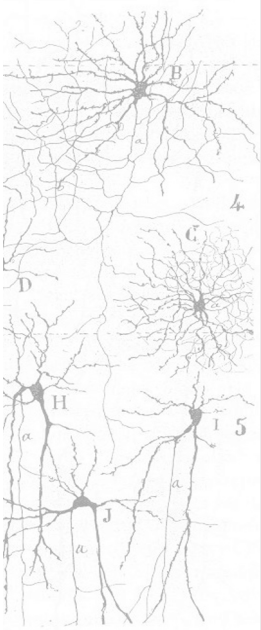
CUNY Neuroscience Collaborative Seminar Series
SPRING 2024

Friday, May 17th, 3:00 - 4:30 PM
The CUNY Graduate Center, Rm. 6495



Victor Luna, Ph.D.,
Temple University

Cellular and Synaptic Mechanisms Underlying Behavioral Sex Differences in Aged Mice

Age is the major risk factor for mild cognitive impairment (MCI), Alzheimer's disease (AD), and AD-related dementias (ADRD). Synaptic dysfunction is at the heart of all cognitive and emotional impairments associated with these disorders. However, our limited understanding of the normal aged synapse has hampered the development of effective treatments for MCI, AD, and ADRD. In this talk, I will present synaptic, cellular, and behavioral studies from my lab from 22-26 month old mice equivalent to humans 65-74 years old. I will specifically discuss how dentate gyrus (DG) synapses compensate for loss of adult hippocampal neurogenesis (AHN) during aging. I will show how these synaptic mechanisms impact emotional memory discrimination. In another set of studies, I will show how synaptic aging gives rise to behavioral sex differences that are independent of baseline AHN levels. These synaptic mechanisms provide important insights on the neural processes that cause women to be at greater risk for AD and ADRD. Overall, these establish a synaptic framework for developing treatments for MCI, AD, and ADRD especially during their later stages.

In-person

Hosts: **Dr. Nesha Burghardt (nb844@hunter.cuny.edu) and Dr. Asohan Amarasingham (aamarasingham@ccny.cuny.edu)**

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