PEMBERIAN SALEP EKSTRAK DAUN MENGKUDU *(Morinda citrifolia L.)* TERHADAP PENINGKATAN SABUT KOLAGEN PADA MUKOSA ORAL MARMUT

ABSTRACT

Background: *Collagen is the major component in wound healing process. Collagen is needed in every phase of wound healing. Several studies have shown that the leaves of mengkudu (Morinda citrifolia L.) have many important substances. The primary indigenous use of this plant appears to be of the leaves, as a treatment for wound healings. Anthraquinone is the main substance of Morinda citrifolia L. that can increase biosynthesis regulation of type-1 collagen and decrease matrix metalloproteinase. Ascorbic acid is the other main substance of Morinda citrifolia L. that can stimulate collagen synthesis and hydroxylate proline and lysine to become hydroxyproline, the main substance of collagen production.* ***Purpose:*** *The aim of this study is to prove that the application of Morinda citrifolia L.'s leaves extract salve can increase collagen fiber density in Cavia cobaya incision wound, and also to determine the most effective concentration among the groups.* ***Methods:*** *A laboratory experimental study with "random post test only control group design" recruits Cavia cobaya as the object divided to 4 groups including the control group (Cavia cobaya with lower buccal fold mucous incision wound). P1, P2, and P3 group is incised with salve application (P1=22,5% concentration; P2=45% concentration; P3=90% concentration). Then on the tenth day the animal were killed and histologic preparation on the incised area were made and stained using Masson's trichrome method. The density of collagen fiber were counted with scoring method and analyzed using Kruskal-Wallis and Mann-Whitney tests.* ***Results:*** *There are non-significant difference between Control group and P1. There are a significant difference between Control group and P2. There are a significant difference between Control group and P3. There are non-significant difference between P1 and P2. There are a significant difference between P1 and P3. There are non-significant difference between P2 and P3.* ***Conclusion:*** *Morinda citrifolia L.'s extract salve can increase the density of collagen fibers on incision wound. 45% concentration salve of Morinda citrifolia L. is the most effective concentration to increase collagen fibers density.*

Keywords: *Morinda citrifolia L., wound healing, extract, gel, collagen, anthraquinone, ascorbic acid.*