

# Shareholder Newsletter

June 2021



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# Hello from our CEO and MD, Dr James Campbell

**Patrys continues to focus on leveraging the range of different therapeutic opportunities provided by its unique deoxymab antibody platform for the development of new treatment options for patients with cancer.**

Despite the many challenges that the global pandemic presented, Patrys has made tremendous progress on all of its programs over the last 12-months and remains on track to initiate the first human clinical trial in patients of one of its deoxymabs in the first half of the next calendar year.

Earlier this year we announced the successful development and selection of an optimised stable cell line for commercial-scale production of clinical grade PAT-DX1. This is a critical step for any antibody development program and will provide the material required to complete the final elements of our preclinical program and to initiate our first clinical trial of PAT-DX1. We also expanded our portfolio of deoxymabs with the addition of PAT-DX3, a humanised full-length IgG deoxymab, late last year.

Patrys has completed animal pharmacokinetic (PK) studies for both the PAT-DX1 antibody fragment and the full-sized PAT-DX3 IgG antibody. Both antibodies have demonstrated pharmaceutically attractive PK profiles, with the differences reflecting in part the different sizes of the antibodies and potential for use in different therapeutic applications.

As the breadth of opportunities for our deoxymab antibody platform continues to grow, we are actively ensuring that this is reflected in the expansion and protection of our intellectual property. This includes securing new patents where appropriate and is a core part of our commercialisation strategy – which is described in greater depth later in this Newsletter.

Our sights are now firmly set on starting the first human clinical studies of PAT-DX1 in 1H CY 2022. Patrys is fully funded for this process following our successful capital raising of \$7.3m via a Placement and Rights Issue in November last year. These funds will allow Patrys to manufacture our deoxymab antibodies, complete the required preclinical studies, and initiate the first PAT-DX1 clinical trial.

I am also pleased to announce that I have recently joined the AusBiotech Board as a Director. AusBiotech represents a credible and united voice for our nation's vibrant biotechnology ecosystem, and I look forward to contributing to advocacy efforts that support research, development, and investment activity in this space.

This is an exciting and pivotal time for Patrys as we get closer to the clinic. As a valued shareholder and partner in our business, I would like to personally thank you for your support.

With you in health and business,



James Campbell





# Media and Analyst Highlights

## AUSTRALASIAN BIOTECHNOLOGY

Patrys appeared in the most recent edition of Ausbiotech's journal, [Australasian Biotechnology](#). The article titled, 'Timing is everything – mastering the protection and commercialisation of intellectual property', includes detailed commentary from industry experts and Patrys CEO and MD, Dr James Campbell, about what it takes to produce, protect and successfully commercialise biotechnology assets.

## BIOSHARES

Independent investment research firm, [Bioshares](#), rated Patrys as one of its top six stock picks for 2021, stating: 'In general, antibodies are unable to cross the blood-brain barrier, so an antibody that overcomes that limitation, along with the potential to hit a key target, such as one related to glioblastoma (a brain cancer), is significant. Patrys is in the possession of a potentially powerful new approach for addressing difficult-to-treat cancers, such as brain, melanoma, breast, prostate and ovarian cancers.'

## BIOWORLD

Respected industry publication, [BioWorld](#), covered Patrys' recently announced research collaboration with Imagion Biosystems Ltd in an article titled, 'Australian biotech's Imagion and Patrys collaborate to better diagnose brain cancer'. Patrys is honoured to partner with Imagion to further leverage the cancer-targeting ability of our deoxymabs platform – and hope our combined efforts will develop new ways to visualise and diagnose cancer.

## STOCKHEAD

Gilead Sciences (NASDAQ:GILD) recently agreed to pay \$US21 billion for Immunomedics (NASDAQ:IMMU), while Merck & Co (NYSE:MRK) committed \$US4.2 billion to Seattle Genetics (NASDAQ:SGEN). Off the back of this news, Dr James Campbell told [Stockhead](#): "Where we are compared to a year ago, the number of deals is going through the roof."

## PROACTIVE INVESTORS

Dr James Campbell also spoke with [Proactive Investors](#) about growing international interest and multi-million dollar deals in antibody drug conjugates (ADCs), stating: "There is significant international interest in ADCs at present, and Patrys believes that the unique attributes of deoxymabs make them attractive to explore as potential new ADC therapeutics. Patrys also believes that a potential clinic-ready asset complemented by substantial pre-clinical data on platform applications will make a more compelling partnering opportunity."

# Optimised stable cell line for our lead asset PAT-DX1

Stable cell lines that are able to express large and consistent amounts of an antibody are crucial for any therapeutic antibody development program. In February this year Patrys announced it had selected an optimised stable cell line capable of producing commercial quantities of clinical grade PAT-DX1.

The antibody development and scale-up manufacturing program started in mid-2019 and has taken around 18 months to complete. This program has included modifying PAT-DX1's protein back-bone to improve its properties for use in human therapeutic applications. In addition, cell lines expressing the modified PAT-DX1 were developed and an extensive selection process was conducted to identify single, clonal cell lines that produced high yields of high quality PAT-DX1. The final hurdle to overcome was to ensure that the cell line was stable and able to deliver reproducible and consistent production of PAT-DX1. Six different optimised cell lines were analysed, and the best performer was selected to be stored as a Master Cell Bank (MCB) which will form the basis for all future manufacturing of PAT-DX1. Importantly, the cell line was tested to ensure the cell penetrating and cell killing ability of the antibody was maintained.

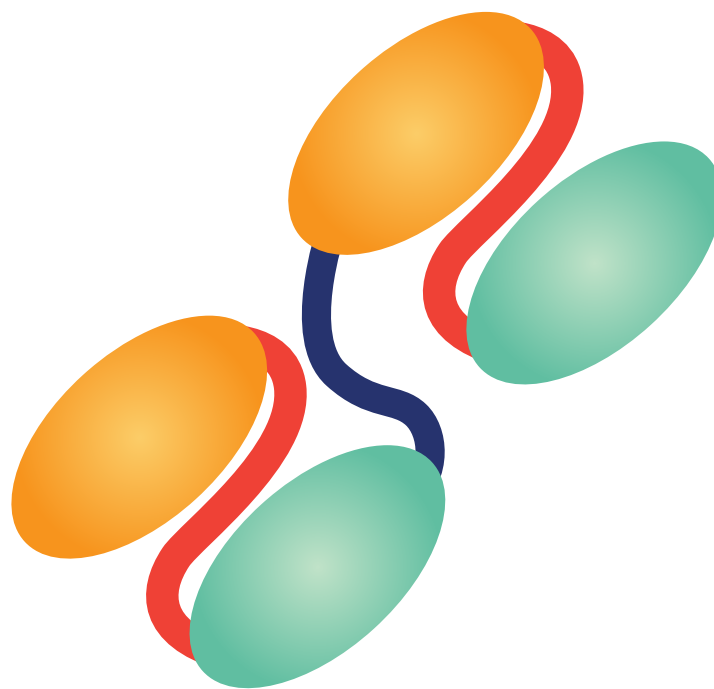
The next steps in the process are scale up and manufacture of PAT-DX1 in large fermenters then GLP toxicology studies prior to initiating first-in-man studies for PAT-DX1 in 1H CY 2022. The Patrys team will leverage internal capabilities and external manufacturing experience to chaperone PAT-DX1 through this phase of the drug development pathway. The team remains confident and excited to be nearing the clinic with this novel product.

Once clinical material is available Patrys is expected to start its first clinical study with PAT-DX1 in 1H CY 2022 in Australia. This will likely be a dose escalation

study in cancer patients. Patrys is utilising the expertise of its board members, in particular, Dr Pamela M.Klein, who ran the clinical development program for

Herceptin whilst at Genentech, to focus its clinical program for success.

**Patrys is expected to start its first clinical study with PAT-DX1 in 1H CY 2022 in Australia.**



# Q&A: Patrys' calculated intellectual property strategy



**Intellectual property (IP) encompasses the legal ownership and rights to patents, trademarks, and trade secrets – which can make or break the value of a company or biotechnology asset.**

Patrys has an extensive portfolio of patents filed in major commercial markets, that currently includes over 35 patent applications across 10 different patent families and is continuing to grow. Our Company operates in a highly competitive and strategic space, and its intellectual property is at the core of everything we do.

**Patrys Vice President Business Development and Intellectual Property, Dr Deanne Greenwood**, ensures that Patrys manages and maximises the value of its intellectual property as a regular part of her role. In this Q&A, she shares insight into how Patrys is safeguarding its future success.

## **For early stage biotechnology companies, what would you consider best practice principles for IP protection at the discovery stage of a project?**

In short, best practice involves identifying, protecting and managing IP to ensure the appropriate commercial outcome. Some specific focus areas include:

- Ensuring the invention remains confidential until a provisional application can be filed
- Preparing overviews of the available data to support the invention
- Reviewing any prior art to identify whether the invention has been disclosed previously
- Reviewing the patent landscape to identify general patents that might create roadblocks for commercialisation of the technology

## **As ideas move from discovery, through to development and commercialisation on a global scale, how do IP needs change? What are some of the challenges?**

At the early stages of an asset's lifecycle, a provisional patent is often filed to secure a priority date for the protection of that discovery. The inventors may continue to explore and extend on the observations in the first patent filing, which could even include filing additional provisional patents around the initial discovery. This approach builds layers of protection with some patents focused on composition of matter and others method of treatment claims, as an example. As the asset matures, management of those portfolios must evolve to ensure that protection by way of granted claims covers the final commercial product. The goal of

commercialisation is turning the IP into a product or service that is commercially valuable.

Some of challenges of managing IP through a lifecycle can arise when multiple parties are involved in the process, particularly when a licensed patent is being progressed by a licensee. Often the original patent owners may have a vested interest to see the technology progress. However, as the IP portfolio matures, there can be different motivations at play that may result in the direct pursuit of particular patent claims in certain jurisdictions. Other considerations and potential challenges can include the ability to obtain and enforce patent claims in various countries, need for exclusivity, potential return on investment, and budgetary limitations. All these factors can influence how a portfolio is managed.

## Q&A continued

### Can you give some examples of how Patrys has effectively protected its core IP at this stage of its development, and how the Company is already planning for the future?

Patrys core IP was licensed from Yale University in 2016. The original portfolio had a suite of three patents around the deoxymab platform. Since that time, we have extended the portfolio to include a further seven patents, with key patents granted in USA, Europe, China and

Japan. We have strategically created layers of protection and barriers of entry for competitors around our core technology. We view each patent as a building block to grow our market share and a resilient portfolio. Lastly, for important cases, we utilise continuation and/or divisional patent application practice where required to obtain different layers of protection for products and provide fall-back positions in case our rights are subject to challenge by third parties.

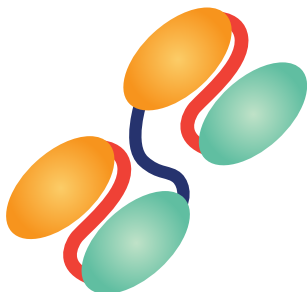
Like many other small biotechnology companies, Patrys' potential exit strategies include out-licensing or selling its technology to another party. To be successful in this, we must ensure the patent portfolio remains robust with built-in flexibility. It is particularly important to consider what a potential future sub-licensee's and/or acquirer's patent needs are and to maximise the benefits from the portfolio.

## Website refresh

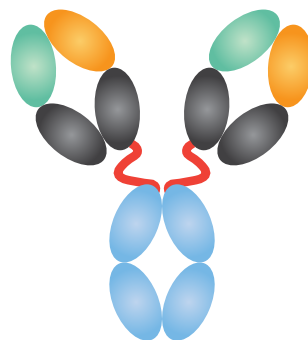
### Have you visited our website at [patrys.com](http://patrys.com)? We're proud to share some new changes – a mini renovation, so you can find information with ease about our Company.

We encourage you to register for our news updates too, if you haven't already, by clicking the [Subscribe link](#) in the home page footer. We regularly send out ASX releases, media wraps, op eds and more.

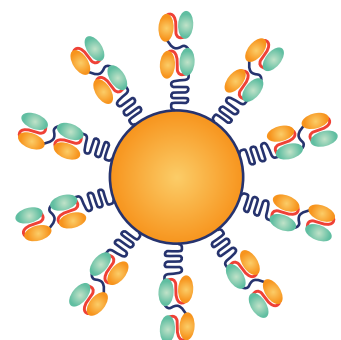
The Pipeline section is worth a close look too – it contains some detailed information about our deoxymab portfolio too. You can preview the new diagrams below.



PAT-DX1 antibody fragment



PAT-DX3 full sized antibody



PAT-DX1-NP conjugated to nanoparticles