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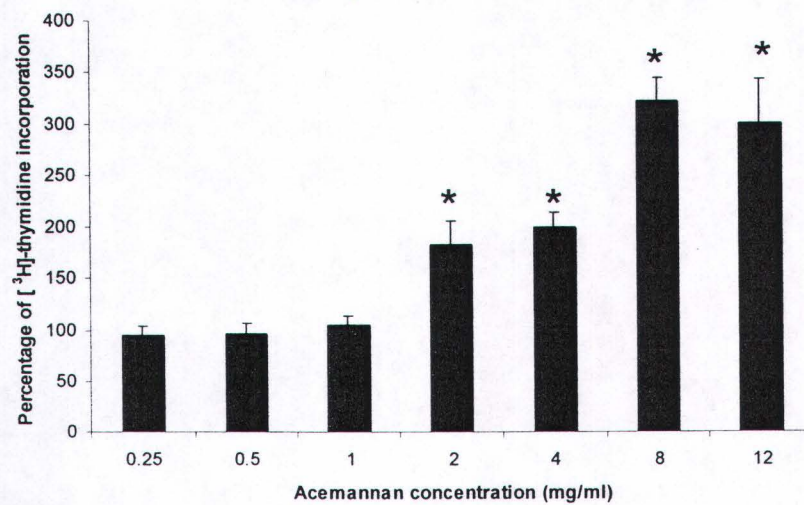


Figure .1 Acemannan enhanced cementoblast proliferation. Cementoblast proliferation was determined by incorporation of [³H]-thymidine after 24 h incubation with acemannan. Acemannan significantly stimulated cell proliferation at 2, 4, 8 and 12 mg/ml. * Compared with the untreated group; $P < 0.05$, $n = 3$.

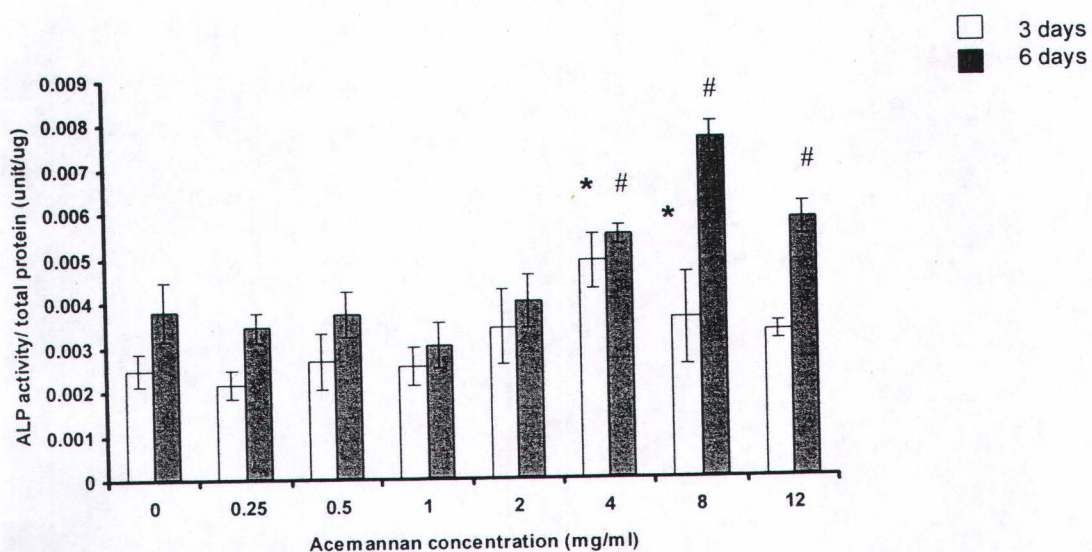


Figure 2 Acemannan upregulated the level of alkaline phosphatase activity. The enzyme activity was determined after 3 days (white bar) and 6 days (dark bar) incubation with various concentration of acemannan.

* Compared to the untreated group at 3 days, # Compared to the untreated group at 6 days; each at $P < 0.05$, $n = 3$

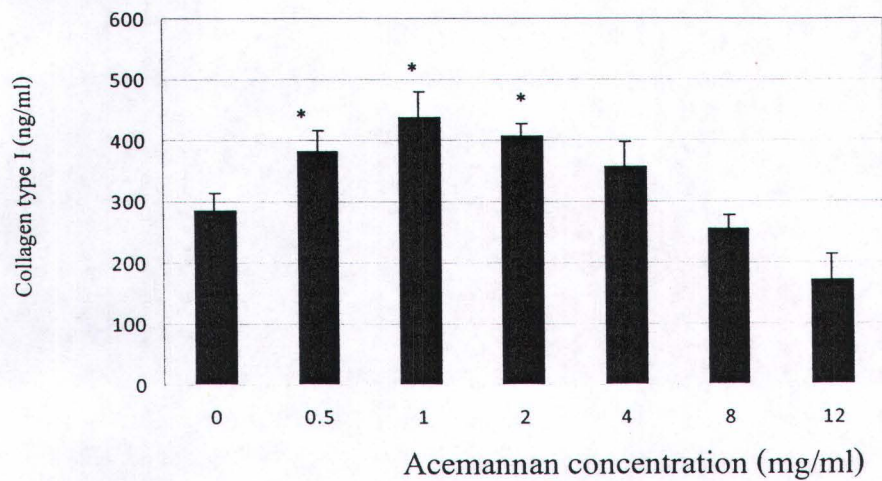


Figure 3. Effect of acemannan on type I collagen expression. Type I collagen production was determined by ELISA of cementoblast supernatant after 24 h incubation with various concentration of acemannan. Acemannan significantly enhanced type I collagen * Compared with the untreated group; $P < 0.05$, $n = 3$.

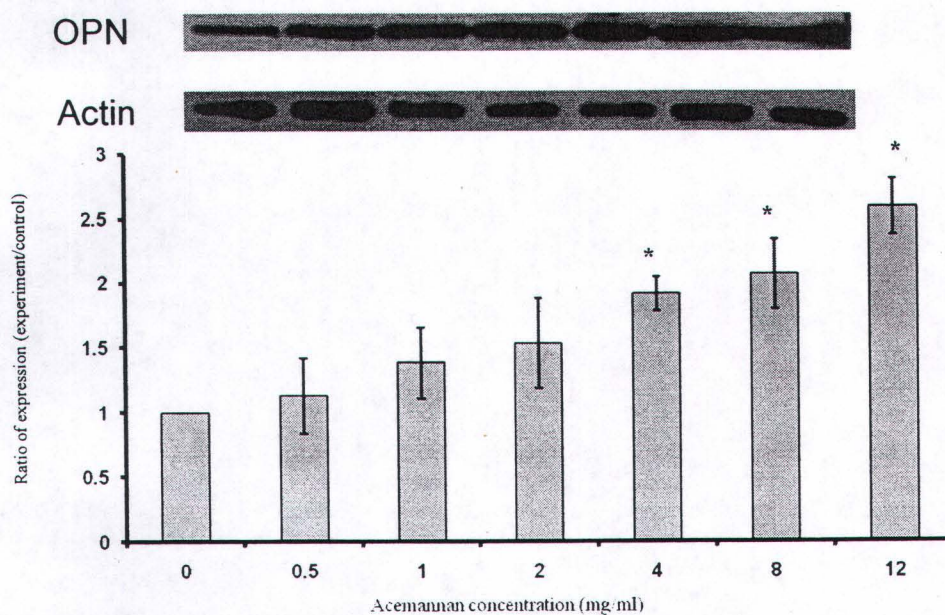


Figure 4. Expression of OPN from cementoblast in response to acemannan. The level of OPN was determined by Western blot. Acemannan significantly stimulated expressions at 6 day of incubation. Beta-actin was used as internal control. * Compared with the untreated group; $P < 0.05$, $n = 3$.

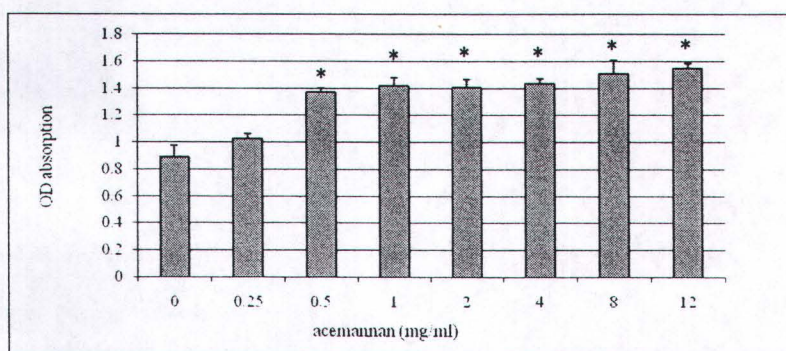
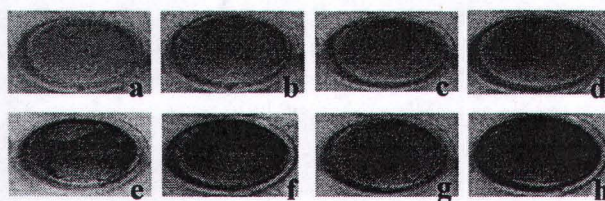


Fig.5 Acemannan stimulated cementoblast mineral deposition. After 21 day of treatment with various concentrations of acemannan, mineralization was stained with Alizarin Red. Cementoblast incubated with acemannan at concentration 0.25, 0.5, 1, 2, 4, 8 and 16 mg/ml (b-h) exhibited strong staining as compared with untreated group (a) as shown by naked eye view (a-h). Quantification of AR staining was done by solubilizing the mineral with cetylpyridinium chloride. * significant difference as compared with control group; $p < 0.05$, $n = 3$.

