

The effects of *Plastrum Testudinis* on bone regeneration

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According to the Taiwan Ministry of Health and Welfare's statistics, the number of bone defect patients is increasing from 587,857(2010) to 671,919 (2013). There are about 1.28 patients suffered from bone defect per minute. However, the current therapies still have plenty of problems. Hence, finding a better way on bone healing is an important issue. *Plastrum Testudinis* (PT) is a medicinal material, which is recorded in traditional Chinese medicine books. PT was mentioned that it could improve the development of children's brain bone. Due to this reason, we intend to investigate about the effects of PT on bone regeneration. In our study, we demonstrated the effect of PT on osteogenesis in MG-63 cell model. Moreover, we used bone development model in zebrafish and rat skull defect model to further prove the osteogenicity of PT.