

# SigN SEMINAR

Hosted by Dr WANG Cheng-I

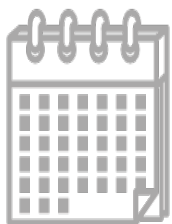


## Ms Cheok Weng (Cherry) CHAN

PhD Candidate  
Peter MacCallum Cancer Centre  
Melbourne, Australia

### Crosstalk of Dendritic Cells and T Cells in Improving Cancer Immunotherapy

Adoptive cell transfer (ACT) therapy using patient-derived T cells genetically engineered to express a chimeric antigen receptor (CAR) is highly effective in B cell malignancies and is now FDA-approved. However, tumor heterogeneity remains a major challenge in treating solid tumors due to the relapse of tumors negative for CAR-targeted antigen. Previous work from their group demonstrated that CAR T cells engineered to secrete dendritic cell (DC) growth factor Fms-like tyrosine kinase 3 ligand (Flt3L) promote host anti-tumor immunity to effectively eradicate heterogeneous tumors by expanding intratumoral conventional type 1 dendritic cells (cDC1) (Lai et al. 2020 Nat Immunol). cDC1 is well-reported to be a critical mediator in activation of anti-tumor cytotoxic responses. A key aspect of this study was that despite the increased population of intratumoral cDC1s, cDC1s required a second activatory stimulus to elicit anti-tumor immunity. In Cherry's PhD, she has developed strategies to enhance CAR T cell efficacy in solid cancers by promoting cDC1 recruitment and activation to overcome tumour heterogeneity. As co-first author of a recent *Nature Immunology* publication, she demonstrated that Flt3L mediates differentiation of stem-like CD8+ T cells, improve their maintenance and activation during immune checkpoint blockade treatment.



**04 May 2026 (Monday)**  
**10 – 11 AM (Singapore Time)**

**SigN Seminar Room**  
**8A Biomedical Grove, Immunos, #04-06**  
**Singapore 138648**

*Seminar is open for all to attend.*

*Registration is not required.*

