FULL TEXT LINKS

Regul Toxicol Pharmacol. 2018 Feb:92:338-346. doi: 10.1016/j.yrtph.2017.12.013.
Epub 2017 Dec 16.

Non-clinical toxicity of β-caryophyllene, a dietary cannabinoid: Absence of adverse effects in female Swiss mice

George Laylson da Silva Oliveira [1], Keylla Conceição Machado [2], Kátia Conceição Machado [2], Ana Paula Dos Santos C L da Silva [2], Chistiane Mendes Feitosa [3], Fernanda Regina de Castro Almeida [4]

Affiliations
PMID: 29258925 DOI: 10.1016/j.yrtph.2017.12.013

Abstract

β-caryophyllene is a food additive that is found in food plants and has broad pharmacological potential. However, little toxicological information has been reported and its use is based on the fact that this bicyclic sesquiterpene is daily consumed as a plant food in much larger quantities than as a food additive. Thus, this study evaluated acute (14-day) and repeated-dose (28 days) oral β-caryophyllene toxicity in female Swiss mice analyzing changes in body weight, food intake, water intake, hematological and biochemical parameters, organ weight after necropsy, oxidative stress markers and histopathology of various tissues. Acute (300 and 2000 mg/kg) and repeated-dose (300 and 2000 mg/kg) toxicity studies were performed according to the Organization for Economic Cooperation and Development (OECD) guideline 423 and 407, respectively. There was absence of adverse clinical signs and mortality in any animal subjected to acute and repeated-dose toxicity study. In addition, no significant changes in body weight, food and water intake, oxidative stress biomarkers, hematological and biochemical parameters were observed when compared to control group from single-dose and repeated-dose toxicity study. Therefore, the results of this study provide an understanding of the toxicity profile of β-caryophyllene which can be considered a compound with toxicity at doses higher than 2000 mg/kg body weight.

Keywords: Acute toxicity; Bicyclic sesquiterpene; Repeated-dose toxicity; Swiss mice; β-caryophyllene.

Related information

MedGen
PubChem Compound (MeSH Keyword)

LinkOut - more resources

Full Text Sources

Elsevier Science
Ovid Technologies, Inc.

Other Literature Sources