

Download The Neurobiology Of Opiate Reward Processes

Conceptual framework, definitions, and animal models. Drug addiction can be defined as a chronically relapsing disorder, characterised by compulsion to seek and take the drug, loss of control in limiting intake, and emergence of a negative emotional state (eg, dysphoria, anxiety, irritability) when access to the drug is prevented. The reward system is a group of neural structures responsible for incentive salience (i.e., motivation and "wanting", desire, or craving for a reward), associative learning (primarily positive reinforcement and classical conditioning), and positively-valenced emotions, particularly ones which involve pleasure as a core component (e.g., joy, euphoria and ecstasy). Anatomy. The mesolimbic pathway is a collection of dopaminergic (i.e., dopamine-releasing) neurons that project from the ventral tegmental area (VTA) to the ventral striatum, which includes the nucleus accumbens (NAcc) and olfactory tubercle. It is one of the component pathways of the medial forebrain bundle, which is a set of neural pathways that mediate brain stimulation reward. Preclinical studies; Amphetamine; al-Tikriti et al. (1994) • AMP increased the washout rate of [¹²³I]IBF (a D₂ receptor antagonist) from the striatum of baboons, as measured using SPECT Annamalai et al. (2010) • AMP-stimulated downregulation of the NET was linked to the PKC-resistant T258/S259 structural motif and mediated by reduced plasma membrane insertion and enhanced endocytosis