

**May 24, 2024 (Fri) 15:00-16:00**

**Venue: Medical Innovation Center Bldg. (Bldg. No.56)  
Seminar Room (1F)**



## Professor Di Yu

Chair in Paediatric Immunotherapy,  
Professor of Immunology,  
Director of the Ian Frazer Centre of Children's Immunotherapy Research,  
University of Queensland

# “Ferroptosis in T cells: bridging systemic metabolism with immune function”

Ferroptosis is increasingly recognised as a critical non-apoptotic programmed cell death pathway, significantly impacting the homeostasis and functionality of peripheral CD8+ and CD4+ T cells. Our recent studies have revealed that TFH cells, which are crucial in regulating the dynamics of humoral immunity and vaccine response, demonstrate elevated lipid peroxidation and are particularly susceptible to ferroptosis. The enzyme glutathione peroxidase 4 (GPX4), a key scavenger of lipid peroxidation, is essential for TFH cell survival. Moreover, we have pinpointed several metabolic pathways that enhance T cell resistance to ferroptosis, thus modulating both humoral and cellular immunity across animal models and human subjects. These insights underscore the unique influence of ferroptosis in controlling T cell homeostasis and present a promising therapeutic avenue to boost T cell efficacy in vaccination and anti-tumour immunity.



**Admission free.**  
**No advance registration required.**  
**Mark your calendar and join us!**

Organized by  
Center for Cancer Immunotherapy  
and Immunobiology (CCI)  
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