

Monthly Neuro Seminar Series

Spring 2026



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A ventral pallidal to basolateral amygdala cholinergic circuit mediates approach behaviors

The ability to appropriately encode valence ensures apt behavioral responses toward rewarding (i.e., approach) and harmful (i.e., avoidance) stimuli. Using activity- and cre-dependent viral vectors, we have previously demonstrated two distinct populations of cholinergic neurons in the ventral pallidum (VP) that differentially encode valence, and play opposing roles in approach/avoidance behaviors. The primary output target of VP cholinergic neurons is the basolateral amygdala (BLA), another brain region involved in valence encoding. However, it is unknown if valence encoding VP cholinergic neurons form anatomical and/or functional connections with valence encoding BLA neurons. To investigate this question, we utilized longitudinal, in-vivo, single-cell calcium imaging of BLA neurons, in conjunction with simultaneous optogenetic stimulation of VP cholinergic terminals in the BLA, during presentation of negative and positive valence stimuli. Our results suggest a potential valence encoding microcircuit between VP cholinergic neurons and valence encoding BLA neurons, which mediates approach but not avoidance behaviors.

Tuesday, April 7
4:00 p.m.
SLC 285



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