

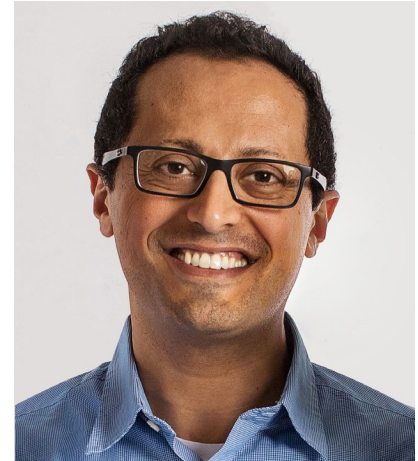
# SEMINAR

Fri, 3 May 2024 | 9:30 am | Online Zoom Session

Hosted by Asst. Prof Phua Siew Cheng

## Rewiring persistence by targeting dopamine- neuron inhibitory circuits

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Meeting Password: 780871



**By Michael Tadross**

*Dept. Of Biomedical Engineering,  
Duke University*

### **About the Speaker**

*Michael Tadross is an Assistant Professor of Biomedical Engineering at Duke University, where he develops genetically encoded technologies to target clinically relevant drugs to specific cell types in the brain. His lab applies these methods to mouse models of neuropsychiatric disease, providing a roadmap for development of targeted therapeutics. He received a B.S. in Electrical & Computer Engineering with a minor in Chemistry at Rutgers; an M.D.-Ph.D. in Biomedical Engineering at Johns Hopkins; postdoctoral training with Richard Tsien in Cellular Neuroscience at Stanford; and began independent research as a Fellow at the HHMI Janelia Research Campus.*

My lab studies how the brain's neurochemical circuitry influences behavior, utilizing a multidisciplinary approach that bridges engineering and neurobiology. A pivotal development is our Drug Acutely Restricted by Tethering (DART) technology, which allows precise manipulation of neurochemical synapses. Our recent work with DART has led to an intriguing discovery about the role of GABA in modulating dopamine neurons in the ventral tegmental area. By employing DART to selectively block GABAA receptors on these dopamine neurons, we've observed nuanced changes in neural activity and surprising behavioral effects that challenge longstanding assumptions about behavioral persistence. Through these findings, we continue to expand and refine our toolset, striving for subcellular precision and matching our tools to critical questions in neuroscience, both independently and collaboratively.

#### **Virtual Seminar Etiquette:**

- ✓ Please "mute" upon arrival into the meeting room.
- ✓ Questions can be asked after the presentation. You are encouraged to verbally ask questions or submit your questions via chat group.
- ✓ By being present at this meeting, **information presented is a privilege** and you agree that you would **NOT UNDERTAKE** any forms of recording/photo-taking.