ANTIINFLAMMATORY ACTIVITY FROM EXTRACTS OF PLUKENETIA VOLUBILIS L.

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Natural products have long been investigated for their potential benefits and plants are an important source of the compounds for healing and prevention of various diseases. Inflammation is a crucial defense mechanism of organisms against pathogens and tissue injury; however, chronic inflammation can lead to several diseases. Thus, the discovery of new natural compounds with anti-inflammatory action would contribute to the development of new therapies against chronic inflammation and its associated disorders. The aim of this study was to investigate the action of extracts aqueous (EA) and ethanolic extracts (EE) from \textit{Plukenetia volubilis} (PK) on nitric oxide (NO) production in RAW 264.7 murine macrophages stimulated with LPS and evaluate the ability of the extracts to neutralize the effects caused by carrageenan-induced peritonitis. Therefore, RAW macrophages were plated at a $2 \times 10^5$ cells/well density and after 24 hour, the treatment was carried out at concentrations of 100 µg/mL and 500 µg/mL of the extracts. Nitrite accumulation in the culture medium was determined as an indicator of NO production. For \textit{in vivo} test, mice BALB/c were used. Animals were randomly divided into 12 groups, where: (group 1) treated with saline; (group 2) carrageenan treatment; (group 3) dexamethasone 0.5 mg/kg (Dexa); (group 4, 5 and 6) 4, 10 and 20 mg/kg PK aqueous extract respectively; (group 7, 8 and 9) 4, 10 and 20 mg/kg PK ethanol extracts. The results showed that the EE and EA extracts acted as NO synthesis inhibitors, produced only 37% and 38% nitrite, respectively. Regarding \textit{in vivo} evaluation was observed that EA and EE reduced the peritoneal leukocytes migration significantly in a similar way as the dexamethasone control. Based on these data we suggest that the PK extracts and its constituents have potential use in anti-inflammatory therapy.

Key-words: Natural products, inflammatory, extracts.

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