

SCAFFOLD FOR THE REGENERATION AND/OR REPLACEMENT OF A BONE TISSUE

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Porous hierarchical scaffold for the replacement, repair, regeneration, reconstruction and/or simulation of a bone tissue, in particular of the trabecular and/or cortical bone tissue.

Protection: Italy (opportunity for seeking patent protection internationally)

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INVENTION

The invention regards a process for the preparation of a porous hierarchical scaffold used for the replacement, repair, regeneration, reconstruction and/or simulation of a bone tissue. This scaffold is able to accurately reproduce the morphological, physiological and mechanical characteristics of connective tissues, such as bones. Our innovative support is characterized by a sacrificial porous sheath consisting of nanofibers. After the integration, the sacrificial scaffold is removed so as to obtain a porous scaffold having internal pores according to the cellular matrix of bone tissue.

ADVANTAGES

- Innovative biomimetic scaffold that allows to accurately reproduce the morphological, physiological and mechanical characteristics of connective tissues.

APPLICATIONS

- Veterinary and human surgery,
- In-vitro testing,
- Actuators and robotics,
- Sensors.

CONTACTS

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