

HEPARIN AND DERMATAN SULFATE OBTAINED FROM THE ASCIDIAN  
*STYELA PLICATA* WITH HIGH ANTINFLAMMATORY EFFECT IN AN  
EXPERIMENTAL MODEL OF INFLAMMATORY BOWEL DISEASE

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Sulfated glycosaminoglycans (GAGs) are major constituents of the extracellular matrix of the intestinal mucosa. In intestinal bowel diseases (IBD), there is a destruction of the intestinal mucosa, which is associated with the loss of GAGs. There is evidence supporting the idea that GAGs may have an important role in wound healing. Thereby, we investigated the effect of invertebrate GAGs on an experimental model of IBD in rats. Dermatan sulfate and heparin were isolated from *Styela plicata* and injected daily into animals in which colon inflammation was induced by local injection of TNBs/ethanol (inflamed group) for 7 days. They were then sacrificed, the colon removed and processed for histochemistry and immunohistochemistry. Analysis by ELISA showed an increase of TNF $\alpha$ , VEGF and TGF $\beta$  in the colon of the inflamed group. Histochemistry analysis, showed an increased of collagen and immunohistochemistry analysis showed an increased of apoptotic rate. Exogenous GAGs reduced the amount of the cytokines levels, collagen and apoptotic rate in the inflamed colon. These results indicate that dermatan and heparin from ascidian possess antiinflammatory effect in an animal model of IBD.

Key words: antiinflammatory, ascidian, dermatan sulphate, heparin

Financial support: CNPq, FAPERJ, NIH-FIRCA (R03 TW05775).