# Biotech Daily

Monday September 24, 2018

*Daily news on ASX-listed biotechnology companies*

*** ASX DOWN, BIOTECH EVEN: FACTOR UP 14%; PARADIGM DOWN 5%**

*** IMMUTEP, MERCK KGAA, PFIZER CANCER TRIAL**

*** FDA CLEARANCE FOR VOLPARA ENTERPRISE, DENSITY, LIVE**

*** VALEANT FIGHTS ACRUX, 13 OTHERS ON GENERIC JUBLIA**

*** ONCOSIL RECEIVES $4.3m FEDERAL R&D TAX INCENTIVE**

*** DIMERIX AGM VOTES ON 6.35m CEO DR NINA WEBSTER OPTIONS**

*** AIRXPANDERS VOTES ON 29m CEO FRANK GRILLO SHARES**

*** ELIXINOL TAKES 50.5% OF JAPAN HEMP COMPANY; ELIXINOL JAPAN**

*** NOXOPHARM'S NYRADA DISCOVERS IRAK4 INHIBITOR**

MARKET REPORT

The Australian stock market fell 0.12 percent on Monday September 24, 2018 with the ASX200 down 7.7 points to 6,186.9 points.

Sixteen of the Biotech Daily Top 40 stocks were up, 15 fell, six traded unchanged and three were untraded.

Factor Therapeutics was the best, up 0.8 cents or 13.8 percent to 6.6 cents with 1.4 million shares traded.

Airxpanders climbed 10 percent; Immutep improved 9.8 percent; Cynata and Prana were up more than seven percent; Clinuvel was up 4.65 percent; Benitec and Volpara improved more than three percent; Avita, Bionomics, Medical Developments and Oncosil rose two percent or more; with Cyclopharm, Ellex, Polynovo and Pro Medicus up more than one percent.

Paradigm led the falls, down five cents or 5.3 percent to 89 cents with 160,722 shares traded.

Imugene, LBT, Reva and Universal Biosensors fell four percent or more; Neuren and Pharmaxis lost more than three percent; Genetic Signatures and Mesoblast shed more than two percent; CSL, Impedimed, Nanosonics, Orthocell, Starpharma and Telix were down more than one percent; with Cochlear and Opthea down by less than one percent.

IMMUTEP

Immutep says it will collaborate with Pfizer and Germany's Merck to evaluate its IMP321 with avelumab, an anti-PD-L1 antibody for advanced solid tumors.

Immutep said that avelumab was first discovered and developed by the Darmstadt, Germany-based Merck KGaA and it had an alliance with the New York-based Pfizer "to benefit from each other's strengths and capabilities and further explore the therapeutic potential of avelumab, an anti-PD-L1 antibody … and advance Pfizer's programmed cell death-1 (PD-1) antibody".

The company said the Merck-Pfizer alliance was "focused on developing high-priority international clinical programs to investigate avelumab as a monotherapy, as well as in combination regimens".

Immutep said the clinical trial collaboration and supply agreement with Merck and Pfizer would evaluate the combination of IMP321, also known as eftilagimod alpha or efti, with avelumab, with the trial to begin by the end of this year.

The company said that IMP321 was a first-in-class antigen-presenting cell activator which stimulated cancer-fighting T-cells, while avelumab was an anti-PD-L1 therapy that worked by increasing the ability of the body's immune system to help detect and fight tumor cells.

Immutep said that avelumab had accelerated approval by the US Food and Drug Administration for metastatic Merkel cell carcinoma and previously-treated patients with locally advanced or metastatic urothelial carcinoma, and was under further clinical evaluation across a range of tumor types under the Merck-Pfizer alliance.

The company said avelumab was "under clinical investigation for … solid malignancies, has not been demonstrated to be safe and effective for these uses, [and there is no guarantee that avelumab will be approved for solid malignancies by any health authority".

Immutep said the planned clinical evaluation would be an amendment to the existing up-to 40 patient, phase I 'Insight' trial of IMP321 for solid tumors at the Frankfurt-based collaboration partner, Institut für Klinisch-Onkologische Forschung (the Institute of Clinical Cancer Research) at Krankenhaus Nordwest GmbH to evaluate the safety, tolerability and recommended phase II dose of IMP321 when combined with avelumab in patients with advanced solid malignancies (BD: Jul 10, 2017).

The company said the Institute would sponsor the trial with advisor Prof Salah-Eddin Al-Batran continuing as the lead investigator.

Prof Al-Batran said his group was "excited to have the opportunity to sponsor this clinical trial of two complementary mechanisms of action and build upon the existing relationship between IFK and Immutep".

Immutep said the trial would "evaluate the clinical benefits of releasing the brakes and pushing the accelerator of the body's immune system at two different positions in the cancer immunity cycle".

Immutep chief executive officer Marc Voigt said the collaboration "with these industry leaders further supports our hypothesis that there is a potentially meaningful therapeutic benefit in combining eftilagimod alpha with a checkpoint inhibitor … [for] cancer".

Merck KGaA head of clinical development Alise Reicin said that the "combination regimen adds to our clinical development program to further evaluate the potential in different challenging cancers".

"We are eager to assess the opportunity of combining eftilagimod alpha with avelumab to improve patient outcomes," Ms Reicin said.

Pfizer head of immune-oncology Dr Chris Boshoff said his company focused "on opportunities to advance combination trials with avelumab, as we believe the pathway to progress in immuno-oncology lies in combination approaches".

Immutep was up 0.4 cents or 9.8 percent to 4.5 cents with 12.7 million shares traded.

## VOLPARA HEALTH TECHNOLOGIES

Volpara says the US Food and Drug Administration has granted 510(k) clearance for technologies used in its Enterprise software and Volpara Density clinical application.
Volpara said that the new clearance expanded the types of information that its algorithms could provide clinicians and “sets the stage for the introduction of the Volpara Live system.
The company said that Volpara Live was “the first real-time, decision-support product for mammography designed to use quality control feedback to improve breast care for women, whilst improving the financial performance of breast imaging clinics”.
Volpara said it could refine breast density scoring when there was an area of the breast that was especially dense and provide an overall sensitivity score for the examination, based on the results of “the many international clinical trials that have used the Volpara Density clinical application [which was] an industry first”.
The company said that the clearance expanded the list of x-ray systems compatible with the Density clinical application.
Volpara chief executive officer Dr Ralph Highnam said the “new features show Volpara’s continuing leadership and commitment to the breast density space”.
The company said the clearance covered a new type of output, which advised the radiographer of any image quality issues soon after the image was acquired, allowing the radiographer to evaluate whether a retake was necessary before the woman left the clinic.
Volpara said the new technology would be marketed as the Live system, opening a new, untapped product market.
“Over the last two years we have learned a great deal from Volpara Enterprise customers and the “big data” in our [internet] cloud,” Dr Highnam said.
“Through our refined understanding of quality in mammography and our ability to automatically and objectively measure performance, we have uncovered new ways that we can help improve mammography,” Dr Highnam said.
“The Volpara Live system will be our first commercialization path for this newfound knowledge and falls in step with the recent introduction of the FDA Equip initiative, which mandates that all mammography facilities have a renewed focus on quality,” Dr Highnam said. “The … Live system is a natural, customer-led extension of our product line and will see us increase our price per woman, while continuing to retain high gross margins.”
Dr Highnam said Volpara expected to complete development of the Live system for the Radiological Society of North America meeting in Chicago, November 25 to 30, 2018.
Volpara was up three cents or 3.4 percent to 90.5 cents.

## ACRUX

Acrux says that Valeant Pharmaceuticals North America has begun patent litigation against it and 13 other companies relating to its lead program for generic Jublia.
In August, Acrux said it had submitted a first-to-file application to the US Food and Drug Administration for generic Jublia, or efinaconazole, for the fungal toe and finger nail infection onychomycosis (BD: Aug 2, 2018).
Today, the company said that the Bridgewater, New Jersey-based Valean began proceedings in the US District Court for the District of New Jersey regarding their paragraph IV abbreviated new drug applications for efinaconazole topical solution, 10 percent, a generic version of Jublia 10 percent topical solution, asserting patents listed in the Orange Book for Jublia topical solution 10 percent.
Acrux said the legal action was “expected and formally initiates the litigation process under the Hatch-Waxman Act”.
Acrux fell six cents or 21.8 percent to 21.5 cents with 3.3 million shares traded.

## ONCOSIL MEDICAL

Oncosil says it has received $4,286,144 from the Australian Tax Office under the Federal Government Research and Development Tax Incentive program.
Oncosil said that the cash rebate was related to expenditure on eligible Australian and international research and development activities conducted in the year to June 30, 2018.
Oncosil was up half a cent or 2.7 percent to 19 cents with 1.1 million shares traded.

## DIMERIX

The Dimerix annual general meeting will vote to issue chief executive officer Dr Nina Webster 6,351,975 options.
Dimerix said that the options would vest in three equal tranches after 12 months of employment, exercisable at 18 cents, 27 cents and 36 cents, by October 30, 2023.
In August, the company said it had appointed Dr Webster as chief executive officer on a base salary of $300,000 (BD: Aug 27, 2018)
Today, Dimerix said that shareholders would vote on the remuneration report, the ratification of the prior issue of 3,926,753 shares, the approval of the 10 percent placement capacity and the election of director Dr Sonia Poli.
The meeting will be held at Stantons, Level 2, 1 Walker Avenue, West Perth, Western Australia on October 30, 2018 at 10am (AWST).
Dimerix was unchanged at 11 cents.

## AIRXPANDERS

Airxpanders says an extraordinary general meeting will vote on the issue of 28,922,901 options to chief executive officer Frank Grillo.
The Airxpanders notice of meeting said that when Mr Grillio was appointed chief executive officer in June his remuneration package included “the issue of options equal to five percent of the fully-diluted capitalization of the company … subject to stockholder approval once [it had] completed a financing raising [of] $US10.0 million or more”.
In August, Airxpanders said it raised $20.3 million through a placement and 15-for-16 rights offer at 7.5 cents a share (BD: Aug 3, 27, 2018).
In June, Airxpanders said it appointed Frank Grillo as chief executive officer on a base salary of $US450,000 ($A590,999) a year with target bonuses for 2018 of 30 percent for short-term incentives and 50 percent for long term-incentives (BD: Jun 12, 2018).
Today, the company said that, pending approval, Mr Grillo would be issued with options over 9,640,966 US shares, equivalent to 28,922,901 Chess depository instruments (CDIs), exercisable at the price on the day of issue, expiring in 10 years from issue.
Airxpanders said that 25 percent of the options would vest on June 12, 2019, with equal monthly vesting for the balance of the options over the subsequent three years.
The company said shareholders would vote to issue chairman Barry Cheskin 299,060 US shares equivalent to 897,180 CDIs at 16.7 US cents per US share or 7.66 cents per CDI.
Airxpanders said the meeting would vote to ratify and approve the prior allotment and issue of 20,142,123 US shares, as 60,426,369 CDIs at 16.7 US cents per US share; ratify and issue warrants to purchase 1,215,278 US shares to Oxford Finance LLC; approve the replacement of 2,777,374 US employee stock options, and increase the total number of authorized class A US shares from 200,000,000 shares to 600,000,000 shares.
The meeting will be held at Johnson, Winter and Slattery, Level 34, 55 Collins Street, Melbourne, on October 25, 2018 at 9am (AEDT).
Airxpanders was up one cent or 10 percent to 11 cents.

## ELIXINOL GLOBAL

Elixinol says that it will pay $2.2 million for 50.5 percent of a restructured but unnamed Japanese cannabidiol and hemp foods business, to be named Elixinol Japan.
Elixinol said that through its wholly-owned subsidiary, EXL International Holdings, the cash invested in the unnamed Japanese company would provide working capital to scale the business for anticipated growth in the Japanese market for hemp-derived cannabidiol (CBD), foods and skincare products.
The company said that Elixinol USA held 10 percent of Elixinol Japan and Hemp Foods Australia held 25 percent of Hemp Foods Japan.
Elixinol said that following completion of the investment, EXL would own 50.5 percent of the restructured business comprising both Japanese entities and would be included in the group's consolidated financial statements.
Elixinol said that in the six months to June 30, 2018, the Japan company "generated pro-forma revenue of $600,000 and a breakeven [earnings before interest, taxation, depreciation and amortization] position" which were an improvement on the full year 2017 revenue of $1.0 million and a $200,000 loss.
The company said that the deal was expected to be completed by October 31, 2018.
Elixinol chief executive officer Paul Benhaim said that Japan was health conscious and "quickly starting to recognize the nutritional and health benefits of hemp-derived CBD and hemp food products".
The company said that in May 2018, the first hemp-derived CBD advertising billboard was allowed in Japan at a Tokyo railway station, promoting its CBD products.
Elixinol fell 10 cents or five percent to $1.90.

## NOXOPHARM

Noxopharm says its two-thirds subsidiary Nyrada has "discovered a way to inhibit IRAK4" with implications for chronic inflammation including autoimmune diseases. Noxopharm said that interleukin-1 receptor-associated kinase 4 (IRAK4) was "a key switch in the cells that form the body's innate immune system" and faulty IRAK4 behavior in these cells played a role in the development of inflammatory and autoimmune diseases.
The company said that pre-clinical programs would identify the most appropriate indication of indications with human studies "likely" in 2020.
Noxopharm was up two cents or 3.2 percent to 64 cents.