

Using mouse models to dissect developmental and connectivity defects in neurodevelopmental disorders

Yi-Ping Hsueh, PhD

薛一蘋

My team has been aiming to elucidate how neurons differentiate their crucial subcellular structures, including synapses, dendrites and axons, to achieve the function of receiving and delivering signals among neurons. Because appropriate neurodevelopment is essential for neural function, it is not surprising that the genes regulating neural development are associated with neurological diseases, particularly neurodevelopmental disorders. To further elucidate the molecular etiology of neurodevelopmental disorders, in addition to neuronal morphology, we have also extended our study to mouse behavior analyses, particularly those related to autism-like behaviors, and circuit characterization using tracing approaches. Our studies have revealed the detailed molecular regulation of neural development, as well as the molecular etiology of several neurological disorders. Our most recent research studies about autism spectrum disorders will be reported in the meeting.