

PIONEERS IN BIOMEDICAL RESEARCH SEMINAR

Presented by the Fralin Biomedical Research Institute and co-sponsored by the research institute's Addiction Recovery Research Center and the Center for Health Behaviors Research



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Virtual Seminar: Dopamine Circuits in Reward and Aversion

The pursuit of reward and avoidance of pain might be one of the oldest ideas in the history of thought about behavior of organism. Indeed, learning to adapt to a constantly changing environment through reward and punishment is essential for survival of an organism. Midbrain dopamine neurons encode reward prediction errors which is thought to reinforce actions that are triggered by rewarding stimuli. However, whether dopamine acts as a unitary 'reward signal' has been controversial for decades. Dr. Lammel's research has sought to clarify this controversy by demonstrating that dopamine neurons can be divided into a much larger number of anatomically and functionally distinct cell populations. In his presentation, Dr. Lammel will discuss recent work in which his lab provided the first incontrovertible evidence for a distinct, identifiable subset of dopamine neurons that are activated by aversive stimuli and cues that predict them. Moreover, he will discuss unpublished data showing how his lab developed an approach that allows his team to perform large scale electrophysiological recordings (via 'Neuropixels') from optogenetically identified dopamine neurons in mice performing a reward seeking task.

FRIDAY, OCT. 15 at 11:00 a.m.

Watch live via Zoom at <https://virginiatech.zoom.us/j/82722436593> or at <https://fbri.vtc.vt.edu/events/live-webcast.html>.



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