



ASX announcement

Patrys and Walter and Eliza Hall Institute of Medical Research Awarded Grant

Melbourne, Australia; 28 August, 2018: Patrys Limited (**ASX: PAB**), a clinical stage biotechnology company, and the Walter and Eliza Hall Institute of Medical Research have recently been awarded a \$100,000 State Government Victorian Medical Research Acceleration Fund grant to support research within the PAT-DX1 program that aims to develop new treatments for cancer.

The Walter and Eliza Hall Institute is one of Australia's leading biomedical research institutes. The research will be undertaken by Dr Ruth Kluck, laboratory head in the Institute's Molecular Genetics of Cancer division and Associate Professor Edwin Hawkins, laboratory head in the Immunology division at the Institute.

Since 2002 Dr Kluck has been working towards new approaches to cancer treatment by investigating how cancer cells die. In particular, Dr Kluck is an expert on how cell-killing proteins called Bax and Bak help to eliminate cancer cells that grow out of control. This knowledge can assist in the development of new treatments that directly activate these important proteins to kill dangerous cells in the body. Dr Kluck has established an international profile in the cell death field and has been awarded prestigious fellowships from the Wellcome Trust and the Australian Government's Australian Research Council.

Associate Professor Hawkins is internationally renowned for his ground-breaking work in microscopy techniques. He has developed state-of-the-art imaging technology that investigates the action of drugs in real time and allows the monitoring of drug responses over extended periods. His laboratory is focused on investigating new treatments in blood cancers. Associate Professor Hawkins has received multiple competitive international research grants and fellowships and in 2017 was the runner up for the Centenary Institute Medical Innovation Award. He was also recently awarded a National Health and Medical Research Council of Australia career development fellowship to begin in 2019.

The Victorian Medical Research Acceleration Fund grant of \$100,000 will be used to support a collaboration between Patrys and the Walter and Eliza Hall Institute that aims to develop new reagents that target, penetrate and kill cancer cells.

The work will couple Patrys' PAT-DX1 with the Institute's 7D10 to generate a bi-specific antibody called 7D10-PAT-DX1. 7D10 protein interacts with the Bak protein inside cells to cause cell killing but is unable to pierce a cancer cell's outer membrane and bind to its targets by itself. PAT-DX1 is a novel antibody that can enter and kill cancer cells harboring defective DNA repair mechanism. Combining these technologies by the generation of a bi-specific 7D10-PAT-DX1 antibody will result in a novel antibody that will be able to enter a cell, bind to its targets and act to help circumvent



survival pathways typically employed by cancer. An intra-vital microscopy technique that Associate Professor Hawkins uses will allow following up of the cancer disease to see how the disease is affected when 7D10-PAT-DX1 therapy is introduced.

“Patrys has an established relationship with Dr Kluck and is looking forward to expanding that and building a new relationship with Associate Professor Hawkins. The collaboration should provide data regarding the potential effectiveness of 7D10-PAT-DX1 to kill cancer cells,” said Dr James Campbell, Chief Executive Officer and Managing Director of Patrys. “The State Government’s Victorian Medical Research Acceleration Fund scheme plays a critical role in establishing partnerships between Australian based companies and the research sector,” he said.

Dr Ruth Kluck said she was excited to be working on the new approach to treating cancers and improving patient outcomes. “Working with Patrys we will investigate the effectiveness of this new strategy which combines our two antibodies to target, penetrate and kill cancer cells. We are thrilled to have the expertise of Associate Professor Hawkins, as well as access to his innovative way of observing the cancer cells’ response to treatment over time. We’re grateful to The Victorian Medical Research Acceleration Fund grant program for their support of this project,” Dr Kluck said.

Patrys expects to be able to report on the research findings in 2019.

About Deoxymab 3E10, PAT-DX1 and PAT-DX1-NP

Deoxymab 3E10 is a DNA damage-repair (DDR) antibody that was first identified in lupus as an autoantibody that bound to normal cells. Of particular interest is that whilst 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 and kills cells that have mutations or deficiencies in DNA repair mechanisms as found in various cancer cells. Deoxymab 3E10 has single agent therapeutic potential and 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 tumors.

Patrys has developed a humanized form of Deoxymab 3E10, PAT-DX1 with improved activity over the original version of 3E10, and is progressing this, and a nanoparticle-conjugated form (PAT-DX1-NP) towards the clinic. In a range of pre-clinical cancer models PAT-DX1 has shown significant ability to kill cancer cells in cell models, human tumor explants and xenograft models. PAT-DX1 has also been shown to work synergistically with the approved PARP inhibitor, olaparib. Patrys believes that PAT-DX1 may have application across a wide range of malignancies such as gliomas, melanomas, prostate, breast, pancreatic and ovarian cancers.

Patrys’ rights to Deoxymab 3E10 are part of a worldwide license to develop and commercialize as anti-cancer and diagnostic agents a portfolio of novel anti-DNA antibodies and antibody fragments, variants and conjugates discovered at Yale University.



About the Victorian Medical Research Acceleration Fund

The Victorian Medical Research Acceleration Fund aims to support those in the early stages of health and medical research to translate their work into health and economic outcomes.

The competitive program leverages funding from philanthropic, industry and international sources. It's designed to capitalise on Victoria's comparative advantages in medical research, increase the efficiency of the Victorian health system and further enhance the Victorian economy's investment attractiveness. The Victorian Medical Research Acceleration Fund will provide \$3 million per annum to help address current market gaps and deliver rewards for research.

About the Walter and Eliza Hall Institute of Medical Research

The Walter and Eliza Hall Institute of Medical Research is one of the world's leading medical research centres. The Institute's international reputation has been built upon major contributions to immunology, haematology, cancer, malaria and autoimmune diseases, including diabetes, multiple sclerosis, coeliac disease and rheumatoid arthritis. Over many decades, advances and discoveries in these areas have led to significant benefits for patients throughout the world. The Institute is at the front line of the biotechnology revolution, using advances in genetics, bioinformatics and structural biology to help develop individualised therapies and more effective drugs. Further information about the Institute can be found at www.wehi.edu.au

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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.