

POTENTIAL OF LIME PEEL DECOCTION (*CITRUS AURANTIFOLIA*) TO THE OSTEOCLAST NUMBER IN ALVEOL OF WHITE RAT (*RATTUS NORVEGICUS*) STRAIN WISTAR AFTER TOOTH EXTRACTIONS

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Tooth extraction can damage oral tissue so that we need treatment to restore chewing, aesthetics and speech function. Osteoclasts play an important role in bone healing to start of new bone formation. Lime peel contains many active compounds such as flavonoids, vitamin C and tannins that are antibacterial, anti-inflammatory and antioxidants that can accelerate the wound healing process in post-extraction of tooth sockets. The purpose of this study was to determine the effect of lime peel decoction (*Citrus aurantifolia*) on the amount of osteoclast alveoli in white rat (*Rattus norvegicus*) strains Wistar after tooth extraction. This research was conducted with laboratory experimental approach *in vivo*. The design of the research used is the random post-test randomized control group design. The animals were divided into six groups, they are the non-boiled control group with lime peel decoction (K1, K2, K3) and the lime peel decoction treatment group (P1, P2, P3), were decaputed on the 7th, 14th, 21st day and make tissue histology preparations to calculate the number of osteoclasts. Analysis of data using one-way ANOVA showed no significant difference between K1 and P1, K3 and P3 and showed significant difference between K2 and P2. Pearson correlation test showed a strong relationship with the negative direction which means the longer the decoction time the number of osteoclasts decreases. Based on this study, it can be concluded that the lime peel decoction (*Citrus aurantifolia*) affects the amount of osteoclast alveol in white rats (*Rattus norvegicus*) of Wistar strains after tooth extraction.

BIOGRAPHY

Azimah Nurin Nafilah has completed her study of bachelor degree in Dentistry, Brawijaya University, Indonesia. She has followed many dental competitions and became a speaker in International Dental Conference of Suatera Utara, and also she got award of the most Outstanding Poster Presentation in Hiroshima University, Japan in 2018.

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