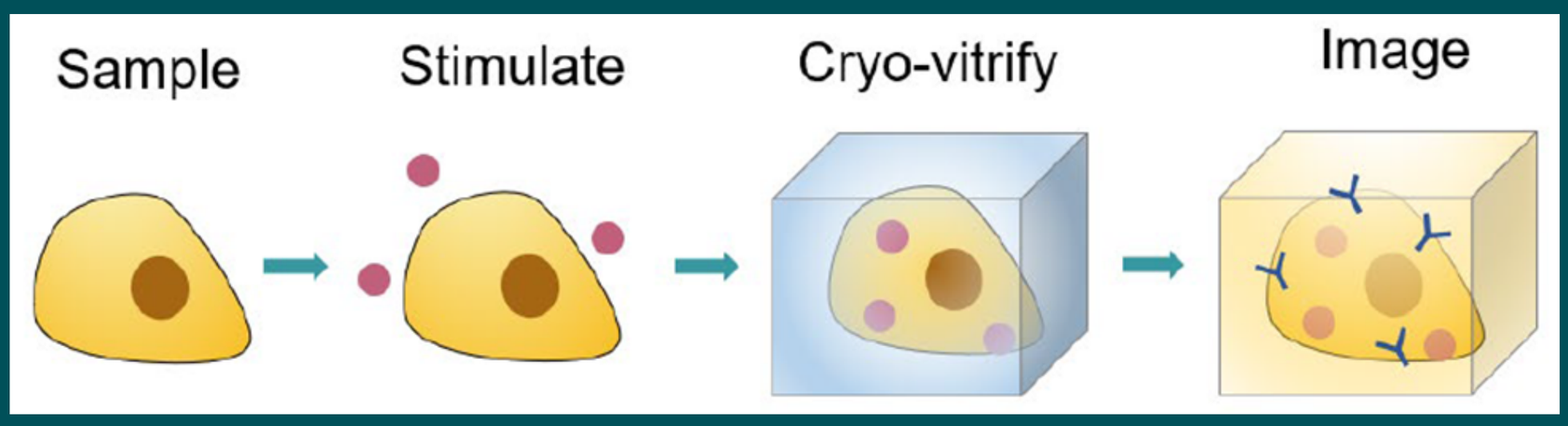
Chemical & Physical Sciences
UNIVERSITY OF TORONTO
MISSISSAUGA

COLLOQUIUM SEMINAR SERIES

TOWARDS NANOSCALE SINGLE-CELL PHARMACODYNAMICS



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G-protein-coupled receptors (GPCRs) form the largest and the most druggable class of transmembrane receptors in humans. Emerging evidence suggests that dynamic nanoscale organization of GPCR signaling compartments in cells is an important driver of cell signaling. However, for technical reasons – a lack of a combination of temporal and spatial resolution – the pharmacodynamics of GPCR signaling in cells is difficult to visualize. To this end, we are developing a suite of tools that will allow freezing cells and tissues after defined time delays following stimulation with a drug for subsequent high-resolution optical and electron imaging. Our long-term goal is to use this approach to understand the role of spatiotemporal dynamics in determining GPCR signaling outcomes. Moreover, since many cellular processes are initiated by ligands, our methods will likely be broadly useful for revealing dynamic cellular processes.

Colloquium Seminar Series
Wednesday, March 30, 2022
Join us on Zoom at 3:10pm
https://utoronto.zoom.us/j/88646928603