

EFEK KOMBINASI EKSTRAK TEMULAWAK (*Curcuma xanthorrhiza* Roxb) DAN KETOCONAZOLE TERHADAP KOLONISASI *CANDIDA ALBICANS*

COMBINATION EFFECT OF Curcuma xanthorrhiza* Roxb. – *Ketoconazole AGAINST THE COLONIZATION OF CANDIDA ALBICANS

ABSTRACT

Background: *C. albicans* is one of the manifestations of infection are most commonly found in immunocompromised patients. Candidiasis caused by *C. albicans* can be overcome by various types of anti-fungal. Recently, there are many cases of *C. albicans*'s resistance to the antifungal. *Curcuma xanthorrhiza* Roxb., was investigated for its antifungal activity using *C. albicans*. This study is to find out the effectiveness of combination of ketoconazole and *Curcuma xanthorrhiza* extract for oral candidiasis therapy. **Objective:** To study the combined effect of *Curcuma xanthorrhiza* with ketoconazole in inhibiting colonization of *C. albicans*. **Methods:** This research conducted in vitro by serial dilution method and colony's calculation. This study used a sample of non ARV *C. albicans* stock derived from immunocompromised patients from Institute Tropical Disease, Airlangga University. This sample was recultured and then divided into 3 groups and given different treatments. Group 1 was given a single ketoconazole, group 2 was given *C. xanthorrhiza* extract, and group 3 was given a combination of both. In each group is performed serial dilution. In this serial dilution process, ketoconazole diluted with initial concentration of 4-0.0625 mg/mL, whereas is given constant in each tube=50%. After that, the colony were cross-checked and re-planted on SDA media. Serial dilution also conducted for *Curcuma* by diluted 10-0,15625 mg/L concentration. Then both were combined and divided into 3 concentration. **Results:** *C. albicans* was susceptible to combination of *Curcuma* 1,25 mg/mL and ketoconazole 0,5 mg/mL. **Conclusion:** It can be concluded that administration of ketoconazole combination of *Curcuma xanthorrhiza* extract-ketoconazole is more effective than single ketoconazole.

Keywords: ketoconazole, *Curcuma xanthorrhiza*, *C. albicans*.