Introduction and objectives: Brazil has a great biodiversity of plant species that are popularly used for the treatment of various diseases. The Brazilian Northeast is responsible for much of this use. Scientific research in this area promotes greater information leading to the safe use. Therefore, the aim of this study was to evaluate the cytotoxicity of popularly used plant species against normal and tumor cell lines. Material and Methods: 3T3 (mouse fibroblast) and 786-0 (kidney carcinoma) cell lines were exposed to extracts (from 0.1 to 100 µg/100µL) from Kalanchoe brasiliensis (saião), Ziziphus joazeiro (juazeiro), Libidibia ferrea Martius (jucá), Anacardium occidentale (cajú) and Schinus terebinthifolius Raddi (aroeira) species for 24 hours and the cell viability was measured using MTT assay. The absorbance of each well was measured at 570 nm. Results and conclusions: Several samples stimulated the 3T3 cell growth, highlight A. occidentale (cajú) effect, in the presence of this extract the cells growth 6-fold higher in comparison with cell from control group. On the other hand, jucá, aroeira and joazeiro extracts inhibits cells viability (30.98, 42.08 and 87.55% respectively). All extracts showed inhibition of 786-0 cell line growth. The jucá and joazeiro extracts showed respectively 47.22% and 90.56% inhibition at the dose of 100 µg/100µL. The most potent cytotoxic extract was saião extract that inhibits 786-0 cells viability in a rate of 94%. Extracts of jucá, joazeiro and saião proved to be good inhibitors of tumor cells therefore more promising as future therapeutic agents.

Palavras-chave: Medicinal plants, cytotoxicity, kidney carcinoma cells.