ASX & Media Release

New Mechanism By Which PAT-DX1 May Reduce Cancer Metastasis

- Peer-reviewed publication reporting that Patrys' deoxymab antibody PAT-DX1 suppresses the formation of neutrophil extracellular traps (NETs);
- NETs have been implicated in progression and metastasis in some cancers;
- Provides additional mechanism by which Patrys' deoxymabs may be used for the treatment of cancer and certain inflammatory diseases.

Melbourne, Australia; 14 June 2022: Patrys Limited (ASX: PAB, "Patrys" or the "Company"), a therapeutic antibody development company, is pleased to announce that a range of studies showing that PAT-DX1 suppresses the formation of neutrophil extracellular traps (NETs) in neutrophil cells has been published in the peer-reviewed journal *ImmunoHorizons* (June 1, 2022, 6 (6) 356-365). These findings open up new approaches for using Patrys' deoxymabs to potentially treat metastatic cancer, as well as certain inflammatory diseases.

Neutrophil extracellular traps (NETs) are structures that are composed of DNA strands and certain proteins produced by neutrophils (a type of white blood cell). Recent studies, both in animal models and patients, have indicated that NETs may play an important role in the establishment and maintenance of cancer cells, cancer spreading (metastasis), and regulating inflammation. Patrys' antibodies are known to bind DNA and to inhibit the DNA damage repair process (DDR) in cell nuclei. The DDR process contributes to the mechanism of formation of NETs, a process called NETosis. The release of DNA that is associated with NETs is believed to contribute to immunity, inflammation and the pathophysiology of various inflammatory diseases and some cancers.

This new publication, entitled "*Inhibition of NETosis by a nuclear penetrating anti-DNA autoantibody*" by Patrys collaborators Dr James Hansen, of Yale School of Medicine and Dr Kim O'Sullivan, of Monash University, is the first study showing that PAT-DX1 may be used to regulate the formation of NETs. Using a range of experimental approaches, the authors found that PAT-DX1 can inhibit NET production and release. These experimental results raise the possibility that PAT-DX1 may have a role in developing treatments for a range of indications from metastatic cancer through to chronic inflammatory diseases.

Patrys Chief Executive Officer and Managing Director, Dr. James Campbell said: "This is an unexpected and important discovery for Patrys, offering mechanistic rationale to the previously-described ability of PAT-DX1 to reduce cancer spread by metastasis, and opening the door to broader uses of deoxymabs in non-cancer indications, particularly chronic inflammatory conditions that are driven by NET formation. The discovery has been protected by patent application, and opens new areas for business development to Patrys."

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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 NETs and NETosis:

NETosis is a form of neutrophil-specific cell death characterised by the release of large web-like structures referred to as neutrophil extracellular traps (NETs). NET's operate by casting their DNA "inside out" to catch pathogens and kill them in the extraceullar environment. NETs are composed of DNA strands associated with histones and decorated with about 20 different proteins. NETs are also involved in autoimmune diseases, like systemic lupus erythematosus, rheumatoid arthritis, psoriasis, and in other non-infectious pathological processes, as coagulation disorders, thrombosis, diabetes, atherosclerosis, vasculitis, and cancer.

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).