

#### **ASX** announcement

# New Research Grant For Deoxymabs in Metastatic Breast Cancer

Melbourne, Australia; 26 August, 2022: Patrys Limited (ASX: PAB), a therapeutic antibody development company, is pleased to announce that the Olivia Newton-John Cancer Research Institute (ONJCRI) has been awarded a \$100,000 Victorian Medical Research Acceleration Fund (VMRAF) grant from the Victorian State Government to support research into the potential to incorporate PAT-DX1 and PAT-DX3 into new treatments for metastatic breast cancer.

The VMRAF grant of \$100,000 will be used to support a collaborative research program between Patrys and the ONJCRI. This program will evaluate the ability of PAT-DX1 (a deoxymab antibody fragment) and PAT-DX3 (a full-sized, humanized IgG deoxymab antibody) to control tumour growth and metastasis in preclinical models of breast cancer. The program will also evaluate the use of PAT-DX1 and PAT-DX3 in combination with DNA damaging agents such as radiation and chemotherapy for treating animal models of human triple negative breast cancer (TNBC).

The research program will be led by Professor Robin Anderson, Head of ONJCRI's Translational Breast Cancer Program and Metastasis Research Laboratory. Professor Anderson's research is focused on understanding the genetic regulation of metastasis, primarily in breast cancer, and is aimed at identifying new targets for molecular based therapy for patients with progressive disease. This is the second grant Patrys and ONJCRI have been awarded to support development efforts of PAT-DX1. In July 2020, the parties were awarded a \$50,000 Federal Government grant through the Entrepreneur's Programme Innovation Connections scheme.

"We are very excited to be able to continue working on this novel and exciting approach for treating women with breast cancer," said Professor Anderson. "We know from the success of the PARP inhibitor drugs that DNA damage repair is the Archilles heal for some cancers. We look forward to exploring if Patrys' deoxymab antibodies are able to block DNA damage repair in breast cancer and could consequently provide a new therapeutic approach. We are extremely grateful to The Victorian Medical Research Acceleration Fund grant program for their support that will allow us to work with Patrys on this project."

Patrys Chief Executive Officer and Managing Director, Dr. James Campbell said: ""We are delighted that this VMRAF grant will allow us to expand our ongoing research program with Professor Anderson at the internationally-recognised ONJCRI. We have recently discovered that PAT-DX1 inhibits the formation of NETs, molecules that are implicated in the progression and metastasis in some cancers, and this new grant focused on metastatic breast cancer is an exciting addition to our programs."

#### -Ends-

This announcement is authorised for release by the Board of Directors of Patrys Limited.



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## **About Patrys Limited**

Based in Melbourne, Australia, Patrys (ASX:PAB) is focused on the development of its deoxymab platform of cell-penetrating antibodies as therapies for a range of different cancers. More information can be found at <a href="https://www.patrys.com">www.patrys.com</a>.

# About Patrys' deoxymab 3E10 platform:

Patrys' deoxymab platform is based on the deoxymab 3E10 antibody. While most antibodies bind to cell surface markers, deoxymab 3E10 penetrates into the cell nuclei and binds directly to DNA where it inhibits the DNA repair processes. Cancer cells often have high levels of mutations and underlying deficiencies in the DNA repair mechanisms. For these reasons, the additional inhibition of the DNA repair processes by deoxymab 3E10 can kill cancer cells while having little impact on normal cells. As a single agent, deoxymab 3E10 has been shown to significantly enhance the efficacy of both chemoand radiotherapies in animal models of human cancer.

Patrys has developed two humanised forms of deoxymab 3E10, both which have improved activity over the original deoxymab 3E10 antibody. PAT-DX1 is a dimer (two joined subunits) of the short chain from the binding domain of deoxymab 3E10, while PAT-DX3 is a full-sized IgG antibody. In numerous pre-clinical studies, PAT-DX1 has shown significant ability to kill cancer cells in cell-based experimental systems, human tumour explants, xenograft and orthotopic models. PAT-DX1 has been shown to cross the blood-brain barrier, reduce tumour size, and increase survival in multiple animal models of brain cancer, non-brain cancers, and metastatic disease. PAT-DX1 is tumour-agnostic, meaning that it can target many different tumour types in the body, regardless of pathology-specific tumour antigens. Patrys believes that PAT-DX1 may have application across a wide range of cancers including gliomas, melanomas, prostate, breast, pancreatic and ovarian cancers.

Deoxymabs, such as PAT-DX1 and PAT-DX3, can be used to target nanoparticles carrying a payload of anti-cancer drugs specifically to tumours. This allows specific delivery of cancer drugs to multiple types of cancer while having minimal impact on normal, healthy cells. PAT-DX3, being a full-sized IgG molecule, also has potential for antibody drug conjugate (ADC) and antibody oligonucleoside



conjugation (AOC) programs. A PAT-DX3 based ADC showed significant tumor targeting and survival benefit in proof-of-principle studies.

Patrys' rights to deoxymab 3E10 are part of a worldwide license to develop and commercialise a portfolio of novel anti-DNA antibodies and antibody fragments, variants and conjugates discovered at Yale University as anti-cancer and diagnostic agents. Overall, nine patents in the portfolio have been granted with six patents covering the unconjugated form of deoxymab 3E10 (and derivatives thereof) granted (Europe, Japan, China, and 3 in the USA), and three patents covering nanoparticle conjugation (Australia, India and Canada).

## **About the Victorian Medical Research Acceleration Fund**

The Victorian Medical Research Acceleration Fund aims to support those in the early stages of health and medical research to translate their work into health and economic outcomes.

The competitive program leverages funding from philanthropic, industry and international sources. It is designed to capitalise on Victoria's comparative advantages in medical research, increase the efficiency of the Victorian health system and further enhance the Victorian economy's investment attractiveness. The Victorian Medical Research Acceleration Fund will provide \$3 million per annum to help address current market gaps and deliver rewards for research.