

## ORGAN CULTURE AS A MODEL FOR EARLY MOLECULAR EVENTS DURING DISTRACTION OSTEOGENESIS

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### Project Summary

Rat ulnas and mandibles were used to validate an *in vitro* organ culture as a model for fracture healing and osteodistraction. The study demonstrated that the initial stages of inflammation (i.e., inflammatory cells localized at the fracture site) occurred within the first 3 days of fracture in the absence of a general circulation. These experiments also showed that the bones remained viable in culture for the 6 day study period. ELISA tests demonstrated that the fractured bones produced increased amounts of PDGF and VEGF.