

B175 Anti-inflammatory activity of *Bursera simaruba*

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The Burseraceae family of plants is represented in Mexico by 20 genera and over 600 species. These plants are characterized by their exudates and resins which are rich in essential oils used with medicinal and industrial purposes. A potential insecticidal activity has been also described for some species. From *Bursera simaruba*, phenolic and terpenoid compounds have been isolated. On the other hand the anti-inflammatory activity of the hexanic extract obtained from the leaves of this species has been also described (1). On the basis of the previous discussion in this work the methanolic and acetonetic extracts obtained from the leaves of a Mexican population of *B. simaruba* were tested, for its anti-inflammatory activity, in an assay of 12-O-tetradecanoyl-phorbol-acetate (TPA, 2.5 µg), induced ear edema in mice, and after 10 min loading dose 0.31 mg extract was topically applied. The results indicate that the acetonetic extract produces 40.89 % of inhibition of the induced edema (p = 0.0431). An inhibition of 20.86% was obtained for the methanolic extract (p = 0.0569). Biodirected fractionation of the acetonetic extract looking for the bioactive compounds is now in progress.

References: 1. Abad, M.J. et al. (1996) J. Ethnopharmacol. 55: 63-68.

B176 Anti-inflammatory activity of two *Dyssodia* species (Asteraceae)

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Dyssodia is a New World genus. The plants belonging to this genus are distributed in the tropics and subtropics of North and Central America (1). In Mexico two species are used as medicinal plants, *D. porophylla* and *D. papposa*. Their folk uses indicate a probable anti-inflammatory activity (2) that has been investigated in this work. Hexane and methanol extracts were prepared from the parts of the plants used in Traditional Medicine, stems and leaves of *D. porophylla* and stems and inflorescence of *D. papposa*. From these extracts the anti-inflammatory activity was determined by the mouse ear edema test induced with TPA (12-O-tetradecanoyl-phorbol-13-acetate), 2.5 µg TPA / ear topically applied and after 10 minutes 0.31 mg extract / ear, also topically applied.

Anti-inflammatory activity was found in the methanol extract of *D. papposa* inflorescence, 22.09 % inhibition of the ear edema (p = 0.01), and in the methanol extract of *D. porophylla* stems, 26.57% inhibition of the ear edema (p = 0.05). The results indicate that the plants have an anti-inflammatory activity which is in accordance with their use in the Traditional Medicine.

References: 1. J.L. Strother (1969) Systematics of *Dyssodia* cavanilles (Compositae: Tageteae) University of California Press. Los Angeles, U.S.A. 2. A. Argueta et. al. (1994) Atlas: Plantas Medicinales Tradicionales Mexicanas II. Instituto Nacional Indigenista. México D.F.