DAYA ANTIFUNGAL EKSTRAK KULIT MANGGIS (Garcinia mangostana L.) TERHADAP PERTUMBUHAN Candida glabrata DARI RONGGA MULUT PASIEN HIV/AIDS SECARA IN VITRO

ANTIFUNGAL EFFECT OF MANGOSTEEN PEEL (Garcinia mangostana L.) EXTRACT TOWARD THE GROWTH OF Candida glabrata FROM HIV/AIDS PATIENT’S MOUTH (IN VITRO STUDY)

ABSTRACT

Background. Most cases of oral candidiasis have been attributed to C. albicans, but recently non-albicans Candida species have been identified as frequent human pathogens, especially C. glabrata. In past two decades, C. glabrata that was known as non-pathogenic saprophyte, as a consequence of the widespread use of immunosuppressive drugs and the emergence of the AIDS, C. glabrata is increasingly implicated in human infection. Moreover, C. glabrata is of added concern because of its inherent resistance to certain antifungal agents and need a high doses of antifungal agents. Mangosteen peel is a medicinal herb that grows widespread worldwide. It has many health benefits, one of them is antifungal effect. Purpose. The aim of this study was to find the effective concentration (MIC and MFC) of mangosteen peel extract towards the growth of C. glabrata from HIV/AIDS Patient’s Mouth. Method. This research was done with the use of C. glabrata colony culture from the pseudomembranous oral candidiasis lesions in patient with 4th stage of HIV/AIDS. The inoculums was incubated in Sabouraud broth liquid to let the C. glabrata grow. Mangosteen peel extract is diluted in different concentration: 100%, 50%, 25%, 12.5%, 6.25%, 3.125%, 1.56%, 0.78%. Inoculums are dipped in Mangosteen peel extract and put on the Sabouraud dextrose agar media. After 24 hours, colony of C. glabrata will be counted. Result. The colony count on the concentration 100% and 50% were none. On the concentration 25%, 12.5%, 6.25%, 3.125%, 1.56%, 0.78% showed a growth of C. glabrata colonies, but in 25% had the minimum colonies. Conclusion. Mangosteen peel extract have antifungal effect toward the growth of C. glabrata colonies from HIV/AIDS patient’s mouth lesions. The MIC is 25% and the MFC is 50%.

Keywords: Garcinia mangostana L, Oral Candidiasis, HIV/AIDS, Candida glabrata, Colony count