



Yavin Shaham

NIDA-NIH, Baltimore, USA

Day 1- 25.6, Session I- 11:45-13:15

Incubation of drug craving: past, present, and future

Abstract:

In previous studies, we and others have used a rat model of drug relapse and craving to demonstrate time-dependent increases in drug seeking after experimenter-imposed (forced) homecage abstinence from several addictive drugs (heroin, cocaine, methamphetamine, nicotine, alcohol), a phenomenon we termed incubation of drug craving (Grimm et al. *Nature*, 2001; Pickens et al. *Trends Neurosci*, 2011; Wolf. *Nat Rev Neurosci* 2016). More recently, we have established a rat model of drug craving and relapse after extended periods of voluntary abstinence in the drug environment. Voluntary abstinence is achieved using a mutually exclusive discrete choice procedure in which male and female rats with prior history of intravenous drug self-administration can choose every day between palatable food or interaction with a social peer and the drug (Caprioli et al. *Biol Psychiatry* 2015; Venniro et al. *Nat Neurosci* 2018). In the lecture, I will first summarize results from studies using the classical model (incubation after forced abstinence), and then introduce the new model (incubation after voluntary abstinence) and describe our initial circuit characterization of relapse and craving using this model