

**ABSTRACT****THE EFFECT OF BITTER PEAR LEAF (*MOMORDICA CHARANTIA* L.)  
EXTRACT AS TOPICAL TREATMENT TO ACCELERATE 2<sup>nd</sup> GRADE  
OF BURN WOUND HEALING PROCESS IN GUINEA PIGS (*CAVIA  
COBAYA*)**

A True experimental Study in The Biochemistry Laboratory Medical Faculty  
Airlangga University, Surabaya

**By : Fatiyah Malihah**

Second grade of burn wound often found in common practice. Although it could recover by itself about 10-14 days, it would give great pain sensation and high risk to sepsis. The purpose of this study was to identify the effects of bitter pear leaf extract as topical treatment to accelerate 2<sup>nd</sup> grade burn wound healing process in guinea pigs.

This study used true experimental design. Samples were 36 guinea pigs that randomized to two groups, group with bitter pear leaf extract and group with NaCl 0,9%, by used simple random sampling. The independent variable was bitter pear leaf extract as topical treatment. The dependent variables were inflammation phase and proliferation phase. Data were collected using observation paper in 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup>, 8<sup>th</sup>, and 10<sup>th</sup> days post 2<sup>nd</sup> grade of burn wound making, then analyzed using *Independent t-test* and *Mann-Whitney U test*.

Result showed that bitter pear leaf extract had effect to accelerate 2<sup>nd</sup> grade of burn wound healing process, especially in erythema ( $p=0.005$ ), wound granulation ( $p=0.000$ ), and wound closure ( $p=0.047$ ) at 6<sup>th</sup> day, wound granulation ( $p=0.003$ ) and wound closure ( $p=0.004$ ) at 8<sup>th</sup> day, and wound granulation ( $p=0.000$ ) and wound closure ( $p=0.002$ ) at 10<sup>th</sup> day.

It could be concluded that bitter pear leaf extract as topical treatment could accelerate 2<sup>nd</sup> grade burn wound healing process. Histologic examination is needed during inflammation, proliferation and maturation phase. Further study is needed to know the effective doses of bitter pear leaf extract.

**Keywords:** bitter pear leaf extract, *Momordica charantia* L., second grade burn wound healing