

SULFATED POLYSACCHARIDES REDUCE THE EFFECTS OF *Loxosceles intermedia* VENOM

Sene, R. V<sup>1</sup>, Brito, J. B<sup>1</sup>, Nowatzki, J<sup>1</sup>, Gremski, L. H<sup>2</sup>, Rocha, H. A.O<sup>3</sup>, Trindade, E. S<sup>1</sup>, Veiga, S. S<sup>1</sup>, Nader, H. B<sup>2</sup>, Franco, C. R. C<sup>1</sup>

<sup>1</sup>Department of Cell Biology, UFPR, Curitiba, Paraná, Brazil;

<sup>2</sup>Medical Clinic Discipline, Department of Medicine, UNIFESP, São Paulo, Brazil;

<sup>3</sup>Department of Biochemistry, UFRN, Natal, Brazil.

Accidents related to *Loxosceles intermedia* (brown spider) have been increasing along the years, specially in the south of Brazil. This spider's bite can evolve to cutaneous and/or systemic effects. At the present there are no drugs which can minimize or inactivate the action of the venom. Therefore, sulfated polysaccharides (fucans and heparin) were used to analyse their potential pharmacological application against the effects of the brown spider's venom. The interactions between the polysaccharides and the venom's toxins were observed using agarose gel electrophoresis using Tris/Acetate buffer. The electrophoretic mobilities of known digestion fibronectin by the venom in SDS-PAGE showed a protective effect in the presence of polysaccharides. Adhesion assays using endothelial cells on a fibronectin coat showed that the protective effect caused by polysaccharides led to an increase of the cell adhesion after exposure to the venom. The flow cytometry analysis verified a decrease of the venom's toxins interaction to the cell's surface after the exposure to the polysaccharides. These results suggests a potential pharmacological use of the sulfated polysaccharides against the effects evoked by the *Loxosceles intermedia*'s venom.