

Leukocyte Migration Pontencial of a C-type Galactoside-Binding Lectin Isolated From *Bothrops atrox* Snake Venom

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Lectins are proteins with non-enzymatic activity that binds specifically to carbohydrates, and are characterized by distinct biological activities such as inflammatory response. Recently, a C-type galactoside-binding lectin was isolated from *Bothrops atrox* snake venom: Galatrox. The aim of this work was to evaluate Galatrox leukocyte migration potencial, by *in vivo* and *in vitro* assays, and its capability of binding to the surface of neutrophils. Inicially, *in vitro* assay was performed in Boyden chamber to evaluate human purified neutrophils migration towards diferents concentrations of Galatrox and in the presence, or not, of lactose or sucrose. Galatrox promoted neutrophils migration on a dose-dependent manner, where only lactose inhibited this activity. The evaluation of this lectin to bind the surface of neutrophils was performed by coupling Galatrox with FITC and incubating different concentrations of the complex with the cells and analyses by flow citometry. Galatrox showed maximum capacity to bind to 5×10^5 neutrophils from the concentration of $8 \mu\text{g/mL}$ ($91,47\% \pm 0,5650$ positive cells). Also, lactose inhibited in 50% the binding capacity. *In vivo* assay was performed evaluating the global and differential leukocyte counting of the peritoneal wash on mouse treated with different doses of Galatrox and different periods after injection. The inflammatory response induced by the lectin was characterized by an acute neutrophil migration (peak of migration after 4 hours of injection: $0,98 \times 10^6 \pm 0,0481$ neutrophils/mL) at a dose of $50 \mu\text{g}/\text{mouse}$. The results provides important information about the role of Galatrox on envenoming physiopathology and raises strategy for new experimental tools due it's affinity for specific ligands on neutrophil surface.

Key Words: *Bothrops atrox*, snake venom, Leukocyte migration, Lectin

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