



**Center for Translational Neuroscience
Distinguished Lecture Series**

Tuesday, March 13, 12 noon
Rayford Auditorium, Biomed II Bldg.

**“Neuroepigenetics of gamma oscillations
in the pedunculopontine nucleus.”**

Francisco J. Urbano, Ph.D.

Associate Professor
Universidad de Buenos Aires
Buenos Aires, Argentina

Epigenetic mechanisms play a role in regulation of gene expression in response to a wide range of environmental stimuli. The pedunculo pontine nucleus (PPN) is the arm of the reticular activating system that modulates ascending stimuli through the thalamus to modulate arousal, and descending projections through the pons and medulla to modulate posture and locomotion. It controls waking and REM sleep.

Recent reports from our group described the presence of intrinsic gamma oscillations mediated by voltage-dependent, high threshold N- and P/Q-type Ca^{2+} channels that are present in every PPN neuron.

Dr. Urbano will discuss his latest results obtained in collaboration with Dr. Garcia-Rill. These breakthrough results reveal the modulation of high threshold Ca^{2+} channels by *in vitro* exposure to histone deacetylation inhibitors, opening an important new line of research at the Center for Translational Neuroscience on the neuroepigenetics of arousal.