Dissecting the evolution of immune responses to infection in lymphoid organs

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The initiation of immune responses to pathogens involves a complex series of interactions between lymphocytes and dendritic cell (DC) subsets. These events occur within the lymphoid tissues, which are highly structurally and functionally organised to support the orchestration of adaptive immunity. Subsets of stromal cells provide critical signals for immune cell migration and homeostasis, as well as controlling the hypertrophy of lymphoid tissues in response to inflammation. Using advanced imaging, transgenic and molecular tools we are dissecting the generation of T cell responses to virus infection and the roles of stromal cells in lymph nodes and spleen.

Associate Professor Scott Mueller is an ARC Future Fellow and Lab head in the Department of Microbiology and Immunology at the University of Melbourne, located in the Peter Doherty Institute for Infection and Immunity. He completed his PhD at the University of Melbourne, before working as a post-doc in the USA with Prof. Rafi Ahmed, and then Dr Ronald Germain, before returning to start his own group. He has contributed fundamental insight into the dynamics of T cell activation and the roles of dendritic cell subsets, the generation and functions of tissue-resident memory T cells, and the roles of stromal cells in lymphoid organs. His laboratory is continuing work on these areas, as well as examining neural regulation of T cell responses and developing new methods for the imaging and quantification.

Please contact Andrea Johannessen (andrea.johannessen@monash.edu) if you would like to meet with Scott after the seminar.