

patrys

Company Overview

28 Sept 2021



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Investment summary

Unique antibody platform

- Cancer targeting
- Cross blood brain barrier
- Block DNA repair

Multiple applications

- Single agent
- Combination agent
- Targeting agent

Attractive markets

- PARP inhibitors US\$2.3B
- DNA repair deals
- ADC deals

Utility for brain cancers

- Primary brain cancer
- Secondary brain cancer

Exclusive rights

- Global rights
- All cancer indications
- Humanised antibodies

Strong balance sheet

- A\$10.9M cash (30 June)
- Burn ~A\$1.5M/qtr
- Funded to the clinic



Company snapshot

Shares 1.83B

Market cap A\$80M

Cash ¹ A\$10.9M

Last qtr burn ¹ (A\$1.8M)

Headquarters Melbourne

Board John Read (Chair)

James Campbell (CEO & MD)

Pamela Klein (NED)

Suzy Jones (NED)

Michael Stork (NED)

Substantial Dr Dax Marcus Calder – 10.8%

Mason Stevens – 6.3%

Stork Holdings - 5.4%



Price ²

\$0.044

12mth high - low

\$0.063 - \$0.012

Av. daily volume

16,298,033



¹ As at 30 June 2021

² As at close of trading, 27 September 2021

Board of Directors



John Read Chairman

- Experienced Chairman and Director in public, private and government organisations
- Extensive career in venture capital, private equity and commercialisation
- Chairman of CVC Limited (ASX: CVC), previously Eildon Capital Limited (ASX:EDC)



Dr James Campbell

- >20 years of international biotechnology research, management and leadership
- Previously the CFO and COO of ChemGenex Pharmaceuticals Limited (ASX:CXS) and of Evolve Biosystems Inc.
- Board member, Ausbiotech
- Board member, Prescient Therapeutics (ASX: PTX)



Dr Pamela M. Klein

- Former VP, Development at Genentech, led development of a large portfolio of drugs
- Former Chief Medical Officer of Intellikine (acquired by Millennium/Takeda)
- Board member at Argenx (Euronext & Nasdaq: ARGX)
- Chief Medical Officer of Olema Oncology (Nasdaq: OLMA)



Suzy Jones

- Founder and Managing Partner of DNA Ink, a life sciences advisory firm in San Francisco
- 20 years at Genentech in BD, product development and immunology research
- Board member at Calithera (Nasdaq: CALA)



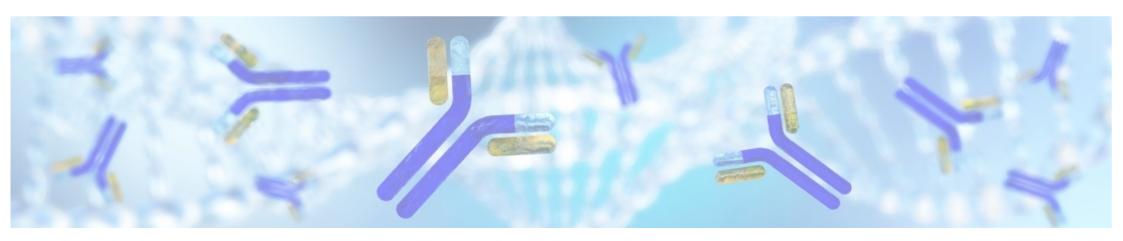
Mike Stork

- Managing Director of Stork Holdings Ltd, active in Canadian technology start-up sector
- Director of multiple leading Canadian technology start-up companies



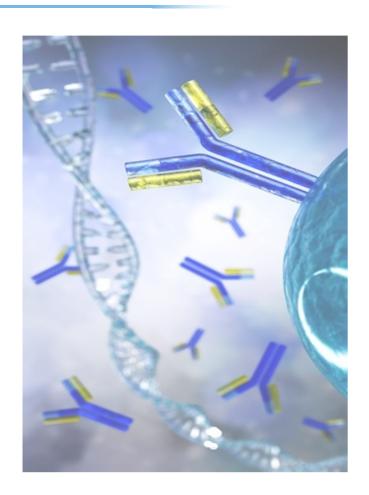


Technology Overview



First anticancer antibody therapeutic targeting DDR

- Deoxymabs are derived from an antibody, 3E10, which was isolated from a mouse model of the autoimmune disease lupus (SLE)
- Deoxymabs bind to DNA and have a unique combination of properties:
 - Cancer seeking: tumors release DNA which attracts deoxymabs
 - **Cell penetrating:** able to get into cells and the cell nucleus
 - Block DNA damage repair (DDR): killing dividing cancer cells
 - Cross the blood-brain barrier (BBB): to treat cancers in the brain
- Preclinical studies: deoxymabs safe with very little effect on normal, healthy cells
- Previous phase 1 clinical trial of 3E10 in 9 SLE patients showed no safety issues¹

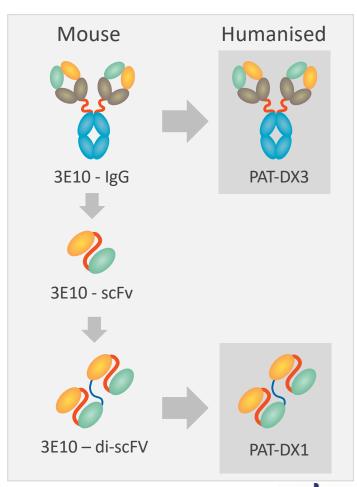






Patrys' deoxymab platform

- Patrys' deoxymab platform is based on humanised versions of the mouse 3E10 antibodies
- Global rights to 3E10 antibodies for the treatment of cancer were acquired in 2016
- Patrys has created humanised versions of the 3E10 antibodies for therapeutic development:
 - **PAT-DX1**: two copies of a humanised binding domain of 3E10
 - **PAT-DX3**: a humanised version of the full IgG 3E10 mouse antibody
- PAT-DX1 and PAT-DX3 are likely to have different pharmaceutical properties, enabling their use for a wide range of healthcare applications
- Manufacturing and formulation program is underway



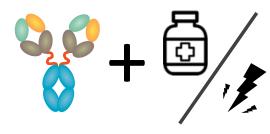
Deoxymab platform offers multiple therapeutic approaches

Single Agent



- Many cancers have pre-existing defects in their DNA damage repair (DDR) systems
- Additional blocking of DDR by deoxymabs can increase the amount of DNA damage to a level where it is lethal
- Consistently demonstrated ~50% increase in median survival in TNBC; pancreatic; brain cancers

Combination Therapies



- Radiation therapy and many chemo drugs work by causing damage to DNA
- Deoxymabs can slow the repair of the damage caused by these agents by blocking the DDR systems
- Combination with radiation demonstrated
 3-fold better survival than radiation alone

Targeted Therapies



- Deoxymabs can direct delivery of payloads to cancer cells and the cell nucleus
- ADC opportunity (99.7% tumour growth inhibition)
- Imaging opportunity (collaboration such as Imagion)
- Intracellular payload delivery

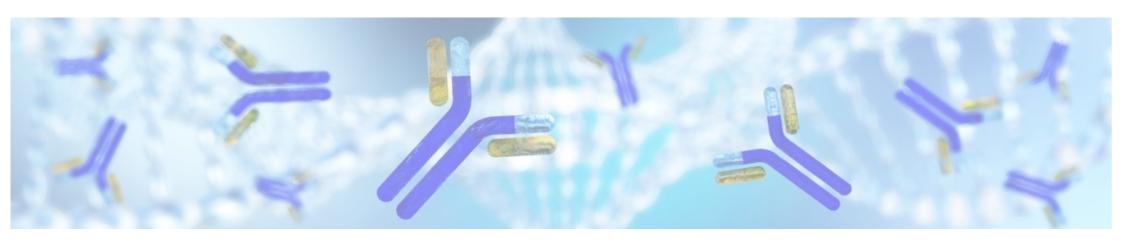
All of these approaches for using deoxymabs have been successfully demonstrated in preclinical studies







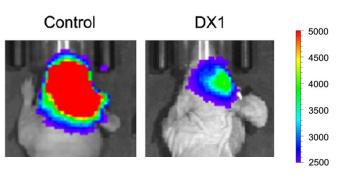
Deoxymab results

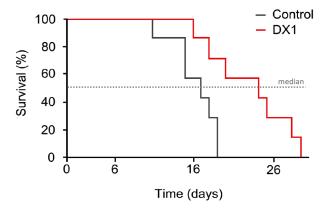


Deoxymabs improve survival in glioblastoma

- Glioblastoma (GBM) is the most common form of primary brain cancer, with approximately 23,000 new cases diagnosed in the US each year
- GBM is highly aggressive with few effective treatment options (5-year survival rate = 5.6%)
- First line therapy for GBM is surgical removal of the tumour followed by radiation. Temozolomide (Temodar®) improves survival by 2 months
- \sim 40% of GBM tumors have a mutation in a protein call PTEN which is involved in the repair of DNA damage
- In GBM cells, single agent PAT-DX1:
 - has no impact on survival in cells with an intact PTEN protein
 - significantly decreases survival in cells with a PTEN mutation (DDR deficiency)
- In an animal model using human GBM explants, PAT-DX1 on its own was able to <u>improve median survival by 47%</u>

Mice with human GBM





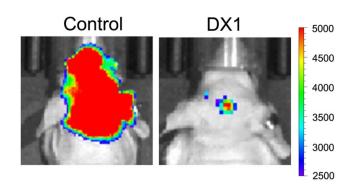


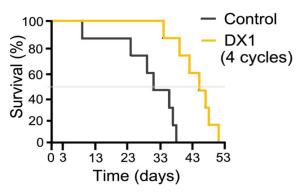


Deoxymabs improve survival with breast cancer metastases

- Approximately 230,000 women are diagnosed with breast cancer in the US each year
- 10%-15% have Triple Negative Breast Cancer (TNBC), an aggressive form with deficiencies in the BRCA1 gene (DNA damage repair)
- ~50% of TNBC patients develop brain metastases
- Like glioblastoma, TNBC brain metastases are very difficult to treat and patients usually have poor outcomes
- Mice with TNBC metastases treated with PAT-DX1 as a single agent, had 93% less brain metastases than control animals after 28 days
- This resulted in a <u>45% increase in median survival</u>

TNBC ¹ Brain Metastases Model





¹ TNBC = triple negative breast cancer which has DDR deficiency

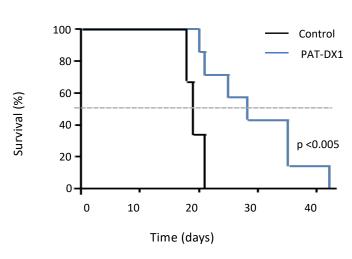


deoxymab

Single agent – deoxymabs for treatment of pancreatic cancer

- Pancreatic ductal adenocarcinoma (PDAC) is one of the most common and aggressive cancer types, with a 5-year survival rate of 2–9%¹
- Globally, 460k new cases and 432k deaths in 2018
- Limited treatment options
- Projected to become the second leading cause of cancer death in the Western world by 2030
- First line therapy is surgical removal of the tumour followed by chemotherapy and radiation
- In an animal model of pancreatic cancer, single agent PAT-DX1 <u>improved</u> median survival by 47%

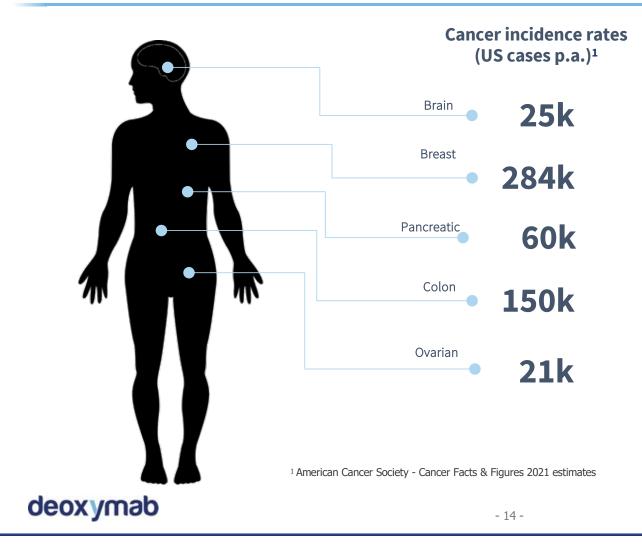
Pancreatic Cancer Model

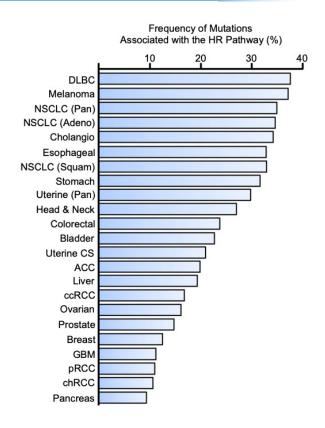


1. Arias-Pinilla & Moditahedi. Therapeutic Application of Monoclonal Antibodies in Pancreatic Cancer: Advances, Challenges and Future Opportunities. Cancers. 2021



Many solid tumors have DDR mutations



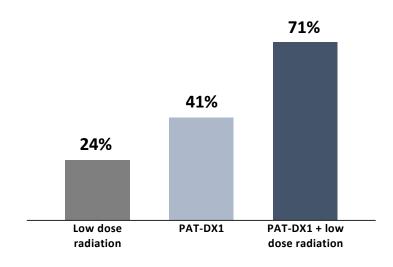


Principe et al 2020. Frequency and prognostic value of mutations associated with the homologous recombination DNA repair pathway in a large pan cancer cohort, Scientific Reports volume 10, Article number: 20223 (2020)

Combination therapies – improving glioblastoma treatments

- Radiation is a mainstay treatment for glioblastoma (GBM) patients and is used:
 - as a monotherapy (less frequently)
 - post-surgical removal of tumour tissue
 - in combination with the drug temozolomide (Temodar®)
- The efficacy of radiation therapy is dose-dependent, which is limited by potential side-effects:
 - risk of damage to adjacent healthy brain tissue
 - tiredness, weakness, loss of hair, nausea
 - worsening of brain cancer symptoms
- PAT-DX1 can improve the efficacy of low-dose radiation in a preclinical model of aggressive GBM
- PARP-inhibitors have had limited success in GBM due to their inability to cross the blood-brain barrier

Radiation + PAT-DX1 improves survival



Human glioblastoma cells implanted in mice. Seven mice were in each of four groups: 1. control, 2. radiation alone, 3. PAT-DX1 alone, 4. radiation + PAT-DX1. The bars represent improvement in survival over the control group at day 28.

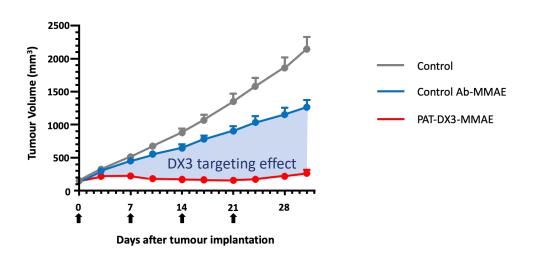
deoxymab



Deoxymabs ADC proof of principle was compelling

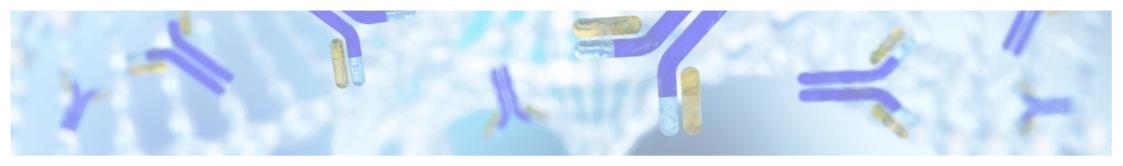
- Antibody drug conjugates are a fast-growing technology
- Use antibody to target delivery of toxic payload to cancer cells. Often superior benefits to antibodies alone
- Proof of principle study with PAT-DX3 conjugated to MMAE (payload used in approved ADCs)
- Clear tumour targeting effect when compared to control antibody
- 99.7% tumour growth inhibition after 3 weeks
- Survival benefit not reported yet (experiment ongoing)

MCF7 Breast Cancer Model

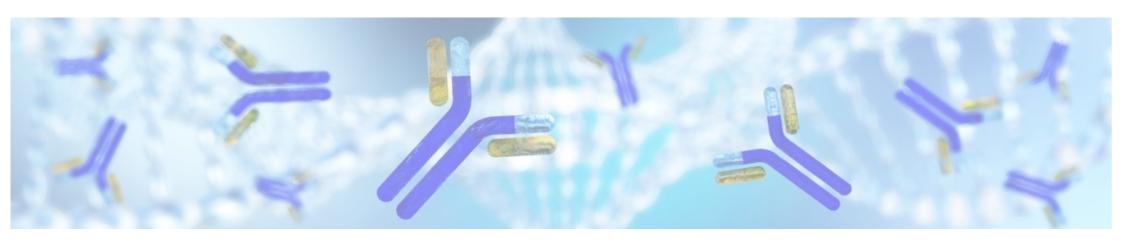




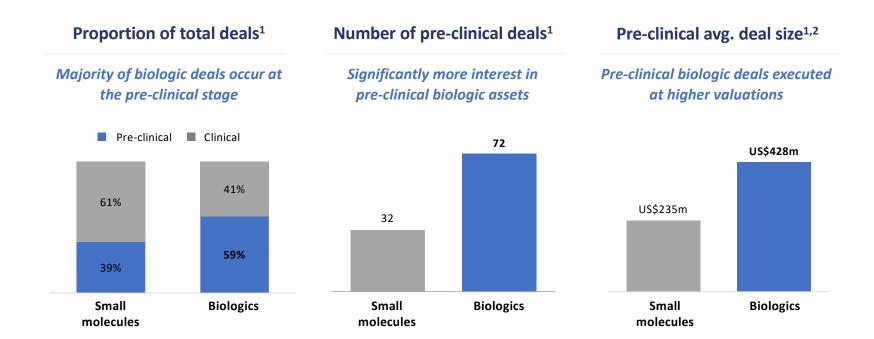




Looking ahead



Biologics typically transact earlier and at higher valuations than small molecules



The value of Patrys' novel therapy is underpinned by potential for multiple applications to achieve better patient outcomes

Source: GlobalData



^{1.} Small molecules and biologics transactions between 2017 and 2019

^{2.} Deal size includes upfront and potential milestone payments

Recent deals for antibody and synthetic lethality assets

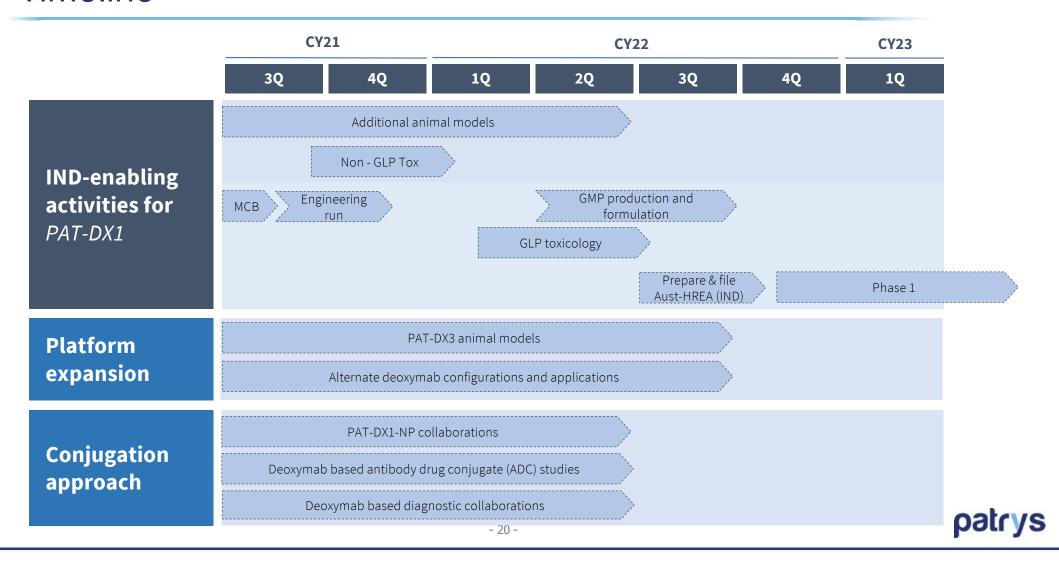


Source: Company information

1. All deal values exclude potential royalty payments

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Timeline





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www.patrys.com

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