

Seminar Announcement *- All Are Welcome -*

Speaker: **Dr Jason M. Rihel**
Senior Research Fellow, Department of Cell and Developmental Biology
Division of Biosciences; University College London

Title: **Searching for genetic and neuronal regulators of sleep in larval zebrafish**

Date : **23 March 2012 (Friday)**

Time : **3pm – 4pm**

Venue: **Creation Theatrette, Matrix Level 4, Biopolis**

Host : **Dr Ray Dunn**
(Tel: 64070164, email: ray.dunn@imb.a-star.edu.sg)



Abstract of the Seminar:

The regulation and function of sleep remain among the fundamental mysteries of biology, fascinating poets, playwrights, and philosophers for thousands of years. In our own efforts to unravel neural and molecular sleep regulators, we combine strategies from systems and chemical biology, neuropharmacology, behavioral neuroscience, and genetics, using the zebrafish as a model system. With high-throughput methods to observe sleep and wake behaviors in zebrafish larvae, we first demonstrated the conservation of the neuronal circuits regulating sleep. Then we performed both small molecule and peptide over-expression screens and have identified novel regulators of the sleep/wake state. Our current efforts seek to map these small molecules and secreted peptides onto their sleep-relevant biological targets, chart the specific sleep-regulating neuronal circuits that are altered, and demonstrate the functional importance of discrete neuronal circuits in the homeostatic control of sleep/wake states.

About the Speaker:

Jason Rihel obtained his Ph.D. under the supervision of Dr. Catherine Dulac in the Department of Molecular and Cellular Biology (MCB), HHMI, Harvard University, Cambridge, MA, USA. His doctoral research investigated the molecular organization of both the developing and adult mouse accessory olfactory bulb using high resolution single-cell expression profiling. For his post doc, Jason switched vertebrate models and joined Dr. Alex Schier's group also at Harvard MCB to initiate an innovative project that exploits the zebrafish system to identify and study novel regulators of sleep. Recently, Jason established his own independent group in the Department of Cell and Developmental Biology, University College London, UK.