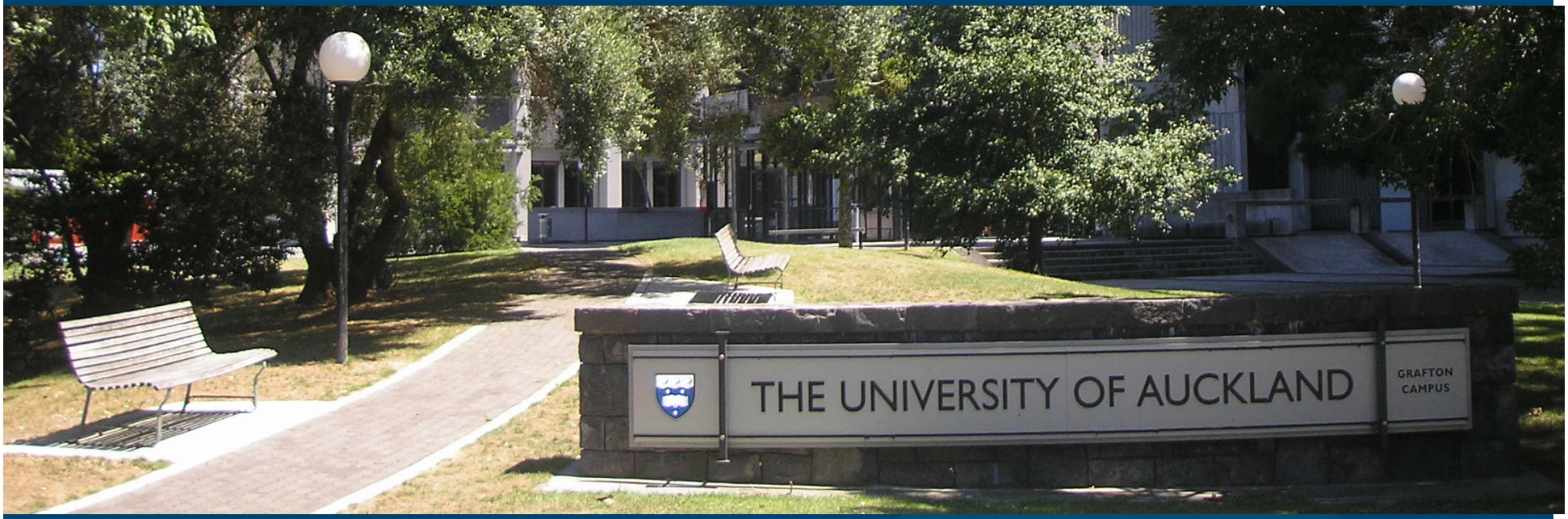

Immunostaining and Super-Resolution Imaging of Structures In Cardiac Myocytes

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Auckland, New Zealand
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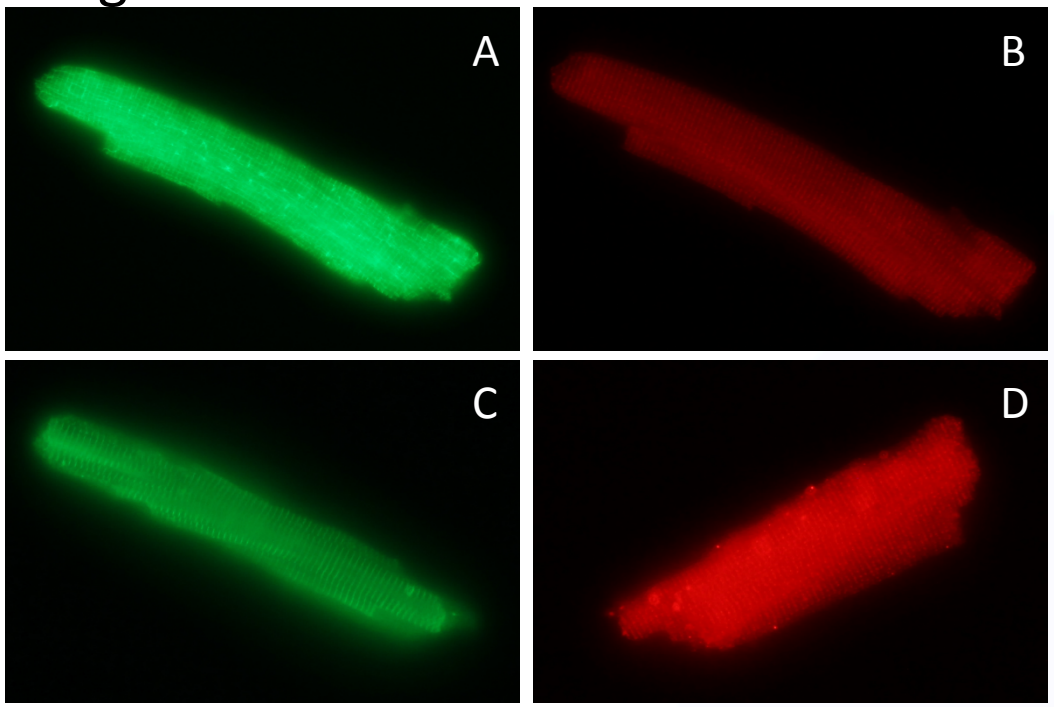
Proposed Research

- 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

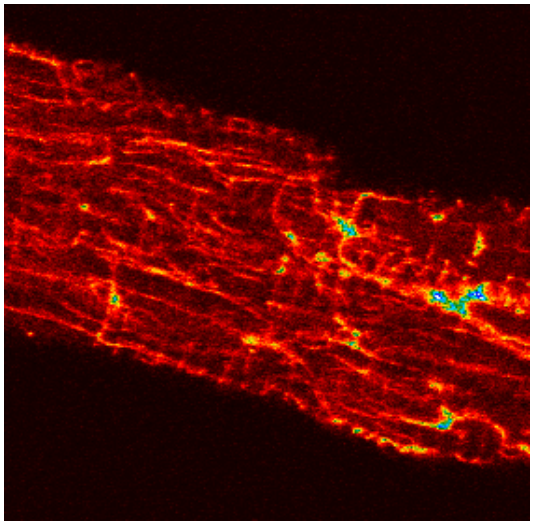
- Immunostaining of rat and mouse cardiomyocytes for beta-tubulin and junctophilin-II to compare samples
- Imaged with wide field and confocal microscopes



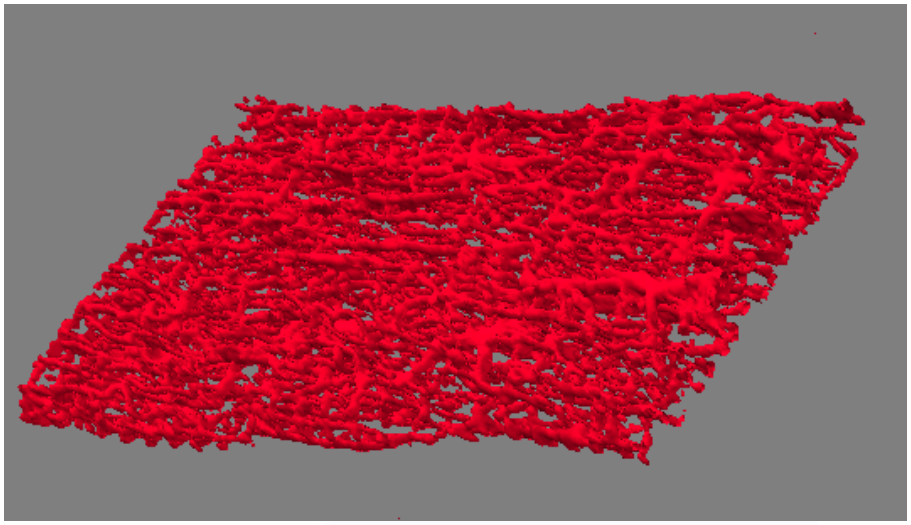
Mouse cardiomyocytes stained for **(A)** beta-tubulin and **(B)** junctophilin-II

Rat cardiomyocytes stained for **(A)** beta-tubulin and **(B)** junctophilin-II

Progress This Week



Confocal image of section of mouse cardiomyocyte



3D isosurface of microtubule system in section of mouse cardiomyocyte, composed of 40 images taken through the cell at 0.3 µm intervals.

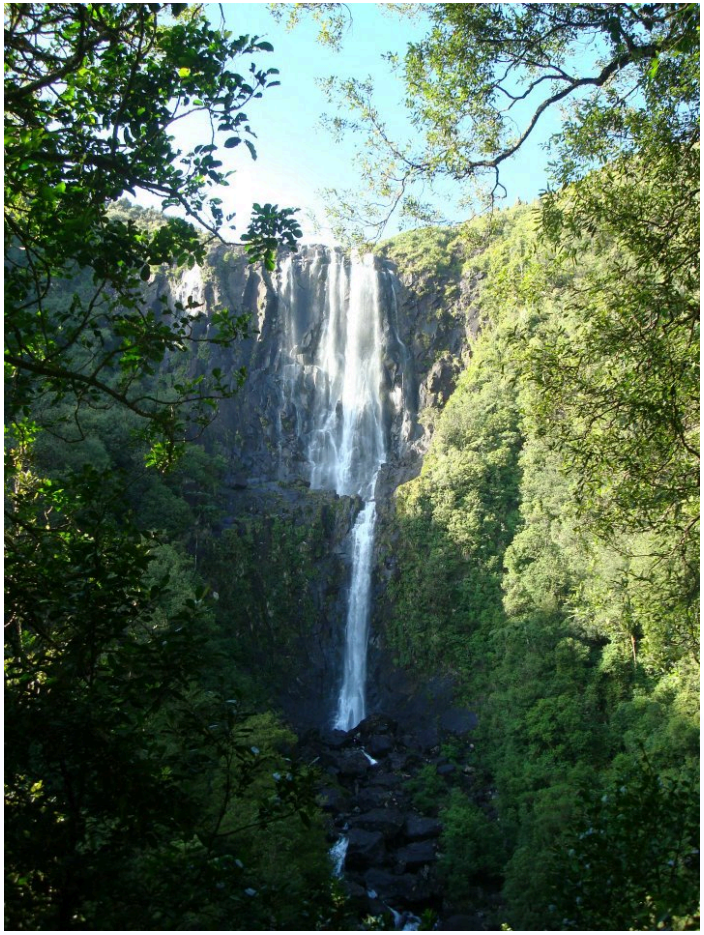
- Further familiarized with lab protocols
- Introduction to image processing/analysis techniques

Future Plans

- Label mouse cardiomyocytes with dual-fluorescent dye to allow visualization under high-resolution microscope as well

Cultural Aspect

Drove through the New Zealand countryside at sunrise. Lots of frost on the ground, and many, many cows on the dairy farms.



Climbed Wairere Falls, the tallest waterfall in north island.

Cultural Aspect

Went for a tour of Hobbiton in Matamata, where they filmed for Lord of the Rings and The Hobbit.