The Neuroprotection Laboratory is chiefly concerned with the neuroprotection of the ganglion cells of the retina. Ganglion cells give rise to axons that collect at the optic nerve head and leave the eye to form the optic nerve. These cells and their axons are susceptible to glaucoma and optic neuritis, as well as several neurological disorders. The chief focus of the laboratory is the characterization of susceptibility and the protection of these nerve fibers.

**Directors**

- Claire Mitchell  
  *Associate Professor of Physiology*
- Alan Laties  
  *Professor of Ophthalmology*

**Staff**

Includes four postdoctoral fellows.

**Recent Research**

A series of projects have been undertaken to characterize the release of ATP by the retina and response to a step increase in intraocular pressure. When this occurs ganglion cell death can ensue. Evidence has been developed that the released ATP is toxic to ganglion cells. Specifically, ATP acting on purinergic receptor leads to a lethal calcium influx to ganglion cells. Recently the laboratory was able demonstrate that this toxic effect can be blocked by a purinergic receptor antagonist.