

Special Issue

The Neurobiology of Substance Addiction

Message from the Guest Editors

Drugs of abuse modify synaptic transmission and synaptic plasticity mechanisms in important brain reward circuits. Different classes of abused drugs have divergent actions due to distinct mechanisms of action at the molecular level, but converge on many of the same neurotransmitter and neuromodulator systems including glutamatergic, monoaminergic, and peptidergic systems. These peptidergic systems include, but are not limited to, hypocretin/orexin, neuropeptide Y, oxytocin, neuropeptide S, galanin, corticotropin-releasing factor, dynorphin, and nociceptin/orphanin FQ. Importantly, individual differences in drug response can be observed, reflecting gene–environment interactions that also influence physiological response. The goal of this Special Issue is to recognize and celebrate the contributions of a diverse cross-section of individuals making substantive contributions to the field of drug abuse. There is an ongoing need to identify and better understand the cellular, molecular, and neurochemical mechanisms that contribute to the pathophysiology of substance use disorder and related neuropsychiatric conditions.

Guest Editors

Prof. Dr. Robert L. Meisel

Prof. Dr. Sade Spencer

Prof. Dr. Julia Lemos

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