

Barrier membrane comprising the extract of herb mixture for guided bone regeneration

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The present study evaluates a new synthetic degradable barrier membrane based on collagen for use in guided bone regeneration comprising the extract of herb mixture. Also, the objective of this study was to confirm the subsequent effects of the released the extract of herb mixture from collagen membranes on bone regeneration in vitro and in vivo. In vitro studies were conducted using MC3T3-E1 mouse preosteoblasts cultured with or without factors. Cell viability, cell proliferation, alkaline phosphatase (ALP) activity and alizarin red staining were then measured. In vivo studies were conducted by placing collage membrane with low or high concentration herb extract in a rat calvarial defects. After 4,8 weeks, surgery new bone formation was measured using micro CT and histological analysis.