

# Child Health Research CIO

CHILD HEALTH RESEARCH CHARITABLE INCORPORATED ORGANISATION (CHRCIO) PROGRESS FORM -  
VACATION STUDENTS

<b>Student's name</b>	Matthew Lee
<b>Academic Programme</b>	Developmental Neurosciences
<b>Project title(s):</b>	Quantifying the effect of activity on muscle microstructure using diffusion MRI
<b>1. Lay Summary:</b>	

The aim of this project is to quantifiably determine how physical activity affects calf muscle microstructure in healthy volunteers, which will inform imaging protocols in patients with Duchenne Muscular Dystrophy (DMD). Magnetic Resonance Imaging (MRI) protocols focussing on the diffusion of water in the calf muscle before and after a specific exercise regime will be acquired. These measurements allow us to characterise the microstructure of the tissue. The processing and subsequent statistical evaluation of this data will inform the effect of this exercise on the common image measurements used in diffusion MRI (or diffusion tensor imaging (DTI)). Through this project, I aim to gain personal research experience in a research department, to better understand research as a career path.