Understanding the Multicellular Response to Injury in the Mouse Spinal Cord

November 12
Tuesday, 12:30 pm
Weekly Colloquium
Billings Building
Rosedale Conference Room

Speaker: Binhai Zheng, Ph.D.
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Host: Yutaka Yoshida, Ph.D.

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Abstract
Our lab studies the mechanisms of axon regeneration and sprouting after central nervous system (CNS) injury using mouse models of spinal cord injury. We started with the myelin-derived inhibitors and recently shifted focus to neuron-intrinsic pathways such as Pten/mTOR and MAP3Ks. We documented an age-dependent decline in axon regeneration and illustrated a multicellular role for the MAP3K12/13 pathway after CNS injury. Our in vivo imaging data supports a synaptic suppression hypothesis of axon regeneration.