Mechanisms of neurogenic heterotopic ossification after spinal cord injury

Project Description

Project Title:	Mechanisms of neurogenic heterotopic ossification after spinal cord injury.
Project duration, hours of engagement & delivery mode	**4 weeks** during the UQ Winter Research Program (30 June – 25 July25) Hours of engagement must be between **24-36hrs per week** Applicant will be based in the Stem Cell Biology group at Mater Research, at the **Translational Research Institute**, Woolloongabba, Brisbane.
Description:	Neurogenic heterotopic ossifications (NHOs) are extra-skeletal bones that develop around joints after severe central nervous system injury. NHOs are incapacitating as they impair flexing of the affected joint and without intervention or surgical excision they can lead to major motor incapacitation. As the pathogenesis of NHOs is poorly understood, there are no diagnostic tools to predict NHO development in patients. To address these challenges, our team investigates mechanisms of NHO development in a pre-clinical model of NHO after spinal cord injury to discover new therapeutics and predictive biomarkers. The aim of this project is to investigate the expression of numerous inflammatory and osteogenic differentiation markers in NHO tissues by qRTPCR.
Expected outcomes and deliverables:	Skills in a broad range of molecular biology techniques including RNA extraction, cDNA synthesis, qRTPCR, PCR, DNA extraction, PCR.
Suitable for:	We are seeking a highly motivated individual with an interest bone and immunology research, with a willingness to progress with further studies (Masters or PhD).
Primary Supervisor:	Dr Kylie Alexander
Further info:	Please contact Dr Kylie Alexander: kylie.alexander@mater.uq.edu.au to express your interest, attaching your CV and academic transcript. Please note this EOI Form is not an application for the UQ Winter Program. Official applications need to be lodged via the UQ StudentHub