The Singapore Bioimaging Consortium (SBIC) presents a seminar on

“Molecular Control of Synaptic Vesicle Fusion”

Speaker: Dr Jeremy Dittman  
Associate Professor  
Biochemistry at Weill Cornell Medical College  
New York

Host: Dr Han Weiping
Date: Thursday, 17 December 2015
Time: 2.00pm – 3.00pm
Venue: SBIC Seminar Room  
11 Biopolis Way  
Level 2, Helios Building, Singapore 138667
(Please enter via Level 1)

Abstract
Communication between neurons requires precise and highly regulated control of synaptic vesicle fusion. SNARE proteins power the fusion process, but the mechanisms underlying the regulation of fusion are not well understood. Complexin is a major gate keeper of exocytosis at synapses, and recent work from our demonstrates that complexin’s C-terminal domain binds lipids through a novel protein motif, permitting inhibition of spontaneous exocytosis in vivo by targeting complexin to synaptic vesicles. We propose that the SV pool serves as a platform to sequester and position complexin where it can intercept the rapidly assembling SNAREs and control the rate of spontaneous fusion.

About the Speaker
Dr Jeremy Dittman is an Associate Professor of Biochemistry at Weill Cornell Medical College in New York City. He trained as an MD PhD at Harvard Medical School with Dr Wade Regehr where he investigated the role of calcium in presynaptic modulation and plasticity of cerebellar synapses. As a postdoctoral fellow with Dr Joshua Kaplan at UC Berkeley and Mass General Hospital, Jeremy continued to study the synapse using C. elegans as a model system while developing novel imaging approaches in the worm. In 2008, he joined the Biochemistry Department at Weill Cornell Medical College and began to investigate several key synaptic proteins such as complexin, Munc13, and Munc18 using a combination of genetics, physiology, as well as computational and in vitro biochemical approaches.

--- Admission is free and all are welcome ---