



a place of mind

THE UNIVERSITY OF BRITISH COLUMBIA

## Department of Cellular and Physiological Sciences



### Sarah Kucenas, Ph.D

University of Virginia

Associate Professor

Department of Biology

**\*\*CPS SEMINAR TIME\*\***

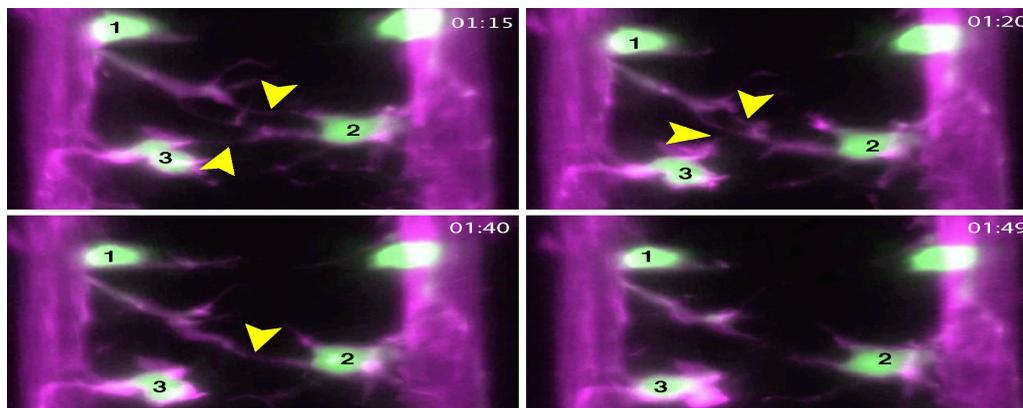
**12:30 PM Thursday, March 14, 2019**

**Location: LSC3**

**Hosted by Dr. Vanessa Auld**

### "Unwrapping Glial Diversity in the Vertebrate Nervous System"

The long-term goal of my research program is to elucidate the mechanisms that mediate glial-glial and glial-neuronal interactions during nervous system development, maintenance and disease/injury. Using *Danio rerio* (zebrafish) as a model system (and to a lesser extent mouse), my lab combines genetic and pharmacological perturbation, single cell manipulation, laser ablation/axotomy, small molecule screening and in vivo, time-lapse imaging to directly and continuously observe glial cell origins, behaviors and interactions in an intact vertebrate. Over the last several years, my lab has been fascinated with the glial cells and glial-glial interactions that occur at these positions in the nervous system. Biologically, we're currently investigating: 1) The mechanisms that mediate migration of CNS-derived peripheral glia from the spinal cord into the periphery, 2) Exploring if CNS-derived peripheral glia are similar to CNS glia, PNS glia, or a hybrid population with features of both, 3) Elucidating the roles and mechanisms that mediate glial-glial interactions across spinal cord TZs, 4) Determining if the molecular mechanisms that mediate glial-glial interactions at TZs are universal and govern glial tiling in both the CNS and PNS as well and 5) Elucidating glial heterogeneity/diversity in the CNS and PNS. By exploring these questions both during development and in injury/disease contexts, our work not only lays the groundwork for a more fundamental understanding of the rules that form a functional nervous system, but will also shed light on mechanisms that could be perturbed in disease.



**Join us for coffee and cookies at Noon in LSC 1416!!!**

For more information please contact Dr.Auld<[auld@zoology.ubc.ca](mailto:auld@zoology.ubc.ca)>