

Department of Pharmacology



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the Seminar Series:

Signaling

Neuroscience

Genomics

Frontiers in Pharmacology

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Department of Neuroscience
University of Connecticut Health Center

“Intrinsic and extrinsic determinants of ion channel clustering in neurons.”

The electrical properties of neurons depend not only on the types of ion channels and receptors expressed, but also on the location of these channels in the cell membrane. Two extreme examples that illustrate the subcellular polarized nature of neurons and the tight regulation of ion channel localization can be seen at the axon initial segment and nodes of Ranvier. The axon initial segment is important for initiation of action potentials, while nodes of Ranvier are important for rapid, faithful, and efficient propagation of action potentials. These two polarized membrane domains share a common molecular organization. However, one important difference between these two domains is that nodes require extrinsic, glial derived factors in order to form, whereas the axon initial segment is intrinsically specified by the neuron. I will discuss recent work in my laboratory to elucidate the molecular mechanisms underlying formation of these specialized membrane domains.

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Friday, May 11, 2007

10:00 am

Auditorium (Room 1005) in GBSF

For future seminar information for Pharmacology:

<http://www.ucdmc.ucdavis.edu/pharmacology/>