



ASX & Media Release

Further United States patent granted for Patrys' deoxymab assets

- A patent covering the use of Patrys' novel deoxymabs (including both PAT-DX1 and PAT-DX3) in combination with radiosensitising agent(s) that damage DNA or inhibit DNA repair, such as cisplatin and doxorubicin, has been granted in the United States.
- This new patent further expands Patrys' patent estate which covers a range of different ways to use Patrys' novel deoxymabs in their unconjugated form for the treatment of multiple types of cancer.
- Several patents covering other applications for Patrys' deoxymabs have already been granted in key markets including the US, Europe, China and Japan.

Melbourne, Australia; 31 March 2021: Patrys Limited (ASX: PAB, "Patrys" or the "Company"), a therapeutic antibody development company, is pleased to announce that US patent number: 10,961,301, titled "*Cell-penetrating anti-DNA antibodies and uses thereof inhibit DNA repair*" has been granted. This new patent provides protection until August 2033.

Patrys' deoxymabs are able to penetrate into cancer cells and disrupt their DNA Damage Repair (DDR) systems. This has proven to be effective for treating certain cancers with a class of drugs called PARP inhibitors. Deoxymabs provide an antibody approach for targeting DDR in cancer cells which may provide additional benefits through their ability to target cancer cells and their ability to disrupt multiple DDR systems. Combining these properties of deoxymabs with radiosensitising agents, that simultaneously cause DNA damage or inhibit the repair of damaged DNA, may provide a powerful new approach for treating a number of different cancer types.

Patrys Chief Executive Officer and Managing Director, Dr. James Campbell said: "The granting of this patent by the United States Patent and Trademark Office provides Patrys with additional intellectual property covering different ways that its deoxymab antibodies may be used for the treatment of patients with cancer. The Company now has multiple patents granted in the United States and other jurisdictions which can be applied to a broad range of cancers. This protection provides Patrys with a range of options as it finalises its plans to commence the clinical development of its deoxymabs over the coming months."

This patent further expands Patrys' intellectual property portfolio. The Company now has six granted patents covering unconjugated forms of PAT-DX1 and PAT-DX3 and other assets in the deoxymab portfolio; one in each of Europe, Japan, China, and three in the US. In total, Patrys has filed over 35 patent applications across 10 different patent families in major jurisdictions providing the Company with a significant patent estate covering the use of its unique deoxymab platform for the potential treatment of cancer.

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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.

About Patrys' deoxymab platform:

Patrys' deoxymab platform is based on the deoxymab 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 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 can kill cancer cells, but appears to have little impact on normal cells. As a single agent, deoxymab has been shown to significantly enhance the efficacy of both chemo- and radiotherapies. Further, deoxymabs can be conjugated to nanoparticles to target delivery of chemotherapeutics and imaging agents to tumours.

Patrys has developed two humanised forms of deoxymab, both which have improved activity over the original deoxymab antibody. PAT-DX1 is a dimer (two joined subunits) of the short chain from the binding domain of deoxymab, 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 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. Six patents covering the unconjugated form of deoxymab (and derivatives thereof) have already been granted (Europe, Japan, China, and 2 in the USA), and one patent covering nanoparticle conjugation has been granted (Australia).