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From: Tom Borowski

NEUROSCIENCE SPEAKER SERIES



Alicia Izquierdo

**Department of Psychology
University of California Los Angeles**

**Translational models of frontocortical circuits in
learning and decision making**

**Tuesday, February 20
4:00 PM
Seaver Commons RM 102
Pomona College**

Abstract: Two subregions of the prefrontal cortex, orbitofrontal cortex (OFC) and Anterior cingulate cortex (ACC), have been assigned various overlapping roles ranging from learning and responding to reward, signaling value and uncertainty, and supporting economic decisions, to name a few. Both of these regions share reciprocal anatomical connections with basolateral amygdala, contributing to functional similarities among these circuits. Using a combination of novel behavioral paradigms, cell-specific manipulation and recording techniques (DREADDs and 1P calcium imaging) in freely-moving rats, our lab has sought better resolution of diverse frontocortical processes. In this talk I will present data comparing subregional frontal cortex contributions, together with basolateral amygdala, in reward learning and value-based decisions. With few exceptions, our results suggest mostly overlapping, less specialized, roles for ACC and OFC that point to complementary roles in keeping track of expected uncertainty, or the range of typically-experienced outcomes. Collectively these findings may have implications for how we view frontocortical contributions across rodent and primate species.