Biotech Daily

Friday May 19, 2023

Daily news on ASX-listed biotechnology companies

*** ASX, BIOTECH UP: ONCOSIL UP 17%; IMPEDIMED DOWN 13%**

*** DR BOREHAM'S CRUCIBLE: CHIMERIC THERAPEUTICS**

*** IMPEDIMED $20m PLACEMENT, SHARE PLAN FOR $5m MORE**

*** AND HEALTH $3.75m FOR 5 DIGITAL HEALTH COMPANIES**

*** CRESO $2.5m PLACEMENT**

*** IMUGENE: FDA OKAYS ONCARLYTICS, BLINCYTO SOLID TUMOR TRIAL**

*** MONASH UNI DEVELOPS NANOTECH SKIN MONITOR**

*** INOVIQ: 'DATA BACKS EXO-NET EXOSOME ISOLATION TECHNOLOGY'**

*** ALTHEA: IRELAND APPROVES THC20:CBD1 MEDICAL MARIJUANA**

*** NOXOPHARM: 'SOF-XX REDUCES SKIN INFLAMMATION, IN MICE'**

*** VELOCIMETRY, ANDREAS, HELEN FOURAS DILUTED TO 21% OF 4D**

*** EPSILON APPOINTS PETER GIANNOPOULOS CEO, ON $495k PA**

MARKET REPORT

The Australian stock market was up 0.59 percent on Friday May 19, 2023, with the ASX200 up 42.7 points to 7,279.5 points. Eighteen of the Biotech Daily Top 40 stocks were up, 13 fell and nine traded unchanged.

Oncosil was the best on no news, up 0.2 cents or 16.7 percent to 1.4 cents, with 15.9 million shares traded. Actinogen, Alcidion and Cynata all climbed 7.14 percent; Pharmaxis was up 5.8 percent; Imugene, Nova Eye and Polynovo improved more than four percent; Orthocell rose 2.9 percent; Clinuvel, Dimerix, Pro Medicus and Starpharma were up one percent or more; with Cochlear, CSL, Genetic Signatures, Nanosonics, Next Science, Proteomics and Telix up by less than one percent.

Impedimed led the falls, down two cents or 12.9 percent to 13.5 cents, with 18.9 million shares traded. Uscom lost 11.3 percent; Compumedics shed 6.25 percent; Avita was down 5.8 percent; Paradigm fell 4.1 percent; Prescient was down 3.2 percent; Antisense, Immutep, Mesoblast and Universal Biosensors shed more than two percent; Neuren, Opthea and Volpara were down more than one percent; with Resmed down 0.8 percent.

DR BOREHAM'S CRUCIBLE: CHIMERIC THERAPEUTICS

By TIM BOREHAM

ASX code: CHM

Share price: 3.9 cents; **Shares on issue**: 425,278,237*****; **Market cap:** $16.6 million;

Chief executive officer: Jennifer Chow

Board: Mr Hopper (executive chair), Ms Chow, Leslie Chong, Dr Lesley Russell, Cindy Elkins, Dr George Matcham

Financials (March quarter 2023): revenue nil, loss of $687,000, cash of $2.82 million

Identifiable major holders*: Paul Hopper 21%, Dr Christine Brown 2.75%, Dr Michael Barish 2.7%

***** Ahead of a capital raising, which if fully subscribed would add 153,913,040 shares.

The imperative for cash-strapped ASX biotechnology companies to get money through the door has been highlighted by oncolytic drug developer Chimeric's quest to raise up to $6.25 million, by way of a placement and a follow-on share purchase plan (SPP).

Chimeric listed in January 2021 raising $35 million at 20 cents to fund its CLTX Car-T immune-oncology programs, acquired from the City of Hope Hospital (see below).

In those buoyant times investors had oversubscribed for $60 million in the initial public offer (IPO), which was put together by legendary biotech entrepreneur Paul Hopper. Reality has since bitten with the venom of a deadly scorpion (see below).

As the company announced on Monday, share plan subscribers can subscribe at four cents a share, a 13 percent discount on the undisturbed closing price on Friday May 12.

A placement is subscribed by board and management, which Mr Hopper describes as a sign of confidence in the potential of the company's programs.

Other ASX biotechs raising funds include Dimerix and 4D Medical while Mesoblast has just done so.

Kiss of the scorpion

CLTX refers to chlorotoxin, while Car-T is short for chimeric antigen receptor T-Cell. Initially, Chimeric's main program involved a treatment for the difficult-to-treat glioblastoma, a form of brain cancer.

In an exotic vein, the active ingredient derives from the venom (peptide) of the deathstalker scorpion - chlorotoxins that bind to unique targets in the body.

This scorpion juice is worth something like $9,000 a gram, but fortunately for researchers the active ingredient is derived synthetically and they don't have to chase the arachnids across the Sahara Desert.

The toxin is familiar to the oncolytic community, because for years it has been used as an imaging agent to detect cancers.

"Logically if you have something that will tell you where cancer cells are, it will attach to these cells," says Chimeric chief executive Jennifer Chow.

Search and destroy

Car-T therapies work by 'supercharging' the body's T-cells to fight cancers. The genetically-engineered cells are grown by the millions in a laboratory and then re-injected, resulting in the patient getting a turbo-charged version of their own T-cells.

Car-T treatments are known to be effective with blood-based cancers such as leukaemia, with six drugs approved in the US.

Formally known as a 36 amino acid peptide, the scorpion toxin recognizes the cancer marker membrane-bound matrix metallo-protease-2 (MMP2) with healthy cells unharmed.

Ms Chow says Chimeric has focused on "first-in-class assets with novel design" and Chimeric's work has also expanded into so-called 'natural killer' cells, based on assets derived from Case Western Reserve University in Ohio.

It's all about the people

A former executive at Car-T specialist Kite Therapeutics, the Toronto-born Ms Chow was Chimeric's chief operating officer before being anointed in the top job in August 2021. She had also held roles at Roche, Nycomed/Takeda and Schering Canada.

Ms Chow says the Chimeric team has 75 years' collective experience in the space, having been involved elsewhere in taking four of six of the approved Car-T drugs to market.

Chimeric's foundation intellectual property was devised by the Los Angeles-based City of Hope researchers Prof Christine Brown and Dr Michael Barish. The former chairs Chimeric's scientific advisory board.

Mr Hopper has founded - or been involved in - no fewer than 14 drug companies, including fellow ASX-listed immuno-oncology play Imugene.

We only mention this because Imugene chief Leslie Chong moonlights as a Chimeric director.

The board includes Cindy Elkins, an erstwhile Juno Pharmaceuticals heavyweight.

Don’t mention the C word

While the C (cure) word is still only mentioned in hush tones in the oncolytic community, Ms Chow cites the example of a 33-year-old US woman undertaking Car-T-cell therapy for aggressive acute myeloid leukaemia (AML) at an Ohio research centre.

Within days, the patient’s condition had stabilized and within 33 days the cancer had disappeared. More than two years later, she was still cancer-free.

“I have worked in cancer for my whole career and have never seen outcomes like this before,” Ms Chow says.

She says cancer treatment had developed incrementally over decades, with the advent of chemotherapy and targeted and immune therapies, but “it wasn’t until the introduction of Car-T therapies that we measured the improvement in term of years, the outcomes have been really dramatic.”

Unrelated to Chimeric, an early-stage Italian Car-T clinical paediatric trial has shown encouraging results for neuroblastoma, a nerve tissue cancer affecting the adrenal glands.

Carried out at Rome’s Bambino Gesù Children’s Hospital, the study showed that nine of the 27 enrolled children had no sign of cancer after six weeks. It wasn’t entirely a feel-good story as two later relapsed and died, but all the kids were in a bad way.

Natural born thriller

Chimeric’s ‘natural killer’ platform - CHM0201 - was developed by Dr David Wald of Ohio’s Case Western Reserve University. The parties are jointly developing the program through an exclusive global licence.

The autologous (off-the-shelf) therapy involves a healthy donor providing the material, from which the natural killer (NK) cells are isolated, enhanced and made into thousands of doses and frozen.

The patient’s blood is sent to a facility where the T-cells are supercharged. The claret is then shipped back to the same patient.

In March 2022, the company said a previous nine-patient, phase I study established safety across three dosing levels, with no sign of graft-versus-host disease (rejection).
Six of the patients enrolled had colorectal cancer, with disease control evident in two. The other three were acute myeloid leukaemia patients including the aforementioned 33-year-old lady. The other two showed disease stabilization, but not a complete response.

Chimeric is undertaking a trial combining its therapy with the existing agent inhibitor Vactosertib, for advanced colorectal and blood cancers.

“Because it’s an off-the-shelf therapy, this one can move a bit quicker,” Ms Chow says. “We expect enrolment to be completed by the end of this calendar year and it will take another six months to get the data.”

Tackling glioblastoma

The asset on which Chimeric's IPO was based, CHM1101 (CLTX-Car-T) is in a phase I clinical trial at City of Hope, as a potential glioblastoma treatment.

"Glioblastoma is a disease for which next to nothing works," Ms Chow says. "Sadly, the drug approval bar is very low because there has been no new drug for 10 years."

Enrolling 18 to 36 patients, the ongoing phase I dose escalation trial involves four dose strengths. The third cohort was dosed in December 2022, with all patients progressing beyond 28 days without any toxicity issues. In early March, the fourth cohort was dosed, with results pending.

"If the data is good enough, we will want to expand the trial and engaging other sites puts us in a good position to do that," Ms Chow says.

And gastro-intestinal tumors …

Bought in from the University of Pennsylvania, CHM2101 targets CDH17, an antigen expressed on tumors.

CHM2101 was developed by the university's Dr Carl June, who in 2018 was nominated by Time magazine as one of the world's most 100 influential people for his earlier work in developing the first FDA-approved Car-T therapy, tisagenlecleucel, marketed as Kymriah.

Kymriah initially was approved for paediatric acute lymphoblastic leukaemia, with the indication later expanded to non-Hodgkin's lymphoma in adults.

Pre-clinical data from the CHM2101 program showed "strong evidence of efficacy, with complete eradication of eight different types of gastrointestinal tumors with no relapse or toxicity".

Chimeric held an investigation new drug meeting with the US Food and Drug Administration in March, in view of paving the way for a clinical trial at the university.

Finances and performance

The Chimeric board has done the shareholder-friendly thing by pitching the share purchase plan at a better price than the placement. The placement was struck at 4.6 cents, equal to the previous Friday' May 12 'undisturbed' closing value.

The share plan will be at four cents, a 13 percent discount to the May 12 close and a whopping 25 percent discount to the 10-day volume weighted average price (VWAP) leading up to May 12.

The entry price could be even cheaper: a five percent discount to the five-day VWAP leading up to - and including - the June 2 closing date for the share plan.

The placement is subject to shareholder approval at an extraordinary general meeting, likely to be held in late June.

Chimeric reported cash of $2.82 million at the end of the March 2023 quarter, having burnt through $687,000 in the three months. Given the company had outflows of $13.3 million for the first nine months of the financial year, this implies a considerable improvement.

The raising is not Chimeric's first post-IPO top-up.

In February 2022, the company tried to raise $18.1 million in an institutional and retail rights issue, at 17 cents a share. After some struggle, it banked $14.4 million.

Chimeric also has another funding mechanism: in June last year it entered an equity placement agreement with the Melbourne-based L1 Capital, by which the boutique fundie provides up to $30 million of equity over 24 months.

Struck at a five percent discount to the prevailing price, the drawdowns are at the company's discretion and the facility need not be used at all. Self-evidently, the facility does not preclude the company from raising funds elsewhere.

Chimeric shares shot to a high of 41 cents from the 20 cents listing price, but since then reality has bitten (or stung, given we're talking about scorpion venom).

With a circa 21 percent Chimeric stake pre-placement, Mr Hopper has plenty of skin in the game and is about to add some more dermis.

Dr Boreham's diagnosis:

While Chimeric has a few clinical irons in the fire to pique investor interest, any hopes of a lucrative short-term payday have been dashed.

Chimeric certainly doesn't look like being a repeat of Mr Hopper's immune-oncology play Viralytics, acquired by Merck & Co in 2018 for $502 million. (By the way, last October Merck quietly ditched Viralytics' key drug candidate, the melanoma treatment Cavatak as part of its "routine pipeline prioritization.")

Ms Chow notes that cell therapies are expected to be the fastest-growing cancer sector in the next decade, growing from a $US1 billion market in 2020 to around $US22 billion by 2030 (a compound annual growth rate of 21 per cent).

Martin Luther King Jr once said: "We must accept finite disappointment but we must never lose infinite hope."

And while he probably wasn't talking about the Australian biotechnology sector, Chimeric holders should draw some comfort from the longer-term potential.

Disclosure: Dr Boreham is not a qualified medical practitioner and does not possess a doctorate of any sort. We only mention that because a 'fake medico' accusation would really sting.

IMPEDIMED

Impedimed says it has commitments to raise $20 million through a placement and hopes to raise $5 million from a share purchase plan, both at 13.0 cents a share.
Impedimed said the placement and share plan were not underwritten and the offer price was a 16.1 percent discount to the May 17, 2023 closing price and a 24.4 percent discount to the five-day volume weighted average price.
The company said that the record date for the share purchase plan was May 18, it would open on May 30 and close June 16, 2023.
Impedimed said it would use the proceeds to fund market access and the reimbursement of the field support team for signing private payors and providers; build the sales and marketing team; generate evidence to expand beyond breast cancer lymphoedema care; invest in its manufacturing capacity; and enable the rollout of its Sozo systems in the US.
Impedimed said that Canaccord Genuity (Australia), Wilsons Corporate Finance and Jarden Australia Pty Ltd were joint lead managers for the placements.
Impedimed fell two cents or 12.9 percent to 13.5 cents with 18.9 million shares traded.

AND HEALTH (AUSTRALIA'S NATIONAL DIGITAL HEALTH INITIATIVE)

AND Health says it will provide five Australian digital health companies $3.75 million, along with expert support.
AND Health said the program was funded by the Federal Medical Research Future Fund and would identify the five most "compelling" digital health companies in Australia.
The organization said previous selected companies had raised more than $144 million, generated more than $48 million in revenue and hired 400 employees.
AND Health said the program provided industry mentoring and support and equity free investment through a two-stage investment process.
AND Health chief executive officer Bronwyn Le Grice said the "combination of real-world experience and track record, hands on support and non-dilutive investment available through AND Health+ has been proven to be a game-changer for many of our past and present participant companies".
"As of March this year, our first two AND Health+ cohorts … have already raised over $17 million in funding and reached over 200,000 new patients, engaging over 500 new commercial customers in a little over a year," Ms Le Grice said.
AND Health said applications were currently open, would close in mid-June and applicants could apply at: http://www.andhealth.com.au/our-programs/plus.

CRESO PHARMA

Creso says it has commitments to raise $2.5 million in a placement at 1.22 cents a share to repay debts, progress a phase II trial, development and for regulatory initiatives.
Creso said the offer price was a 23.75 percent discount to the May 16 2023 closing price and each share would come with an option exercisable at 8.0 cents by January 31, 2027.
Creso said former chair Adam Blumenthal had committed to buying $900,000 worth of shares in the placement and it had agreements with debtors to convert $368,333 liabilities through the issue of $481,666 in shares at 1.22 cents a share, and 36,748,607 options; and would repay the 260,850 Obsidian convertible notes with a face value of $US1.15 million ($A1.73 million) through the issue of 55,655,738 shares at 1.22 cents a share.
The company said it would extend the maturity of its secured notes to September 30, 2023 with the majority of lenders, who would be issued shares at 1.22 cents a share.
Creso fell 0.2 cents or 12.5 percent to 1.4 cents with 18.9 million shares traded.

IMUGENE

Imugene says the US Food and Drug Administration has approved its 58-patient, phase I trial of its Oncarlytics oncolytic virotherapy with blinatumomab for solid tumors.
Imugene said the clearance was for Oncarlytics CF33-CD19, in combination with the CD19-targeting bispecific monoclonal antibody blinatumomab, marketed as Blincyto, for treat solid tumors untreatable with blinatumomab alone.
The company said the US study would evaluate the safety and efficacy of two routes of administration of CF33-CD19, intra-tumoral injection and intravenous infusion, either alone or in combination with blinatumomab.
Imugene chief executive officer Leslie Chong said the start of its Oncarlytics study was a "significant milestone for clinicians treating patients faced with the challenge of solid tumor cancers, which to date have been untreatable with CD19-targeting biological drugs."
Imugene was up half a cent or 4.35 percent to 12 cents with 42.2 million shares traded.

MONASH UNIVERSITY

Monash University says it has developed a new "ultra-thin" skin-patch with nanotechnology to monitor 11 human health signals.
The University said the wearable patch was worn on the neck and had three layers that measured speech, neck movement and touch, as well as breathing and heart rates.
Monash University said the patch was made from laminated cracked platinum film, vertically aligned gold nanowires and a percolated gold nanowire film.
Lead researcher Prof Wenlong Cheng said that "emerging soft electronics have the potential to serve as second-skin-like wearable patches for monitoring human health vitals, designing perception robotics and bridging interactions between natural and artificial intelligence".
Monash University said the technology had a frequency and amplitude-based neural network called Deep Hybrid-Spectro that automatically monitored multiple biometrics from a single signal.
The University said the research, titled 'Hierarchically resistive skins as specific and multi-metric on-throat wearable biosensors' was published in Nature Nanotechnology with an abstract at: https://www.nature.com/articles/s41565-023-01383-6.

INOVIQ

Inoviq says it has produced an oral presentation and five posters confirming the effectiveness of its Exo-Net exosome isolation technology.
Inoviq said it would present the data with the University of Queensland and the Baltimore Maryland-based Johns Hopkins University at the International Society for Extracellular Vesicles in Seattle, Washington from May 18 to 21, 2023.
The company said the meeting was "the leading global exosome scientific conference for Inoviq to show important advances to leaders in the extracellular vesicle field worldwide".
Inoviq chief executive officer Dr Leearne Hinch said the presentations "highlight the broad utility of Exo-Net for fast and efficient exosome isolation and biomarker discovery across multiple bio-fluids including plasma, serum, saliva and cell culture media".
"[The data supports] the reproducibility and efficiency of Exo-Net for discovery of early and accurate biomarkers for use in development of Inoviq's next-generation Exo-ovarian cancer test for early detection of ovarian cancer when it can be cured," Dr Hinch said.
Inoviq fell one cent or two percent to 50 cents.

ALTHEA GROUP HOLDING

Althea says Ireland's Health Products Regulatory Authority has approved the sale and distribution of its THC20:CBD1 medical marijuana oil.
Althea said it was the only supplier of Ireland-approved multiple marijuana oils and one of two to have tetrahydrocannabinol (THC) and cannabidiol (CBD) approved products.
Last year, the company said the Irish regulator had approved the prescription and supply of its CBD12:THC10 medical marijuana (BD: May 20, 2022).
Althea said it had applied for THC20:CBD1 to be added to the reimbursement service, which would make the medicine free for Irish patients with certain medical conditions.
In addition to the regulatory approval, the company said its UK-based subsidiary Myaccess Clinics would expand to Ireland.
Althea chief executive officer Joshua Fegan said the approval was "evidence of our progress beyond … [Australia], where Althea is the leading brand of cannabis extracts".
Althea was unchanged at 4.8 cents.

NOXOPHARM

Noxopharm says its Sofra therapeutic SOF-XX can reduce inflammation, in mice, showing potential for autoimmune diseases like psoriasis and lupus.
Noxopharm said it presented the research with Melbourne's Hudson Institute of Medical Research at the Systemic Lupus Erythematosus meeting in Seoul, South Korea.
The company said some autoimmune diseases, including lupus and psoriasis, involved the overactivation of the Toll-like receptor 7 (TLR7) immune sensor.
Noxopharm said it applied the TLR7 agonist Aldara cream with SOF-XX to the back and ear of mice and measured the appearance and severity of skin inflammation.
The company said the mice with SOF-XX had reduced ear thickness compared to control vehicle mice at day-4, almost no redness at day-4 compared to vehicle mice and almost no back scaliness compared to vehicle mice at day-4.
Noxopharm said there were no currently approved therapeutic inhibitors of TLR7 on the market.
The company said its SOF-VAC mRna "vaccine enhancer" used the same underlying technology, meaning the results could act as a pre-clinical proof of concept for SOF-VAC.
Noxopharm said that up-to 24 million people in the US had autoimmune diseases, and that there were an estimated 20,000 patients with lupus in Australia.
Noxopharm was up 0.1 cents or 2.1 percent to 4.9 cents.

4D MEDICAL

Velocimetry Consulting, Prof Andreas and Helen Fouras say their 66,350,161 share-holding in 4D Medical has been diluted from 22.02 percent to 20.92 percent.
In a series of substantial shareholder notices, 4D Medical complied with regulations relating to the release of 85,536,074 escrowed shares in August 2022, with a "deemed relevant interest" (BD: Jul 18, 2023).
Prof Fouras told Biotech Daily that he had not sold any share in his company.
Last week, 4D Medical said it had completed a $20 million placement at 91 cents a share, with an up-to $15 million share purchase plan to follow (BD: May 8, 2023).
4D Medical fell five cents or 5.4 percent to 87 cents.

EPSILON HEALTHCARE

Epsilon says it has appointed Peter Giannopoulos as its chief executive officer, on a base salary of $495,000 a year, effective from May 23, 2023.

Epsilon said Mr Giannopoulos was previously Cell Therapies Pty Ltd chief executive officer and Ramsay Pharmacy Group chief executive officer for 12 years.

According to his LinkedIn page, Mr Giannopoulos held a Bachelor of Science from Monash University.

The company said that Mr Giannopoulos would be entitled to short and long-term incentives, pending performance hurdles.

Epsilon was up 0.3 cents or 16.7 percent to 2.1 cents.