**Anti-inflammatory and Anti-aging potential of *Arrabidaea chica* Verlot extracts (Bignoniaceae).** 1Batalha ADSJ\*\*, 1Barbosa ARC\*\*, 2Machado TM\*\*, 2Sousa LB\*\*, 2Vasconcellos MC, 2Lima ES, 1Lalwani PJ, 1Boechat AL 1Laboratory of Infectious Diseases and Immunology - ICB - UFAM; 2Biological Activity Laboratory - FCF - UFAM, Manaus/AM. \*\*Graduate students.

The amazonian species *Arrabidaea chica* Verlot (Bignoniaceae), known as crajiru, are useful in traditional medicine, because of antioxidant and anti- inflammatory potential. The aim of this study was to investigate the anti-aging and anti-inflammatory potential of aqueous extract *Arrabidaea chica* species. It was assessed by the cytokines quantification, and intracellular reactive oxygen species (iROS) production, mitochondrial membrane potential, comet test and the assessment of apoptosis by Annexin V flowcytometry. The extract reduced TNF-α (IC 50% = 35 μg/mL) and increased IL-10 (EC 50% = 31 μg/mL) with dose-dependent manner in zymosan stimulated J774 macrophages. The extract reduces the iROS production compared to staurosporin (-4.19±1.38, 26.73± 3.31, p<0.0001), and enhancement of the mitochondrial membrane potential (9.51±1.01, -29.9±5.99, p<0.0001) in THP-1 macrophages. Furthermore, the extract from *Arrabidaea chica* protected the DNA against doxorubicin action (*p*<0.0001) in THP-1 cells and from apoptosis (*p*<0.0001). The species Arrabidaea chica (crajiru) is easily accessible and we suggest that it should be explored as a therapeutic agent against cellular aging and inflammatory processes. This work was supported by Fundação de Amparo a Pesquisa do Estado do amazonas (FAPEAM).