

### **Effect of calcium ion on human cultured gingival fibroblast.**

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The purpose of this study was to determine the effect of calcium ion on the culture of human gingival fibroblasts (HGF) for cytotoxicity, proliferation and level of matrix metalloproteinase (MMP) – 2. Cells cultured in the serum free medium were treated with calcium chloride at 0 , 0.1, 0.5, 1, 2 and 5 mM, then cytotoxicity was analysed at 24 hours by MTT assay. Cell proliferation was analysed at 48 hours by Methylene blue assay and conditioned medium at 48 hours was analysed for MMP – 2 by zymography. The result showed that calcium ion was toxic to the cells at 5 mM and had no proliferation effect at any concentration, however, 2 mM, calcium ion reduced the secretion of MMP – 2. Taken together this result demonstrated the inhibitory effect of calcium ion on MMP – 2 secretion in the culture of HGF.

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