

EFFECT OF THE SULFATED POLYSACCHARIDE ISOLATED FROM THE BROWN SEAWEED *PADINA GYMNOSPORA* IN THE INFLAMMATION

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The effects of a fucan isolated from the brown seaweed *Padina gymnospora* on inhibition of leukocyte migration and nitric oxide production was analyzed in this work. This fucan was extracted by proteolytic digestion, followed by sequential acetone precipitation and chemical characterization. The chemical analyses demonstrated that the fraction F1.5 (precipitated with 1.5 volume of acetone) is composed mainly of fucose, xylose, glucose and galactose in a molar ratio of 1.0:0.4:0.2:0.3 respectively. This fraction presented 8.9% of sulfate and low contamination for protein (0.5%). The effect of this fucan on the leukocyte migration was observed in the inflammatory process induced by 3% sodium thioglycollate in peritoneum of Swiss mice. This polymer decrease the migration of leukocyte in the order of 56 and 39% when used 10 and 25 mg/Kg respectively. Nitric oxide (NO) production by mouse peritoneal macrophages was detected in culture supernatants using Griess reagent. Our results demonstrated that fucan (375 and 500 µg/mL) reduced the nitric oxide production significantly ($P < 0.001$) after incubation for 24 and 48 h. These results suggest that the fraction F1.5 presents potential pharmacological applications.

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