

SULFATED POLYSACCHARIDES FROM AN ANTARCTIC SEAWEED: ISOLATION AND ANTINOCICEPTIVE ACTIVITY

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Sulfated polysaccharides (SP) have a broad range of biological properties comprising antiviral and antitumoral action, variable effects on the immune system and anticoagulant activity. We report here the SP activity from *Gigartina skottsbergii* as a new antinociceptive drug. The SP was extracted according to FARIAS *et al* (2000). Male Swiss mice were used in the writhing test (KOSTER *et al*,1959). In formalin test (HUNSKAAR *et al*,1985) the licking time was recorded during the first 5 min (1st phase) and after 20 min (2nd phase). Animals groups were previously treated with the polysaccharides intraperitoneal (i.p). In both tests naloxone, an opioid antagonist, was injected 15 min before the carbohydrates. Results showed that SP was potent in causing inhibitions of the abdominal contractions. A significant reduction (93%), of the writhing numbers ($2,57 \pm 1,37; n=12$) was seen as compared to the control group ($45,37 \pm 3,09; n=16$). In the formalin test the carbohydrates caused a significant inhibition of the licking time on the 1st phase (33,06 and 28,36%) and 2nd phase (75,93 and 74,87%, respectively). The effect of carbohydrate in the dose of 20 mg/kg was reversed by naloxone only on the 2nd phase, reducing the inhibition in 46,8% ($22,16 \pm 4,15; n=6$) indicating the involvement of the opioid system.

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Key words: seaweed, sulfated polysaccharides, antinociceptive activity.