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DISCOVERY BY FEDERATION RESEARCHERS OPENS DOOR TO NEW IMMUNE THERAPIES

A team from Federation University Australia have discovered how an important type of immune cell develops in humans, which could pave the way for a new generation of medical treatments.

Professor Stuart Berzins from Federation's Institute of Innovation, Science and Sustainability is co-lead of the research project that has revealed new information about how the dominant subset of *gamma-delta* T cells develop in the human body. These cells play a key role in the body's immune response against a wide range of illnesses, including cancer and microbial infections, but their development has been poorly understood.

The study found that *gamma-delta* T cells are produced continually through our lives in the thymus organ, countering previous scientific doctrine that they were only produced during foetal development. Furthermore, the study identified how these important immune cells develop, which provides new pathways to treat or prevent illnesses dependent on *gamma-delta* T cells.

This pioneering study is the result of a collaboration between Federation University's Professor Berzins and PhD student Louis Perriman, and a group led by Associate Professor Daniel Pellicci at the [Murdoch Children's Research Institute](#). The work has been accepted for publication in the prestigious [Science Immunology](#) journal and the authors have been invited to present their findings at several international conferences and scientific institutes.

The project team has applied for a grant from the [National Health and Medical Research Council](#) to fund further research into *gamma-delta* T cells to support the development of new immune-based therapies.

Quote attributable to Professor Stuart Berzins, Group Leader, Human Immunology, Institute of Innovation, Science and Sustainability at Federation University Australia.

"The international recognition this research is receiving is very gratifying. It confirms the importance of the discoveries we have made and shows that Federation University continues to produce world-leading research, including in the area of Immunology, which is more traditionally associated with larger metropolitan universities and institutes."

About Federation University Australia

With a history spanning over 150 years, Federation University Australia is Victoria's premier regional dual-sector university with campuses located in Ballarat, Berwick, Brisbane, Gippsland and Wimmera. From 2018-2022 Federation ranked first in Australia for first-generation student

enrolments. In a first for Australia, the globally recognised co-operative education model will be embedded across all Federation programs from 2025.