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## Role of endocannabinoid system in dopamine signalling within the reward circuits affected by chronic pain

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### Abstract

The association between chronic pain, depression and anxiety has gained particular attention due to high rates of comorbidity. Recent data demonstrated that the mesolimbic reward circuitry is involved in the pathology of chronic pain. Interestingly, the mesolimbic reward circuit participates both in pain perception and in pain relief. The endocannabinoid system (ECS) has emerged as a highly relevant player involved in both pain perception and reward processing. Targeting ECS could become a novel treatment strategy for chronic pain patients. However, little is known about the underlying mechanisms of action of cannabinoids at the intersection of neurochemical changes in reward circuits and chronic pain. Because understanding the benefits and risks of cannabinoids is paramount, the aim of this review is to evaluate the state-of-art knowledge about the involvement of the ECS in dopamine signalling within the reward circuits affected by chronic pain.

..... Brain structures; Catecholamines metabolism; Chronic pain; Endocannabinoid system; Hypodopaminergia; Osteoarthritis; Reward system.

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