

Cells and Circuits for Spinal Cord Motor Control

October 6

Tuesday, 12:30pm–1:30pm

Live Webinar
via Zoom Conference



Speaker: Ariel Levine, M.D., Ph.D.
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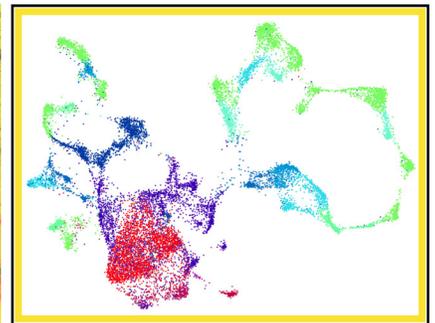
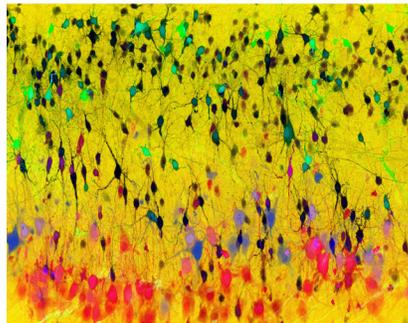
**Hosts: Edmund R. Hollis II, Ph.D.
and Vibhu Sahni, Ph.D.**

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Abstract

The spinal cord is the major link between the brain and the body. It receives cues from the cortex, the brainstem, and other sources, and transforms these diverse inputs into behavior. We seek to understand how the diverse cell types of the spinal cord function together to mediate normal behavior. Ultimately, we hope to use this knowledge to improve recovery for patients with stroke and spinal cord injury. We are guided by three key questions: What are the cell types of the mammalian spinal cord? How do specific spinal cord cell types contribute to motor control? And, how are spinal cord cells incorporated into central nervous system-wide circuits for behavior?



1. Russ, ED*; Patterson-Cross, RB*; Li, L; Koch, SC; Matson, KJE; Levine, AJ. (2020) A Harmonized Atlas of Spinal Cord Cell Types and Their Computational Classification. *BioRxiv*
<https://www.biorxiv.org/content/10.1101/2020.09.03.241760v1>.
2. Sathyamurthy A, Barik A, Dobrott CI, Matson KJE, Stoica S, Pursley R, Chesler AT, Levine AJ. Cerebellospinal Neurons Regulate Motor Performance and Motor Learning. *Cell Rep.* 2020 May 12;31(6):107595. doi: 10.1016/j.celrep.2020.107595. PubMed PMID: 32402292; PubMed Central PMCID: PMC7263484.
3. Sathyamurthy A, Johnson KR, Matson KJE, Dobrott CI, Li L, Ryba AR, Bergman TB, Kelly MC, Kelley MW, Levine AJ. Massively Parallel Single Nucleus Transcriptional Profiling Defines Spinal Cord Neurons and Their Activity during Behavior. *Cell Rep.* 2018 Feb 20;22(8):2216-2225. doi: 10.1016/j.celrep.2018.02.003. PubMed PMID: 29466745; PubMed Central PMCID: PMC5849084.

