

Donnelly Centre for Cellular + Biomolecular Research UNIVERSITY OF TORONTO



"Structure-based approaches to characterize and manipulate cytokine signaling"



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> Thursday, March 13, 2014 11:00 a.m. - 12:00 p.m. James Friesen | Cecil Yip Red Seminar Room Donnelly Centre

Abstract:

Class-2 cytokines form a family of ~28 proteins involved in regulating immune responses to virus and bacteria. The Walter lab has been using x-ray crystallography and other methodology to elucidate the molecular recognition principles by which these cytokines engage their cell surface receptors. This talk will 1) Describe current biochemical, animal and clinical sample studies undertaken to extend our understanding of cytokine function and 2) Describe how this information may contribute to new diagnostics or therapeutic interventions. Towards these goals, the lecture will focus on two cytokines; IL-10 and type-I interferon. IL-10 is an immunosuppressive cytokine that has been incorporated into herpes virus genomes to gain an advantage over the host. Type I interferon are anti-viral and anti-cancer drugs, yet also contribute to the initiation and progression of autoimmune disease.

Host: Sachdev Sidhu