

EVALUATION OF ANTINOCICEPTIVE AND ANTI-INFLAMMATORY EFFECTS OF SULFATED POLYSACCHARIDES FROM *CODIUM ISTHMOCLADUM*

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The utilization of green algal biomass can be based on specific properties of their sulfated polysaccharides (SP), which are known for their anti-inflammatory or antinociceptive activities. In this study, five polysaccharides-rich fractions (F0.3, F0.5, F0.7, F0.9, F1.2) were obtained from the green alga *Codium isthmocladum* by proteolytic digestion and sequential acetone precipitation. The chemical analyses showed that they are composed mainly of galactose, mannose, arabinose and xylose. The inflammatory process induced by 3% sodium thioglycollate in peritoneum of Swiss mice was not significantly inhibited by the fractions ($P > 0.05$, $N=5$). The antinociceptive effect of the fractions (20mg/Kg, iv.) on swiss mice was evaluated by abdominal writhing (AW) induced by acetic acid 0,6% (ip.). F0.9 and dipyrone produced significant inhibition of AW (30mim), with 22.5 ± 2.5 and 24 ± 3.3 writhing respectively (control: 75.6 ± 3.05 ; $P < 0.001$; $N=10$). This effect was time- and dose-dependent, reaching the highest activity 90mim and 10mg/kg after iv. administration. No effects were observed in the hot-plate test (10 mg/kg; $N = 10$). These results suggest that sulfated polysaccharides of F0.9 have a great potential as antinociceptive compound. Moreover, further studies are necessary to characterize the possible mechanism of nociceptive action.

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