

Study Effect of Ointment Combination Kefir and Aloe (*Aloe vera*) The Expression of TNF- α and Density Collagen as Wound Treatment Incision in Rat (*Rattus norvegicus*)

ABSTRACT

Wound is the destruction of the unity or components of the tissue because of the injury or surgery. Wound healing is the process of wound repair by inflammatory cells, epithelial, endothelial, platelets and fibroblasts that interact to repair the damage. The purpose of research to determine the effect of combination therapy kefir and aloe topically to the decreased expression of TNF- α and improvement of wound closure in terms of the density of collagen associated with wound healing incision in Wistar rats (*Rattus norvegicus*). This study was an experimental study with completely randomized design (CRD) using BB 150-180 g male rats were divided into five treatment groups. The five groups, namely the negative control group, positive control, treatment 1, 2, and 3 do the incision and were treated kefir and aloe topically at a concentration of 25%, 37.5% and 50% for 7 days. Observations TNF- α using the IHK, while collagen using Masson's Trichrome staining. The research proves that the lubrication combination of kefir and aloe (*Aloe vera*) 37.5% concentration able to decrease the expression of TNF- α and improve the density of collagen in wound healing rate was quite good.

Keywords: Wound Healing, Kefir, Aloe Vera, TNF- α , and Collagen