

EFFECT OF FUCAN A FROM *SPATOGLOSSUM SCHRÖEDERI* BROWN ALGAE ON THE STIMULUS OF SYNTHESIS OF HEPARAN SULFATE IS DEPENDENT OF THE CONFORMATION OF THE COMPOUND.

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Fucans are sulfated L-fucose rich polysaccharides extracted from marine brown seaweed whose structure is complex heterogeneous. An heterofucan from *Spatoglossum schröederi* named fucan A was submitted to carboxyirreduction (Taylor et al., 1976), partial (2h) and total (8h) desulfatation (Nagasawa et al., 1979). The native fucan A (nFucA), carboxyirreduced fucan A (cFucA), partial desulfated fucan A (dFucA2h) and total desulfated fucan A (dFucA8h) had been the uronic acid and sulfate contents stimulated. The sulfate reduced to 28% to dFucA2h, 53% to dFucA8h and 10% to cFucA while the carboxylic groups reduced 68% to cFucA as compared to nFucA. In this work we also analysed to nFucA the ability to stimulate the antithrombotic heparan sulfate (HS) in rabbit aorta endothelial cells (RAEC). A binding to RAEC responsible for the effect. The results showed that the nFucA was able to stimulate the antithrombotic HS in RAEC however the decrease of the sulfatation in 30% reduced the stimulus to the synthesis of HS. The reduction of carboxylic groups reduced in 20% this effect suggesting that the biological activity of fucan A not just depends on the anionic charge but on the molecular spatial structure.

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