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Autore M Foster Olive

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edited by: M. Foster Olive and Justin Gass

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Sommario/riassunto Drugs of abuse induce a host of alterations in brain struc

Drugs of abuse induce a host of alterations in brain structure and function, ranging from changes in gene expression and epigenetic processes to aberrant synaptic plasticity to volumetric changes in discrete brain regions. These alterations can be drug class-specific, and are not confined to neurons, as drugs of abuse also induce molecular and cellular alterations in various glial cell types such as astrocytes and microglia. This drug-induced "rewiring" of the brain at numerous levels can contribute to the development, maintenance, and persistence of the addicted state, as well as associated deficits in normal cognitive functioning. The aim of this Research Topic is to collect recent and important findings related to the structural alterations produced by drug of abuse in neurons, glial, and other cell types of the central nervous system. Suitable areas of analysis include but are not limited to: macrostructure of individual brain regions, dendritic branching and architecture, dendritic spine density and morphology, cell soma morphology, presynaptic terminal volume, astrocytic process length and branching, myelination, and microglial