

# ARMI EXTERNAL SEMINAR SERIES 2020



10 YEARS  
2009-19

## Development of Tissue-resident Lymphocytes

Professor Laura Mackay

The Peter Doherty Institute for Infection and Immunity

### Abstract

Tissue-resident memory T cells are critical mediators of viral and tumor immunity and are increasingly being recognized as key players in autoimmune and allergic pathologies. Despite this, targeting tissue-resident lymphocytes specifically is currently difficult, as their developmental requirements are only partially understood. Using genetic and molecular approaches in combination with animal models, we have identified common genes and molecular pathways that drive the tissue-resident cell fate, as well as tissue-specific factors that imprint distinct gene signatures on immune cells that reside in different microenvironments. Combined, this work provides a molecular framework for tissue-resident lymphocyte differentiation, revealing novel pathways that may be targeted therapeutically.

### Bio

Professor Laura Mackay holds appointments at The Peter Doherty Institute at The University of Melbourne and A\*STAR in Singapore. She is a Howard Hughes Medical Institute (HHMI) and Bill & Melinda Gates International Scholar, a Sylvia & Charles Viertel Charitable Foundation Senior Medical Research Fellow and an NHMRC Leadership Investigator. She is the recipient of Awards including The 2019 Prime Minister's Prize for Life Scientist of the Year, The Gottschalk Medal (Australian Academy of Science), The Eureka Prize for Outstanding Early Career Researcher, The Woodward Medal in Science and Technology, The Michelson Prize for Human Immunology and The Victorian Young Tall Poppy Award. She is also the current President of The Federation of Immunological Societies of Asia-Oceania (FIMSA). For a number of years, Laura has been at the forefront of research into tissue-resident immune cells and their role in local immunity. The focus of her Laboratory is on the molecular signals that govern tissue-resident memory T cell differentiation, with a view to harness these cells for the development of new immunotherapeutic strategies against disease.

### EVENT DETAILS

#### DATE:

Tuesday, 7<sup>th</sup> July 2020

#### TIME:

11:00am

#### ZOOM:

<https://monash.zoom.us/j/96107931723>

Or, go to <https://monash.zoom.us/join> and enter meeting ID: 961 0793 1723

#### HOST:

Professor Jose Polo



The Australian Regenerative Medicine Institute (ARMI) acknowledges the generous support of Monash University and the Victorian State Government.