Research Project Proposal
Academic year 2019-2020

Project Nº 58 ASIGNADO

Title: *Enhancing matrix integration and mechanical properties of tissue-engineered cartilage*

Department/ Laboratory *Cartilage Regeneration Laboratory, Institute of Health and Biomedical Innovation, Queensland University of Technology*

Director 1 *A/Prof. Travis Klein*
Contact: *t2.klein@qut.edu.au*

Summary *Hydrogels are a key class of materials used in engineering cartilage based on their ability to encapsulate cells and similarities to the native extracellular matrix. While they have a number of advantages over other classes, such as 3D-printed polymer scaffolds, there are some limitations. Among these limitations is the propensity for the hydrogel network to prevent the diffusion and integration of newly synthesised extracellular matrix. This project will work towards developing a new technique to improve matrix production and distribution within hydrogel constructs. This project will involve work with biomaterials, 3D cell cultures, and a range of biological and mechanical analyses.*

yes	
no	**X**

Does the project include the possibility of supervised animal manipulation to complete the training for animal manipulator?