In vitro Cytotoxic Effect of *Tabebuia aurea* Seed Extract on *Leishmania infantum* Promastigotes and Murine Macrophages

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INTRODUCTION: Protozoa of the genus *Leishmania* cause leishmaniasis disease which promotes a high level of morbidity and mortality, especially visceral leishmaniasis caused by *Leishmania infantum*. The drugs for treatment are expensive and require a long time of administration, so new therapies based on the use of plant metabolites have been researched. *Tabebuia aurea* is a plant with medicinal properties as antimicrobial and anti-inflammatory which indicate presence of active biomolecules. **OBJECTIVE:** To evaluate the potential cytotoxicity of *T. aurea* seed extract on *L. infantum* promastigotes and murine macrophages. **MATERIAL AND METHODS:** *T. aurea* seed powder was submitted to extraction in 0.15M NaCl (10%, w/v) under constant agitation (16h). The material was centrifuged (at 4 °C) to obtain the extract. Protein concentration and hemagglutinating activity were evaluated. The cytotoxicity was analyzed by MTT test, using *L. infantum* promastigotes and murine macrophages in culture plates, which were incubated with extract (500-0.485 µg mL^{-1} and 500-31.25 µg mL^{-1}, respectively) for 72h; subsequently plates were washed, complete RPMI medium and MTT were added. After 3h, DMSO was added, plates were shaken and the absorbance was measured at 540nm. Data were analyzed by ANOVA followed by Tukey's post-test (program SPSS 13.0). **RESULTS AND DISCUSSION:** The extract showed 11.31 mg mL^{-1} protein concentration and specific hemagglutinating activity of 0.35, revealing presence of lectin. The extract revealed cytotoxic effect on macrophages at a protein concentration of 500 µg mL^{-1} ($p<0.05$). There was no cytotoxicity on *L. infantum* promastigotes. Different molecules in the extract such as lectins or other metabolites can have caused the cytotoxicity on macrophages. Lectins can trigger different biological effects, including toxicity, therefore cytotoxicity and lectins should be investigated in medicinal plants. **CONCLUSION:** *T. aurea* seed extract has lectin activity and cytotoxic effect on macrophages, but has no effect on viability of *L. infantum* promastigotes.

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