

Randall Shortridge's University Webb Page and Credentials (as of July 2006)

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Research Projects:

- **Molecular genetics of *Drosophila* phototransduction.** This has been our bread-and-butter project for over a decade. Current efforts are directed at determining how the signaling complex in vision forms with a focus on the interactions that occur between G-protein, phospholipase C, and the inaD (a PDZ-binding) protein. Current collaborators include Dr. William Stark, Department of Biology, St. Louis University
- **Temperature-sensitive paralysis in *Drosophila* and what it reveals about the nervous system.** This project is being carried out as a collaborative effort with in Dr. Satpal Singh, Department of Pharmacology And Toxicology, SUNY-Buffalo. Paralytic mutants are being studied in order to identify novel pathways regulating the nervous, muscular, or neuro-muscular system. Over thirty mutations have been identified, out of which five are being actively studied at the present time. One of these paralytic mutants has a drastically reduced lifespan and shows phenotypic characteristics (including gene defects) that are very similar to Leigh syndrome in humans.

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