Position Title	PhD Studentship - Developing Innovative Injectable Collagen-Bioceramic Composites for Medical Devices
Project Abstract	It is proposed that an injectable composite product, which harnesses the advantageous properties of both collagen and ceramics, would be an innovative and novel biomaterial technology. As such, *this project aims to develop a novel range of shear thinning injectable collagen-bioceramic composites, capable of in situ hybridisation, for drug and cell delivery in tissue engineering and regenerative medicine applications.* Specifically, the objectives of this project will be two-fold: 1) Combine collagen with a variety of ceramics with bioactive properties (e.gthermoresponsive properties, collagen is as an attractive polymer for. hydroxyapatite, magnesium phosphate, strontium, calcium phosphate) and develop a series of shear thinning, thermoresponsive, injectable composite biomaterials 2) Functionalise the injectable composites with specific therapeutics to guide cell differentiation and tissue formation both in vitro and in vivo The outcome of this project will be a catalogue of novel shear thinning injectable composite biomaterials with a broad range of mechanical properties and biological functionalities to be used as medical devices in the treatment of diseased and damaged tissue.
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 or Medicine. Candidates should also have a strong interest in regenerative medicine and materials.
Funding	The studentship will cover fees up to €5,500 pa and a stipend of €18,500 pa
Location	RCSI
Closing Date	Friday 29th June 2018
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