



Position Title	PhD Studentship – Develop Novel Translational Imaging Methods to Transition AMBER-Developed Joint Repair Materials into Clinical Practice
Project Abstract	<p>As tissue engineered solutions for joint repair become ever closer to mainstream clinical use, the ability to monitor their progress and performance also comes into sharper focus. There has been ground-breaking successes in clinical applications of tissue engineering (TE) therapies for osteochondral defects within TCD/AMBER in recent years. Current methods of non-invasive diagnostic imaging are not equipped to specifically determine therapeutic progress after implantation. We have recently developed ways to merge basic biological joint assessments with MRI imaging methods. This is an important new area in tissue engineering and musculoskeletal imaging. This PhD project will bring together expertise in bone/cartilage imaging and mechanobiology (Kennedy) and clinical perspectives on joint repair (Moran & Flanagan) as well as vast experience in generation and implementation of tissue engineered joint repair applications (Profs Danny Kelly and Fergal O’Brien).</p> <p>We propose a PhD project that will fully characterize the performance of tissue-engineered constructs, from a diagnostic imaging perspective (MRI and μCT) perspective, first in a pre-clinical animal model and then ultimately this will be translated to clinical setting, by incorporating with ongoing clinical trials which use novel implanted materials (such as Chondrocoll). This will allow us to bring our understanding of these processes to the next level and to fully control and monitor implant integration, pathological processes and tissue regeneration.</p>
Experience	The PhD position is funded for 4 years, including a monthly stipend and materials and travel budget. Applicants should hold a minimum of an honours bachelor’s degree at 2:1 level or equivalent in a relevant subject such as Bioengineering/Biomedical Science/Medicine. Candidates should also have a strong interest in regenerative medicine.
Funding	The studentship will cover fees up to €5,500 pa and a stipend of €18,500 pa
Location	TCD/RCSI
Closing Date	Friday 29 th June 2018
For more information contact	Prof. Cathal Moran; moranc8@tcd.ie

AMBER,
CRANN Institute,
Trinity College Dublin,
Dublin 2, Ireland

T + 353 (0) 1 8963030
W ambercentre.ie
twitter @ambercentre

