



Biotech Daily

Monday June 22, 2015

Daily news on ASX-listed biotechnology companies

- * **ASX UP, BIOTECH DOWN: PATRYS UP 17%, ONCOSIL DOWN 9.5%**
- * **3D MEDICAL PRINTED TITANIUM JAW JOINT IMPLANTED**
- * **BENITEC, RENEURON JOIN STEM CELLS, ddRNAi; BOB ATWILL V-P**
- * **CYTOMATRIX HIRES MICHAEL SISTENICH CORPORATE DEVELOPMENT**
- * **BIO-MELBOURNE 'MASSIVE HEALTH DATA' BRIEFING**

MARKET REPORT

The Australian stock market was up 0.24 percent on Monday June 22, 2015 with the S&P ASX 200 up 13.2 points to 5,610.2 points.

Thirteen of the Biotech Daily Top 40 stocks were up, 19 fell, six traded unchanged and two were untraded. All three Big Caps were up.

Patrys was the best, up 0.1 cents or 16.7 percent to 0.7 cents with 11.6 million shares traded, followed by Circadian up 13.3 percent to 17 cents with 423,282 shares traded and Biotron up 11.5 percent to 14.5 cents with 1.1 million shares traded.

Antisense climbed 8.7 percent; Nanosonics was up 4.4 percent; Avita, Benitec, Pharmaxis and Psivida rose two percent or more; Acrux, Admedus and Sirtex were up more than one percent; with Cochlear, CSL, Medical Developments and Resmed up by less than one percent.

Oncosil led the falls, down one cent or 9.5 percent to 9.5 cents with 1.5 million shares traded.

Prima lost 8.75 percent; Atcor, Neuren, Prana and Starpharma fell five percent or more; Compumedics was down 4.6 percent; Cellmid and Reva lost three percent or more; Actinogen, Clinuvel, Genetic Technologies and Optiscan shed more than two percent; with Anteo, Bionomics, Mesoblast, Osprey, Universal Biosensors and Viralytics down more than one percent.

3D MEDICAL

3D Medical says that with oral and maxillofacial surgeon Dr George Dimitroulis, it has developed a 3D-printable and customized titanium joint for corrective jaw surgery.

3D Medical said that a 32-year-old male patient underwent a five hour operation at the Epworth-Freemasons Hospital in East Melbourne to correct a rare jaw deformity, which had left the patient with a skewed lower face and limited jaw opening resulting from a missing left temporo-mandibular jaw joint and consequent lack of growth in the left side of the face.

The company said that the patient's severe deformity was "an ideal case for [three-dimensional] printing application, enabling the corrective implant to be perfectly fitted to the complex geometry of the mandible".

3D Medical chairman Dr Nigel Finch told Biotech Daily that the company took high resolution magnetic resonance imaging data and through its licenced software could "render a 3-D model and produce an anatomical model or implant".

Dr Finch said that using a computer-aided design system the company was able to "print" metal pieces at its Port Melbourne facility.

Dr Finch said that in a machine about the size and shape of a pizza oven the printer used lasers to melt and combine titanium dust and when completed the part was cleaned and ready to be implanted.

Dr Finch said that parts could be designed to be precisely the size and shape required by the patient, rather than settling for standard off-the-shelf sizes and gave as examples hip and knee replacements where surgeons were often required to shape the patient's bone to the implant, rather than the other way around.

In a media release, 3D Medical said that with Dr Dimitroulis, it developed a customized titanium jaw joint that was successfully implanted into the patient.

Dr Dimitroulis said: "We are at the cross-roads of an exciting era of customised medical devices that will become an integral part of healthcare in the 21st Century."

3D said that the commercialization process not only included the design and development of the implant but also extended to gaining necessary approvals with hospitals, clinicians, healthcare suppliers and the health insurer who paid for the cost of the procedure.

Dr Finch said that "the successful outcome of this procedure not only achieves a fantastic result for the patient but it also serves to validate the end-to-end business model of 3D Medical in designing and developing custom implants".

"3D Medical expects to see an increase in cases of this type as leading clinicians and hospitals seek to leverage the data-rich medical images used in patient diagnoses by harnessing computer-aided design and precise [three-dimensional] printing to more efficiently solve complex clinical problems."

In March, 3D Medical said it would sell Mach7 Technologies image management products to Telstra Corp division Telstra Health for development of an image and data management service (BD: Mar 11, 2015).

3D said at that time it had exclusive reseller rights in Australia and New Zealand to the South Burlington, Vermont-based Mach7 Technologies, which develops image management products for hospitals, radiology clinics and other health service providers. The company said that Mach7 had an enterprise imaging platform designed to enable ownership, sharing and access of imaging data to improve patient care, revenues, compliance and clinician satisfaction across the enterprise.

3D Medical said the licence and support agreement would enable supply of Telstra's image and data management service to 3DM customers, with commercial release planned by October 2015.

3D Medical was up two cents or 22.2 percent to 11 cents with 4.3 million shares traded.

BENITEC BIOPHARMA

Benitec says it has a new exploratory cellular therapy program including exosome-based delivery using its DNA-directed RNA interference (ddRNAi) technology.

Benitec said that the use of exosomes, a part of mammalian cells found in many biological fluids, was facilitated by a collaboration with the Guildford, Surrey-based stem cell therapeutics company Reneuron.

The company said it had appointed Bob Atwill as its senior vice-president of cellular therapies to progress this and other potential opportunities in cellular and immunotherapies, such as ddRNAi-modified chimeric antigen receptor T-cells.

Benitec said that Mr Atwill had extensive experience in the stem cell industry and was the former chief executive officer of the regenerative medicine division of Admedus.

The company said that the collaboration with Reneuron aimed to use its ddRNAi technology to address diseases using derived exosomes as delivery agents.

Benitec said it and Reneuron had completed a series of in-vitro experiments that demonstrated that stem cells transduced with ddRNAi-expression constructs produced exosomes that were effective at delivering expressed short-hairpin RNA (shRNA) to target cancer cells and to knock down a specific gene in those cells.

The company said the data indicated that Reneuron's stem cells could be more effective than mesenchymal stem cells for this purpose and while preliminary, the results showed potential for both platform technologies to be extended to a wide range of applications.

Benitec chief executive officer Dr Peter French said the "application of ddRNAi to stem cells and derived exosomes represents a unique combination of stem cell biology, gene therapy and gene silencing".

"Having Reneuron as a collaborator on this approach increases the chances of success as their knowledge of stem cell science coupled with their unique therapeutic platforms are tremendous assets in this area," Dr French said.

Reneuron chief executive officer Olav Hellebø said it was "exciting ... to explore the potential of our technology as a delivery system for Benitec's unique gene silencing technology targeting drug resistant cancers".

"Benitec's extensive knowledge of expressed RNA interference is invaluable in this novel approach," Mr Hellebø said. "Whilst the work is at an early stage we are committed to developing the program in conjunction with Benitec to determine the optimal design and use of therapeutics deploying this promising and highly novel technology combination."

Benitec was up 1.5 cents or two percent to 78 cents.

CYTOMATRIX

Cytomatrix has appointed former Bell Potter investment banker Michael Sistenich head of corporate development.

Cytomatrix said that Mr Sistenich and managing director Benjamin Bergo would lead capital raising and corporate transactions.

The company said that Mr Sistenich led the life sciences investment banking practice at Bell Potter for the past year, completing significant placements for Starpharma, Phosphagenics, Circadian Technologies and Avita Medical.

Cytomatrix said that Mr Sistenich had more than 18 years of experience as a healthcare specialist in investment management and banking, including at Deutsche Bank DWS Investments GmbH as a director of international equities and head of global healthcare investments, where he was responsible for more than EUR6.5 billion (\$A9.5 billion) of healthcare investments.

Cytomatrix is a public unlisted company.

BIO-MELBOURNE NETWORK

The Bio-Melbourne Network says its July 9, 2015 Bio-Briefing will discuss what it takes to realise the benefits of the massive amounts of healthcare data available.

The Bio-Melbourne Network said that the briefing was entitled 'Hype or reality? Applied data transforming health'.

The Network said that Victorian Comprehensive Cancer Centre corporate development director Shmuley Goldberg would lead a panel of experts in a discussion on how advances in technology, cognitive computing, smart connected devices, wearables and sensors, software platforms and new business partnerships were transforming health care, including discovery, the delivery of care and health management.

Bio-Melbourne Network chief executive officer Dr Krystal Evans said that health care produced massive amounts of data, in health facilities, from medical devices, personal devices and sensors

"Does all this data equate to improved access to care, more efficient care or better outcomes?" Dr Evans asked.

"What does it take to realize the benefits of data?" Dr Evans said.

The July 9, 2015 Bio-Briefing will be held at The Cox Walford Meeting Room, Level 5, Murdoch Childrens Research Institute, Royal Children's Hospital, Flemington Road, Parkville, with registration from 3.45pm for the Bio-Briefing and panel discussion from 4pm followed by a networking session.

To register go to: <http://www.biomelbourne.org/events/view/370>.