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A critical review of the antipsychotic effects of cannabidiol: 30 years of a translational investigation.

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Source

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Abstract

$\Delta(9)$ -tetrahydrocannabinol ($\Delta(9)$ -THC) is the main compound of the Cannabis Sativa responsible for most of the effects of the plant. Another major constituent is cannabidiol (CBD), formerly regarded to be devoid of pharmacological activity. However, laboratory rodents and human studies have shown that this cannabinoid is able to prevent psychotic-like symptoms induced by high doses of $\Delta(9)$ -THC. Subsequent studies have demonstrated that CBD has antipsychotic effects as observed using animal models and in healthy volunteers. Thus, this article provides a critical review of the research evaluating antipsychotic potential of this cannabinoid. CBD appears to have pharmacological profile similar to that of atypical antipsychotic drugs as seen using behavioral and neurochemical techniques in animal models. Additionally, CBD prevented human experimental psychosis and was effective in open case reports and clinical trials in patients with schizophrenia with a remarkable safety profile. Moreover, fMRI results strongly suggest that the antipsychotic effects of CBD in relation to the psychotomimetic effects of $\Delta(9)$ -THC involve the striatum and temporal cortex that have been traditionally associated with psychosis. Although the mechanisms of the antipsychotic properties are still not fully understood, we propose a hypothesis that could have a heuristic value to inspire new studies. These results support the idea that CBD may be a future therapeutic option in psychosis, in general and in schizophrenia, in particular.

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