



THE UNIVERSITY OF ARIZONA
COLLEGE OF MEDICINE TUCSON

Pharmacology

Presents

“Co-release of different neurotransmitters, unanticipated types of neurotransmission and future challenges”

BY



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Abstract Dopamine neurons distributed within the ventral tegmental area (VTA) play crucial roles in different behaviors. Studies of VTA information processing have been focused on resident dopamine neurons for over fifty years. This talk will provide an overview of evidence showing that the VTA has glutamatergic neurons that establish both local and long-range connections and provide excitatory regulation within different brain areas. In addition, it'll cover data on subpopulations of VTA neurons that co-release dopamine and glutamate or glutamate and GABA. It'll also provide evidence indicating that axon terminals from glutamate-GABA neurons share a common and unique synaptic architecture in which a single dual glutamate-GABA axon terminal simultaneously establishes excitatory and inhibitory synapses. The discovery of the complex neuronal diversity of the VTA offers new scientific challenges and opportunities towards having a better understanding of neuronal mechanisms underlying brain disorders related to the reward system.

Wednesday, December 4, 2024

11:00 am – Noon

AHSC - Room 8403

<https://arizona.zoom.us/j/82268538546>