he says.

In the meantime, Volpara was able to keep calm and carry on because of an unusual advantage: the district’s calamitous earthquake in 2017 meant that management and staff were already well-versed in working from home.

‘Absolute double whammy’

Volpara’s reason for being is the distinction between fatty and dense breasts, which is more than an aesthetic consideration for swimsuit catalogues.

Since the 1970s, clinicians have been aware that dense-breasted women are more at risk of breast cancer - about four to six times more so, in fact.

The problem with traditional imaging is that the dense tissue shows up as white on a mammogram - as do the tumors. Thus, finding the latter is like finding a polar bear in a snowstorm.

Put another way, a tumor in a fatty breast has 90 to 100 percent chance of detection at screening, but this rate falls to 60 to 65 percent with the dense- breasted variety.

“It's an absolute double whammy,” Dr Highnam says.

About half of all women are dense breasted, but this cohort falls from around 80 percent for the under 40s to 20 percent for the over 70s.

Who said old age did not have its rewards?

About 10 percent of women are classed as “extremely fatty” in the mammary department, while 10 percent are “extremely dense” and it’s nothing to do with their IQ.

Motivated by the number of friends and family members lost to breast cancer, Dr Highnam completed an Oxford University Doctorate of Philosophy on the topic in the early 1990s.

He founded Volpara in 2008 and the company listed on the ASX on April 26, 2016, raising $10 million at 50 cents apiece.

Volpara started with Volpara Density, a tool to measure breast density and thus identify at-risk women for more frequent examinations.

Volpara then devised Volpara Enterprise: automated tools used by clinics to improve the efficiency and performance of sites with multiple x-ray machines.

The company then launched Volpara Live ! - since renamed the less expressive Volpara Live - to assist clinicians in real time. Volpara Live enables clinicians to detect a sub-standard image before the patient has left the clinic, avoiding the need for an expensive recall.

Users of Volpara Enterprise include New York's Sloan Kettering Cancer Centre, the Houston Texas MD Anderson, California's Stanford University Hospital, the University of Virginia Medical Centre, Women's Breast Imaging Perth, the Auckland Breast Centre and Auckland Mercy Radiology.

The Seattle-based MRS, as in Mammography Reporting Systems, provides its services to more than 1,600 US breast clinics and hospitals. The MRS purchase also included a modest lung cancer screening business, Aspen Lung.

Based on parts of the acquired MRS, Volpara Patient Hub is patient management software that contains patient details, patient communications and workflow data. This tool helps with regulatory, audit and reimbursement compliance.

Augmenting market share

Currently almost one in three US women who undergo breast cancer screening are subject to Volpara's supplementary screening.

Dr Highnam says the CRA purchase will boost this penetration further, while exposing the company to the booming genetic testing market.

He says it's a "great feeling" that Volpara is ensuring that 12.5 million American women get safe and reliable x-ray results.

The aim now is to penetrate the remaining two-thirds of the screening market; and to expand screening to the one-third of US women who don't undergo screening.

Dr Highnam notes that Volpara does have competition, with about eight other products providing density scores. But these provide a crude ranking from A to D, rather than providing exact breast density measures that can be tracked over time.

'A' means extremely fatty and 'D' means extremely dense.

"If you write good software and it provides good value, you can get very large market shares in breast imaging," Dr Highnam says.

In mid-March Volpara announced its biggest contract to date, via the CRA Health subsidiary. Worth $US400,000 in annual recurring revenue, the deal pertains to providing breast cancer risk scores to a large Indiana based organization that has sites in 20 states and runs expansive electronic health records.

Win for women in windy Wellington

Volpara derives 90 percent of its revenue from the US, but women do exist elsewhere.

In Australia, Volpara has a strong presence in private Adelaide clinics and in Queensland, where the company has been selected for the state's public screening program.

“We still have a long way to go in New South Wales, Victoria and Western Australia despite having some excellent sites,” Dr Highnam says.

Volpara also has customers in Auckland and Palmerston. Despite being based in Wellington, Volpara only recently signed its first customer in the windy capital.

“It was a great moment for women in Wellington,” Dr Highnam says. “We have long wanted them to get the benefit of what we do here.”

Dutch density detection delivers

Volpara’s ability to prevent breast cancer has been validated in the latest results from a marathon 10-year study being carried out by the University of Uechtrecht in the Netherlands.

Dubbed DENSE, the study measures the clinical utility of supplemental screening (post magnetic resonance imaging, or MRI) for women with extremely dense breasts – as measured by Volpara Density.

The first results, in late2019, showed a significant reduction in interval cancers - those detected between breast exams - but also a high false positive rate.

Covering 3,000 women, the second round of results showed the false positive rate had reduced.

The randomized, controlled trial also opens the way for hesitant potential customers - notably public screening programs - to adopt Volpara products.

Finances and performance

Despite the coronavirus, Volpara reported third (December) quarter receipts of $NZ4.6 million, up two percent.

Volpara’s revenue has been transitioning from capital purchases to ‘software as a service’ subscription revenues, which allows for smoother annuity income over contracts that typically run for five years.

The company also recorded an operating loss of just over $NZ3 million, compared with $3.5 million in the second (September) quarter.

Dr Highnam says he’s not too concerned about Volpara being loss-making, as the company is focusing on customer acquisition that will lead to reliable annuity revenue in the longer term.

Later this month Volpara is due to report its full year results for the year to March 2021. Broker Morgans forecasts a net loss of $NZ13.4 million, on revenue of $NZ22.6 million. The firm then expects revenue of $28.5 million and a $NZ6.5 million loss in the current (2021-’22) year.

The company brings home the bacon in the year to March 2023, delivering a $6.5 million profit on revenue of $NZ44 million.

Volpara cites an average revenue per user (ARPU) of $US1.22, up five percent. But there's an historical lag here, with the ARPU on deals struck during the quarter ranging from $US1.43 to $US5.12.

Management has a target of increasing this ARPU to an average $US10, through higher take-up of bundled products and rolling out high-margin genetic testing.

Currently, most customers use only one Volpara product.

Broker Morgans reckons that every additional 10 US cents of ARPU should increase the value of Volpara shares by 43 cents - or close to one third.

Volpara shares have wandered between 30 cents (May 2017) and a peak of $1.99 (November 2019).

The stock has recovered from a Covid-era low of 99 cents (March 27, 2020).

Dr Boreham's diagnosis:

In February, Dolly Parton graciously requested leaders of her home town of Nashville not to build a statue of her, given "everything else that is going on". In renouncing the chance to be remembered for a different kind of bust, the singer and philanthropist was referring to the pandemic and Washington's turmoil.

But there's also a lot going on in breast cancer detection, with the CRA Health purchase aligning Volpara with rapidly evolving risk assessment and prevention techniques.

"There's a whole world of preventative strategies opening up, but the key to getting the right patients on them is to do very accurate risk prevention," Dr Highnam says.

"That's why we bought CRA because they are the best of breed at risk and genetics."

Volpara, meanwhile, has been awaiting a new US Food and Drug Administration requirement that screening clinics must inform all patients of their breast density measures. A number of states have adopted this rule already.

The FDA flagged the rule 18 months ago and it was meant to have been formalized in October, but things were a bit busy in Washington at the time.

If the Biden administration gives the nod - and it didn't run on an anti-breast platform - Volpara can edge closer to gold standard 'breast practice' status in the world's biggest breast imaging market.

Disclosure: Dr Boreham is not a qualified medical practitioner. He does not possess a doctorate of any sort but does like to keep abreast of medical technologies.

THE WALTER AND ELIZA HALL INSTITUTE OF MEDICAL RESEARCH

The Walter and Eliza Hall Institute says it has found a way to understand how stem cells differentiate to become particular cell types, with implications for cancer.

WEHI said that the research discovered 30 genes that program stem cells to make the dendritic cells that start the immune response, which could lead to new immunotherapy treatments for cancer.

The Institute said the technique could be used in other areas such as discovering new drug targets in tumor initiation.

WEHI said that using a “single cell method” helped understand the programming behind what causes stem cells to make particular cell types.

The Institute said that its researchers tested daughters of a single stem cell in different parallel tests and found 500 genes that predicted dendritic cell fate and using a clustered regularly interspaced short palindromic repeats (Crispr) screen, they discovered 30 key genes amongst the 500 that program dendritic cell production.

WEHI said it intended to expand the use of this technique to identify new drug targets to fight cancer.

The Institute said the research, titled ‘Clonal multi-omics reveals Bcor as a negative regulator of emergency dendritic cell development’ was published in Immunity, with an abstract at: https://www.cell.com/immunity/fulltext/S1074-7613(21)00124-2.

WEHI said the research was led by Dr Shalin Naik, Dr Luyi Tian, Sara Tomei and Jaring Schreuder and outlined the processes involved in “kick-starting” the generation of dendritic cells driven by the hormone Flt3 ligand, which was used in immunotherapy and then developed a technique to link the gene expression of a single cell with what cell types it made.

“We invented a technique called ‘SIS-seq’ in order to study sister cells that descended in parallel from the mother stem cell,” Dr Naik said.

“As RNA sequencing destroys the single stem cell, you are only able to measure the genetic contents of the cell but lose the chance to know what it would have made,” Dr Naik said.

“So, there is no way of then going back in time to find that out,” Dr Naik said.

“By letting a single stem cell divide only a few times, not all the way, we were able to test the sisters separately,” Dr Naik said.

“Some were tested for what they made, and others were tested for their genetic contents,” Dr Naik said.

“In this way, we have been able to link the genes with the cell types that are made,” Dr Naik said.

Dr Naik said the findings would not have been possible without advances in technology that enabled the team to answer multiple questions simultaneously.

“Using a Crispr screen, we tested 500 genes that predicted dendritic cell fate and discovered 30 new genes that actually program dendritic cells to be made,” Dr Naik said.

Dr Naik said the breakthrough could pave the way for new drug targets to fight cancer and improve immunotherapy treatment, with a list of genes to try to generate or boost human dendritic cells in a petri dish for immunotherapy.

“And we are going to expand the use of this technology to find the genes that program the generation of each of the different human immune cell types,” Dr Naik said.

“Using our time machine technique, we hope to be able to pinpoint which of the normal programs in tissue generation are hijacked by cancer causing genes in single cells and then use this information to find new targets for therapy,” Dr Naik said.

MAYNE PHARMA GROUP

Mayne says the US Food and Drug Administration has approved its combined oral contraceptive, marketed as Nextstellis, and will launch the product by July 2021.
Mayne said the contraceptive was developed with the Liege, Belguim-based Mithra Pharmaceuticals and contained 3mg of dropirenone and 14.2mg of plant-based native oestrogen, oestetrol.
In 2019, the company said it would pay Mithra up-to $US295 million (then $A440million) over 20 years to commercialize for the oestetrol and drospirenone combination oral contraceptive in the US (BD: Oct 2, 2019).
Today, Mayne said it would pay Mithra $US11 million ($A14.2 million) in cash and 85.8 million Mayne shares, and Mirtha was entitled to appoint a representative to the Mayne board of directors.
Mayne chief executive officer Scott Richards said that the Nextstellis approval was “an important milestone, providing women with a new choice for their reproductive health”.
Mayne was up five cents or 10.9 percent to 51 cents with 42.7 million shares traded.

ANATARA LIFESCIENCES

Anatara says it has been granted an Australian patent for its pineapple-stem bromelain-derived Detach for livestock diarrhoea.
Anatara said the patent, titled ‘Anti-diarrhoea formulation which avoids antimicrobial resistance’ would protect its intellectual property until August 24, 2038.
The company said the patent covered an oral formulation of bromelain for the treatment and prevention of diarrhoea caused by pathogenic microbes.
Anatara said the formulation did not kill pathogenic microbes and would not facilitate the proliferation of anti-microbial resistant organisms.
Anatara was up 1.5 cents or 8.3 percent to 19.5 cents with 6.65 million shares traded.

STEMCELL UNITED

Stemcell United says it has “firm commitments” to raise $3.8 million in a placement at 1.9 cents a share.
Stemcell United said that investors would receive one free attaching option for every two shares purchased, exercisable at four cents each within three years.
The company said it would use the funds to secure additional sale and partnership agreements in the marijuana and hemp sector, as well as development opportunities in sea grape research and cultivation.
Stemcell United said Sanlam Private Wealth was the lead manager to the placement and would receive six percent of the placement along with a fee of $20,000 and 10,000,000 options exercisable at four cents each within three years.
Stemcell was up 0.1 cents or 4.8 percent to 2.2 cents with 14.7 million shares traded.

KAZIA THERAPEUTICS

Kazia has requested a trading halt pending an announcement in relation to “the conclusion of negotiations regarding a potential in-licensing transaction”.
Trading will resume on April 20, 2021 or on an earlier announcement.
Kazia last traded at $1.53.

EXOPHARM

Exopharm has requested a trading halt “pending the release of an announcement relating to a capital raising”.
Trading will resume on April 20, 2021 or on an earlier announcement.
In its Appendix 4C for the three months to March 31, 2021, Exopharm said it had cash and cash equivalents of $5,091,000 which would fund two quarters of operations.
Separately, the company posted a presentation discussing the use of exosomes to deliver RNA vaccines for severe acute respiratory syndrome-coronavirus-2 (Sars-Cov-2) and other aspects of its exosome technology.
Exopharm last traded at 92 cents.

VISIONEERING TECHNOLOGIES

Thorney Technologies and Tiga Trading say they have increased and been diluted in Visioneering from 244,578,085 shares (26.97%) to 600,144,797 shares (25.39%).
The Melbourne-based Thorney and Tiga said that between August 7 and 22, 2020 they bought shares, with the single largest purchase 111,764,706 shares at 1.7 cents a share.
In February, Visioneering said has raised $22 million in an “over-subscribed” placement at 1.7 cents per Chess depository instrument and in March raised $1 million in a share plan at the same price (BD: Feb 17, Mar 18, 2021).
Visioneering was unchanged at 1.5 cents with 21.5 million shares traded.

RACE ONCOLOGY

Race says it has appointed City of Hope researcher Prof Jianjun Chen to its scientific advisory board.
Race said Prof Chen discovered that Bisantrene inhibited the fat mass and obesity associated protein which was associated with metastatic melanoma cancers and some kidney cancers (BD: Mar 19, 25; Apr 15, 2021).
The company said Prof Chen was the chair of systems biology at the Beckman Research Institute of City of Hope and was previously a professor at Ohio’s University of Cincinnati College of Medicine and the University of Chicago.
Race said Prof Chen held a Doctor of Philosophy from the Shanghai-based Chinese Academy of Sciences.
Race was up 26 cents or 7.9 percent to $3.56 with 1.2 million shares traded.