Immunostaining and Super-Resolution Imaging of Structures In Cardiac Myocytes

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Proposed Research

• Super-resolution fluorescent imaging of ryanodine receptors (RyR) and microtubule structures in mouse cardiac myocytes with altered expression of protein junctophilin-II

• Compare relative positions of labeled structures to wild type samples
Progress This Week

- Immunostaining of normal rat cardiomyocytes
- Imaged using confocal microscope
  - (left) Rat cardiomyocytes stained for beta-tubulin visualized with Alexa488
  - (right) Rat cardiomyocytes stained for caveolin visualized with Alexa594
- Learned basic protocols, locations of materials in the lab
- Settled in at host site
Future Plans

• Stain and image other cells from different species
  – More practice with protocols
  – Stain some with junctophilin-II knockdown?
  – Investigate presence of striations and other abnormalities seen in last week’s images?
Cultural Aspect

• Kia ora! This week was spent mostly settling in and working. More cultural experiences begin this weekend, but so far adjusting to NZ city life:

Rainy winter weather is very different from San Diego at any time of the year; Cars in NZ drive on the other side of the road.