IMCB Invited Speaker

Speaker : **Prof. Leslie Griffith**
Director, Volen National Center for Complex Systems,
Brandeis University, USA

Date : 1 August 2013 (Thursday)

Time : 11:00AM - 12:00PM

Venue : Level 3, IMCB Seminar Room 3-46, Proteos, Biopolis

Host : Prof. Wanjin Hong

Seminar :

Sleep: Insights into human behavior from an insect model system

Why and how we sleep has been a matter of speculation and study for millennia. Every day our brains cycle between waking and sleeping states. Both of these brain states are highly active, but the nature of the activity and the connection of the brain to the outside world in each state are distinct. Primate and rodent model systems have provided great insights into sleep, but the circuitry in these organisms is quite complex. The recent finding that insects sleep suggests that Drosophila melanogaster, a simple and genetically tractable organism, can be used to study this process.

In recent years, work from my lab and others has exploited the new genetic and electrophysiological tools available in Drosophila to push forward our understanding of sleep by identification and manipulation of the underlying circuitry. In this talk I will discuss the evolutionary conservation of sleep at the behavioral and circuit levels in the fly and how dissection of the circuitry in this organism may allow us to understand the fundamental nature of sleep regulation.

About the Speaker :

Leslie Claire Griffith was born in Michigan and raised in a small town on Lake Superior. She attended MIT as an undergraduate, where she got interested in research, working for three years on a project to understand the effects of methylxanthines on the hypothalamic/pituitary axis. After receiving her SB, she went to Stanford where she did her MD/PhD in the laboratory of Dr. Howard Schulman, working on rat brain Ca2+/calmodulin-dependent protein kinase II (CaMKII). The intriguing biochemistry of this enzyme suggested that it might be an integral part of the biochemical machinery underlying memory formation and Griffith decided to move to a genetic modelorganism, Drosophila, in order to test these ideas. After a short postdoc with Dr. Ralph Greenspan at the Roche Institute of Molecular Biology in Nutley, NJ, she joined the faculty of the Biology department at Brandeis University in 1992 where her research has expanded from the biochemical to the behavioral and systems levels. She served as Department Chair from 2009-2012 and is currently the Director of the Volen Center for Complex Systems, an interdisciplinary center that serves as a focus for Neuroscience at Brandeis. She has served on numerous national and international scientific committees, grant review panels and editorial boards.

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