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Engineered protein hydrogel for open wound management in Canines

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Abstract

The present study explores the wound healing profile of the engineered protein based hydrogel in open wounds of Canine. In brief, fish scale gelatin has been tethered with dihydroxy phenolic acids and the resultant product (Phenolic acid modified gelatin – PAMG) upon enzymatic oxidation transformed to a hydrogel with adhesive nature. The experimental study contains two groups: Group I – PAMG treated and Group – II standard cream treated. Each group contains six cases with wounds of ununiform size and area and the experimental period scheduled for 36 days. For Group I animals, PAMG solution (once in three days) applied to the wound site and which then transformed to adhesive hydrogel under *in situ* condition using tyrosinase enzyme. Group II animals received Loraxane cream every day. Despite different shapes and depth, wounds of Group I animals showed accelerated wound closure. Further, the percentage of wound contraction and H & E staining of sections of

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