# Brian Danysh University of Delaware Department of Biological Sciences



Laboratory of Vertebrate Development

## **Back to Biology**

 Went to high school in north western New Jersey

BA in Biological Sciences from the University of Delaware

 Before graduate school I designed and built fiber optic networks for computer storage arrays and managed UNIX servers

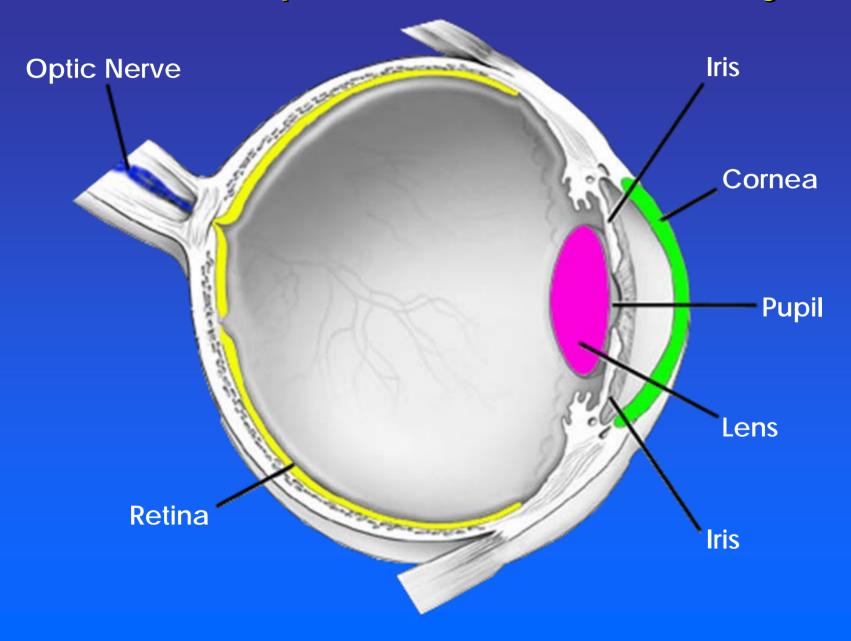
Currently in my 4<sup>th</sup> year of study for my PhD in Molecular Biology







### The Development and Growth of the Eye



#### The Lens

- Transparent tissue composed of specialized cells
- Focuses light in the eye
- Surrounded by a selectively permeable membrane called the lens capsule



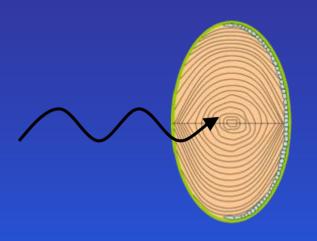
bovine (cow) lens

 My research focuses on the mechanisms behind the selective permeability of the lens capsule

# Important to Understand Selective Diffusion in the Lens Capsule

- The lens is not directly fed by blood vessels
- Nutrients and other molecules required by the lens to develop and grow must diffuse through the capsule
- Protect the lens from bacterial and viral invasion

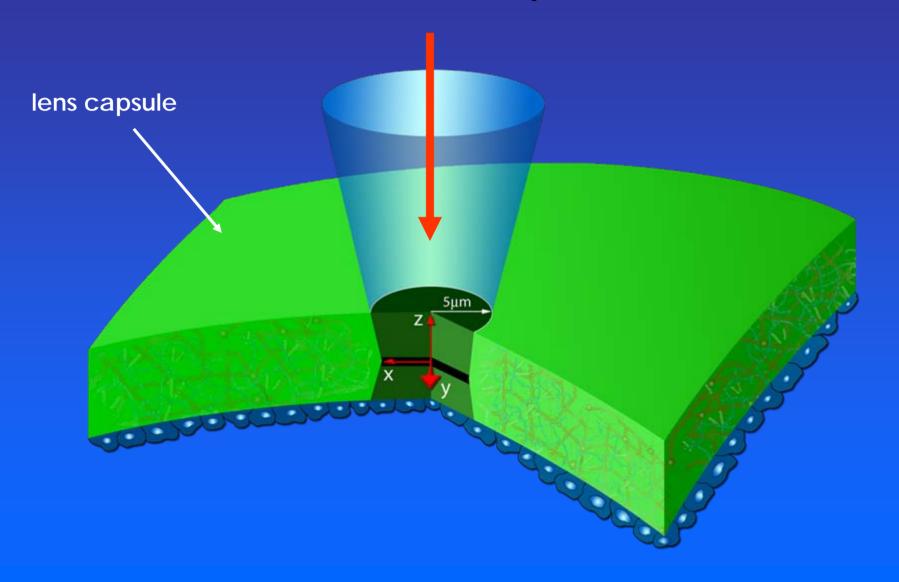
 My research will help understand how other organs filter molecules







# Use a Laser to Measure Diffusion of Molecules in the Lens Capsule



## Thank You

**Any Questions?**