Postdoctoral Research Fellowship in Vascular Tissue Engineering (2 year)

Project Description:
This research aims to determine if the mechanical stimuli conferred by the natural collagen fibre network of a scaffold, derived from decellularised arterial tissue, can be tuned to induce mesenchymal stem cell differentiation and growth to develop a tissue engineered blood vessel. The postdoctoral researcher will characterise healthy and decellularised porcine coronary tissue using histological and imaging techniques (e.g. Laser confocal microscopy, SEM, polarised microscopy) and conduct a range of experiments to identify the influence of strain and structure on the growth and differentiation of vascular smooth muscle cells and mesenchymal stem cells.

Required Qualifications:
Candidates should have a BEng/BSc in Biomedical/Mechanical Engineering or Cell Biology/Biochemistry and a PhD in Biomedical Engineering/Tissue Engineering or other relevant discipline. Ideally candidates should have specific experience in vascular tissue engineering and stem cell biology, a strong publication record and a demonstrated ability to mentor PhD students.

The Lally Lab:
Prof. Caitríona Lally is a Professor in the School of Engineering in Trinity College Dublin and PI within the Trinity Centre for Bioengineering (TCBE). Prof. Lally leads a multidisciplinary research group where the aim is to develop innovative means of diagnosing and treating cardiovascular diseases through the integration of arterial biomechanics and vascular biology. The successful applicant will work within a multidisciplinary project team including PIs, postdoctoral research fellows and postgraduate researchers in the Trinity Centre for Bioengineering (TCBE: http://www.tcd.ie/bioengineering/), and the Advanced Materials and Bioengineering Research Centre (AMBER, http://ambercentre.ie/) in Trinity College Dublin and will also collaborate with researchers in the School of Biotechnology in Dublin City University.

Start date:
January 2017 (preferred); position will remain open until suitable candidate is found.

Application process:
Please e-mail your CV (including the names and contact details of 3 referees) to lallyca@tcd.ie with the subject heading “Postdoctoral Researcher in Vascular Tissue Engineering”