In vivo anti-inflammatory activity of *Campomanesia velutina* (Cambess.) O. Berg

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Introduction: *Campomanesia velutina* (Cambess.) O. Berg is endemic in Brazil, found in the Brazilian cerrado bioma, savanna and Brazil’s Atlantic Forest (L.R.LANDRUM, Flora Neotropica, 1986). They are popularly known as “gabiroba” or “guavira” and have widely been used in folk medicine as depurative, anti-diarrhea, anti-rheumatic, anti-inflammatory, antiseptic of the urinary tract, in the treatment of diabetes and reduction of blood cholesterol (M.W. BIAVATTI, J. Ethnopharmacol., 93, 385, 2004). Although the traditional use of *C. velutina* as anti-inflammatory agent, there is a lack of investigations on the pharmacological properties of this plant. Thus, the aim of this study was in vivo evaluate the anti-inflammatory activity of ethanolic extract (EE) from leaves of *C. velutina* and its ethyl acetate (A) and methanolic (M) fractions.

Materials and Methods: The anti-inflammatory activity was evaluated by the carrageenan-induced paw oedema method in mice, according to Winter et al. (C.A. WINTER, Proc. Soc. Exp. Biol. Med., 111, 544, 1962) with modifications. The animals were divided into eight groups (n=8) and the respective groups were treated with vehicle, indomethacin and two doses (100 and 300 mg/Kg) of EE, A and M. Half an hour after treatment, oedema was induced by injection of carrageenan (0.02 mL, 0.1%, w/v) into the sub-plantar tissue of the right hind paw. A digital caliper rule was used to measure oedema variation. The paw oedema was calculated as the percentage of variation between zero time and 1, 2, 3, 4, 5 and 6 h after carrageenan.

Results and discussion: Oral treatment with EE at major dose (300 mg/kg) was effective in reducing the oedematogenic response from first hour after carrageenan injection and remained throughout the experiment. Moreover, anti-inflammatory activity of EE was similar to indomethacin during the entire experiment. These results suggest that EE acts at different phases of carrageenan-induced inflammatory process, probably by inhibiting the release and/or actions of several mediators involved at inflammatory response, like vasoactive amines, kinins, PG’s and NO. A and M significantly inhibited oedema from third hour after carrageenan injection. Thus, activity of these fractions only in the second phase of inflammatory process indicates that mechanism of action of these fractions is related to PG’s and NO.

Conclusion: The results of the present study demonstrated, for the first time, the anti-inflammatory activity of *Campomanesia velutina*. Although complete mechanisms underlying these actions remain to be elucidated, the anti-inflammatory activity seems to involve vasoactive amines, kinins, prostaglandins and NO pathway. Results obtained justify the use of the plant extract in traditional Brazilian medicine for the treatment of inflammatory conditions.

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