

Technology: [Compositions and methods for osteogenic gene therapy](#)

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Inventor: William Kin-Hing Lau

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The VA has a joint ownership interest with Loma Linda University

Contact [Lee Sylvers, PhD](#)

Abstract: The present disclosure provides compositions and methods for increasing bone growth and/or enhancing wound healing, for example, fracture repair. The disclosure provides recombinant nucleic acids useful for promoting bone growth. For example, the disclosure provides recombinant nucleic acids that encode a fibroblast growth factor-2 (FGF-2) analog. The disclosure also provides vectors and cells incorporating these nucleic acids, as well as FGF-2 analogs encode by them. The disclosure also provides a mouse system of bone marrow transplantation and methods for producing as well as methods for using the system. Methods for inducing division and/or inducing differentiation of a hematopoietic stem cell are also provided, as are methods for enhancing bone growth and/or wound repair (for example, fracture repair).