The Neurobiology of Information Storage
Training Program (NISTP)

Fifth Annual Lecture
Neuroclinical Approaches to Mood and Mentation

Marina Picciotto, PhD
Charles B.G. Murphy Professor in Psychiatry
Yale University, New Haven, CT

Revisiting and revising the cholinergic hypothesis of depression

There is a well-established connection between smoking and depression, with depressed individuals over-represented among smokers and ex-smokers often experiencing increased depressive symptoms immediately after quitting. Nicotine in tobacco binds to, activates and desensitizes nicotinic acetylcholine receptors (nAChRs), but it is not known whether activation or desensitization is more important for nicotine's effects on depressive symptoms. Our hypothesis is that blockade rather than activation of neuronal nAChRs may be important for the effects of nicotinic agents on depressive symptoms based on clinical and pre-clinical studies of nicotinic drugs. The endogenous neurotransmitter for nAChRs is acetylcholine, and the effects of nicotine on depression-like behaviors support the idea that dysregulation of the cholinergic system may contribute to the etiology of major depressive disorder. Thus, pharmacological agents that limit acetylcholine signaling through neuronal nAChRs might be promising for the development of novel antidepressant medications.

Thursday, 4:00 PM, October 6th, 2011
Hughes Auditorium
Robert H. Lurie Medical Research Center
303 E. Superior St., Chicago Campus

A reception will follow the lecture

Host: Professor Anis Contractor. For more information please contact: s-stade@northwestern.edu