

Selected Publications

Ozel MN, Langen M, Hassan BA, **Hiesinger PR**. (2015) Filopodial Dynamics and Growth Cone Stabilization in *Drosophila* Visual Circuit Development. *eLife*, 4. pii: e10721. doi: 10.7554/eLife.10721.

Hassan BA, **Hiesinger PR**. (2015) Beyond Molecular Codes: Simple Rules to Wire Complex Brain. *Cell*, 163(2): 285-291.

Langen M, Agi E, Altschuler D, Wu L, Altschuler S, **Hiesinger PR**. (2015) The Developmental Rules of Neural Superposition. *Cell*, 162(1): 120-133.

Wang D, Epstein D, Khalaf O, Srinivasan S, Williamson WR, Fayyazuddin A, Quioco FA, **Hiesinger PR**. (2014) Calcium/Calmodulin regulates SNARE assembly and spontaneous neurotransmitter release via v-ATPase subunit V0a1. *J. Cell. Biol.*, 205(1): 21-31.

Cherry S, Jin EJ, Ozel MN, Lu Z, Agi E, Wang D, Meinertzhagen IA, Chan C-C, **Hiesinger PR**. (2013) Charcot-Maire-Tooth 2B mutations in *rab7* cause dosage-dependent neurodegeneration due to partial loss of function. *eLife*, 2(0): e01064.

Bonn Lecture Series in Neuroscience



Membrane trafficking in Neuronal Development and Maintenance: A Look Through the Fly's Eye

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Wednesday, October 05th 2016, 17:00h
Epileptology, Seminar Room, Ground Floor

How do a few thousand genes determine the unique neuronal properties that underlie the development, function and maintenance of the brain? To approach this question, we utilize a combination of experimental advantages of the fruit fly, *Drosophila melanogaster*, as a model organism. Using genetic approaches, we discovered neuron-specific membrane trafficking machinery that regulates the receptor sorting and signaling required for both the development and maintenance of synapses. This talk will focus on the role of endolysosomal membrane trafficking, as regulated by Rab GTPases, SNAREs and other proteins, that functions at synapses and bestow neurons with its unique properties. The goal is to provide a window into the study of membrane trafficking using fly neurogenetics and how it relates to mechanisms found in other cells.