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CHEMICAL COMPOSITION AND POSSIBLE ANTI-INFLAMMATORY MECHANISM OF FIXED OIL OF TEUCRIUM STOCKSIANUM

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Teucrium stocksianum is used in folk medicine for the treatment of fever and diabetes. The methanolic extract and essential oil of Teucrium stocksianum possesses strong antinociceptive activity. In the current study GC-MS (Gas chromatography coupled with Mass spectrometer) analysis identified 21 different saturated and unsaturated fatty acids constituents. Methyl esters of linoleic and octadecadienoic acids were found in predominant concentrations, 23.84 and 22.60%, respectively. Elaidic, oleic and palmitic acids were also detected in distinct amounts, 4.7, 3.8 and 2.77%, respectively. Fatty acids (FA) exhibited profound protection against all edemogens at 3 ml/kg at 3rd h. FA has demonstrated 67.87, 68.36, 68.75 and 58.3% inhibition against carrageenan, arachedonic acid, prostaglandin E2 (PGE2) and leukotrienes (LT) respectively, at a dose of 3 ml/kg. Thus, it could be concluded that the FA of T. stocksianum exhibited the anti-inflammatory effect via dual inhibition of both cyclooxygenase and lipoxygenase pathways of arachedonic acid metabolites. Nonetheless, substantial effect was observed via prostaglandin inhibition. These results strongly support the traditional use of the plant in the treatment of various inflammatory conditions.

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