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EXTINCTION LEARNING: THE NEURAL, BEHAVIOURAL, ONTOGENETIC, EDUCATIONAL, AND CLINICAL MECHANISMS

April 24 - 25, 2018 Veranstaltungszentrum, Ruhr University Bochum

Tuesday April 24, 13:40 – 16:20

Session 2 Extinction & Associative Learning – Foundations

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Frontostriatal and frontobulbar systems linking appraisal, extinction, and avoidance

Human emotion and behavior are strongly determined by appraisal, a process of constructing expectations and beliefs based on a conception of the self in context. Historically, research on threat learning and extinction is agnostic about the involvement of conceptual processes. However, recent advances suggest that conceptual processes are crucial. Furthermore, brain systems connecting the ventromedial prefrontal cortex (vmPFC) with the nucleus accumbens and periaqueductal gray play important roles in cognitive appraisal, extinction learning and recall, and pain avoidance. This juxtaposition of functions provides a substrate for learning shaped by concepts and beliefs, and helps explain why cognitive self-regulation can meaningfully alter the trajectory of maladaptive plasticity in chronic pain, anxiety disorders, and beyond.





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