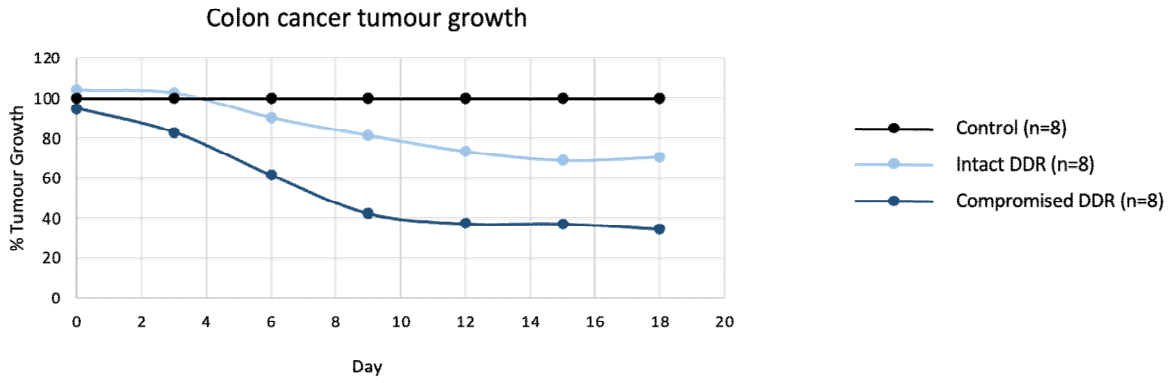
ASX & Media Release

Preclinical data supports synthetic lethality mechanism

Melbourne, Australia; 14 March 2023: Patrys Limited (ASX: PAB, "Patrys" or the "Company"), a therapeutic antibody development company, is pleased to announce results from a recently completed pre-clinical study that validates the potential to use its full size IgG deoxymab, PAT-DX3, for synthetic lethality strategies to treat relevant cancers.

Patrys' deoxymabs have a number of novel properties that are not typically found in antibodies and that offer the potential to develop new antibody-based therapeutic strategies for treating cancer. One of these is the ability to enter the cell and cell nucleus and block the DNA Damage Response (DDR) systems. In tumours with pre-existing mutations that compromise their DDR systems, such as cancers with a mutation in the BRCA2 gene, the additional inhibition from adding a deoxymab may result in the accumulation of DNA damage that can ultimately kill the tumour cells. This approach is known as 'synthetic lethality' and has been successfully used in certain tumours with several new small molecule cancer drugs.

In a pre-clinical colon cancer study in mice treated with PAT-DX3, tumours with a compromised DDR system showed a 71% reduction in growth, significantly more than the 35% reduction in growth in tumours with an intact DDR mechanism. This difference in response rate is further evidence of a synthetic lethality mode of action for Patrys' deoxymabs– a first for therapeutic antibodies.



Patrys Chief Executive Officer and Managing Director, Dr. James Campbell, said: "This is an exciting and important result that shows for the first time the comparative effects of a Patrys deoxymab on tumours with or without DDR mutations in the same animal. This study was requested by a potential partner as part of Patrys' ongoing business development activities. This study confirms the potential to use deoxymabs as a single agent to treat cancers which have pre-existing mutations that compromise their DDR systems, including BRCA2 negative breast cancer and other cancers. In addition, Patrys is looking at using deoxymabs in combination with DNA damaging therapies, such as radiation and chemotherapies, and as a delivery agent for small molecules and nucleic acids."

An additional component of this study evaluated the accumulation of DNA breaks in tumour cells. This confirmed that all tumours in animals treated with PAT-DX3 showed an accumulation of DNA damage, and that the level of DNA damage was significantly higher in DDR deficient tumours.

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

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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 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).