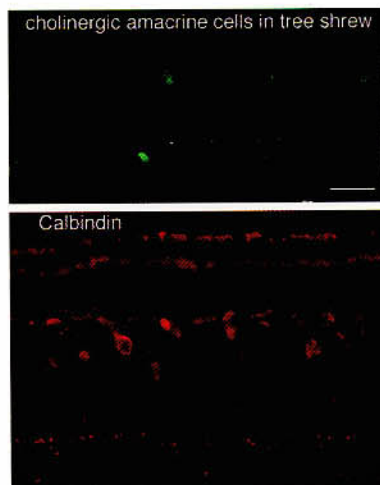


## Histology of Myopia: studies of the tree shrew retina



Carla with the ultramicrotome.

Carla Abbott is a PhD student who is co-supervised by Prof. Neville McBrien and Dr. Michael Pianta from the Department of Optometry and Vision Sciences and Associate Prof. Ulrike Grünert from the NVRI. Carla will investigate the anatomical changes in the retina of myopic humans and animals (tree shrews). The retinas of tree shrews are embedded in resin and sectioned with an ultramicrotome. Carla then measures the thickness of the retina and compares normal and myopic retinas.



The structure and connections of the tree shrew retina can be investigated using immunochemical methods. Cell populations, and patterns of antibody expression can be measured in normal and myopic eyes, with the goal of discovering whether retinal pathways are involved in myopia development.

*Identifying cell populations in tree shrew retina. Upper panel: cholinergic amacrine cells. These cells are believed to participate in retinal circuits for motion detection. Lower panel: Calbindin immunoreactive bipolar cells. The function of the calbindin-labelled bipolar cells is poorly understood.*