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\$2.2m funding for new research centre

Murdoch University is leading a major research collaboration which will bring the latest metabolic phenotyping technology to Australia.

The Australian Research Council (ARC) has announced almost \$2.2m in funding to establish the new Australian Metabolic Phenotyping Centre (AMPC) at Murdoch.

Metabolic phenotyping is a powerful tool for wide ranging biological studies, offering a greatly enhanced range of metabolic analysis.

This technology can identify the precursors, intermediates and products of metabolism interacting within a biological system, ensuring they are quantitatively measured.

Associate Professor Robert Trengove, from Murdoch University's Separation Science Laboratory, is Chief Investigator on the project.

He said: "This is a game changing development and will allow Australian scientists to be part of the initiative for many of today's global challenges in human and animal health, crop production and the environment.

"Metabolic phenotyping provides the ability to stratify patients and animals and implement precision medicine, while also stratifying crops for precision agriculture.

"This Centre will be able to undertake population-scale metabolic phenotyping".

The funding is the result of a consortium of all five Western Australian (WA) universities: Murdoch University; Curtin University; the University of Western Australia (UWA); Edith Cowan University (ECU) and The University of Notre Dame Australia (UNDA).

Partners also include the Telethon Kids Institute, the Harry Perkins Medical Research Institute, the Pawsey Supercomputing Centre in Perth, the EPICentre at the University of New South Wales and the Western Australian Health Translation Network (WAHTN).

Internationally, the AMPC will be partnered with the UK MRC-NIHR National Phenome Centre, led by Professor Jeremy Nicholson at Imperial College London, and the Singapore Phenome Centre, based at Nanyang Technological University.

As a partner in a greater global collaboration, the AMPC will support research of high-impact and in important areas, addressing a wide range of biological and biomedical research needs.

Once established, the AMPC will provide a unique resource to WA and Australia by centralising existing world class expertise in analytical chemistry, computational biology, data modelling and visualisation.

The Centre will serve biological and life sciences, clinical and biomedical sciences, analytical chemistry, toxicology, animal and crop sciences, wildlife conservation and sports science.

Each university will play a specific role in the Centre's capabilities, with Murdoch University providing mass spectrometry expertise; experimental design and data science at ECU; spectroscopy at UWA; high performance computing at Curtin; clinical research at UNDA, and advanced visualisation at UNSW.

The primary aim of the AMPC is to lead Australian metabolic phenotyping research and promote Australian scientific strength through global engagement, ensuring Australian scientists remain globally competitive.

Professor Peter Klinken, Chief Scientist of Western Australia, said: "This is a wonderful outcome for WA, which positions the State as a global leader in the rapidly developing area of phenomics.

"Congratulations to all the WA universities for working collaboratively to submit this as a combined application."

Professor John Challis, Executive Director of the Western Australian Health Translation Network (WAHTN), said: "This is a fantastic development which will allow us to provide leadership in phenomics and personalised medicine.

"Not only within Australia, but this will also contribute to international developments in this area through our role as a member of the international phenomics consortium and as a training hub for South East Asia."

This initiative was supported by a proof of concept grant awarded through Telethon Perth Children's Hospital Research Fund, which is a joint initiative of the WA Department of Health and the Channel 7 Telethon Trust.

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