

# Monthly Neuro Seminar Series

*Spring 2024*



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### **The tripartite synapse: roles for gliotransmission in reward-seeking and alcohol use disorder**

Alcohol use disorder has been characterized by an entangled framework that comprises three stages: binge/intoxication, withdrawal/negative affect, and preoccupation/anticipation, which plausibly correspond with enhanced incentive salience/pathological habits, negative emotional states, and executive function deficits, respectively. To fill the substantial gap in our knowledge of the fundamental biological mechanisms underlying those complex alcohol-related behaviors, we have been focusing on context-dependent cellular communication, specially between neurons and one of the non-neuronal glial cells, astrocytes, in the brain. In addition to the traditionally well-known neuro-supportive roles, astrocytes are emerging as a key determinant of neuronal synaptic function and consequent behavioral changes through bi-directional modulation, including the temporal release of various gliotransmitters and the scavenging of overflowed neurotransmitters. The seminar will discuss the importance of context-dependent coordination of neuronal and astrocytic activities to understand the diverse behaviors in alcohol use disorder and its comorbid psychiatric disorders.

Tuesday, February 6  
4:00 p.m.  
Coverdell S175



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