



## ASX & Media Release

### Significant funding to support deoxymab brain cancer research

- *Clinical Accelerator funding from Cure Brain Cancer Foundation to support deoxymab preclinical research program to be conducted at Telethon Kids Institute;*
- *The funding will support using Patrys' deoxymabs to increase the effectiveness of current standard of care therapies for treating brain cancers*

**Melbourne, Australia; 3 June 2022:** Patrys Limited (ASX: PAB, "Patrys" or the "Company"), a therapeutic antibody development company, is pleased to announce that Telethon Kids Institute has been awarded \$250,000 in funding from the inaugural Clinical Accelerator fund of Cure Brain Cancer Foundation to support research on potential therapeutic applications for Patrys' PAT-DX1 and PAT-DX3 deoxymabs in the treatment and management of brain cancers.

Patrys' deoxymabs have demonstrated promising activity against cancers in the brain in multiple animal models to date. This is by virtue of their ability to both cross the blood-brain barrier, something that few other antibodies are able to achieve, and to block the DNA-damage repair (DDR) systems within cancer cells. The current standards of care for treating brain cancers, radiation or chemotherapies, primarily kill the cancer cells by causing damage to the DNA of rapidly dividing cancers cells. Combining these with the DDR-blocking activity of Patrys' deoxymabs has the potential to significantly increase the effectiveness of these established therapies.

Cure Brain Cancer Foundation's inaugural Clinical Accelerator funding will be used for research on Patrys' PAT-DX1 and PAT-DX3 deoxymabs in both *in vitro* and *in vivo* models of high-grade glioma (HGG), combining the deoxymabs with standard of care (SOC) treatments such as radiotherapy and temozolomide. Patrys believes that the addition of PAT-DX1 or PAT-DX3 to SOC treatments has the potential to significantly increase efficacy by blocking the repair of the damaged DNA which, in turn, will cause an increase in cancer cell death.

HGG is the most common and deadly type of brain cancer, affecting both adults and children. Adult patients have a 5-year survival rate of 10% with standard therapy (surgical resection, radiation and chemotherapy). In children HGG is a rapid and universally lethal disease. HGG is called "high-grade" because the tumors are fast-growing and spread quickly through brain tissue making them very difficult to treat.

Telethon Kids Institute is based within the Perth Children's Hospital and is one of the largest and most successful medical research institutes in Australia. The research program will be led by Professor Terrance Johns, Professor of Paediatric Cancer Research & Head of Telethon Kids Cancer Centre. Professor Johns has a strong track record in translational research with extensive national and international networks. Professor Johns is also Co-Director of the Australian Brain Cancer Research



Alliance (ABCARA), Australia-wide consortium of researchers and clinicians dedicated to ensuring that promising therapeutics discoveries are translated into the clinic for the treatment of patients with brain cancer.

**Patrys Chief Executive Officer and Managing Director, Dr. James Campbell said:** “This is one of our most exciting collaborations to date. Professor Johns and his team are leaders in brain cancer translational research in Australia and have numerous international connections. We gratefully acknowledge Cure Brain Cancer Foundation’s Clinical Accelerator, a visionary program to accelerate into the clinic potentially transformative therapies for brain cancer patients. This is the first time this program has been offered and we are honoured to be part of the inaugural successful application. We hope to grow our relationship with Cure Brain Cancer Foundation, and look forward to expanding our connections to Australian brain cancer clinicians and researchers as we move towards our expected phase 1 clinical trial in mid-2023.”

CEO of Cure Brain Cancer Foundation, Lance Kawaguchi, said this is a strong move towards the goal of improving the quality of life for people living with the disease. “Cure Brain Cancer Foundation is humbled to award our very first Clinical Accelerator to Prof Terry Johns from Telethon Kids Cancer Centre in conjunction with leading Australian biotechnology company Patrys to continue our shared goal of improving treatments for people, especially children, living with brain cancer. To have a ground-breaking antibody that can potentially be in clinic by 2023 is life changing, and we are committed to drive research breakthroughs with rapid results. It’s our mission to move towards a future where there’s a cure for brain cancer and this is a bold step in the right direction. We must continue to support early-stage biotechs like Patrys, to close the gap in getting new therapies to patients.”

Professor Terrance Johns said, “This partnership between Telethon Kids and Patrys is a tremendous opportunity to make a difference for brain cancer patients. Advances in new treatments have been stalled for over 30 years, consequently patient survival has barely improved in that time. Our approach represents a radically new strategy for treating brain cancer. We believe it could significantly improve the effectiveness of current treatments, extending patients’ lives.”

**-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 [www.patrys.com](http://www.patrys.com).

**About Patrys' deoxymab 3E10 platform:**

Patrys' deoxymab platform is based on the deoxymab 3E10 antibody that was first identified as an autoantibody in a mouse model of the human disease systemic lupus erythematosus (SLE). While most antibodies bind to cell surface markers, deoxymab 3E10 penetrates into the cell nuclei and binds directly to DNA where it inhibits 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, but appears to have little impact on normal cells. As a single agent, deoxymab 3E10 has been shown to significantly enhance the efficacy of both chemo- and radiotherapies. Further, deoxymab 3E10 can be conjugated to nanoparticles to target delivery of chemotherapeutics and imaging agents to tumours.

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 a range of pre-clinical studies, PAT-DX1 has shown significant ability to kill cancer cells in cell models, 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, other cancers, and cancer metastases. PAT-DX1 is tumour-agnostic, meaning that it can target many different tumour types in the body, regardless of 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.

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, eight patents in the portfolio have been granted with six patents covering the unconjugated form of deoxymab 3E10 (and derivatives thereof) have already been granted (Europe, Japan, China, and 3 in the USA), and two patents covering nanoparticle conjugation (Australia and India).



**About Cure Brain Cancer Foundation:**

Cure Brain Cancer Foundation is the leading voice for brain cancer research, advocacy and awareness in Australia. We strive to rapidly increase brain cancer survival and improve the quality of life for people living with this disease – it's at the core of everything we do. Thanks to your generosity, and the voluntary work of our global Scientific Advisory Committee, we've committed \$29 million into world-class brain cancer research, including more than \$8 million for projects to help children with the disease.

**About Telethon Kids Institute:**

Telethon Kids Institute is one of the largest and most successful medical research institutes in Australia, comprising a dedicated and diverse team of more than 900 staff and students. We've created a bold blueprint that brings together community, researchers, practitioners, policy makers and funders, who share our vision to improve the health and wellbeing of children through excellence in research. The Institute is headed by leading paediatrician and infectious diseases expert Professor Jonathan Carapetis, with Founding Director Professor Fiona Stanley now Patron. Telethon Kids is independent and not-for-profit. The majority of funding comes from our success in winning national and international competitive research grants. We also receive significant philanthropic support from corporate Australia and the community.