A BRIEF SURVEY OF SOME INFLAMMATORY AND ANTICLOTTING ACTIVITIES OF THE AQUEOUS EXTRACT OF *Magonia pubescens* A.ST.-HIL STEM BARK


Several molecules used as antifungal, antibacterial and anti-inflammatory come from plants, and Brazil, with its biodiversity, constitutes one of the largest biological reservoirs of pharmaceuticals. *Magonia pubescens* A.St.-Hil (commonly known as tingui do cerrado) is a plant used in Brazilian folk medicine as a sedative, healing and for skin and hair treatments. Scientific studies reveal its acaricide and larvicide activities. Based on this, we decided to study some biological activities of the aqueous extract of *M. pubescens* stem bark (MpAE) and analyze some of its proteins. To obtain the aqueous extract, stem barks were ground in a blender, left in water (1:5 w/V) for 24h at 4 °C and, after that, filtered and centrifuged (10,000 x g) and discarded the pellet. The analysis of MpAE revealed the presence of lectins with hemagglutination titers of up to 2048 HU. MpAE was tested against serine proteases and exhibited inhibitory activities both for trypsin and chymotrypsin. On the blood coagulation tests, MpAE caused slight increase in the clotting time of the intrinsic pathway (10 seconds in aPTTT), but did not affect the extrinsic pathway time (PT). MpAE was able to decrease the viability of macrophages in concentrations higher than 0.5 mg/mL (30%) and did not show hemolysis until this same concentration. Although it has caused no hemolysis at lower concentrations, MpAE was still able to activate macrophages. Quantification of TNF-α showed that the tingui extract alone was capable of stimulate the secretion of this cytokine. MpAE enhanced the cytokine secretion in activated cells by LPS, revealing its potential immune stimulatory effect. Differently, MpAE demonstrated a suppressing effect to release IL-6 from activated cells. These results show the importance of tingui as a source of biopharmaceuticals, especially as modulator of the inflammatory process. Nevertheless, further analysis of its components is required.

Keywords: *Magonia Pubescens*; lectins; serine proteinases.