



"Underlying mechanisms of diverse functions in excitatory and inhibitory synapses."

Speaker

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Time

Thursday, 17th November 2022

5:00 PM

Location

via zoom

<https://gwdg.zoom.us/j/85147921523?pwd=RHpuSGFaUXlnMWVZOWFIVjUwTVAxQT09>

Meeting ID: 851 4792 1523

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Abstract

The activity of a neural network is ultimately determined by the strength of synapses releasing excitatory or inhibitory neurotransmitters. In this project, we will examine the mechanisms regulating the number of neurotransmitter-filled packets, synaptic vesicles, released at glutamatergic (excitatory) or GABAergic (inhibitory) synapses in response to a single stimulation. Using a combination of electrophysiology, pharmacology, imaging, and molecular biology methods in a single neuron, primary culture preparation, we will determine how signaling pathways regulate the characteristics of synaptic vesicle release in a cell-type specific manner. Overall, this project will add to our understanding of the mechanisms used by different types of synapses to regulate the strength of synaptic transmission. Fundamental knowledge about how excitatory and inhibitory synapses regulate their function is key to understanding how balanced activity is maintained in healthy neural networks.