NEW BONE FORMATION INDUCED BY INJECTION OF BOVINE BONE MORPHOGENETIC PROTEIN EXTRACT

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Abstract

To test the ability of extracts from bovine cadaveric bone sources to induce new bone formation. Bone morphogenetic protein (BMP) from demineralized bovine bone matrix was extracted and lyophilized. The molecular weights of the extracted bovine BMP were determined by sodium dodecylsulfate polyacrylamide gel electrophoresis (SDS-PAGE). Extract was bio – assayed by injecting into the thigh muscle of goats. The extracted bovine BMP induced new bone formation in the thigh muscle of goats. The molecular weights, of bovine bone-derived BMP were similar to that of dentin derived bone morphogenetic proteins. Our results suggest that native bovine BMP extracts can induce new bone formation.

Key words: Extraction, Bone morphogenetic protein; osteoinduction, bioassay; SDS page.