

Supplementary Table S1. List of compounds, reported contents, and their reported toxicity/safety issue contained in Cannabis roots

Major compounds in Cannabis root	Concentration	Toxicity/Safety issue	Reported biological activity
Friedelin	7.5-12.8mg/kg	N/R	Anti-inflammatory, Analgesic, antipyretic, anti-viral, anti-oxidant [1]
Epifriedelanol	14.5-21.3mg/kg	N/R	Anti-inflammatory, anti-oxidant [2]
Carvone*	893.36 mg/kg	Low toxicity with rare cases of contact allergy; in animal studies, doses ≥ 30 mg/kg/day caused kidney changes in males, but no carcinogenicity or genotoxicity was observed.	Anti-microbial, anti-oxidant, anti-inflammatory [3]
Dihydrocarvone*	267.95 mg/kg	Low acute toxicity, with LD50 values above 5 g/kg in rats and rabbits; high-dose (subcutaneous) administration in mice produced anticonvulsant and sleep-related effects.	Antimicrobial [4]
Cannabisativine	2.5mg/kg	N/R	N.R
Anhydrocannabisativine	0.3mg/kg	N/R	N.R
β -Sitosterol	0.687mg/kg	No genotoxicity was seen in mice, but long-term intraperitoneal injections in rats caused mild liver and kidney lesions.	Anti-inflammatory, Anti-microbial, anti-oxidant, analgesic [5]
Campesterol	0.172mg/kg	In a study on rabbits was not irritating. Oil-derived mixture caused very slight and reversible erythema.	Anti-nociceptive, anti-inflammatory, anti-oxidant [6,7]
Stigmasterol	0.202mg/kg	In a two-generation study, no reproductive or developmental toxicity was observed in rats at high doses.	Anti-inflammation, analgesic, immunomodulation [8]
N-(p-hydroxy-b-phenylethyl)-p-hydroxy-trans cinnamamide	1.6 mg/kg	N/R	Anti-inflammation [9]

* Higher yields of carvone and dihydrocarvone due to hexane-based extraction and large-scale processing.

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