

ARNOLD HAYER, PhD

McGill University

Assistant Professor, Department of Biology

Hosted by: Dr. Susanne Bechstedt



Wednesday, May 22, 2019

11:30 am

Room 1/12

Strathcona Anatomy Building
3640 University Street

“Exploring mechanisms controlling collective endothelial cell migration”

The coordinated movement of groups of cells, termed collective cell migration, is fundamental to many developmental, repair, and disease processes. Collectively migrating cells are self-propelled, but they coordinate their movements through neighbor-neighbor interactions. Within individual cells, cell propulsion is driven by protrusive and contractile actin cytoskeletal dynamics, as well as by their coupling to the substrate. A major question in the field of collective cell migration has been how polarity signals are transmitted from one cell to another across symmetrical cadherin junctions. During my talk, I will first introduce cadherin fingers, asymmetric junctional structures between collectively migrating cadherin fingers, and discuss how they are involved in collective cell guidance. I will then talk about our current approaches to study RhoGTPase signaling using FRET-based biosensors and how RhoGTPase signaling dynamics are coordinated between neighboring, collectively migrating cells.