

COATREG-3D:

Bioactive coatings to promote Tissue regeneration and ingrowth into 3D custom-made porous titanium endoimplants

ADRESSED PATHOLOGY: Osteonecrosis of the jaw

GENERAL OBJECTIVE:

Development of a custom-made maxillofacial implant, or prosthesis, that provides both aesthetic and functional recovery. EBM sintering technology will be used to manufacture highly porous metal backbones that match exactly the facial features of the patient, and tissue engineering elements (biomaterials, signalling molecules and stem cells) will provide an osteoinductive environment that will promote bone growth around and inside the pores of the metal scaffold, thus attaining the implant integration. On providing both a functional and an aesthetic solution, this new type of prosthesis could become an alternative of choice in maxillofacial surgery for jaw osteonecrosis.

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