

ABSTRACT

Background. *C. albicans* is the most common type that found in the oral cavity and causes oral candidiasis. *Acanthus ilicifolius* has potential as antifungal, but has no studied about cytotoxicity test. **Purpose.** To examine antifungal potency of *Acanthus ilicifolius* leaf extract against *Candida albicans* and its cytotoxicity on fibroblasts BHK (Baby Hamster Kidney) 21. **Methods.** This study was a true experimental laboratory with posttest only group design. *Acanthus ilicifolius* extraction with solvent chloroform. The treatment group consisted of five groups were given different concentrations of extracts of *Acanthus ilicifolius* each group was 100% (P1), 50% (P2), 25% (P3), 12.5% (P4) and 6.25% (P5). Antifungal test, negative control group (K-) media SDA (Sabouraud Dextrose Agar), while positive control group (K+) media SDA (Sabouraud Dextrose Agar) with *Candida albicans* ATCC10231, incubated 48 hours after treatment and calculated the colony by colony caunter (CFU / mL). Cytotoxicity test, treatment group consisted of five groups were given different concentrations of extracts of *Acanthus ilicifolius* each group was 100% (P1), 50% (P2), 25% (P3), 12.5% (P4) and 6.25% (P5). Eagles media negative control group (K-) and positive control group (K+) media with BHK-21 cells. Test using the MTT assay and its absorbance values were measured using ELISA reader and then calculated by the formula % cell death. **Results.** Antifungal Test: group K (+) compared with P1, P2, P3, P4 and P5 ($p < 0.05$); Group K (-) compared to the P4 and P5 ($p < 0.05$); Group P4 compared with P5 ($p < 0.05$); while group K (-) compared with P1, P2, and P3 ($p > 0.05$). Cytotoxicity assay: Group P1 compared with group P2, P3, P4 and P5 ($p < 0.05$), while the P4 to P5 treatment ($p > 0.05$). **Conclusion.** *Acanthus* extract *ilicifolius* has antifungal potency against *Candida albicans*. Minimum inhibitory concentration (MIC) at concentration 6.25% and Minimum fungicidal concentration (MBC) at concentration 25%. Extracts mangrove *Acanthus ilicifolius* was not toxic to fibroblasts BHK (Baby Hamster Kidney) 21.

Keywords : *Acanthus ilicifolius*, antifungal test, cytotoxicity test, cell fibroblasts BHK (Baby Hamster Kidney) 21.