

# SEMINAR

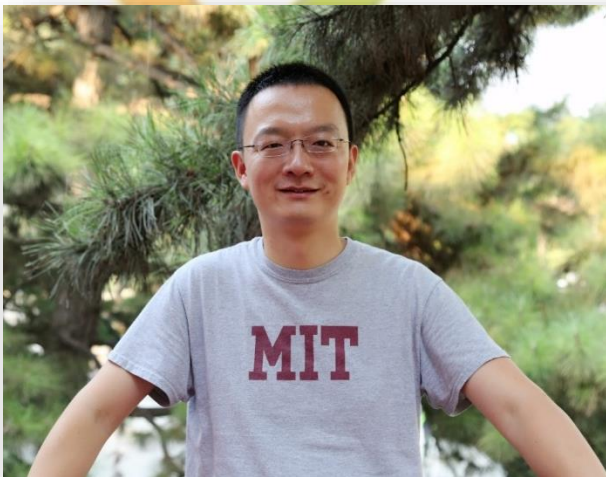
## ALL ARE WELCOME

**29 November 2016 (Tuesday), 4pm**  
**The Auditorium (Level 1)**

Hosted by: Dr KOH Tong-Wey

## The neural regulation of energy and nutrient homeostasis in *Drosophila*

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Dr. Liming Wang is a tenure-track Investigator at Life Sciences Institute, Zhejiang University since 2014. He got B.S. from Peking University in 2005 and Ph.D. from California Institute of Technology in 2011. He then established his independent research lab with the support of Bowes Research Fellows Program at University of California, Berkeley before taking his current position at Zhejiang University. Dr. Wang has a long lasting interest in fruit flies. His undergraduate thesis focused on modeling depression disorders in fruit flies. His PhD research elucidated the chemosensory regulation of social behaviors in fruit flies. His lab is currently interested in understanding the regulation of organismal energy and nutrient homeostasis by the nervous system, using fruit flies as the model system.

The survival and well-being of animals rely on precisely maintained balance between energy intake and expenditure. The central nervous system (CNS) plays a crucial role in maintaining energy and nutrient homeostasis. It determines fluctuations of the internal energy/nutrient state and initiates or terminates food intake behaviors accordingly. However, despite its striking accuracy, the ability of the CNS to maintain energy and nutrient homeostasis can be disrupted by sustained environmental challenges, including high fat diet, insomnia and stress, which may contribute to the pathogenesis of prevailing metabolic disorders in post-industrialized societies, such as eating disorders, obesity and type II diabetes. It is therefore of both scientific and clinical interest to elucidate the mechanism underlying the regulation of food intake by the CNS. Our laboratory uses the fruit fly *Drosophila melanogaster* as a model system to investigate this problem. I will share our recent findings into the regulation of food intake behaviors and their implication in organismal energy homeostasis.

### Recent Publications:

1. Yang, Z., Yu, Y., Zhang, V., Tian, Y., Qi, W., and **Wang, L.** (2015). Octopamine mediates starvation-induced hyperactivity in adult *Drosophila*. *Proc. Acad. Acad. Sci. USA* 112, 5219-5224, September 08, 2015
2. Yu, Y., Rui, H., Jie, Y., Zhang, V., Chao, W., Guo, C., Jia, J., **Wang, L.** (2016). Regulation of starvation-induced hyperactivity by insulin and glucagon signaling in adult *Drosophila*. *eLife* 2016;5:e15693, September 9, 2016
3. **Wang, L.** (2014). How sex prevents violence: the magic of caress (and GABA). *Nature Neurosci.* 17, 4-6. September 08, 2015