

<b>Project Title</b>	Multiphoton imaging of the hippocampus in mouse models of neurodegenerative disease
<b>Supervisor(s)</b>	Professor Simon Schultz Dr Ann Go
<b>Themes</b>	Biomedical Sensing Diagnostics and Imaging Neurotechnology and Robotics
<b>Project Type</b>	Lab based
<b>Project Description</b>	<p>"The project will involve two photon imaging of calcium signals in populations of neurons in hippocampal subfield CA1, as mice perform a basic spatial memory exploration task. A specific question examined will be the extent of aberrant excitability, as well as hyper-synchrony, in treated and untreated 5xFAD mice – something that has previously been examined in cortex but not in the hippocampus during behaviour.</p> <p>Training will be provided by the Schultz laboratory in stereotactic viral injection, recovery surgery for window implantation, behavioural training and multiphoton calcium imaging, and data analysis for multiphoton imaging. The Foust laboratory will provide advice and training on optical microscopy and biophotonics."</p>