



CDB SEMINAR

Takaki Komiyama

Howard Hughes Medical Institute
Department of Biological Sciences
Stanford University

Monday, March 13
16:00 ~ 17:00
C1F CDB Auditorium

Unraveling the Logic of Olfactory Circuit Formation

Formation of precise neural circuits is essential for perception and behavior of organisms. As a model system to study mechanisms of neural circuit development, we are using the olfactory system of *Drosophila*. The olfactory system demonstrates a dramatic example of precise neural circuits, with single classes of olfactory receptor neuron axons and single classes of second order projection neuron dendrites forming one class to one class connections at the antennal lobe, the first olfactory relay station in the brain. This organization is conserved from flies to mammals. We are studying cellular and molecular mechanisms of dendritic targeting of projection neurons, as well as axon targeting of olfactory receptor neurons.

Takaki Komiyama studies the mechanism of olfactory circuit wiring as a member of Liqun Luo's laboratory in Stanford University (<http://www.stanford.edu/group/luolab/>). His recent publication include the following:

Komiyama T, Carlson JR, Luo L. Olfactory receptor neuron axon targeting: intrinsic transcriptional control and hierarchical interactions. *Nat Neurosci*, 7:819-825, 2004.

Komiyama T, Johnson WA, Luo L, Jefferis GS. From lineage to wiring specificity. POU domain transcription factors control precise connections of *Drosophila* olfactory projection neurons. *Cell*, 112:157-167, 2003.

Host: Shigeo Hayashi

Morphogenetic Signaling, CDB

shayashi@cdb.riken.jp

Tel: 078-306-3185

(ext: 1523)