


Immunostaining and Super-Resolution Imaging of Structures In Cardiac Myocytes

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Proposed Research

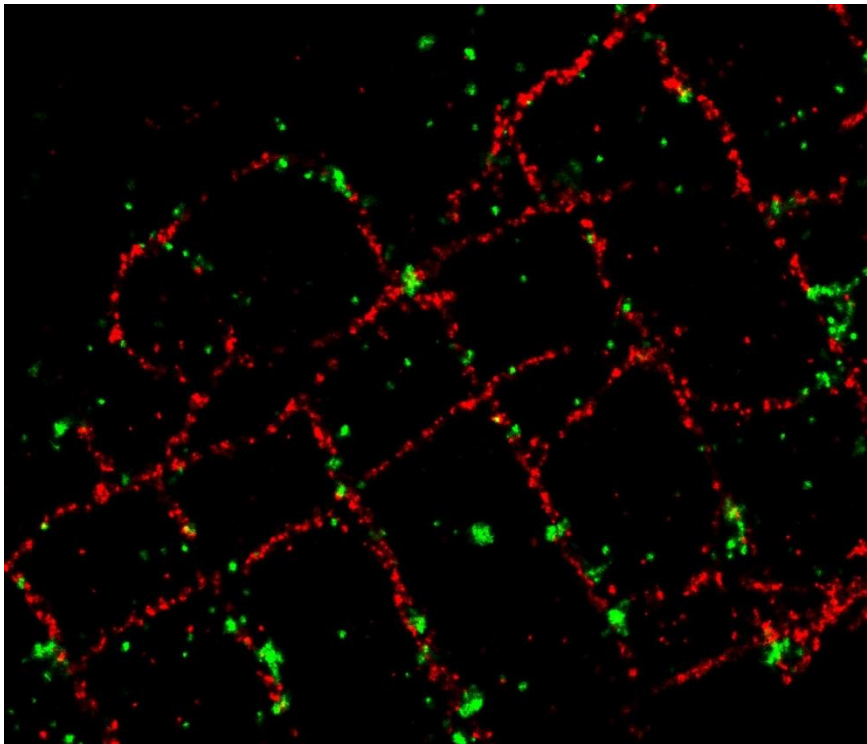


- Super-resolution fluorescent imaging of ryanodine receptors (RyR) and microtubule structures in mouse cardiac myocytes with altered expression of protein junctophilin-II
 - Compare relative positions of labeled structures to wild type samples
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Progress This Week



- Immunostaining of mouse control cardiomyocytes for beta-tubulin, junctophilin-II, and ryanodine receptors
- High resolution microscopy and image analysis



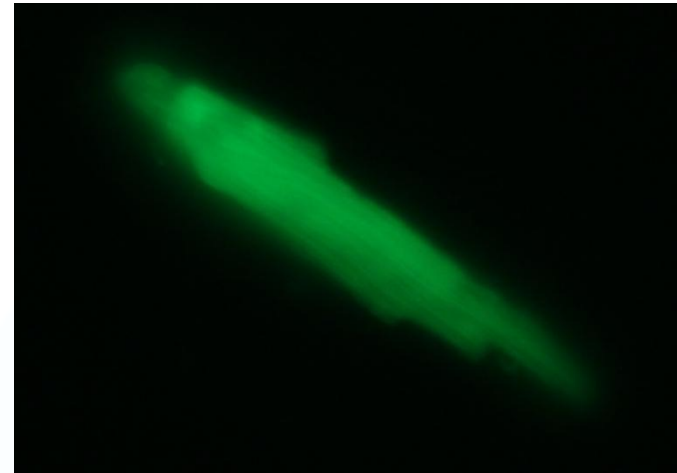
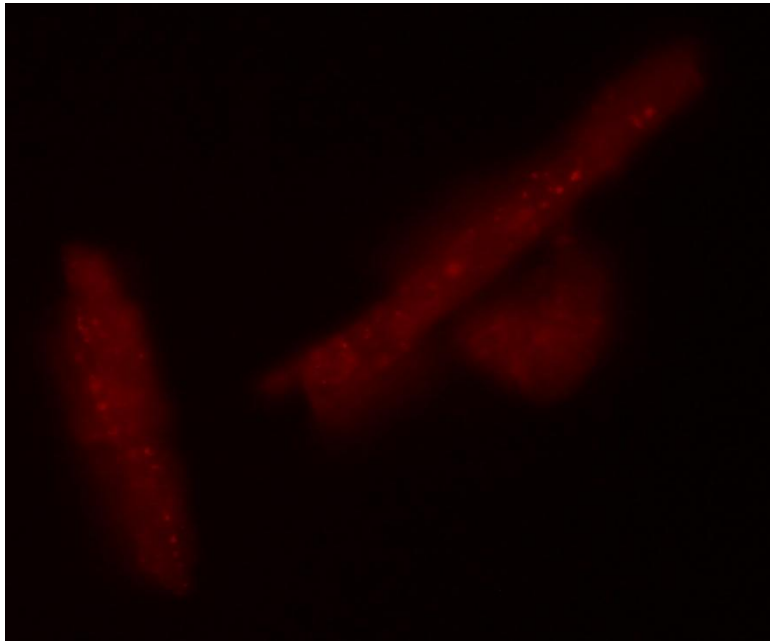
High resolution image showing stained microtubules (red) and junctophilin (green).



Progress This Week



- Also stained with WGA (wheat germ agglutinin) which visibly labels sugars found in plasma membranes



Cells stained with WGA A594 (red) and WGA A488 (green).



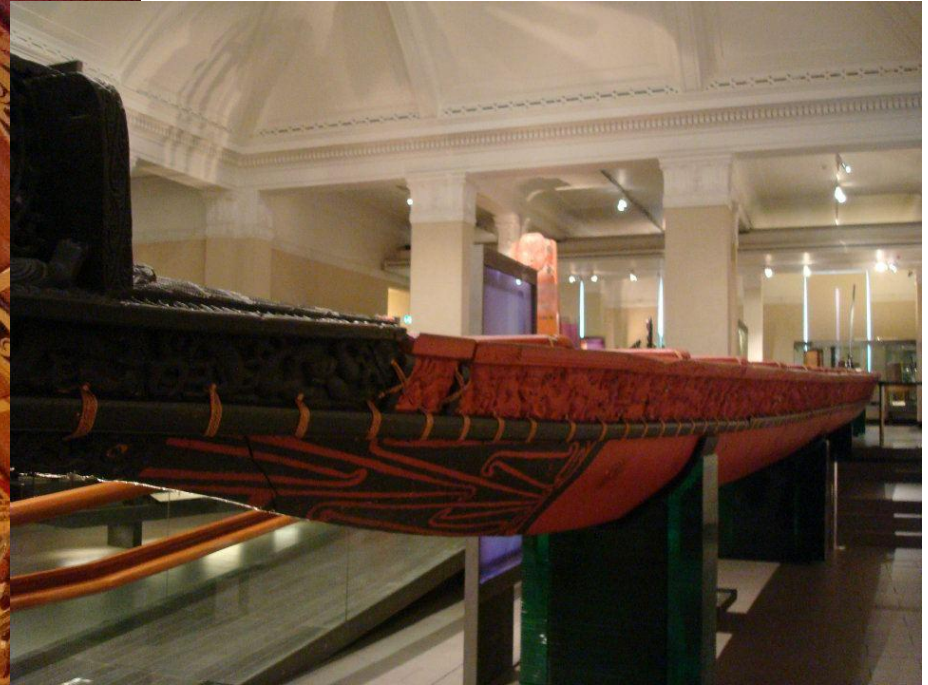
Future Plans



- Further high resolution imaging of mouse cardiomyocytes to visualize internal structures
- Switch fluorophores associated with marked structures within the cells to see if imaging results improve
- Find a way to visualize microtubule system within cells while staining for RyR and JPH



Cultural Aspect



Maori room and canoe in the
Auckland museum

