Effects of *Theobroma cacao* Bean On antioxidant Activities and Re-Epithelialization in Burn Wound in Pre Clinical

Andi Emelda[1]*,Rusli[2],Risqi Nurazizah[3], Siti Amelia[4]

[1,2,3,4] Faculty of Pharmacy, Universitas Muslim Indonesia,
Jl. Perintis Kemerdekaan KM.5 Makassar 90231, South Sulawesi Indonesia.

Abstract: Cocoa beans contain flavanoid compounds that can improve blood circulation, anti-inflammatory, and antioxidant. The aims of this study were to determine the% inhibition of purified extract and the ability to re-epithelialization against burns.This study uses unfermented cocoa beans. The unfermented cocoa beans are extracted using a solvent n.Hexan. The residue of the n-hexan is subsequently extracted using acetone:water (7:3). Cocoa beans in the form of both powder and purified extract were tested for antioxidant content using free radical DPPH. Testing epithelialization of the burn was done by dividing the experimental animals into 5 groups. The first and the second groups are Control group andPositive group.The Group III, IV and V are the group that given the extract with a concentration of 2%, 4% and 8% respectively.The results showed,the evaluation of 80% inhibition at concentrations of 50 ppm are 84.83% for the purified extract and 83.54% for BHT, while the powder form has not reached 80% inhibition. The results of epithelialization ability of purified extract to burn show the percentage reduction of wound are better than the normal group. The groups of purified extract at the concentration of 2%, 4%, and 8% have the epithelialization ability of89.67%, 81.75%, and 63,5% respectively while the normal group only 20.5 %. The purified extract form is better than the powder form.

Keywords : Cocoa bean, purified extract, powder, antioxidant, epithelialisation.

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