

INTERACTION OF TOXINS OF *Loxosceles intermedia* VENOM WITH ENDOTHELIAL CELLS AND POSSIBLE INTERNALIZATION

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Loxoscelism, the term used to describe lesions and clinical manifestations induced by brown spider venom (*Loxosceles* genus), is an important problem of public health, mainly in Parana State (Brazil). The activity of the venom in culture endothelial cells, have been demonstrated that toxins of *Loxosceles intermedia* venom induced morphological alterations with loss of cell adhesion. Moreover, it was demonstrated that venom binds to the cell surface as well as extracellular matrix. In the present work, we were able to demonstrate that venom's toxins interact with integrin receptors (β_1 subunit) and reduce their expression after four hours of exposure to the cells. These toxins interacted directly with the cell surface, by the colocalization with specific carbohydrates. Also the same treatment with the venom can reduce the expression of these carbohydrates. Besides, the venom interaction with cell surface could be charge independent, since heparin, a high negative polysaccharide, that interact with venom's toxins, wasn't able to dislocate the venom bound at the cell surface. Additionally, were observed the internalization of venom's toxins which colocalized with lysosomes using specific marker. These results suggest that the action of venom could be mediated by interactions of cell surface and by its internalization.

Key words: *Loxosceles* venom, cell surface interaction, internalization.