

Next Generation Cancer Immunotherapies

Project Description

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PhD Program attached to a UQ research project scholarship

Description:

Our laboratory focuses on rare white blood cells called dendritic cells (DC) that initiate and orchestrate immune responses. They are critical for the generation of protective immunity against infections and cancer but also drive deleterious immune responses that cause autoimmune disease and allergy. Understanding DC biology in humans has enormous potential to develop new therapeutics and improve outcomes for millions of patients afflicted by these diseases.

This project will unravel the mechanisms by which human dendritic cells promote immune responses against cancer and how tumour cells manipulate dendritic cells to subvert immune responses. You will utilise cutting-edge techniques, including advanced culture systems, novel human immune cell and tumour models, multidimensional flow cytometry, imaging, CRISPR/Cas9 and bioinformatics. The project will deliver impactful new knowledge that will be applied to develop next-generation cancer immunotherapies.

Expected outcomes and deliverables:

The successful candidate will join a world-class collaborative research team at the Mater Research Institute – The University of Queensland (MRI-UQ), based within the Translational Research Institute (TRI) in Brisbane's thriving biomedical precinct. This unique environment offers access to state-of-the-art facilities at TRI, mentorship from industry-leading researchers and professional development opportunities. Integration with Mater's hospitals and health services, provides an exceptional environment for bench-to-bedside research.

Suitable for:

A student with working knowledge of cancer immunology, molecular biology, flow cytometry and bioinformatics would be of benefit to someone working on this project.

You demonstrate academic achievement in the field/s of immunology and or cancer biology and the potential for scholastic success.

A background or knowledge of dendritic cells and human immunology is highly desirable.

Primary Supervisor:

Professor Kristen Radford

Mater Research Institute-UQ

View Professor Kristen Radford's profile

Further info:

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