

***EKSPRESI VEGF AKIBAT PEMBERIAN EKSTRAK TERIPANG EMAS (Stichopus hermanii) PADA ULKUS TRAUMATIKUS MUKOSA ORAL TIKUS WISTAR***

***VEGF EXPRESSION DUE TO THE PRESENT OF GOLD SEA CUCUMBER EXTRACT (Stichopus hermanii) IN WISTAR'S RAT ORAL MUCOUS TRAUMATIC ULCER***

***ABSTRACT***

**Background:** Traumatic ulcer is a lesion formed by local tissue damage that caused by trauma epithelium. Wound healing process involved coagulation, inflammation, proliferation, and remodelling phases which involving different growth factors. VEGF plays an important role in wound healing process including angiogenesis. Gold sea cucumber contains glicosaminaglycans chondroitin sulphate and dermatan sulphate, also protein such as arginin which can accelerate wound healing process. **Purpose:** The aim of this study was to determine the effect of gold sea cucumber extract on wound healing process by observing the increase number of VEGF expression. **Methods:** Gold sea cucumber extraxt was made with freeze-dried method, then prepared gel based using PEG 400 and PEG 4000 solvent of 40% and 80% concentration. Traumatic ulcer was made on the lower lip of Rattus norvegicus by burnisher number 4 that's been heated for one minute and touched for one second. Experimental animals, that have been made mucosal ulcer, were divided into a control group and a treatment group. The ulcers that are formed on day 3 were given gold sea cucumber extract 40% and 80%. All sample were euthanized on day 4<sup>th</sup> and then made a histopathology preparation to count the number of VEGF expression. **Results:** One way anova test showed a significant difference between the control and treatment group. Tukey HSD showed a significant difference between control group and 80% concentration gold sea cucumber application. **Conclusion:** Addition of gold sea cucumber (Stichopus hermanii) extract with 80% concentration is proven in increasing the number of VEGF expression at traumatic ulcer in Wistar rat's oral mucous.

**Keywords:** *Stichopus hermanii, VEGF, traumatic ulcer.*