

Anti Acne Potency of Temulawak

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ABSTRACT

Temulawak (*Curcuma xanthorrhiza* Roxb.) and kunyit (*Curcuma domestica* L.) were examined for anti-bacterial activities against microorganisms involved in acne inflammation by *Propionibacterium acnes*. The reduction in numbers of *P. acnes* is a just parameter of therapeutic effectiveness of antibiotics. The other parameter is inhibition of *P. acnes* lipase activity and antioxidant. Temulawak and kunyit were extracted by methanol and 50% ethanol. Methanol extracts was fractionated using hexane, ethyl acetate and water. All extracts undergo measurement on anti-acne activity to *P. acnes* bacterium (using MIC: minimal inhibitory concentration and MBC: minimal bactericidal concentration), lipase inhibitory activity (BALB: dimercapto propanol tributryrate method) and antioxidant activity (DPPH: 2,2-diphenyl-1-picrylhydrazyl method). This separation step of active compounds is under experiment now. The results showed that methanol and 50% ethanol extracts of temulawak have antibacterial activity against *P. acnes* (MIC: 500 g/ml). All of temulawak extracts have not good activity to inhibit lipase activity and have antioxidant activity. Curcumin has activity as antioxidant but has low activity as antibacterial and no inhibitory *P. acnes* lipase activity. In the mixture with alpha-curumene and alpha cedrene, gamma clemenone has higher activity to inhibit lipase activity compare to beta clemenone.

Key words: antibacterial, antioxidant, lipase inhibitory, kunyit, temulawak