# EFFECT OF FUCOIDAN FROM FUCUS VESICULOSUS AND NON-STEROIDAL ANTI-INFLAMMATORY DRUG IN THE ZYMOSAN-INDUCED ARTHRITIS IN RATS.

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Rheumatoid arthritis is characterized by chronic inflammation of the joints. We investigated the effect of fucoidan, sulfated polysaccharide, from the alga *Fucus vesiculosus* and parecoxib in experimental arthritis. Wistar rats received 1 mg of zymosan into the right knee joint and controls received saline. Groups were treated i.p. with fucoidan from *Fucus vesiculosus* (15, 30 , 50 and 70 mg/Kg) or parecoxib (1 mg/Kg) and non-treated groups received only the zymosan. After 6h the articular exsudate was collected and the number of cells was determinated by Turck's solution, nitrite levels in synovial fluid (Griees reagent), the synovial membranes were excised for histopathological analysis (hematoxylin-eosin staining) and the kind of the GAG of the articular cartilage was determined by agarose gel electrophoresis. Therapeutic administration of different fucoidan concentration or parecoxib significantly inhibited the cell influx and the synovitis when compared to non-treated rats ($p < 0,05$), though being able to reduced NO release. Only chondroitin sulphate was detected in the articular cartilage of the rats with experimental arthritis. These findings suggest that the fucoidan has potencial anti-inflammatory activity in this model.

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