

Australia injects \$18 M into novel CAR-T cell therapy

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CAR-T cells engineered to have increased efficacy and an improved safety profile



A “precision guided” CAR T-cell therapy designed at Peter MacCallum Cancer Centre, Australia’s only public health service dedicated to caring for people affected by cancer, to kill solid tumours will progress to a first-in-human clinical trial.

This project, led by Professors Paul Beavis and Jane Oliaro, has received a \$17.7 million Frontier Health and Medical Research Grant from the Medical Research Future Fund (MRFF).

The novel “precision guided” CAR T-cell therapy will be clinically trialled first in a blood cancer (multiple myeloma) as a validating step towards a later trial in solid tumours, likely in breast or lung cancer.

Compared to conventional CAR T-cells, the Precision Guided Munition (PGM) CAR T-cells are engineered to localise the “cytokine response” to the targeted cancer. It is thought this could improve efficacy and reduce toxicities in both blood and solid tumour cancers.

Professor Beavis and his team conducted the fundamental discovery research, and this funding will enable him to work with Professor Oliaro and the Centre of Excellence in Cellular Immunotherapy to translate this discovery into a novel CAR-T cell product for testing in a first-in-human trial at Peter Mac.

The Centre of Excellence in Cellular Immunotherapy will partner with on-site manufacturing company, Cell Therapies Pty Ltd, who will manufacture the clinical product that will be initially tested in patients with myeloma in a trial led by Professor Simon Harrison.