Treating Ischemic Optic Neuropathy with Intranasally Delivered Neurotrophic Factors

Linda K. McLoon, Ph.D.(PI) & Suroma Pen
Ophthalmology and Neuroscience, University of Minnesota

NNIN Facility utilized: Characterization Facility

1. An experimental optic nerve ischemia is created using a photo-coagulopathy method.

2. After specific post-hypoxia intervals, the animals are treated with neurotrophic factors delivered intranasally.

3. After the appropriate post-injury/post-treatment intervals, the animals are perfused and the optic nerves prepared for morphometric analysis by embedding them in plastic and cutting one micron sections (seen at right).

3. Long-term rescue of optic axons within the optic nerve is assessed morphometrically.