

Controversial Reports to Folk Medicine: The Immunostimulatory Potential of
Aqueous Extract from *Anacardium humile* St. Hil.

Serquiz, R. P.^{1,2}, Pedroso, D. L.¹, Vieira, S. C.¹, Serquiz, A. C.^{1,2}, Carvalho, F. M. C.³, Rabelo, L. M. A.¹, Santos, P. I. M.⁴, Marques-Neto, A. M.¹, Cruz, J. I. O.¹, Santos, Y. Q.¹, Araújo, J. N.¹, França, A. F. J.¹, Souto, J. T.⁵, Souza, C. R. M.⁵, Batista, V. C.¹, Catillo, G. D.¹, Moura, G. M. M.¹, Costa, I. C. S.¹, Uchôa, A. F.¹, Santos, E. A.¹.

¹Departamento de Bioquímica, Centro de Biociências, Universidade Federal do Rio Grande do Norte, Natal, Brazil; ²Universidade Potiguar, Natal, Brazil;

³Departamento de Nutrição, Centro de Ciências da Saúde, Universidade Federal do Rio Grande do Norte, Natal, Brazil; ⁴Departamento de Biologia, Instituto Federal do Piauí, Pedro II, Brazil; ⁵Departamento de Microbiologia e Parasitologia, Universidade Federal do Rio Grande do Norte, Natal, Brazil

Introduction: Plants have been used as medicines by humankind, since the beginning of its existence. Among the different parts of the plants used in folk medicine, the stems seem to be the least studied. However, potions prepared with stems, have already shown promising pharmacologic activities and high molecular diversity. **Objectives:** This study aimed to evaluate the content of a potion obtained from the stem bark of Cajuí (*Anacardium humile* St. Hil.), about some previously described proprieties before in folk medicine and popular use. Thus, in this work, we sought to evaluate the effect of the potion on blood coagulation, inflammation, antioxidant, and proteases inhibitory activities. **Material and methods:** The content of proteins, carbohydrates, phenolic compounds, as well as total antioxidant capacity of the aqueous extract from Cajuí were determined by chemical methods. The effect on blood coagulation was evaluated by APTT and PT tests, and the pro-inflammatory activity was performed by LPS-induced peritonitis model in mice. **Results and discussion:** The results showed that the extract had insignificant interference on the blood coagulation time and was not able to stimulate IL-6 secretion by murine macrophages. On the other hand, its

action on the inflammatory response was more significant, as seen by the release of elastase from activated human neutrophils, the stimulation of TNF- α secretion by macrophages and leukocytes influx into the peritoneal cavity observed by *in vivo* models of peritonitis in mice. **Conclusions:** According to the folk medicine of the Northeast of Brazil, the cajuí potion is used as an anti-inflammatory. Nevertheless, the results suggest that the potion works as an immune stimulator, thus contradicting earlier reports. In addition, the wide variety of molecules and biological activities of the aqueous extract from the *A. humile* stem bark indicate its potential biomedical and biotechnological importance.

KEY WORDS: Folk medicine; *Anacardium humile*; Inflammation;