

Hunter College of the City University of New York
Department of Biological Sciences
Spring 2024 Inga Richter Seminar Series

Carole Morel, PhD
Icahn School of Medicine at Mount Sinai



Parallel Dopamine Circuit Dynamics of Cognitive and Affective Adaptations to Social Stress

Dr. Morel's research aims to decipher the complex mechanisms by which the brain integrates experiences and coordinates responses to traumatic life events, with a keen focus on the pathways leading to psychiatric and neurodegenerative disorders. Utilizing a broad spectrum of methodologies including electrophysiology, optogenetics, and gene expression manipulation in rodent models, Morel's work explores the neural dynamics from health to disease states, particularly in contexts such as decision-making and psychiatric disorders like depression and drug addiction. Morel's academic journey commenced at Pierre & Marie Curie University in Paris, France, where she conducted her graduate work under Dr. Philippe Faure, focusing on the cholinergic modulation of dopamine neurons in drug addiction. This work, which uncovered the role of selective nicotinic receptors in addiction processes, not only earned her a doctorate with honors but also caught the attention of French national media. Her postdoctoral endeavors further expanded her expertise, where she delved into the effects of nicotine on stress and its implications for depression and sex-specific neuronal responses to drug and stress exposures. Morel has recently been awarded the Association Research Grant — New to the Field award from the Alzheimer's Association for her pioneering work on dopamine and neuropsychiatric symptoms in Alzheimer's disease (AD). This research aims to improve the understanding of how gender and midlife stress impact dopamine functions and contribute to the emergence of neuropsychiatric symptoms in Alzheimer's disease.

Monday, March 25, 2024
12:30pm
Hunter College 926HN
Host: Allyson Friedman