

VASCUMAT: Nanostructured advanced technologies based on hybrid biomaterials for in situ regeneration to treat congenital pseudarthrosis and non-consolidating bone

ADRESSED PATHOLOGY: Pseudarthrosis

GENERAL OBJECTIVE:

Development of tailored biodegradable and bioactive nanostructured scaffolds that ensure the right Ca release to activate the angiogenic cascade and promote tissue repair in pseudarthrosis and related lack of bone healing, a disease highly dependent on vascularization. In order to achieve this goal, the design, development and characterization of nanostructured porous CaP glass composites by supercritical foaming and (PLA/CaP glass) hybrid nanofibred scaffolds will be carried out. Furthermore, their biological response (both in vitro and in vivo) will be studied for the above mentioned application.

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