

Barcelona, December 15th 2022

Research position offered at the Institut Químic de Sarrià- Universitat Ramon Llull (Barcelona)

Description

The Vascular Engineering and Applied Biomedicine Group (GEVAB) is looking for a recently graduated PhD to develop a method to recellularize cadaveric veins for use as coronary artery bypass grafts. Based on the work previously developed at GEVAB, and in collaboration by the Barcelona Tissue Bank and the Hospital Germans Trias i Pujol, the candidate will recellularize these veins with endothelial and mesenchymal cells and impose blood-mimicking flow through the veins to promote tissue maturation inside a perfusion bioreactor. In these constructs, the candidate will evaluate the implantation efficiency using classic analytical techniques like Western Blot, ELISA, qPCR or immunofluorescence. Once the method is put in place, the candidate will work with the other institutions to test these constructs in a rabbit aorta model.

The candidate must:

1. Hold a PhD in Biotechnology, Biomedicine, Chemistry, Engineering or similar sciences.
2. Have experience in tissue culture and in cardiovascular mechanotransduction.
3. Have notions of fluid dynamics and ideally of additive manufacturing of biocompatible scaffolds.
4. Ideally, the candidate has the qualifications to perform animal experimentation.

The candidate will:

1. Think and design the experimentation plan.
2. 3D-print aortic models using a FormLabs 3BL SLA printer.
3. Execute and analyze the biological experimentation.
4. Support the research group in administrative/logistical tasks.

Research topic

Cadaveric veins recellularization using endothelial and mesenchymal cells in vitro.

Application deadline

31/01/2023

Application documents

If you are interested to apply, please send a blind CV (meaning the CV without name or photo, and with the publications with all the names deleted, leaving only the title, journal and date) to rrhh@iqs.url.edu