

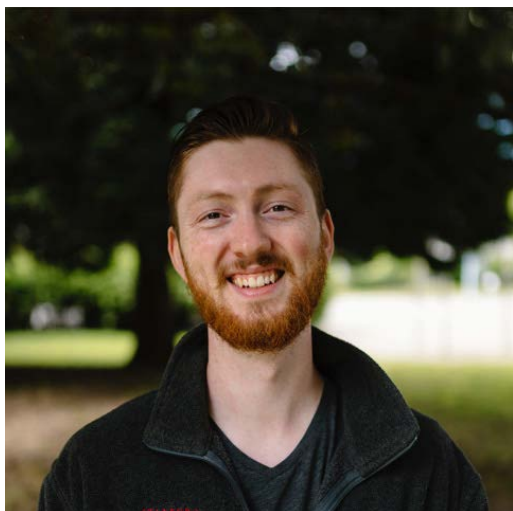
The Centre for Blood Research presents

# CBR SEMINAR SERIES



Wednesday, September 20, 2023  
1:00PM - 2:00PM PT

Life Sciences Centre  
1003 (LSC3) & Zoom



## Dr. Nathanael A. Caveney

Centre for Blood Research, Faculty of Medicine,  
University of British Columbia

### “Imaging and Engineering Cytokine Signalling”

My work is largely focused on the key roles which transmembrane receptors play in human physiology and the modulation of these receptor systems for therapeutic benefit. Here, I discuss the imaging and engineering of a handful of cytokine related systems. Cytokines are key signalling molecules, most well known for their outsized role in immune signalling. My work spans a number of these cytokine receptor systems, utilising protein engineering strategies to assist in their imaging and structural determination. As well, we show how structure guided engineering strategies can be employed to unravel fundamental molecular principles of cytokine subfamilies. Finally, we use determined structures to guide the engineering of molecules which modulate some of these pathways for therapeutic benefit.

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