ABSTRACT

ACTIVITY OF ETANOL 80% AND CHLOROFORM EXTRACT

Helianthus annuus L. LEAVES AGAINST HEME DETOXIFICATION PROCESS

(As an Effort in Overcoming Malaria)

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Helianthus annuus L. (sunflower) is a traditional plant that empirically the leaves used as an antimalarial drug. In vitro study of chloroform extract of H. annuus L. leaves had IC\(_{50}\) value of 0.037 \(\mu g/ml\) and in vivo study of 80% ethanolic extract of H. annuus L. leaves with single dose had ED\(_{50}\) value of 4.64 mg/kg BW. Both studies stated that the leaf extract of H. annuus L. was active as antimalarial drug. The purpose of this study was to determine mechanism of antimalarial that is inhibition of heme detoxification process on both extracts. The study used the method of Basilico et. al. (1998) which has been modified and absorbance was read by ELISA reader at a wavelength of 405 nm. The results showed that the activity of chloroform extract is better than the 80% ethanolic extract. Although, both extracts were declared active in inhibiting the heme detoxification process.

Keywords : Helianthus annuus L., ELISA reader, mechanism of antimalarial, heme detoxification.