

Luetzelburgia auriculata lectin Inhibits Adhesion/Rolling of Leukocytes and Modulates Histamine/P_G₂ Effects in Acute Inflammation Models

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The seed lectin from *Luetzelburgia auriculata* that specifically binds galactose and some of its derivatives was purified to homogeneity from the crude saline extract through affinity chromatography on a guar-gum matrix instead N-acetylgalactosamine as originally reported. The lectin exhibited strong anti-inflammatory activity (2 mg/Kg) on the peritonitis and paw edema models, and drastically reducing locally myeloperoxidase activity. Galactose or heat treatment (100 °C, 10 min) significantly reduced the lectin anti-inflammatory action. However, the lectin resisted to digestion with pronase and retained its pharmacological properties. The anti-inflammation involves the inhibition of adhesion and rolling of leukocytes in the endothelial tissue along with augmentation of Nitric oxide production in serum. It was also shown that the lectin effectively modulated histamine action and at least extent reduces significantly prostaglandins effects (P_G₂) on paw edema. The results suggests that this lectin is a potent anti-inflammatory molecule which the mechanism of action include diverse modulating events. Key words: anti-inflammatory, carbohydrate-binding, plant lectin