Selected Publications


Towards understanding positive symptoms of DiGeorge syndrome and schizophrenia

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I have a long-standing interest in the synaptic mechanisms of learning and memory. My laboratory uses a combination of electrophysiological and molecular methods, behavioral tools, 2-photon imaging, 2-photon glutamate uncaging, and optogenetics to elucidate the presynaptic and postsynaptic mechanisms of synaptic plasticity. We focus our efforts on synaptic plasticity in the hippocampus and auditory cortex as cellular substrates of spatial and perceptual learning and memory. These brain areas are also among those affected in schizophrenia. We, therefore, expanded our studies to mouse models of that disease. Specifically, we are interested in 22q11 deletion syndrome (or DiGeorge syndrome), a disorder that is one of the strongest genetic predictors of schizophrenia.