

EFFECTS OF FUCOIDAN FRACTIONS, DICLOFENAC, LUMIRACOXIB ON THE CELL INFLUX AND NITRIC OXIDE LEVELS IN ZYMOBAN INDUCED ARTHRITIS MODEL.

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Rheumatoid arthritis is an autoimmune chronic inflammatory disease characterized by infiltration and activation of inflammatory cells within the synovial tissue of multiple joints. The purpose of this study was to demonstrate the effects of sulfated polysaccharides (fucoidan) from brown algae *Fucus vesiculosus*, called F1 and F2 in the zymosan (Zy) induced-arthritis. Wistar rats received 1 mg of zymosan into the right knee joint, and controls received saline. 1 hour after the Zy, groups were treated intraperitoneal with F1 (25 mg/Kg), F2 (25 mg/Kg), diclofenac (10 mg/Kg, unselective cyclooxygenase inhibitor) or v.o with lumiracoxib (5 mg/Kg, selective cyclooxygenase-2 inhibitor). After, the articular exudates were collected for evaluation of the cell influx and nitrite release. The administration of the fractions F1 and F2, diclofenac or lumiracoxib significantly inhibit the cell influx (81%, 87%, 54,4%, 44%, respectively) and the increase of NO levels (71%, 75%, 66,7%, 36%, respectively) when compared to control. These results suggest that the fucoidans from *F. vesiculosus* may be considered as a useful therapeutic agent for the treatment of inflammation.

Supported by: CAPES

Key words: *Fucus vesiculosus*, arthritis, zymosan