PHYSIOLOGY & MEMBRANE BIOLOGY

SCHOOL OF MEDICINE

UNIVERSITY OF CALIFORNIA AT DAVIS

DISTINGUISHED SPEAKER SERIES

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Graduate Program in Neuroscience
Department of Neuroscience
U.T. Southwestern Medical Center
Dallas, Texas

"Synaptic vesicle trafficking and its impact on neurotransmission"

Synaptic terminals give rise to synchronous, asynchronous and spontaneous neurotransmitter release that are distinguished by their Ca2+-dependence and time course. This presentation will focus on our recent work which addresses whether all forms of neurotransmission originate from the same synaptic vesicle pool, require dynamin-dependent endocytosis for their maintenance and activate the same population of postsynaptic receptors. Our recent findings suggest that evoked synchronous and asynchronous release originate from a single vesicle pool that recycles rapidly in a dynamin-dependent manner leading to the activation of the same set of postsynaptic NMDA receptors. In contrast, an alternate vesicle pool sustains spontaneous release, in a manner that does not rely on canonical dynamin activation, and targets a distinct population of NMDA receptors triggering independent postsynaptic signaling.

Friday, May 15, 2009

10:00 am

GENOME – ROOM 6202

Refreshments Will Be Served

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