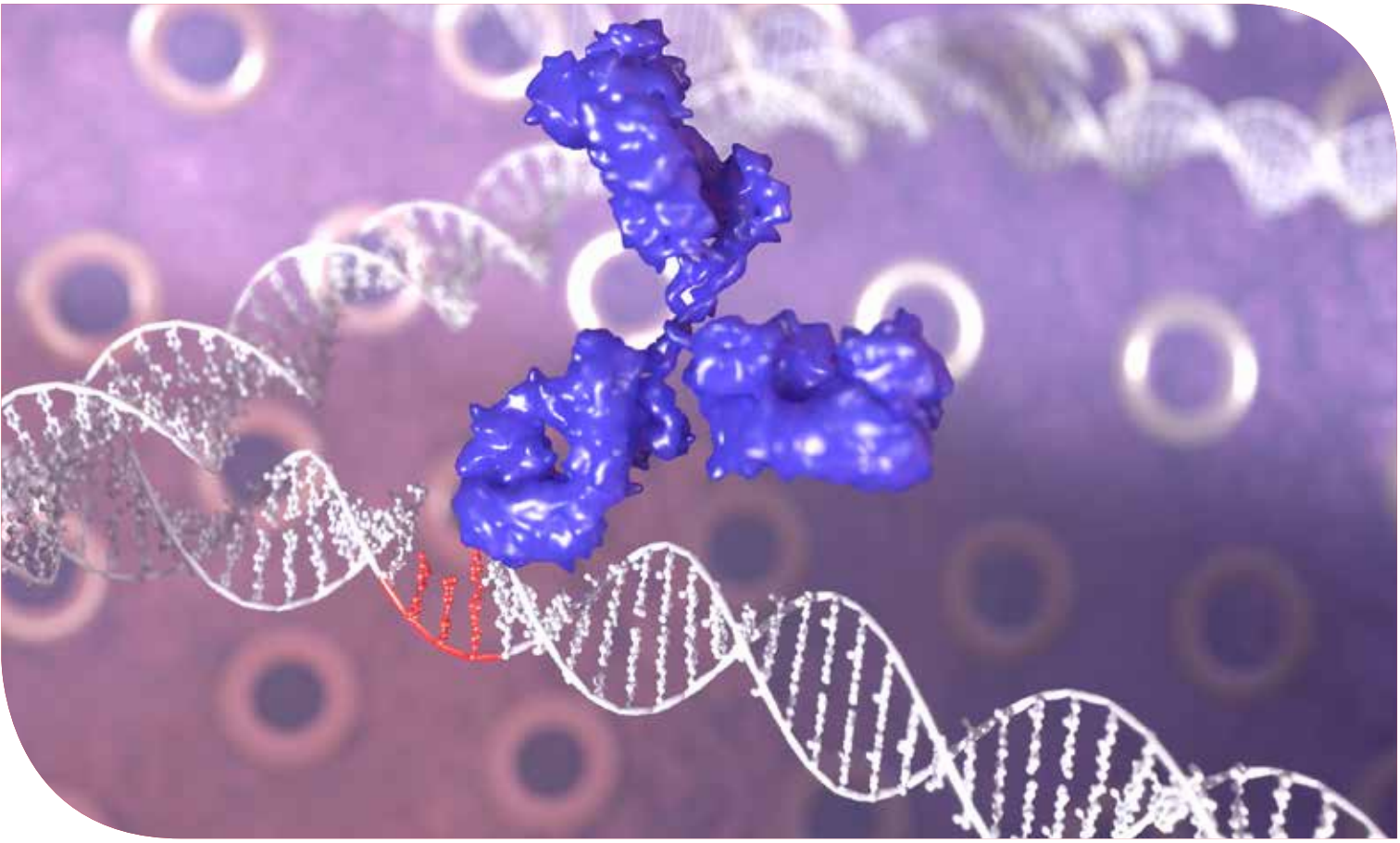
patrys



2017 ANNUAL REPORT (Extract)

Company Profile

Patrys is a therapeutic antibody development company with operations in Australia and the United States of America.

Patrys' expertise and assets target antibody therapeutics in the field of oncology with both IgM antibodies and IgG antibody fragments under development.

Patrys has successfully out-licensed a clinical candidate, PAT-SC1, for the Chinese oncology market and has conducted two clinical trials with another lead candidate from its IgM platform, PAT-SM6. Patrys has in-licensed from Yale University a suite of novel, nucleus-penetrating antibodies (Deoxymabs 3E10 and 5C6) and Deoxymab 3E10 conjugated to nanoparticles which it will progress through development. Patrys will continue to advance lead candidates from both its technology platforms towards the market.

Patrys Limited is an ASX listed company (ASX:PAB), with corporate headquarters in Melbourne, Australia.

For further information on Patrys, visit www.patrys.com



Operations

- Corporate headquarters in Melbourne, Australia
- Preclinical work conducted in multiple Australian and overseas sites, including Yale University, United States of America
- Patrys Limited trades on the Australian Securities Exchange (ASX:PAB)

Milestones

2H 2016

- Humanisation and optimisation of Deoxymab 3E10
- Non-dilutive supplier recoveries received
- Appointment of Scientific Advisory Board

1H 2017

- Deoxymab 3E10 lead candidate, PAT-DX1 confirmed
- Further non-dilutive supplier recoveries received
- Acquisition of additional novel nucleus-penetrating antibody assets developed at Yale University (Deoxymab 3E10 conjugated to nanoparticles; PAT-DX1-NP)
- Initiation of preclinical animal studies of PAT-DX1



Assets

- **PAT-SC1** is an immunoglobulin M (IgM) type antibody which targets an isoform of the membrane-bound CD55 (DAF-B). This isoform has been shown to be significantly over-expressed on the membrane of gastric cancer tissues (74%), while no expression was detected on healthy cells and tissues. In September 2015, Patrys signed an exclusive development and commercialisation license agreement for all oncology indications in China for PAT-SC1 with the Chinese company Hefei Co-source Biomedical Co.

- **PAT-SM6** is a fully human monoclonal antibody (mAb) of the IgM type which targets a variant of human GRP78 and human apolipoprotein B100 (apoB100) found in low-density lipoprotein (LDL) and very low-density lipoprotein (VLDL). It has been successfully utilised in both melanoma and multiple myeloma clinical trials. Further clinical trials for this product candidate have been deferred due to manufacturing issues.

- **PAT-LM1** is a fully human IgM mAb that targets a variant of the human NONO protein (also named nmt55 and p54nrb), which is described to be a multi-functional nuclear protein. PAT-LM1 has shown promise in a range of preclinical cancer models.

- **Deoxymab 3E10** is a lupus autoantibody that penetrates live cell nuclei by binding to DNA or its precursors outside of cells and then following it into cell nuclei through a nucleoside transporter. Once in the nucleus, Deoxymab 3E10 interferes with DNA repair processes. To prepare Deoxymab 3E10 for clinical development Patrys has humanised and optimised the antibody. The lead candidate, to be known as **PAT-DX1**, was selected from a large number of humanised 3E10 variants that Patrys designed to optimise for efficacy, manufacturability and novelty. The selection of PAT-DX1 was based on its performance in a suite of *in vitro* assays where it surpassed other variants in its ability to penetrate into cells' nuclei, and also subsequently kill cancers cells; PAT-DX1 significantly outperformed native forms of the 3E10 antibody in the screening assays. It is currently in preclinical development. Patrys recently acquired the rights to technology conjugating nanoparticles to Deoxymab 3E10. The Company will further develop PAT-DX1 to nanoparticles, designated **PAT-DX1-NP**.

- **Deoxymab 5C6** is another lupus autoantibody that penetrates live cell nuclei. Similar to Deoxymab 3E10, 5C6 is highly toxic to cancer cells with DNA repair deficiencies and has similar potential to be used in cancer therapy. Deoxymab 5C6 is currently in preclinical development.

Pipeline

Product *(Target)*	Discovery	Preclinical	Phase I	Phase 2a	
PAT-SC1 *(CD55)*					*Chinese rights out-licensed*
PAT-SM6 *(GRP78)*					*M. Myeloma Trial Deferred*
PAT-LM1 *(NONO)*					*Licensing candidate*
PAT-DX1 *(DNA)*					*Licensed from Yale University*
PAT-DX1-NP *(DNA)*					*Licensed from Yale University*
Deoxymab 5C6 *(DNA)*					*Licensed from Yale University*



Letter from Chairman and CEO

Dear Shareholders,

Welcome to Patrys' 2017 Annual Report.

Patrys has had a successful year progressing development and consolidating a number of alliances to lay the groundwork for the eventual commercialisation of both of its novel antibody technologies. The Board and Management team are excited by the opportunities in the cancer space, and Patrys' potential to play a significant role. While advances have been made in the sector, there is still a need for treatments that improve quality of life and reduce overall healthcare costs.

During this phase of development, there may be long periods between announcements which is reflective of the nature of the work being undertaken. The Board appreciates your patience throughout these times as we focus on consolidating Patrys' programs and clinical outlook.

With the continued deferment of the planned phase 1b/2a combination clinical trial of PAT-SM6 in patients with relapsed and refractory multiple myeloma due to previously described manufacturing issues, the Company is now focusing its efforts on the licensed novel nucleus-penetrating antibody technology platform ("Deoxymab") from Yale University, until non-dilutive capital can be sourced to progress the PAT-SM6 program.

Deoxymab

Deoxymab 3E10 is the name assigned by Patrys to 3E10, a lupus derived autoantibody. Unlike normal antibodies that the body produces to bind to foreign cells (eg. pathogens) or aberrant cells (eg cancer cells) and trigger an immune response, autoantibodies bind to normal cells. While most antibodies bind to markers on the surface of cells, Deoxymab 3E10 penetrates cells' nuclei and binds directly to DNA. Having bound to the DNA, Deoxymab 3E10 inhibits DNA repair and damages DNA. Normal cells repair DNA damage utilising intact DNA repair processes, however, Deoxymab 3E10 can kill cells that have mutations or deficiencies in DNA repair mechanisms as found in various cancer cells. As well as showing single agent therapeutic potential, Deoxymab 3E10 has been shown to significantly enhance the efficacy of both chemo and radiotherapies.

Since acquiring the rights to develop and commercialise Deoxymab 3E10, Patrys has completed detailed *in silico* biology to optimise Deoxymab 3E10 and selected a lead candidate PAT-DX1, a di-scFv antibody. This is a major milestone for the Company and allows Patrys to move forward with pre-clinical animal models in the coming year. The Company looks forward to receiving data from these animal studies that will guide the development strategy on this asset; the data is expected to be available in H2 2017.

PAT-DX1 has potential as a therapy for cancers that remain difficult to treat including endometrial, ovarian, pancreatic, colon and some breast cancers.

PAT-DX1 is a very exciting development stage asset with a number of patents filed around the technology to create a barrier to entry for competitors. In addition, there is the possibility to pair this technology with other existing treatments and create combination therapies, enhancing the attractiveness of this asset to potential partners. With this in mind, during the financial year, Patrys also acquired further intellectual property from Yale University - the worldwide rights to develop and commercialise technology pertaining to the linking of Deoxymab 3E10 to nanoparticles. The nanoparticles can be loaded with standard chemotherapeutic (or other) drugs and have been demonstrated to significantly increase the efficacy of the drug therapy in pre-clinical models. This acquisition expands the Deoxymab platform and Deoxymab 3E10-nanoparticles (newly designated PATDX1-NP) can be developed concurrently with the PAT-DX1 program.

IgM assets

During the past year the Company completed an investigation into the fundamental issues that arose with the manufacturing of PAT-SM6 antibody, and has identified a path forward to enable the manufacturing and development of PAT-SM6 and its other IgM assets. Given the significant cost and time involved with these programs, Patrys will only consider reactivation on a partnered, risk sharing basis or if non-dilutive funds can be accessed. Discussions with a number of potential partners are ongoing.

The Company is also committed to pursuing a number of insurance claims related to the failed manufacturing of PAT-SM6. Given the magnitude, number and complexity of the claims, this has been a protracted process and Patrys continue to progress the claims with its insurers.

The IgM patent portfolio has reached maturity and the majority of patents have now been granted. A research collaboration with Macquarie University is ongoing, and will be extended into 2018.

Patrys has been pleased to report in the period on progress of its asset PAT-SC1, which was licensed in 2015 to Hefei Co-source Biomedical, an integrated Chinese drug development company. Our Chinese partners have been working diligently to progress the development of PAT-SC1, and the first Joint Development Committee meeting was held in China in October 2016. This license deal covers the exclusive development and commercialisation rights for all oncology indications in China for PAT-SC1. Patrys received an up-front licensing fee, and may, pending the achievement of prescribed milestones, receive multiple milestone payments and royalties on eventual product sales.

Looking ahead

The Patrys team is focused on progressing its Deoxymab platform, and lead candidate PAT-DX1, in parallel with the newly licensed Deoxymab 3E10 nanoparticle technology in a cost-effective manner. We are also focused on finding a suitable path forward for our existing IgM assets. With prudent financial controls in place and guidance from our newly established Scientific Advisory Board, the Company believes it's in an excellent position to build value from its existing base of capital and assets and looks forward to sharing this journey with its shareholders over the coming year.

John Read
Chairman

Dr James Campbell
Managing Director and CEO



The Board of Directors



John Read, BSc (Hons), MBA, FAICD

Chairman

Mr. Read is an experienced Chairman and Director in public, private and government organisations. Through his extensive career in venture capital, private equity and commercialisation he has gained a depth of experience in the formation and growth of emerging companies with an emphasis on commercial entities that provide broad societal benefits. He is currently the Chairman of CVC Limited (ASX: CVC) and previously Chairman of Eildon Capital Limited (ASX:EDC) from 2013 to 2016, Pro-Pac Packaging Limited (ASX:PPG) from 2005 to 2010, The Environmental Group Limited (ASX:EGL) from 2001 to 2012 and The Central Coast Water Corporation from 2011 to 2014.



James Campbell, BSc (Hons), PhD, MBA, GAICD

Managing Director & Chief Executive Officer

Dr. Campbell has more than 20 years of international biotechnology research, management and leadership experience and has been involved in the creation and/or transformation of multiple successful Australian and international biotechnology companies. Dr. Campbell was previously the CFO and COO of ChemGenex Pharmaceuticals Limited (ASX:CXS), where, as a member of the executive team he helped transform a research-based company with a market capitalization of $10M to a company with completed clinical trials and regulatory dossiers submitted to the FDA and EMA. In 2011 ChemGenex was sold to Cephalon for $230M.

Dr. Campbell was a foundation executive of Evolve Biosystems, and has assisted private biotechnology companies in Australia, New Zealand and the USA with successful capital raising and partnering negotiations.

Dr. Campbell sits on the IP and Commercialisation Advisory Committee of the CRC for Mental Health, and sits on the Advisory Board of Deakin University's Centre for Innovation in Mental and Physical Health and Clinical Treatment (IMPACT). Dr. Campbell is a Non-Executive Director of both Invion Limited (ASX:IVX) and Prescient Therapeutics Limited (ASX:PTX).



Michael Stork, BBA

Non-Executive Director

Mr. Stork is the Managing Director of Stork Holdings Ltd, an Investment Holding company active in the Canadian technology startup sector.

Mr. Stork was until early this year active on the Board of Governors of the University of Waterloo and is the Chairman of the Waterloo Accelerator Centre, a technology company incubator affiliated with the University.

He is currently the Chairman of Spartan Biosciences Inc., an Ottawa based DNA analytics company, the Chairman of Dejero Labs Inc., a Waterloo based broadcast technology company, and active on the Boards of a number of other leading Canadian technology startup companies.



Suzy Jones

Non-Executive Director

Ms. Jones is Founder and Managing Partner of DNA Ink LLC, a life sciences advisory firm in San Francisco. Prior to starting her own firm, Ms. Jones spent 20 years at Genentech where she served in many roles in business development, product development and immunology research. She also managed several product teams during this time including the Rituxan team, the first monoclonal antibody launched to treat cancer. Ms. Jones has extensive networks within the pharmaceutical industry and the VC community in North America. Ms. Jones is also a Non-Executive Director of Calithera Biosciences, Inc. (Nasdaq:CALA), a clinical-stage biotech company focused on discovering and developing novel small molecule drugs directed against tumour metabolism and tumour immunology targets for the treatment of cancer.

Management



Melanie Leydin, BBus (Acc Corp Law)

Company Secretary

Melanie Leydin holds a Bachelor of Business majoring in Accounting and Corporate Law. She is a member of the Institute of Chartered Accountants and is a Registered Company Auditor. She graduated from Swinburne University in 1997, became a Chartered Accountant in 1999 and since February 2000 has been the principal of chartered accounting firm, Leydin Freyer. The practice provides outsourced company secretarial and accounting services to public and private companies specialising in the resources, technology, bioscience and biotechnology sector. Melanie has over 25 years' experience in the accounting profession and has extensive experience in relation to public company responsibilities, including ASX and ASIC compliance, control and implementation of corporate governance, statutory financial reporting, reorganisation of companies and shareholder relations.



Deanne Greenwood, BSc (Hons), PhD, MBA, GAICD

Vice President, Business Development & Intellectual Property

Dr. Greenwood joined Patrys in 2008 and has held various roles during that time. Dr. Greenwood's efforts are focused on commercialisation of the IgM and Deoxymab assets and management of the extensive intellectual property portfolio. Dr. Greenwood has extensive experience related to the drug development, relationship management, contracts and grants. Dr. Greenwood led the negotiations with Hefei Co-source Biomedical Co. LTD, a Chinese based company which has taken an exclusive license to PAT-SC1. Prior to joining Patrys, Dr. Greenwood spent 10-years in academia conducting immunology research in the areas of vaccine development and autoimmunity, with the last four years at the Centre for Animal Biotechnology, The University of Melbourne. Dr. Greenwood has a PhD degree in Immunology from the Monash University, Masters of Business Administration (Technology) from La Trobe University and is a graduate of the Australian Institute of Company Directors. Dr. Greenwood is a co-author on 11 publications on immunological related topics.



Valentina Dubljevic, BSc, MBB, GAICD

Vice President, Scientific & Clinical Development

Ms. Dubljevic joined Patrys in June 2012 and is responsible for the pre-clinical and clinical development of Patrys' products. Ms. Dubljevic brings more than 20 years of scientific and commercial experience in the areas of anti- cancer therapies, vaccine development, and diagnostics. Prior to joining Patrys, she worked at the Monash University conducting research on malaria vaccine development; at Cytopia Limited developing small molecule anti-cancer drugs and at Monash Institute of Medical Research (MIMR) developing antibody therapies for cancer. She has extensive experience related to the drug development, management of pre-clinical studies, manufacturing, regulatory and clinical operations, contracts and project management and has co-authored multiple scientific papers and grants. Ms. Dubljevic holds a Bachelor of Biomedical Science degree from Griffith University, Brisbane, a Masters in Biotechnology and Business degree from RMIT and is a graduate of the Australian Institute of Company Directors (GAICD).

Scientific Advisory Board



Pamela M. Klein, BSc, MD

Dr. Pamela M. Klein completed her medical training at Loyola University in Chicago before working at the U.S. National Cancer Institute. Dr. Klein then moved to Genentech where, as Vice President, Development she led the development of a large portfolio of drugs including all the HER (Herceptin, Tarceva, Perjeta), Apoptosis (antibodies and small molecules) and Hematology compounds. After Genentech Dr. Klein was appointed to the position of Chief Medical Officer of Intellikine where she built the clinical development capability and brought multiple early compounds from laboratory to clinic prior to Intellikine being acquired by Milleinium/Takeda. Dr. Klein currently serves as an advisor to a range of different biotech and investment companies, with roles on Scientific Advisory Boards and Corporate Boards as well as broader advisory roles.



Allen Ebens, BSc, PhD

Dr. Allen Ebens completed a PhD at UCLA and completed a Post-Doc at UCSF before joining Exelixis as a scientist in the Discovery Biology group. After more than 5 years with Exelixis Dr. Ebens moved to Genentech where over 11 years in the Research Oncology group he worked from concept to clinic across multiple therapeutic platforms including antibodies, small molecule drugs, antibody-drug conjugates, and cell-based therapies. Dr. Ebens was recruited from Genentech to establish the oncology research lab at Juno Therapeutics, and he is currently the Senior Director, Immune Oncology at NGM Biopharmaceuticals in South San Francisco. Over a significant career Dr. Ebens' contributions include advancement of five discovery projects to clinical development and leadership of T cell recruiting bi-specific antibody teams to proof of concept for multiple targets including one clinical candidate.

About Anti-DNA Autoantibodies

The study of the generation of autoantibodies has helped shape our understanding of the basic mechanisms of immune regulation. Normally, the immune system is able to recognise and ignore the body's own healthy proteins, cells, and tissues, and to not overreact to non-threatening substances in the environment. On occasion, the immune system ceases to recognise one or more of the body's normal constituents as "self", leading to the production of pathological autoantibodies, and emergence of autoimmune diseases. Quantitative changes in particular autoantibody profiles can be indictors of disease status. Many autoimmune diseases (notably systemic lupus erythematosus; SLE) are distinguished by the production of autoantibodies that specifically bind to DNA (known as anti-DNA autoantibodies). The development of anti-DNA autoantibodies has not been fully elucidated.

It was originally thought that because the vast majority of DNA is housed within the nucleus, an area where antibodies were considered unable to gain access, production of anti-DNA autoantibodies was unlikely to occur. It was believed that these anti-DNA autoantibodies could only bind to the small amounts of free DNA present outside of cells (so-called extracellular DNA, or xDNA). However, in recent years, a large body of evidence has accumulated demonstrating that a select group of lupus anti-DNA autoantibodies can traverse into the nucleus of living cells where they can bind to their target DNA.

This finding raised the possibility that such autoantibodies could be used in molecular therapy techniques, in particular for the treatment of cancer. Among the many antibodies that have been considered, two stand out as having great potential for use against cancer, Deoxymabs 3E10 and 5C6.

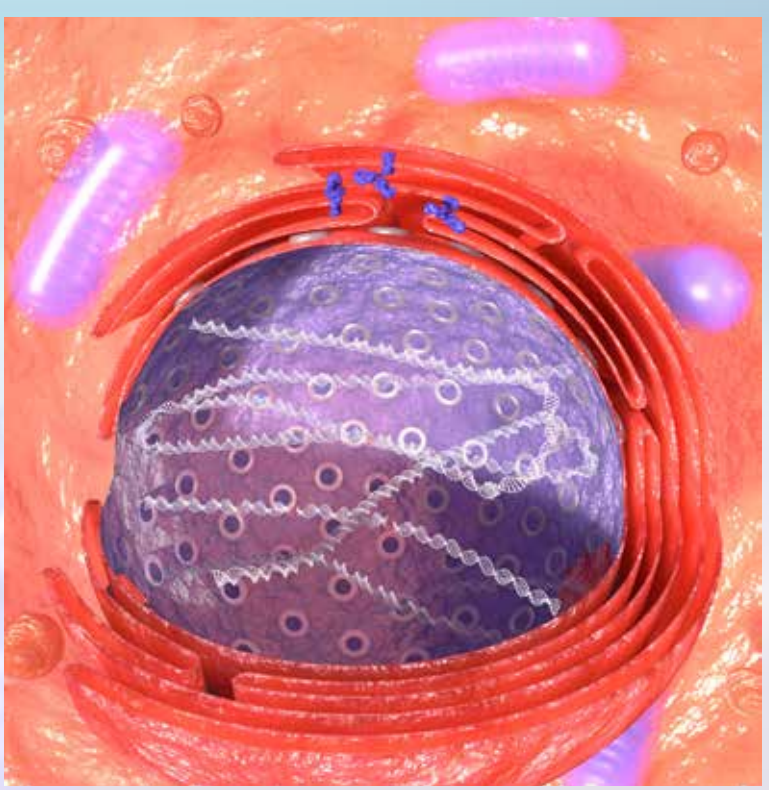
About Deoxymab 3E10

Deoxymab 3E10 is a lupus autoantibody that penetrates live cell nuclei by binding to DNA or its precursors outside of cells and then following it into cell nuclei through a nucleoside transporter. Once in the nucleus, Deoxymab 3E10 interferes with DNA repair processes, but with modest inhibition and not enough to kill normal cells that have the ability to repair DNA damage. Alternatively, cancer cells, that are exquisitely sensitive to DNA damage because their DNA repair machinery is already impaired, accumulate more DNA damage than they can tolerate when they encounter Deoxymab 3E10, and ultimately die.

Deoxymab 3E10 is therefore selectively toxic to cancer cells that have deficiencies in DNA repair, including a wide range of malignancies such as gliomas, melanomas, prostate, breast and ovarian cancers. When combined with DNA-damaging agents such as chemotherapy or radiation, Deoxymab 3E10 has an even greater effect on these cancer cells.

Deoxymab 3E10 is particularly well suited for use in cancer therapy because it preferentially localises to tumours, and not normal tissues. As tumours grow and go through cycles of proliferation they are constantly releasing xDNA, and this results in the accumulation of a "swarm" of xDNA in the tumour vicinity. Deoxymab 3E10 is specifically attracted to DNA, and is dependent on the presence of xDNA in order to penetrate cell nuclei. Therefore, the swarm of xDNA in the tumour vicinity not only attracts Deoxymab 3E10 to the tumour, but also facilitates nuclear penetration by Deoxymab 3E10 into the tumour cell nuclei where it then inhibits DNA repair, sensitises them to DNA-damaging agents and kills the tumour cells.

deoxymab



Next Generation Deoxymab 3E10 Lead Candidate, PAT-DX1

Since acquiring the rights to develop and commercialise Deoxymab 3E10, Patrys has completed detailed *in silico* analysis in order to prepare Deoxymab 3E10 for clinical development. The Deoxymab 3E10 parental murine sequence has been humanised and de-immunised to remove any components that might cause lupus-like side effects and de-risked for manufacturing. In addition, the new Deoxymab 3E10 variants generated were optimised to enhance their binding to DNA and increase their effect on DNA repair-deficient cancer cells. Sixteen different sequence variants of di-scFv Deoxymab 3E10 fragments were synthesised, cloned, expressed and tested in functional assays. The rationale behind creating di-scFv antibody format is to allow more than one binding site to DNA (ie. di-scFv has two binding sites).

Patrys has selected lead candidate PAT-DX1, a di-scFv from the collection of 3E10 variants based on its physicochemical attributes and ability to penetrate nuclei and selectively cause DNA damage and cell death in cancer cells with DNA repair defects.

The selection of PAT-DX1 allows Patrys to move forward with production of the autoantibody to be used in range of animal models of cancer over the coming months. The data from these will be announced in H2 2017.

Patrys has established a research collaboration with Yale University, and has been utilising the expertise from Dr. James Hansen's laboratory to progress PAT-DX1 through pre-clinical development.

Further Intellectual Property Licensed from Yale University - Deoxymab 3E10 Nanoparticles

In June 2017, Patrys announced that it had licensed from Yale University the worldwide rights to develop and commercialise technology pertaining to the linking Deoxymab 3E10 to nanoparticles. The nanoparticles can be loaded with standard chemotherapeutic (or other) drugs and have been demonstrated to significantly increase the efficacy of drug therapy in pre-clinical models.

The new technology builds on one of the central attributes of Deoxymab 3E10, the fact that it is attracted to

the extracellular DNA (xDNA) that is associated with dying cancer cells. Using this targeting mechanism, the 3E10-nanoparticle conjugate is preferentially attracted to tumour tissues, and delivers its payload (the chemotherapy) to where it is most needed. This drives a progressive cycle as increased cancer cell death attracts even more of the conjugated 3E10-nanoparticle to the tumour, and significantly enhances treatment efficacy in animal models.

The 3E10-nanoparticle conjugation intellectual property is the subject of a patent application filed by Yale University, which, if granted, will extend patent protection to 2036.

The synergistic nature of the PAT-DX1 and nanoparticle programs allows both to be developed concurrently, allowing the leverage of development cost savings. The new Deoxymab 3E10 nanoparticle product has been designated PAT-DX1-NP.

About Deoxymab 5C6

Deoxymab 5C6 is another lupus autoantibody that penetrates live cell nuclei. Similar to Deoxymab 3E10, 5C6 is highly toxic to cancer cells with DNA repair deficiencies and has similar potential to be used in cancer therapy. Yale University has also found that 5C6 has a toxic effect on BRCA2-deficient cells in colon cancer.

IgM Assets

Patrys' IgM natural human antibody assets have shown anti-tumour activity in mice and in humans, and have shown a very good safety profile and signals of clinical efficacy. These antibodies can theoretically be combined with existing chemotherapeutic treatments potentially without any cumulative toxicology effects. Patrys is one of only a few companies worldwide with expertise in development of the IgM class of antibody. We continue with business development efforts for all IgM assets in our portfolio.

• PAT-SC1 License Update:

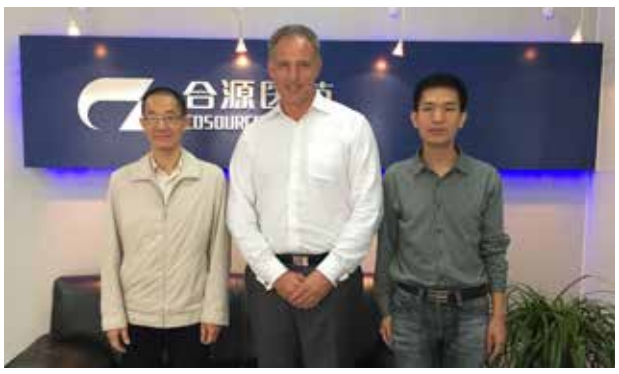
In 2015, the Chinese rights for PAT-SC1 were licensed to Hefei Co-source Biomedical Co. LTD, which is progressing well with its development plans. The Joint Development Committee met in October 2016, and Patrys' CEO Dr. James Campbell was pleased to be hosted by our partner at its site in China. The PAT-SC1 program is progressing well, and a further Joint Development Meeting is planned to be held in October 2017. This alliance provides possible future milestone payments and royalties. Patrys has retained the right to develop and commercialise PAT-SC1 outside of China.



Hefei Co-source Bio-medical Co. Ltd building Shushan District, Hefei, Anhui, P.R China.

• PAT-SM6 update

Patrys in conjunction with its partners completed a review focussed on the fundamental issues that arose with manufacturing of PAT-SM6 antibody. The proposed clinical trial of PAT-SM6 in multiple myeloma will remain on hold until non-dilutive capital can be sourced.



From left to right: Dr Shu Gao, Founder and CEO of Hefei Co-source, Dr. James Campbell, Patrys CEO, Dr. Shanchun Zhang, CEO of Hefei Bio-Medicine prepare for a meeting of the Joint Development Committee

• Intellectual Property

Patrys' patent portfolio undergoes a constant process of expansion and consolidation.

The five patents underlying Deoxymab, PAT-DX1, Deoxymab Nanoparticles and 5C6 and licensed from Yale University include:

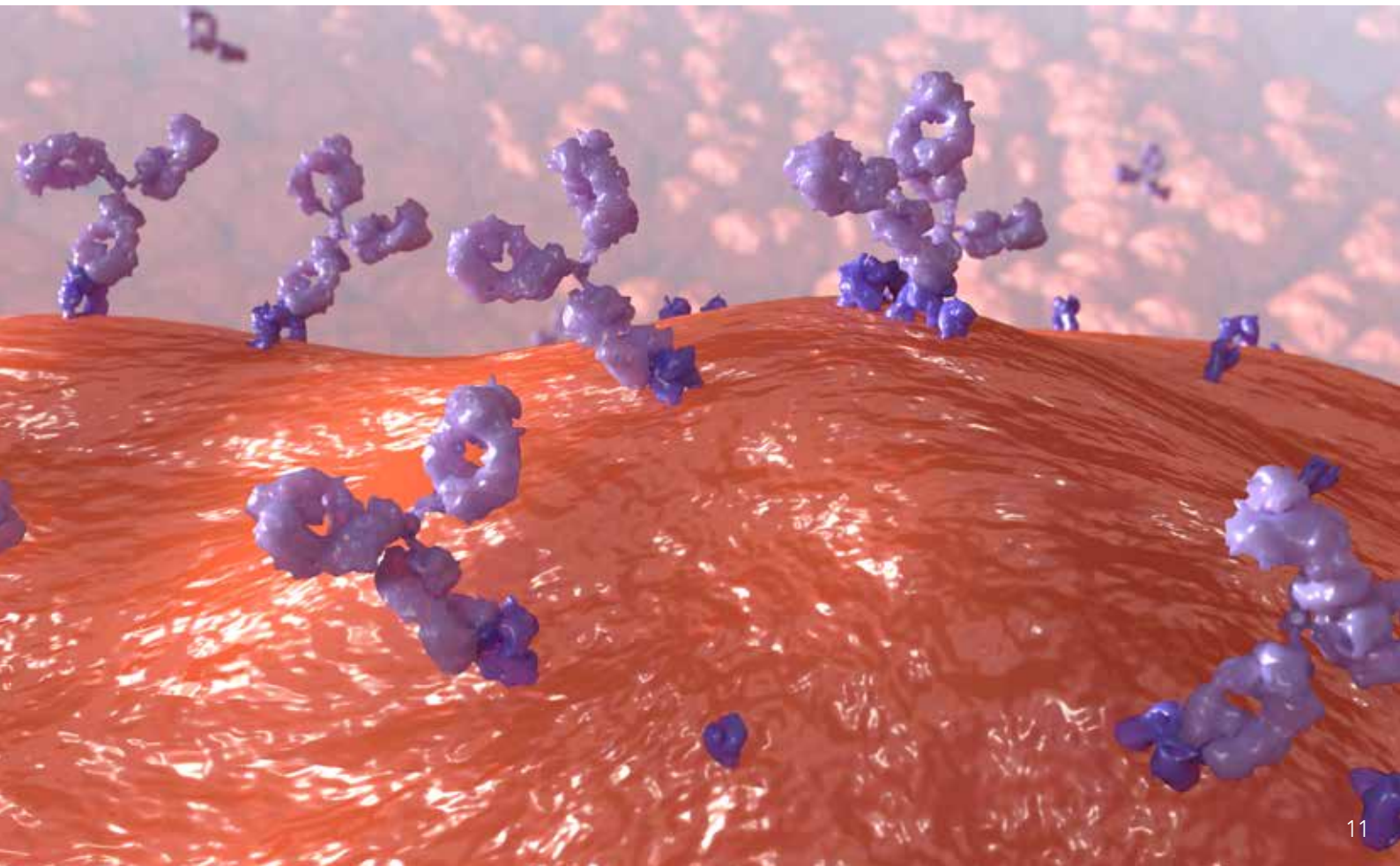
- Cell-penetrating anti-DNA antibodies and uses thereof to inhibit DNA repair
- Multivalent fragments of antibody 3E10 and methods of use thereof
- Cell penetrating nucleolytic antibody based cancer therapy
- Antibody mediated autocatalytic, targeted delivery of nanocarriers to tumours
- Binding proteins

The first patent in the Deoxymab family "Cell-penetrating anti-DNA antibodies and uses thereof to inhibit DNA repair" for cancer treatment has recently been granted in the U.S., with pending applications in China, Europe and Japan. The predicted expiry date for the first filed patent is April 2031.

The six patents that encompass the current IgM portfolio covering products PAT-SM6 and PAT-LM1 include:

- Adenocarcinoma specific antibody SAM-6, and uses thereof
- Human monoclonal antibody having fat-reducing effect
- Novel glycosylated peptide target in neoplastic cells
- Neoplasm specific antibodies and, uses thereof
- LM-antibodies, functional fragments, LM-1 target antigen, and methods for making and using same
- PAT-LM1 epitopes and methods for using same

There are 24 granted applications in these families combined, and only 2 applications still under examination. The first of these patents will expire in 2024. Patrys is seeking to partner the IgM assets in its portfolio.



Recent Publications

Deoxymab 3E10

Chen Z, Patel JM, Noble PW, Garcia C, Hong Z, Hansen JE and Zhou J. A lupus anti-DNA autoantibody mediates autocatalytic, targeted delivery of nanoparticles to tumours. *Oncotarget*, 2016, 7(37): 59965-59975.

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Deoxymab 5C6

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PAT-SC1

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PAT-SM6

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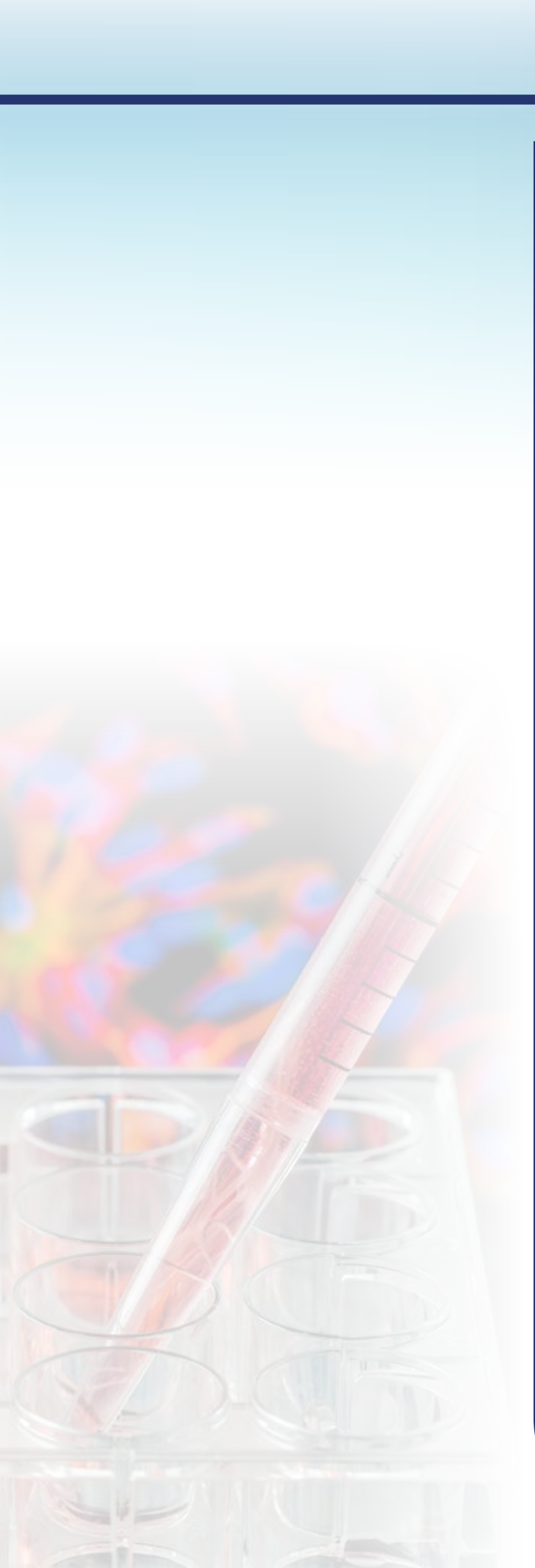
Loos A, Gruber C, Altmann F, Mehofer U, Hensel F, Grandits M, Oostenbrink C, Stadlmayr G, Furtmuller PG and Steinkellner H, Expression and glycoengineering of functionally active heteromultimeric IgM in plants, *PNAS*, 2014, 111(17): 6263-8.

Hensel F, Eckstein M, Rosenwald A and Brändlein S. Early development of PAT-SM6 for the treatment of melanoma, *Melanoma Res.*, 2013, 23(4): 264-75.

Rosenes Z, Mok Y-F, Yang S, Griffin MD, Mulhern TD, Hatters DM, Hensel F and Howlett GJ. Simultaneous binding of the anti-cancer IgM monoclonal antibody PAT-SM6 to low density lipoproteins and GRP78, *PLoS One*, 2013, 8(4): e61239.

Rasche L, Düll J, Morgner C, Chatterjee M, Hensel F, Rosenwald A, Einsele H, Topp MS and Brändlein S. The natural human IgM antibody PAT-SM6 induces apoptosis in primary human multiple myeloma cells by targeting heat shock protein GRP78, *PLoS One*, 2013, 8(5): e63414.

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Corporate Directory

Directors

Mr John Read, Chairman
Dr James Campbell, Managing Director & CEO
Mr Michael Stork, Non-Executive Director
Ms Suzy Jones, Non-Executive Director

Company Secretary

Ms Melanie Leydin

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Securities Exchange Listing

Australian Securities Exchange
ASX Code: PAB

Auditors

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Lawyers

Arnold Bloch Liebler
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Share Registry

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