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TEMASEK LIFESCIENCES LABORATORY

11 December 2015 (Friday), 11am
The Auditorium (Level 1)
Hosted by: Dr YU Fengwei

Genetic dissection of neurodegeneration

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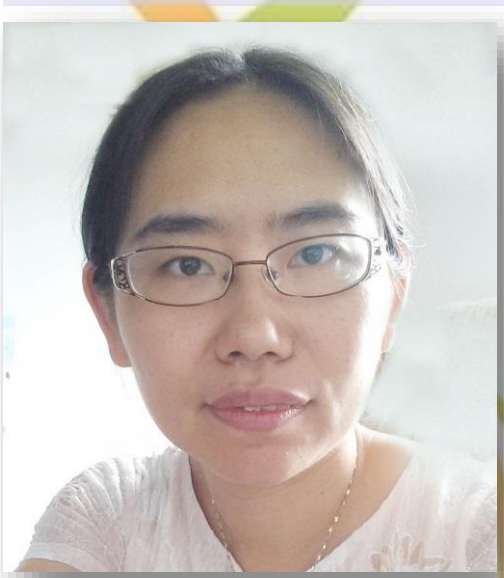

I got my Ph. D. degree from UT Southwestern Medical Center in 2006 and then moved to Houston had my postdoctoral training in Dr. Hugo Bellen's laboratory in Baylor College of Medicine. In 2011, I started my own laboratory in Zhejiang University, China. My major research interest is to dissect the molecular mechanisms that underline neural degeneration diseases. Particularly, I'm interested in how cellular organelles contribute to neuronal health maintenance.

Neurons are long lived cells that can not renew themselves through cell division. To prevent neurodegeneration, the maintenance of organelle homeostasis is extremely important. Malfunctions of organelles such as mitochondria, lysosomes, and endoplasmic reticulum are associated with various human neurological diseases. My lab's major research interest is to dissect how cellular organelles contribute to neuronal health maintenance. Our goal is to identify novel players and to define molecular pathways in neural development and maintenance by using fruit flies and mice as model systems. We hope our study can provide clues for clinical treatments of neurodegeneration and expand our understanding of the general biological questions in organelle biogenesis and clearance.

Recent Publications:

1. Tian, X.J., Gala, U., Zhang, Y.P., Shang, W.N., Jaiswal, S., Ronza, A., Jaiswal, M., Yamamoto, S., Sandoval, H., Duraine, L., Sardiello, M., Sillitoe, R., Venkatachalam, K ., Fan, H.Y., Bellen, H.J. , **Tong, C** (2015). A Voltage gated calcium channel regulates lysosomal fusion with endosomes and autophagosomes and is required for neuronal homeostasis. PLOS Bio 13(3):e1002103.
2. Zhao, X.C., Yang, H., Liu, W., Duan, X.Y., Shang, W.N., Xia, D., **Tong, C** (2015). Sec22 regulates ER morphology but not autophagy and is required for eye development in Drosophila. J Biol Chem 290:7943-51.
3. **Tong, C**., Ohyama, T., Tie, A., Rajan, A., Haueter, C., Bellen, HJ (2011). Rich regulates target specificity of photoreceptor cells and N-Cadherin trafficking in the Drosophila visual system via Rab6. Neuron 71(3):447-59.