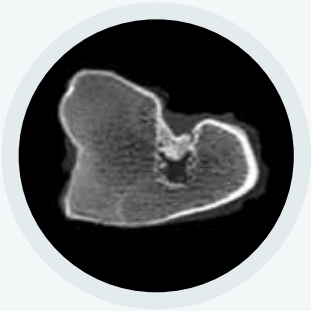

Peptide Matrices for Promoting Bone Regeneration

Researcher

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Research

A multifunctional peptide matrix was developed to act as a hydrogel scaffold for inducing bone regeneration and repair. The hydrogel provides a unique template for bone bio-mineralization and supports cell differentiation through a safe physio-chemical mode of action. It is a purely synthetic bone regeneration medical device, consisting of a designed, novel PFD5 peptide that was found to shorten healing time and increase the rate of bone regeneration in-vivo, in small and large animal models.

The technology combines innovative interdisciplinary expertise in the design of functional peptides, bio-mineralization and tissue regeneration while enabling the biological mechanisms of bone augmentation.

Applications & Products

Bone-graft, peptide-based compositions that accelerate bone tissue regeneration for orthopedic and dentistry applications.

Market Potential

Our peptide-based hydrogel bone graft substitute targets a variety of needs and indications in orthopedics and dentistry, including fracture healing and unmet bone regeneration needs in osteoporosis patients. The market for bone grafts is and will continue to be driven by the risks associated with the use of autograft bone, as well as the need to achieve superior and optimum bone fusion, speedy patient recovery, the need to eliminate multiple surgeries, a rising number of spinal fusion procedures, and increasing use of tissue-engineered bone in joint replacements.

Patent Status

US and EU patents granted.