

Predocctoral Researcher Position available on Nanoengineered electrically conductive 3D hydrogels for oncological applications

The project and the team

We are looking for a highly motivated and creative predoctoral researcher to develop his/her PhD thesis project in the field of 3D printing of electrically conductive hydrogels for oncological applications funded by the Bioengineering, Biomaterials and Nanomedicine Networking Biomedical Research Centre (CIBER-BBN) from Instituto de Salud Carlos III.

The main goal of the research is to develop electrically conductive 3D hydrogels to mimic the electrical fields present in the tumour microenvironment (TME) of solid cancers. These electrically conductive hydrogels will be simultaneously used as artificial extracellular matrices of the TME and as soft sensors to elucidate mechanisms related to electrotaxis using tumoral, immune and stromal cells with the goal to improve the effectiveness of novel cellular immunotherapies.

If selected, you will work in a highly interdisciplinary environment, within the Biomaterials, Biomechanics and Tissue Engineering (BBT) (Materials Science and Engineering Department) group at Universitat Politècnica de Catalunya (UPC) and the Institute of Materials Science of Barcelona (ICMAB-CSIC) under the supervision of Dr. José Manuel García and Dr. Judith Guasch. Additionally, you will have access to the facilities of the Max Planck Institute for Medical Research (Heidelberg, Germany) with whom we have a partnership.

Your profile

- MSc in chemistry, biochemistry, materials science, physics or related
- Experience in soft materials (hydrogels) and their characterization will be very valued
- Experience in cell biology will be very valued

Contract details

- 3 year-contract (Gross salary according to the Spanish standards).
- You will be responsible for the fabrication of electrically conductive hydrogel scaffolds to mimic TME of solid tumours. Moreover, you will characterize their physicochemical, biological and functional properties.
- Access to state-of-the-art experimental facilities and training opportunities both at UPC and ICMAB.
- Travel allowance to participate in national and international conferences.
- Space for creativity and collaboration.
- Expected starting date: October 2024.

How to apply?

Applications must include:

- Cover letter detailing your motivation
- *Curriculum Vitae*
- Description of the marks achieved in the Graduation and Master studies

Applications and informal inquiries should be sent to:

- Dr. José Manuel García (jose.manuel.garcia-torres@upc.edu)
- Dr. Judith Guasch (jguasch@icmab.es)