

Media Release

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PHARMAXIS DRUG DISCOVERIES TO BE STUDIED BY RESPECTED SCIENTIFIC COLLABORATORS FOLLOWING GOVERNMENT GRANTS OF \$1.4M TO ADVANCE CANCER AND SKIN DISEASE TREATMENTS

Highlights:

- Associate Professor Thomas Cox from the Garvan Institute of Medical Research has been awarded an \$827,500 NHMRC Development Grant to lead a multidisciplinary team investigating PXS-5505 as a promising new treatment approach for pancreatic cancer.
- Professor Fiona Wood and Associate Professor Mark Fear of the University of Western Australia have been awarded a \$590,200 NHMRC Drug Development Grant to work on a novel small molecule from the Pharmaxis pre-clinical pipeline for tissue repair and inflammatory skin disease.

Clinical stage biopharmaceutical company Pharmaxis (ASX: **PXS**) has welcomed new drug development grants from the Australian Government awarding NHMRC funding to two renowned research teams to advance work they are conducting with two Pharmaxis discoveries.

A new approach for pancreatic cancer

Associate Professor Thomas Cox from the Garvan Institute of Medical Research has been awarded an \$827,500 NHMRC Development Grant to lead a multidisciplinary team investigating PXS-5505 as a promising new treatment approach for pancreatic cancer.

Collaborating with Pharmaxis, the Garvan-led team will conduct further preclinical studies of the experimental treatment in combination with chemotherapy. As part of this work, the team will also aim to validate biomarkers they previously identified as a potential tool to guide which patients are most likely to benefit from the therapeutic approach, and to monitor treatment response in real time.

PXS-5505 is already being separately studied by Pharmaxis in a phase 2 clinical trial of the bone cancer myelofibrosis with an IND also granted to explore its potential in liver cancer.

Pancreatic cancer is an aggressive cancer with a five-year survival rate of less than 10% and where treatment resistance to existing chemotherapy is a significant problem.

Associate Professor Cox said, "Treatment resistance in pancreatic cancer is partially driven by fibrosis – a process by which scar tissue builds up throughout and around the tumour tissue. This scar tissue can prevent treatments from reaching their tumour target and also stimulate cancer growth and spread. Tumours need specific enzymes called lysyl oxidases to build the main constituent of this damaging scar tissue. Our preclinical studies in experimental models have revealed that targeting lysyl oxidases can reduce fibrosis and improve the efficiency of chemotherapy. Further, they have pointed us to an experimental therapy that we will now help progress to clinical trials."

New treatments for tissue repair and inflammatory skin disease

Professor Fiona Wood and Associate Professor Mark Fear, from UWA's Burn Injury Research Unit, together with Dr Mehra Haghi, University of Technology Sydney, and Pharmaxis have been awarded \$590,264 to examine a Pharmaxis' serine protease inhibitor as a potential new treatment for tissue repair and inflammatory skin disease.

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Slow tissue repair, excessive scarring and many skin diseases are driven by the body's inappropriate or excessive immune response to an injury or environmental trigger. A key enzyme class that cause this excessive response are serine proteases which will be targeted in the research work.

Associate Professor Fear said, "It is great to be working with Pharmaxis on a new compound and drug target to modify tissue repair and inflammatory skin disease. As our previous collaboration with the anti-fibrotic drug PXS-6302 now moves into clinical trials, this new grant gives us an opportunity to target a new pathway with the potential to improve the healing trajectory for patients, reducing time in hospital and improving their outcomes."

Commenting on the two grants, Gary Phillips, Chief Executive Officer said, "We are delighted that the long term scientific collaborations we have with the Garvan, UTS and UWA have been recognised in an extremely competitive government grant process that historically only awards 10% of submissions. Together, our work aims to support commercialisation of new treatment approaches for pancreatic cancer and various skin diseases, which we hope will deliver significant benefits for patients."

The NHMRC Drug Development Grant scheme provides financial support to individual researchers and/or research teams to undertake health and medical research within Australia at the proof-of-concept stage that specifically drives towards a commercial outcome by the industry partner within a foreseeable timeframe.

Pharmaxis has an experienced drug development team with a world leading expertise in amine oxidase chemistry that has discovered numerous drugs that act on inflammation and fibrosis. Five of those drugs have progressed into human studies after successful completion of pre-clinical testing.

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SOURCE: Pharmaxis Ltd, Sydney, Australia

Link to NHMRC development grants outcomes: [Development Grants | NHMRC](#)

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About Pharmaxis

Pharmaxis Ltd is an Australian clinical stage drug development company developing drugs for inflammatory and fibrotic diseases, with a focus on myelofibrosis. The company has a highly productive drug discovery engine built on its expertise in the chemistry of amine oxidase inhibitors, with drug candidates in clinical trials. Pharmaxis has also developed two respiratory products which are approved and supplied in global markets, generating ongoing revenue.

Pharmaxis is developing its drug PXS-5505 for the bone marrow cancer myelofibrosis which causes a build up of scar tissue that leads to loss of production of red and white blood cells and platelets. The US Food and Drug Administration (FDA) has granted Orphan Drug Designation to PXS-5055 for the treatment of myelofibrosis and permission under an Investigational Drug Application (IND) to progress a phase 1c/2 clinical trial that began recruitment in Q1 2021. PXS-5505 is also being investigated as a potential treatment for other cancers such as pancreatic cancer. The FDA has granted an IND for a phase 1c/2a clinical trial in liver cancer.

Other drug candidates being developed from Pharmaxis' amine oxidase chemistry platform are targeting fibrotic diseases such as kidney fibrosis, NASH, pulmonary fibrosis and cardiac fibrosis; fibrotic scarring from burns and other trauma; and inflammatory diseases such as Duchenne Muscular Dystrophy.

Pharmaxis has developed two products from its proprietary spray drying technology that are manufactured and exported from its Sydney facility; Bronchitol® for cystic fibrosis, which is approved and marketed in the United States, Europe, Russia and Australia; and Aridol® for the assessment of asthma, which is approved and marketed in the United States, Europe, Australia and Asia.

Pharmaxis is listed on the Australian Securities Exchange (PXS). Its head office, manufacturing and research facilities are in Sydney, Australia. www.pharmaxis.com.au

About Garvan Institute of Medical Research

The Garvan Institute of Medical Research is a leading multi-disciplinary biomedical research institute in Sydney. With 600 of the world's brightest scientific minds working under one roof, collaborating across different areas of research and using the best technologies to investigate diseases, Garvan have revealed causes and treatments for diseases including diabetes, osteoporosis, cancer, immune deficiency and autoimmunity. www.garvan.org.au

Forward-looking statements

Forward-looking statements in this media release include statements regarding our expectations, beliefs, hopes, goals, intentions, initiatives or strategies, including statements regarding the potential of products and drug candidates. All forward-looking statements included in this media release are based upon information available to us as of the date hereof. Actual results, performance or achievements could be significantly different from those expressed in, or implied by, these forward-looking statements. These forward-looking statements are not guarantees or predictions of future results, levels of performance, and involve known and unknown risks, uncertainties and other factors, many of which are beyond our control, and which may cause actual results to differ materially from those expressed in the statements contained in this document. For example, despite our efforts there is no certainty that we will be successful in developing or partnering any of the products in our pipeline on commercially acceptable terms, in a timely fashion or at all. Except as required by law we undertake no obligation to update these forward-looking statements as a result of new information, future events or otherwise.