Molecular Mechanisms Underlying Neural Connectivity

October 29

Tuesday, 12:30 pm

Weekly Colloquium

Billings Building
Rosedale Conference Room

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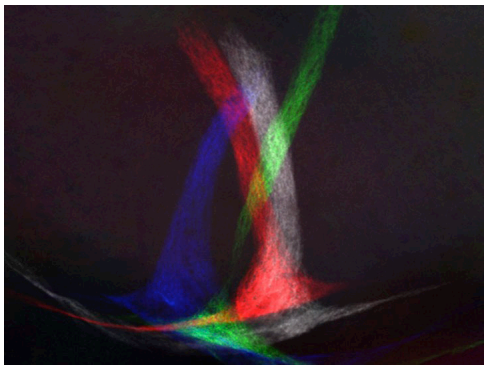
Abstract

We are interested in cellular and molecular mechanisms that mediate neural connectivity, some of which are phylogenetically conserved. The mammalian retina provides is a particularly robust system for examining the molecules and cellular mechanisms that organize neuronal cell bodies and their processes in a precise manner to specific laminae. This presentation will include analyses of the cellular and molecular mechanisms that direct starburst amacrine cell (SAC) bodies and neural processes to their normal laminar locations in the retina. Conserved lamination mechanisms in the Drosophila CNS will also be considered, along with our current efforts to extend our work toward an understanding of neocortical lamination in the mouse.



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3. Wang, Q., Chiu, S.-L., Koropouli, E., Hong, I., Mitchell, S. P., Easwaran, T.P., Hamilton, N.R., Gustina, A.S., Zhu, Q., Ginty, D.D., Huganir, R.L., and Kolodkin, A.L. (2017). Neuropilin-2/PplexA3 receptors associate with GluA1 and mediate Sema3F-dependent homeostatic scaling in cortical neurons. Neuron, 96, 1084-1098 [PCMID: PMC5726806].

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