Cell Biology and Neuroscience Seminar Series

Friday, October 17th

3 pm, 108 Plant BioSciences Building

Dr. Kasper Hansen

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Subtype-selective allosteric inhibition of NMDA receptors

Despite the involvement of NMDA receptors in brain functions and neurological disorders, there remains a surprising lack of ligands that act on NMDA receptors with sufficient subunit-selectivity to allow evaluation of the roles of individual GluN2 subunits in normal brain function and disease. A flurry of clinical, functional, and chemical studies have together re-invigorated efforts to identify subunit-selective modulators of NMDA receptor function, resulting in a handful of new compounds that appear to act at novel sites. The presentation will show data for two of these modulators, namely TCN-201 and QNZ46, which are selective for distinct NMDA receptor subtypes. Evaluation of the structural determinants responsible for their subunit-selectivity suggests that these compounds act at sites on the NMDA receptor that has not previously been described. The binding sites and mechanisms of action for these new subunit-selective modulators are remarkably different and could provide new opportunities for the development of pharmacological tools and therapeutic agents that target NMDA receptors.

Upcoming Seminars:
Friday, October 24
Edward Dratz, Montana State University, Department of Chemistry and Biochemistry
Friday, October 31
Frances Lefcort, Montana State University, Department of Cell Biology and Neuroscience
Friday, November 7
Deborah Levy, Department of Psychiatry, Harvard Medical School

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All are welcome. Refreshments will be served.