



<b>Position Title</b>	PhD Studentship - Engineering the Bone-Cartilage Interface for Joint Repair
<b>Project Abstract</b>	<p>As tissue engineered solutions for joint repair become more advanced, and closer to widespread clinical use, further knowledge of their interface regions is crucial for long-term success. Interface regions are a vital part of every tissue-engineered application and can refer to the region between construct and host tissue, or between different elements of a multi-phase construct. This proposal will address the latter, specifically the zone of calcified cartilage (ZCC) that joins articular cartilage with subchondral bone. There has been ground-breaking success in tissue engineering (TE) of bone and cartilage tissue within the AMBER centre since its inception.</p> <p>We will supervise a PhD project to accomplish the following 3 aims:</p> <p>(1) Establish a library of new tissue-specific candidate factors for regeneration of the joint interface using a combination of our high throughput LCM method and RNA seq/Nanostring technology.</p> <p>(2) Develop an <i>in vitro</i> model system to understand how candidate macromolecules affect cellular crosstalk at the bone-cartilage interface.</p> <p>(3) Test modified/optimized scaffold system in pre-clinical model of joint disease.</p>
<b>Experience</b>	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. Candidates should also have a strong interest in biomaterials/regenerative medicine.
<b>Funding</b>	The studentship will cover fees up to €5,500 pa and a stipend of €18,500 pa
<b>Location</b>	RCSI
<b>Closing Date</b>	Friday 29 <sup>th</sup> June 2018
<b>For more information contact</b>	Dr. Oran Kennedy; <a href="mailto:orankennedy@rcsi.ie">orankennedy@rcsi.ie</a> ; Tel +353 1 402 5041

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