UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH

BIOMATERIALS, BIOMECHANICS & TISSUE ENGINEERING

Postdoctoral Researcher Position available on the development of biofunctionalized Hydrogels

Offer description

We are looking for a Postdoctoral researcher to work in the field of scaffolding materials for bone tissue engineering. Specifically, the candidate will focus on the development of biofunctionalized hydrogels with cell-loading capabilities.

The goal of the research is to develop hydrogels with specific rheological and mechanical properties and functionalized with biochemical cues allowing cell infusion and injection of the hydrogel within a biodegradable scaffold for bone tissue engineering.

This position is part of the Project "Development of tailored 3D printed permanent and resorbable metallic scaffolds with biofunctionalized hydrogel for bone regeneration (TaperMesh)" funded by the Spanish State Research Agency (AEI) and led by Prof. José-María Manero.

If selected, the candidate will have the opportunity to work in a highly interdisciplinary team, the Group of Biomaterials, Biomechanics and Tissue Engineering (BBT), in the Department of Materials Science and Engineering at the Universitat Politècnica de Catalunya (UPC) (https://biomaterials.upc.edu/en). The BBT group has a broad expertise on the design, synthesis and characterization of biomaterials for tissue regeneration, with special emphasis in bone applications.

Requirements

Skills/Qualifications

Applicants are required to have a PhD and relevant experience in the fields of biocompatible hydrogels and cell culture, with a track record of significant contributions in these fields. We will consider candidates with various research backgrounds, including microbiology, biology, biomaterials and biomedical engineering. Willingness and motivation to work in a team and to expand his/her expertise by reaching out to other disciplines is required. The candidate is expected to be proficient in English.

Specific Requirements

Experience in cell culture and polymer chemistry is required. Previous exposure to biomaterials for bone regeneration, characterization of hydrogels and inorganic materials is highly desirable but not essential. Willingness and motivation to expand your expertise by reaching out to other disciplines is required.

Selection process

Target start date: as soon as possible, as from March 2023.
The contract will be for one year. The salary is competitive, in line with Spanish fellowships standards.

Those interested may email a CV with a list of three references, a short (max. one page) statement describing your motivation and prior experience to Dr. José-María Manero (bbt.jobs.upc@gmail.com), with "Postdoc TaperMesh" in the email subject.

ADDITIONAL INFORMATION

About the BBT Group

The BBT group is a multidisciplinary team of researchers with different backgrounds, including chemistry, physics, biology, materials science and biomedical engineering. Our main scientific goal is the development of biomaterials for tissue and organs regeneration. This approach requires the design of materials which can modulate the response of the receiving tissue, leading in some cases to the regeneration and neoformation of the degraded tissues and, in others, to a perfect integration of the biomaterial and to the recovery of the lost functionality.

About UPC

The Universitat Politècnica de Catalunya - BarcelonaTech (UPC) is a public institution of research and higher education in the fields of engineering, architecture, sciences and technology, and one of the leading technical universities in Europe. Every year, it receives more than 6,000 bachelor's and master's students, more than 500 doctoral students graduate and 3,000 graduates in lifelong learning. The UPC's approach to research is highly varied and covers applications and basic research in many knowledge areas. The impact of this research makes the UPC one of the main European technology universities.