

## Behavioral Aspects of $\beta$ -caryophyllene

Many individuals notice major behavioral changes in themselves or clients using BCP over a month.

1. They get control of addictions whether its nicotine, alcohol or food to the point they don't care about reusing.
2. They relax, avoid angry, reactions to stressful situations or if they do the reaction is short lived.
3. Improved social interactions, expressive, friendly, talkative, revealing of past events and traumas.
4. Become more rested with better sleep, less fatigue, less grouchy and more enthused
5. Abandon dysfunctional relationships, aligning themselves with people and sources of positive constructive nature
6. Become impassioned by a laudable goal or purpose into which they throw considerable energy.
7. Increase self awareness of internal conflicts, bad memories, traumatic experiences, and discuss openly.
8. Develop grateful, happy, optimistic, constructive attitudes about life and they laugh.
9. Find that Lifestyle changes like exercise, meditation and diet are more attractive and beneficial.
10. Develop cognitive clarity, improved memory, verbal interactions, awareness of issues and environmental

Studies developed to the date indicated that CB2r is involved in emotional response and cognition. Consequently, the CB2r modulation may be a promising target to improve neuropsychiatric diseases associated with neuroinflammation. It was observed that the CB2r-agonist beta-caryophyllene (BCP) alleviates insulin resistance, oxidative stress, neuroinflammation, and psychological changes, including depressive-like behaviors and memory deficits induced by high fat/fructose diet (HFFD) in male rats. Immunomodulatory Role of CB2 Receptors in Emotional and Cognitive Disorders. doi: 10.3389/fpsy.2022.866052

Among the most promising natural CB2R ligands, the bicyclic sesquiterpene  $\beta$ -caryophyllene (BCP) has emerged as an excellent anti-inflammatory and antioxidant therapeutic agent highlighting its therapeutic potential for the management of depression and anxiety. BCP, endowed with CB2R-selective properties and no psychotropic effects, may provide treatment of neuropsychiatric conditions. Moreover, its widespread presence in edible plants and safe consumption with no toxicity profile suggest that BCP could be a functional food, contributing to overall health and well-being. Beta-Caryophyllene, a Cannabinoid Receptor Type 2 Selective Agonist, in Emotional and Cognitive Disorders. [https://doi.org/ 10.3390/ijms25063203](https://doi.org/10.3390/ijms25063203)

This study demonstrated for the first time the role of BCP in alleviating the HFFD-induced metabolic and psychological changes through CB2R activation. BCP improves depression and memory deficit by modulating PGC-1 $\alpha$ /BDNF pathway in a CB2R-dependent manner in PFC. Beta-caryophyllene alleviates diet-induced neurobehavioral

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changes in rats: The role of CB2 and PPAR- $\gamma$  receptors. <https://doi.org/10.1016/j.biopha.2018.11.039>

Here, we present for the first time, a review that demonstrates the pivotal role of CB2R in the regulation of neurobiological processes underlying cognition, psychosis- and mood-related (anxiety, depression) behaviours, all of which may be included in schizophrenia symptoms. CB2R activation could be a promising new key target in the treatment of different central nervous system (CNS) disorders, which manifest as psychosis, mood-related disturbances and/or memory impairment. CB2 receptor agonism reverses MK-801-induced disruptions of prepulse inhibition in mice. doi: 10.1007/s00213-014-3481-x.

CB2r could be a promising new key target in the treatment of different central nervous system (CNS) disorders, which manifest as psychosis, mood-related disturbances and/or memory impairment. Contribution of CB2 receptors in schizophrenia-related symptoms in various animal models: Short review. doi: 10.1016/j.neubiorev.2020.04.020.

TREATMENT OF SCHIZOPHRENA USING BETA-CARYOPHYLLENE AND CB2 RECEPTORAGONSTS. Patent Pub.No.:US2015/0051299A1