



## **Postdoctoral Researcher Opportunity Developmentally inspired approaches to cartilage defect healing**

We seek an enthusiastic postdoctoral researcher interested in the healing of immature articular cartilage to join the Developmental Biomechanics group at University College Dublin, Ireland.

Focal defects in adult cartilage do not heal effectively, due to articular cartilage's limited capacity for spontaneous repair. In contrast, defects in immature cartilage undergo spontaneous regeneration. However, the process of repair and regeneration in immature tissues is poorly understood. In this project, we will investigate how regeneration of immature cartilage occurs, and determine if the superior healing capacity of neonatal AC can be harnessed to bring about healing of adult defects. We will use a wide range of techniques including nanoindentation, Raman spectroscopy, helium ion microscopy, phase contrast tomographic imaging and RNA sequencing.

On offer: A three year postdoctoral position, with the potential for extension. Starting salary €41,209–48,813 p/a (depending on experience), with annual increments. Position start date: early 2023.

About the research team: Niamh Nowlan is Full Professor of Biomedical Engineering in the School of Mechanical and Materials Engineering at UCD. Her research focuses on the role of mechanical forces in prenatal and postnatal development of the bones, joints and spine. Pieter Brama, is Full Professor of Veterinary Surgery in the School of Veterinary Medicine at UCD. His key clinical interests are lameness and surgery in general and his orthopaedic research interests are in cartilage repair and joint disease.

Qualifications: A PhD in musculoskeletal biology or mechanobiology with a keen interest in cartilage. An undergraduate degree (or equivalent) in Biomedical Engineering, Molecular Bioengineering, Medicine, Veterinary Medicine, Biomedical Sciences or a closely related area. Candidates should enjoy working as part of a team and have a keen interest in working with translational animal models.

If you are interested, please send an email attached with a CV introducing yourself, stating your previous experience, interest in this specific position and your future goals to Prof Nowlan (she/her) at [niamh.nowlan@ucd.ie](mailto:niamh.nowlan@ucd.ie). More information about Prof Nowlan's group is available here: <https://developmental-biomechanics.org/>.