



Position Title	PhD Studentship - Novel polypeptide bioinks for 3D printing of bioactive scaffolds for tissue engineering applications
Project Abstract	The development of defined three-dimensional (3D) architecture fabrication for tissue engineering has been a recent emergence within the field tissue engineering. In particular, 3D printing represents a promising rapid prototyping technology for the production of intricate bio-inspired scaffolds/constructs. Recent work on 3D rapid prototyping with hydrogels has mainly focused on the use of natural polymers such as chitosan, alginate as well as modified bio-native gelatin and hyaluronic acid hydrogels. Notably, the development of printer technology has significantly outpaced the development of new advanced inks and the limited number of suitable bio inks has been identified as the major barrier to progress for the development of tissue engineering applications. It is envisaged that a possible solution lies in the synthesis of hydrogel polymers but application demands are high. We will synthesize polypeptide bioinks; perform rheology and mechanical analysis; 3D print, and perform biocompatibility assessments.
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 Chemistry/Biomedical Science. Candidates should also have a strong interest in additive manufacturing, polymers or regenerative medicine.
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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