

*JUMLAH MAKROFAG SETELAH APLIKASI GEL EKSTRAK KOLOSTRUM SAPI DAN BIJI KELENGKENG (*Euphoria longan*) PADA LUKA DI MUKOSA BIBIR TIKUS*

*MACROPHAGE COUNT AFTER BOVINE COLOSTRUM AND LONGAN SEED (*Euphoria longan*) EXTRACT GELS APPLICATION ON RAT'S LIPS INCISION*

*ABSTRACT*

**Background:** Bovine colostrum contains many nutrients that are helpful in wound healing, such as Insulin-like Growth Factor (IGF-1 and IGF-2), Transforming Growth Factor beta (TGF- $\beta$ 1 and TGF- $\beta$ 2), Fibroblast Growth Factor (FgF), Epithelial Growth Factor (EGF), Platelet Derived Growth Factor (PDGF) and growth hormone. Growth factor will induce chemotaxis of macrophages to the wounded area, causing faster phagocytosis process. Longan seed contains phenolic compounds such as corilagin, gallic acid, and ellagic acid which also induce chemotaxis of macrophages to the wounded area. **Objective:** To compare total macrophage count after bovine colostrum and longan seed extract gels application on rat's lip incision. **Method:** Incising on the lower part of the labial mucosa of Wistar rats, dividing into three groups, which are the control group (sterile aquadest), experimental group 1 (bovine colostrum extract gel 40%), and experimental group 2 (Longan seed extract gel 3.2%). On the fourth day, Wistar rats were sacrificed and their lips were extracted for histopathological staining using HE. Afterwards, macrophage cells were counted using binocular microscope with graticulae at 1000x magnification. **Result:** There was a difference in total macrophage between each group. **Conclusion:** There was a difference of total macrophage count after bovine colostrum and longan seed extract gels application on rat's lips incision.

**Keywords:** wound healing, longan seed, bovine colostrum, macrophage