Graduate Neuroscience Program Seminar Series

Tuesday, April 12th, 4 pm

@ Genomics Auditorium

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**Dr. Yu-Chieh David Chen**

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NYU

***“*Wiring up the brain during development: Coordination and propagation of cell fate choice in neural circuit assembly*”***

How vast numbers of neurons are specified into correct cell fates and connected with their proper targets during development represents a fascinating area of developmental neuroscience. Little is known about the coordination between neuronal specification and specific connectivity patterns, especially when two synaptic partners undergo two different modes of cell specification (stochastic vs. deterministic). In the fly retina, pale (**p**) and yellow (**y**) subtypes of color photoreceptors (R7 and R8) are stochastically specified, whereas their synaptic partners in the optic lobe are produced through highly deterministic programs. How do stochastically determined **p** vs. **y** R7 and R8 find their respective targets that are deterministically specified in the optic lobes? As candidates, we have identified members of Beat proteins (14) and Side proteins (8), which form a receptor-ligand system to control axonal targeting. We have generated CRISPR mutant alleles of these candidates and will present our analyses of their functions in regulating synaptic partner matching.

The seminar is also available via Zoom:

<https://ucr.zoom.us/j/95565194959?pwd=Mm1WclpYb2Z5bFlLQ3FmMnErbnFSQT09>

Meeting ID: 955 6519 4959, Passcode: 295130

Faculty host: Anupama Dahanukar

Student host: Vaibhav Menon