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Nota di contenuto	Endocannabinoids and monoamines: modulating the modulators -- Endocannabinoid-mediated synaptic plasticity -- Current cannabinoid receptor nomenclature and pharmacological principles -- Cue-elicited craving for cannabis activates the reward neurocircuitry associated with the neuropathology of addiction -- Cannabinoid modulation of dopaminergic circuits in neurodegenerative and neuropsychiatric disorders -- Pathophysiology of mood disorders and mechanisms of action of antidepressants and mood stabilizers -- Anatomical, biochemical and behavioral evidence for cannabinoid modulation of noradrenergic circuits: role of norepinephrine in cannabinoid-induced aversion -- Gender Disparity of Depression: The Role of Endocannabinoids and Noradrenergic Function -- Endocannabinoids, Monoamines and Stress -- Chronic effects of cannabinoid drugs on monoaminergic systems and the role of endocannabinoids and cannabinoid receptors in human brain disorders -- Endocannabinoid Signaling and the Regulation of the Serotonin System -- Modulation of serotonin firing activity through CB1 agonists and FAAH inhibitors -- Involvement of serotonergic system in cannabinoid analgesia --

Cannabinoids, monoamines, COMT and schizophrenia: pathobiological mechanisms in psychosis.

Sommario/riassunto

The past two decades have seen a tremendous growth in knowledge related to cannabinoid receptor signaling in brain. In addition, the impact and consequences of cannabinoid modulation of monoaminergic circuits is steadily emerging demonstrating a significant interaction between these two systems in a variety of psychiatric (affective disorders) and neurological disorders (multiple sclerosis, pain). Despite increasing evidence from preclinical data suggesting that therapeutic use of cannabinoid-based drugs may outweigh any potential risks in certain serious medical conditions, the debate surrounding its widespread utility continues as regulatory concerns preclude a smooth transition of promising preclinical studies into clinical trial testing. This may persist in the near future as state and federal governments debate over regulation of medicinal applications of cannabis. Applications for medicinal cannabinoids that are already under investigation include the treatment of nausea, anorexia, neurodegeneration, inflammation, excitotoxicity and pain. The appetitive and anti-emetic properties of cannabinoids have led to the approval of their use in chemotherapy and AIDS patients. There is growing evidence for therapeutic cannabinoid effects on inflammatory and excitotoxic cellular processes that are linked to epilepsy, Parkinson’s disease, amyotrophic lateral sclerosis, spasticity, and central nervous system injury. The chapters, herein, review and discuss current insights into the brain endocannabinoid system, cannabinoid receptor signaling on synaptic plasticity, potential therapeutic applications with a particular focus on endocannabinoid modulation of dopaminergic, noradrenergic and serotonergic circuitry. The potential for establishing cannabinoid-monoaminergic interactions as a novel target in the development of improved treatment strategies for psychiatric and neurological disorders is promising and will require future clinical studies to determine whether promising pre-clinical findings translate into new therapies.