



Position Title	PhD Studentship - Development of a 3D scaffold-based cell culture platform for oncology drug design and screening
Project Abstract	<p>3D scaffold-based <i>in vitro</i> cell culturing is a new innovative approach in cancer research to bridge the gap between conventional 2D culture and <i>in vivo</i> tumours. Importantly, such 3D cell models help to reduce and replace animals for pre-clinical research addressing the principles for the care and use of animals known as the 3Rs (Replace, Reduce & Refine).</p> <p>The purpose of the proposed study is to better understand the molecular nature of the tumour microenvironment (TME), its tissue biomechanics, architecture, and cellularity for both primary tumours and metastatic sites. This, in turn, will help us to identify important features representative of the evolving TME and facilitate its 'reconstruction' <i>in vitro</i> subsequently advancing the recently developed physiologically relevant 3D <i>in vitro</i> cell model to develop and test new drugs for neuroblastoma.</p> <p>The objectives of the study are (i) to deconstruct/dissect neuroblastoma primary and metastatic microenvironment through characterisation its extracellular and cellular compositions, (ii) to characterise their biomechanical properties and (iii) to provide a rationale to design scaffolds that accurately mimic primary and metastatic microenvironments.</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. Candidates should also have a strong interest in cancer research.
Funding	The studentship will cover fees up to €5,500 pa and a stipend of €18,500 pa
Location	RCSI
Closing Date	Friday 29 th June 2018
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