ABSTRACT

THE MECHANISM OF INCREASING THE NUMBER OF NEOVASCULARS IN HEALING TRAUMATIC ULCER AS AN EFFECT OF GIVING MAULI BANANA (*Musa acuminata*)

(Experimental Research of Wistar Rat)

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Traumatic ulcer is an oral disorder that often happens and causes nutrition intake disorder. Mauli banana stem extract can accelerate mucosa wound healing. Nonetheless, the mechanism of increasing the number of neovasculars in wound healing process as an effect of mauli banana stem extract still cannot be explained yet. The purpose of this study was to explain the mechanism of the increase in the number of neovasculars through increased expression of NFkβ, HIF-1α, and VEGF Hsp90α on healing traumatic ulcer as an effect of giving the extract of mauli banana stems. The type of this study was a *true experimental* research with factorial research design. The traumatic ulcer models were male *Rattus norvegicus* Wistar strain. There were 40 samples divided into following groups; Negative Control Group (K) given a gel, Group Treatment 1 (P1) given ethanol extract of mauli banana stem 25%, Group Treatment 2 (P2) given ethanol extract of mauli banana stems 37, 5%, treatment group 3 (P3) given ethanol extract of mauli banana stem 50%. It was done taking the mucosal tissue to make preparation and immunohistochemical staining (IHC) and *Haematoxylin Eosin* staining (HE). Data analysis was done with ANOVA. If the result was not normal, the Kruskal Wallis test was conducted, then path analysis was performed. The results showed the highest increase existed in the group of gel mauli banana stem extract within concentration of 37.5%. The conclusions were that the effects of mauli banana stem extract through the mechanism paths of NFkβ-VEGF- neovascular number, and the mechanism path of HIF-1α-VEGF- neovascular number. Mauli banana extract increase the number of neovasculars through immunomodulator effect.

Keywords: Mauli banana stem, ethanol extract, immunomodulator, mechanism, neovasculars, healing, traumatic ulcer