



Investigating Dendritic Filopodial Dynamics in Highly Controlled Microenvironments

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Date: Tuesday, October 18, 2011
Time: 12:30 – 1:00 p.m. CDT (10:30 – 11:00 a.m. PDT)
Location: 1000 MNTL at Illinois (KL 361 at UC Merced)

Abstract:

The establishment of the intricate wiring of the nervous system relies on filopodial navigation to form complex interconnections between neurons. Until recently, cellular level investigations into filopodial dynamics had focused primarily on axonal growth cone filopodia. Here we focus on their oft ignored cousins—dendritic filopodia, and the cues that guide their development. While being implicated in crucial developmental processes of dendritic morphogenesis, spinogenesis and synaptogenesis, these filopodia have received only limited attention. Our long-term goal is to advance our understanding of the processes that define and modulate the connectivity of neurons in the mammalian brain, with our overall objective being the elucidation of the underlying filopodial dynamics as governed by chemical guidance cues.

References: Millet LJ et al., Lab Chip 2007: 7, 987-994; Millet LJ et al., Lab Chip 2010: 10, 1525-1535; Jain A et al. Neuroscience Meeting Planner. Society for Neuroscience, Chicago. 2009: 722.19/E36.

Seminar Presented by:

