

عنوان مقاله:

Pharmacological effects of Safranal: An updated review

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خلاصه مقاله:

Safranal (a monoterpene aldehyde) is the major volatile component of saffron which is responsible for the saffron unique odor. Several studies have shown the pharmacological activities of safranal including anti-oxidant, anti-inflammatory, cardioprotective, neuroprotective, nephroprotective, gastrointestinal protective, etc. This study was designed to review the pharmacological and medical effects of safranal and up-to-date previous knowledge. Moreover, some patents related to the pharmacological effects of safranal were gathered. Therefore, electronic databases including Web of Sciences, Scopus, and Pubmed for pharmacological effects and US patent, Patentscope, and Google Patent for patents were comprehensively searched by related English keywords from ۲۰۱۰ to June ۲۰۲۲. According to our review, most of the studies are related to the safranal effects on CNS such as antianxiety, analgesic, anticonvulsant, antiischemic, anti-tremor, memory enhancement and its protective effects on neurodegenerative disorders such as Alzheimer's, Parkinson and Huntington diseases. Other effects of safranal are antiasthmatic, antihypertensive, antiaging, anticataract, etc. Moreover, the protective effects of this agent on metabolic syndrome and diabetic nephropathy have been shown. Different mechanisms including anti-oxidant, anti-inflammatory, muscle relaxation, antiapoptotic, and regulatory effects on the genes and proteins expression related to signaling pathways of oxidative stress, inflammation, apoptosis, proliferation, etc. are involved in safranal pharmacological effects. Some patents for the prevention and/or treatment of different diseases such as liver cancer, sleep disorder, depression, cognitive disorder, obesity and PMS were also included. Based on the documents, safranal is considered a promising therapeutic agent although more clinical studies are needed to verify the beneficial effects of safranal in humans.

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