

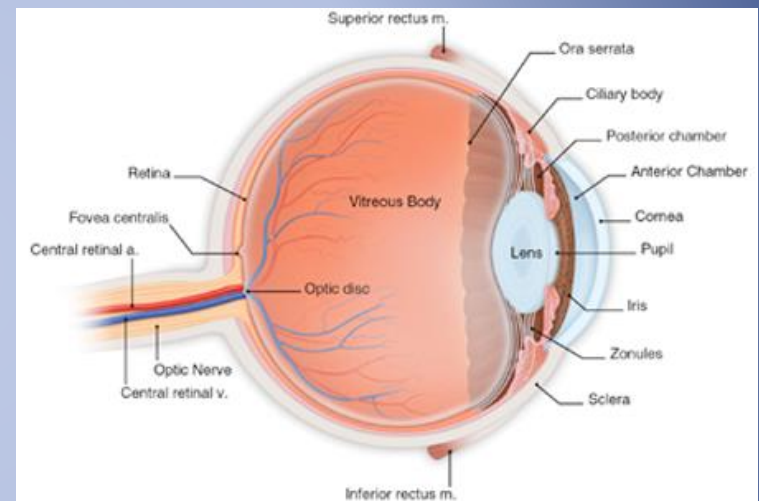
Glaucoma Research

Life in the Horner Lab
Mentor: Denise Inman, PhD

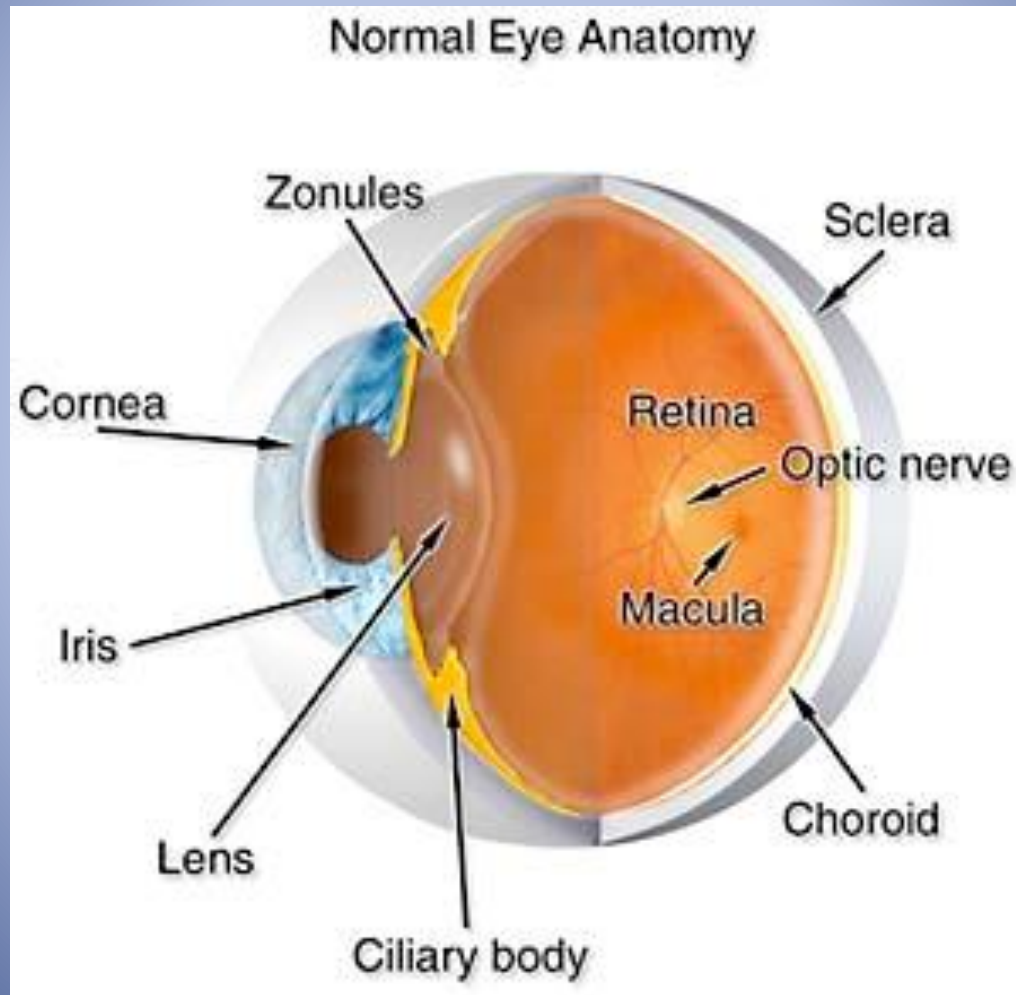
Presented By: Rajiv Iyengar

Glaucoma: A Global Overview

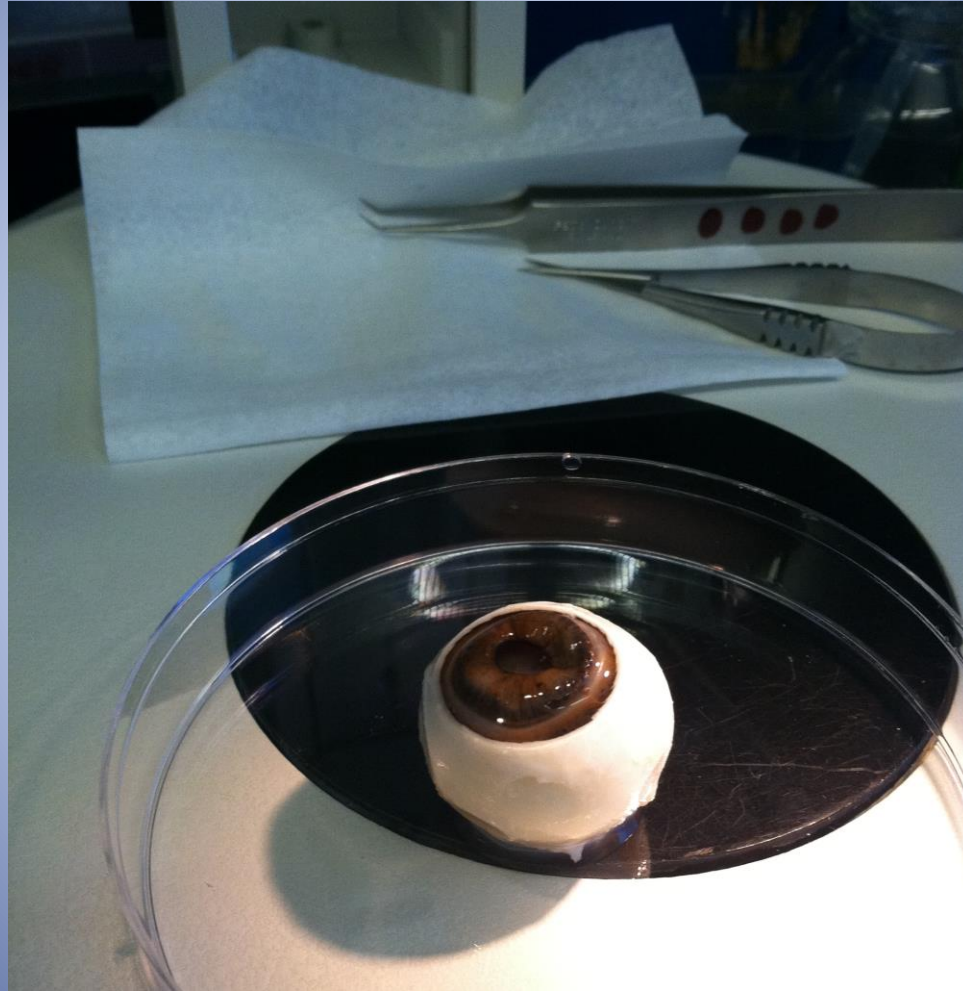
- A group of eye conditions that lead to damage of the optic nerve
 - Damage is largely due to an increase in intraocular pressure (IOP)
- Second most common cause of blindness in US
- 3 Major Types
 - Open angle, closed angle, congenital



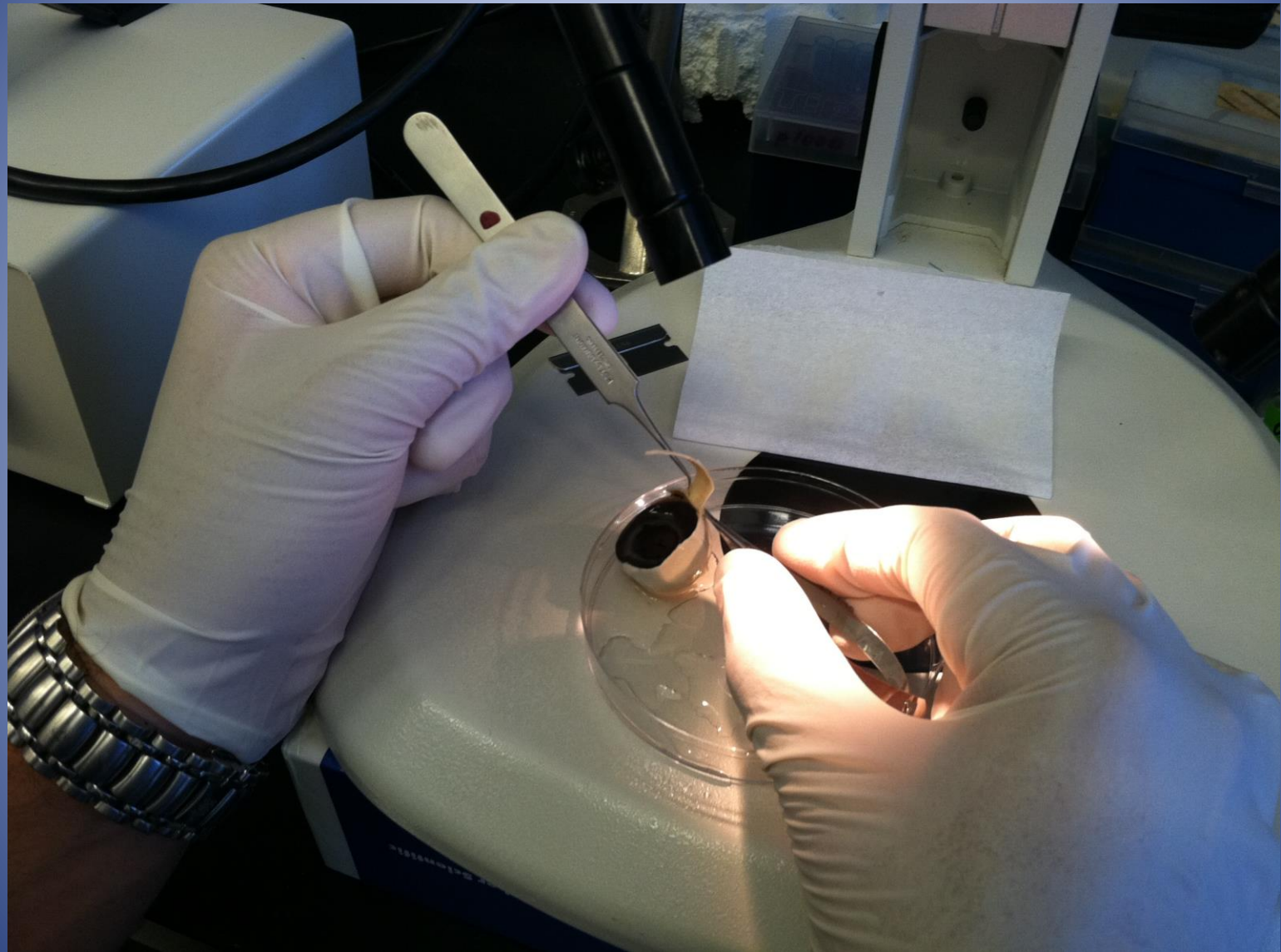
Basic Eye Anatomy



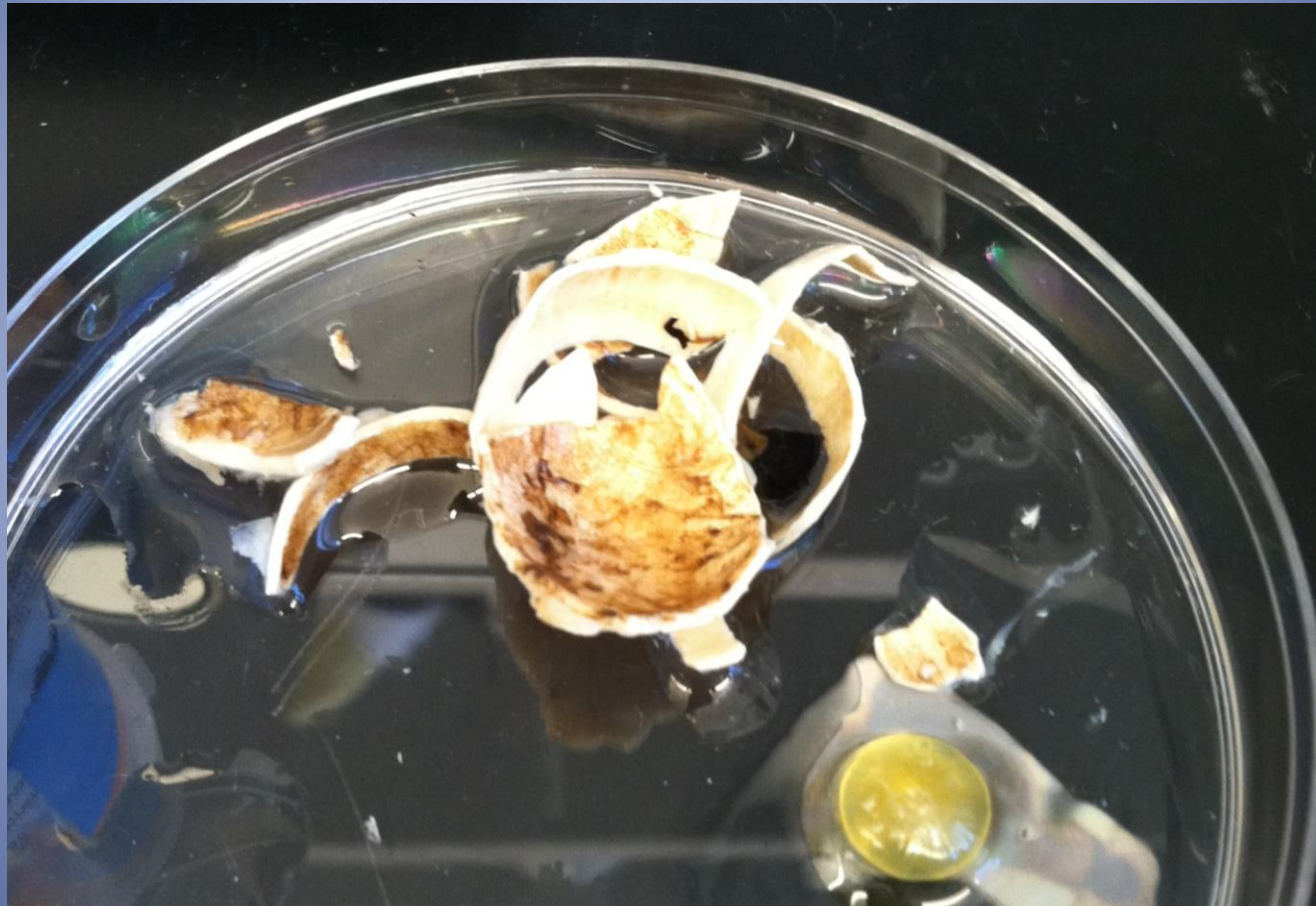
Eyeball preserved in formaldehyde



Resection of Sclera



Extraneous Tissue



Isolation of the Retina and Pigment Epithelium

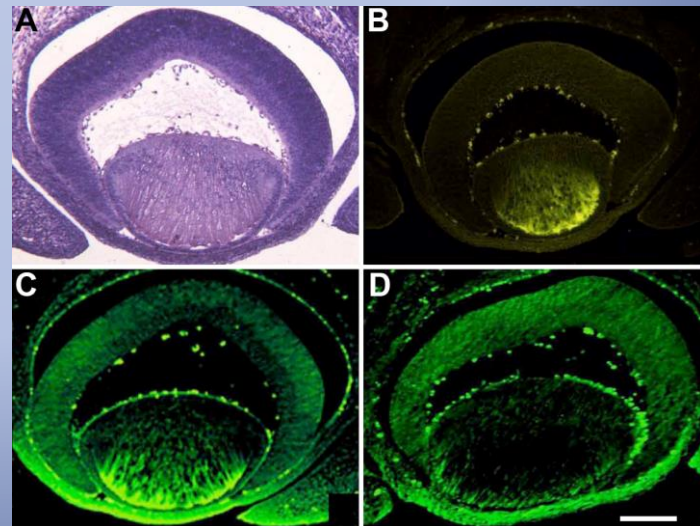
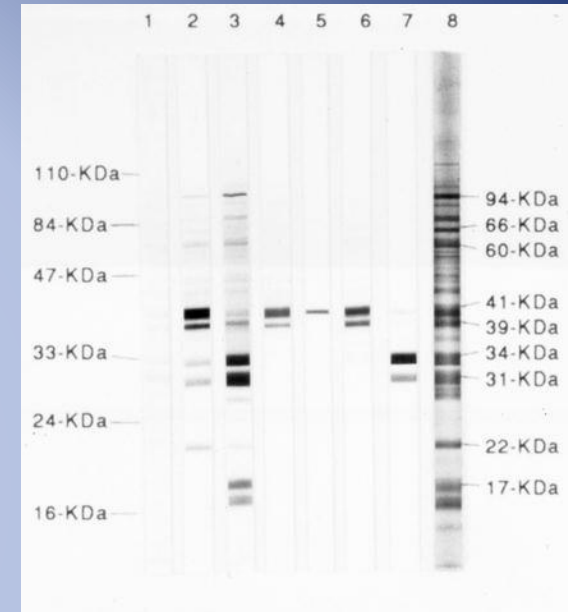


“Naked” Retina



Techniques for Analysis

- Quantitative Polymerase Chain Reaction (qPCR)
- Western Blot
 - Immunohistochemistry
- Staining/Imaging



Sources

- <http://www.bio.davidson.edu/courses/genomics/method/Westernblot.html>
- <http://thalamus.wustl.edu/course/eyeret.html>
- <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0002587/>
- <http://www.molvis.org/molvis/v14/a92/images/mv-v14-762-f7.jpg>
- <http://www.somas.stonybrook.edu/~MADL/images/Resized/qpcr.jpg>