



Novel Coatings for Titanium Bone Implants for Dental and Orthopedic Applications

Researcher

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Research

Multifunctional peptides were developed to efficiently coat titanium implants while enhancing bio-mineralization and bone tissue regeneration at the implant surface. The synthetic peptides act as a calcium depot for the bone forming cells, inducing their adhesion and proliferation. The technology combines innovative interdisciplinary expertise in the design of functional coating peptides, bio-mineralization and tissue regeneration, thereby facilitating the biological mechanisms of bone regeneration.

The first in-vivo testing in small animals has demonstrated significant advantages in mechanical properties over standard titanium implants.

Applications & Products

Coating materials and processes consisting of peptide-based compositions that enable rapid integration and long-term success of titanium implants for orthopedic and dentistry applications.

Advantages

Improved direct bone formation onto the surface of titanium implants, consequently reducing the failure rate of bone implants due to aseptic loosening and infection.

Patent Status

US and EU patents pending