

NO Production and Inhibition of Leucocytes Rolling/Adhesion are Involved in the Anti-inflammation of Laticifer Proteins from *Calotropis procera*.

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Laticifer proteins (LP) from *C. procera* were previously showed to possess anti-inflammatory activity. In this study we aimed at purifying the protein involved in this activity and further characterizing its biochemical properties. Three proteins sub-fractions were recovered after ion exchange (CM-Sepharose Fast Flow) chromatography of LP at pH 5.0. Peaks were recovered after washing the column with acetate buffer (PI - unbound), 200mM NaCl (PII) and 300mM NaCl (PIII), sequentially. Electrophoresis analysis showed that protein patterns of sub-fractions were distinct. Surprisingly, when assayed in different pharmacological analysis, all the sub-fractions (10mg/kg) inhibited neutrophil migration induced by carrageenan (500µg) into peritoneal cavity of animals (*p<0,05). Intravital microscopy studies suggested this effect involved inhibition of leukocyte rolling and adhesion in the endothelium. Whereas PII and PIII did not affect level of Nitric Oxide (NO) in serum, PI was a strong inducer of it (*p<0,05). According to the results observed, the latex of *Calotropis procera* possesses at least three distinct proteins involved in its potent anti-inflammatory activity. Active proteins seem to modulate the inflammatory process by intervening in the cellular migration by different routes.

Keywords: inflammation; intravital microscopy; latex; laticifer proteins

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