ASX & Media Release

PAT-DX1 Active in Pre-clinical Cancer Models

- PAT-DX1 (humanized 3E10) proven to selectively cause cell death in multiple cell models
- PAT-DX1 triggers cell death in primary human cancer samples
- Completion of first PAT-DX1 animal study, with efficacy signals in a mouse model
- Stability and formulation studies ongoing

Melbourne, Australia; September 14, 2017: Patrys Limited **(ASX: PAB)**, a therapeutic antibody development company, is pleased to announce positive pre-clinical data for its lead drug candidate PAT-DX1, a novel first-in-class drug candidate being developed to treat a range of different cancers. Studies in multiple pre-clinical models of cancer have demonstrated the ability of Patrys' proprietary humanized antibody, PAT-DX1 to be taken-up and to kill cancer cells, confirming the successful humanization and de-immunization of 3E10-derived antibody fragments with conserved structural properties and enhanced *in vitro* activity.

Working with contract research organizations and collaborators at Yale University, Patrys has shown that a manufactured batch of PAT-DX1 outperformed the non-humanized 3E10 antibody in cell penetration and cancer cell death assays. These pre-clinical studies confirmed that PAT-DX1 has the ability to kill colon cancer cells that lack key DNA repair enzymes such as BRCA2, a modality consistent with the understanding that PAT-DX1 binds to nuclear DNA and blocks DNA repair.

In addition, experiments in the lab of Dr James Hansen at Yale University also showed that PAT-DX1 was active against primary human glioblastoma tumor cells from patients. Five of the seven glioblastoma tumor explants treated with PAT-DX1 showed significant cancer cell death. Histology studies confirmed that PAT-DX1 was taken-up into the nuclei of the glioblastoma cancer cells.

Patrys has also completed the first animal study using PAT-DX1, in a mouse model of triple negative breast cancer. These studies have shown signals of efficacy and will act as guidance for dosing and route of administration for PAT-DX1 in future animal studies.

Patrys is currently working with its collaborators to improve the stability of PAT-DX1 as part of a longer term program designed to inform formulation for clinical development.

"The Patrys team is encouraged that multiple studies with cultured cancer cells and human cancer tissue explants confirm that PAT-DX1 is able to penetrate into cell nuclei and cause cancer cell death. These observations are consistent with earlier published work on murine 3E10. These results, combined with similar signals of efficacy in a mouse model of aggressive breast cancer, affirm that the humanized version of 3E10, PAT-DX1, is an outstanding candidate to progress towards the clinic," said Dr. James Campbell, Chief Executive Officer and Managing Director of Patrys.

"Looking forward, there is a strong argument that PAT-DX1 could work synergistically with other inhibitors of DNA repair enzymes, such as PARP inhibitors and this has attracted the attention of a number of international collaborators. We are pleased with the position that Patrys is building at the forefront of the growing field of DNA damage response therapeutics, supported by outstanding research and a growing suite of intellectual property" Dr. Campbell added.

About Deoxymab 3E10 and PAT-DX1

Patrys has a worldwide license to develop and commercialize as anti-cancer agents a portfolio of pre-clinical novel anti-DNA antibodies and antibody fragments/variants and antibody-nanoparticle conjugates discovered at Yale University.

Deoxymab 3E10 is an autoantibody originally identified in models of lupus. Unlike normal antibodies that bind to foreign cells (eg pathogens) or aberrant cells (eg cancer cells) and trigger an immune response, autoantibodies bind to normal cells. Of particular interest with Deoxymab 3E10 is that whilst most antibodies bind to markers on the surface of cells, Deoxymab 3E10 penetrates cells' nuclei and binds directly to DNA. Having bound to the DNA, Deoxymab 3E10 inhibits DNA repair and damages DNA. Normal cells repair DNA damage utilizing intact DNA repair processes, however Deoxymab 3E10 can kill cells that have mutations or deficiencies in DNA repair mechanisms as found in various cancer cells. As well as showing single agent therapeutic potential Deoxymab 3E10 has been shown to significantly enhance the efficacy of both chemo- and radiotherapies. Further, 3E10 can be conjugated to nanoparticles to target delivery of chemotherapeutics to tumors.

Patrys has selected a high-performing variant of Deoxymab 3E10, PAT-DX1 as the lead candidate from the program and is progressing PAT-DX1, and its nanoparticle-conjugated form PAT-DX1-NP into pre-clinical cancer models. Patrys believes that PAT-DX1 may have application across a wide range of malignancies such as gliomas, melanomas, prostate, breast, pancreatic and ovarian cancers.

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About Patrys Limited:
Based in Melbourne, Australia, Patrys (ASX: PAB) is focused on the development of antibodies as therapies for a range of different cancers. Patrys has a pipeline of anti-cancer antibodies for both internal development and as partnering opportunities. More information can be found at www.patrys.com.