

College of Science Neuroscience Faculty Candidate

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**Tuesday, December 08, 2015
310 Kelly Hall
3:00pm – 4:00pm**

“Glial ensheathment and immigration at nervous system boundaries”



The precise assembly of the central and peripheral nervous systems (CNS and PNS) creates a directional flow of information with sensory information entering the CNS and motor information leaving to the periphery. Despite the importance of this information exchange, the biology that is utilized to organize and maintain areas where the CNS and PNS intersect is largely unknown. My work has focused on these transition regions, revealing a novel mechanism for how glial ensheathment is precisely timed at one interphase zone and identifying a new glial cell-type at a second. Intriguingly, my work shows that while building these transition regions, specific cells must deliberately ignore a restrictive boundary and migrate across it while others do not. By investigating these regions we have begun to understand how both glial and neuronal cell-types from both the CNS and PNS coordinate their migration, differentiation and maintenance, thereby altering our textbook definition of how the central and peripheral nervous system are segregated as two distinct regions.

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