Beyond Insulin:
Innovative research in T1D prevention and cure

AUSTRALASIAN TYPE 1 DIABETES IMMUNOTHERAPY COLLABORATIVE

Speaker's name: Professor Simon Barry

Seminar date: Friday July 31, 2026 – 1-2pm AEST

Seminar title: Using Immunogenomics to unravel the drivers of progression in T1D: the path to prevention and cure?

Registration link: Register here

About the speaker: Prof Barry leads a collaborative research program which has both a basic science and a translational component. He is focused on Immunogenomics and immunotherapeutics in acute and chronic diseases. Prof Barry has over 25 years of research experience in the cell and molecular biology of human T cells, and the manipulation of these cells to model gene function. He has also worked in the biotech sector in immune therapeutics, so has an ongoing interest in both basic and applied medical research. In basic research he has applied Immunogenomics capability in both the immune tolerance and cancer immunology settings. By forming strong collaborations, he has made significant contributions to the field, including papers in Nature Immunology, Immunity and Nature Cell Biology, delivering an innovative and productive research program at the cutting edge of genomics and immunology. Prof Barry is a chief investigator on the ENDIA longitudinal pregnancy birth cohort from birth to age 10 in children at risk from type 1 Diabetes. This research program is exploring the environmental determinants of type 1 diabetes. Prof Barry was awarded a JDRF innovation grant and a JDRF Genomics grant to connect the genetic risk of T1D to the genes that are altered over each stage of progression using the ENDIA longitudinal cohort, which is critical to find the driver genes of seroconversion and autoimmune progression, so that new treatment and prevention trials can be developed. These research programs and funding successes have enabled him to build a research platform for applied immunogenomics and immunotherapies.

Brief outline of seminar content: We have identified changes in the transcriptional programs of immune cell subsets linked to beta cell tolerance using a deep multiomics platform applied to samples before and after seroconversion in the ENDIA cohort. We are investigating how theses changes in gene regulation and gene expression link to altered function, and whether there are specific genetic or epigenetic signatures that drive this change. We aim to then target the key driver gene pathways to test whether we can restore tolerance or prevent loss of tolerance before it occurs.

For more information about the seminar series, please contact Michelle So mso@svi.edu.au