Department of Anatomy & Cell Biology Seminar Series

Li-Av Segev-Zarko, PhD
Post-Doctoral Scholar
Department of Microbiology and Immunology
Stanford University

How One Eukaryotic Cell Invades Another: Dissecting Invasion by Apicomplexa

The phylum Apicomplexa includes several of the most prevalent and important human eukaryotic pathogens, such as Plasmodium spp., the causative agent of malaria, and Toxoplasma gondii, the causative agent of toxoplasmosis. These parasites can only grow inside a host cell, having evolved to overcome the challenge of gaining entry. To enter a host cell, the ~6000 species in this phylum deploy a remarkable and conserved machinery consisting of cytoskeleton elements and specialized secretory organelles from their anterior, apical end. To date, the means by which the many steps of invasion are accomplished are essentially unknown, but their elucidation would be of tremendous interest for both the discovery of novel cell biology, and the ability to interfere with infection by medically relevant parasites. My future lab will build upon my postdoctoral work using spatial resolution to study cellular processes. Our goals, therefore, are to use molecular and biochemical tools coupled with advanced imaging techniques to achieve subnanometer resolution of the structures involved in invasion and determine the processes driving Apicomplexa entry.

Wednesday, Apr. 19, 2023
11:30am - 12:30pm

Room 1/12 - Strathcona Anatomy and Dentistry Building

Join us in room 1/53 after the seminar for an opportunity to meet the speaker over a pizza lunch!

Hosted by: Joaquin Ortega, PhD

McGill