POsTURE

PhOtocrosslinked hydrogels for guided periodontal TissUe Regeneration

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Periodontitis, a recognized disease worldwide, is a serious gum infection that damages soft tissue and results in loss of tooth-supporting alveolar bone. Regenerative periodontal procedures aim to reverse this damage by using both a bone graft and a membrane to obtain complete tissue reconstruction. The multidisciplinary POsTURE project aims to develop an innovative periodontal regeneration device based on: (i) a self-setting injectable bone grafting material containing Sr, Mg or Si substituted CaP nanoparticles with enhanced bioactivity and (ii) a photo-cross-linked interpenetrating polymer network based on UV photosensitive methacrylated dextran that will be applied as a viscous solution and cured in situ with UV light, as a membrane to prevent excessive proliferation of gingival tissue.

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