

The Centre for Blood Research presents

CBR SEMINAR SERIES



Wednesday, February 21, 2024
1:00PM - 2:00PM PT

Life Sciences Centre
1003 (LSC3) & Zoom

“Engineering Tregs for Tolerance Induction.”

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Regulatory T cells (Tregs) regulate immune homeostasis through a variety of mechanisms and are being explored as a cell-based therapy to dampen inflammation and induce tolerance in the settings of transplantation and autoimmunity. Evidence shows that Treg therapy is safe and well-tolerated, but efficacy remains undefined and could be limited by poor persistence *in vivo* and lack of antigen specificity. With the advent of new genetic engineering tools, it is now possible to create bespoke “designer” Tregs that not only overcome possible limitations of polyclonal Tregs, but also introduce new features. I will discuss our recent work to engineer Tregs with chimeric antigen receptors as a strategy to increase potency. I will also discuss how advanced engineering approaches can be used to further enhance function. The year 2022 marked the entry of these so-called “designer” Tregs into the clinic, with exciting potential for application and efficacy in a wide variety of immune-mediated diseases.

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