Brain Mapping Center
SEMINAR SERIES

Sponsored by the UCLA Brain Mapping Center Faculty

The focus of these talks is on advancing the use of brain mapping methods in neuroscience with an emphasis on contemporary issues of neuroplasticity, neurodevelopment, and biomarker development in neuropsychiatric disease.

Hosted By: Katherine Narr, PhD, Neurology, UCLA

"Imaging Biomarkers of Ketamine in the Depression Connectome"

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Postdoctoral Research Fellow, UCLA

Major depression is the world's leading cause of years lost to disability. Although many patients benefit from first-line monoaminergic antidepressants, therapeutic response can take weeks or longer and a third of patients, defined as having treatment resistant depression (TRD), will remain refractory to two or more treatment trials. Therefore, understanding of rapid response mechanisms remains pivotal for advancing more effective interventions to reduce the personal and economic burden of depression. Ketamine is a noncompetitive N-methyl-D-aspartate (NMDA) receptor antagonist, which when administered at sub-anesthetic doses, is shown to produce fast and robust antidepressant effects in patients with TRD. Although ketamine can reduce depressive symptoms within hours, relatively little is known of its effects on brain function at the systems-level following single or repeated ketamine therapy. Using advanced neuroimaging (Connectomes Related to Human Disease project) we show that ketamine therapy leads to neurofunctional plasticity in brain networks essential for emotional and cognitive functioning in TRD patients. Additionally, early changes in the brain networks are predictive of overall treatment outcome and may serve as a biomarker of treatment response.

February 6, 2020 11:00am - 12:00pm

Neuroscience Research Building (NRB 132)
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