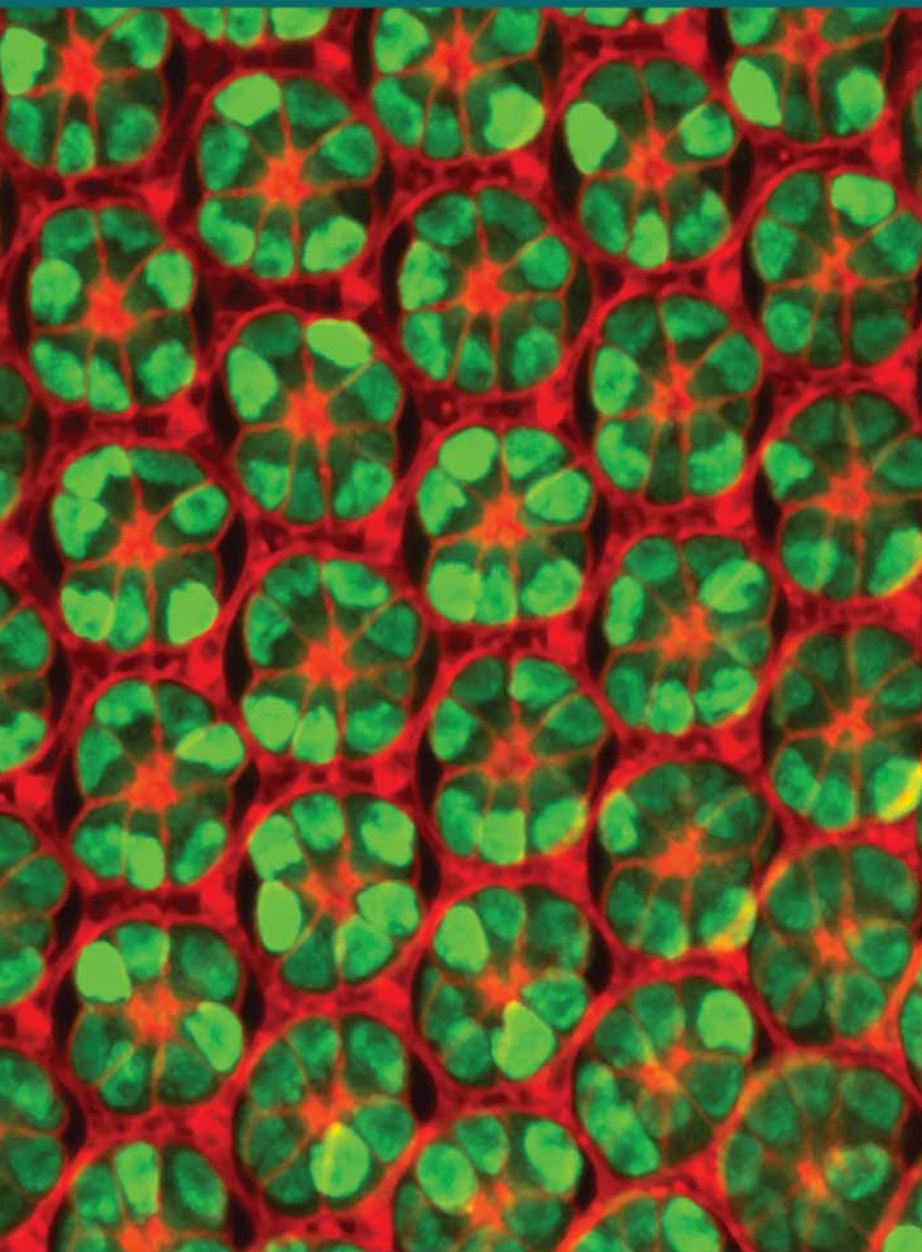


# NEUROSCIENCE and PHYSIOLOGY



GRADUATE STUDIES *in*  
BIOLOGICAL SCIENCES

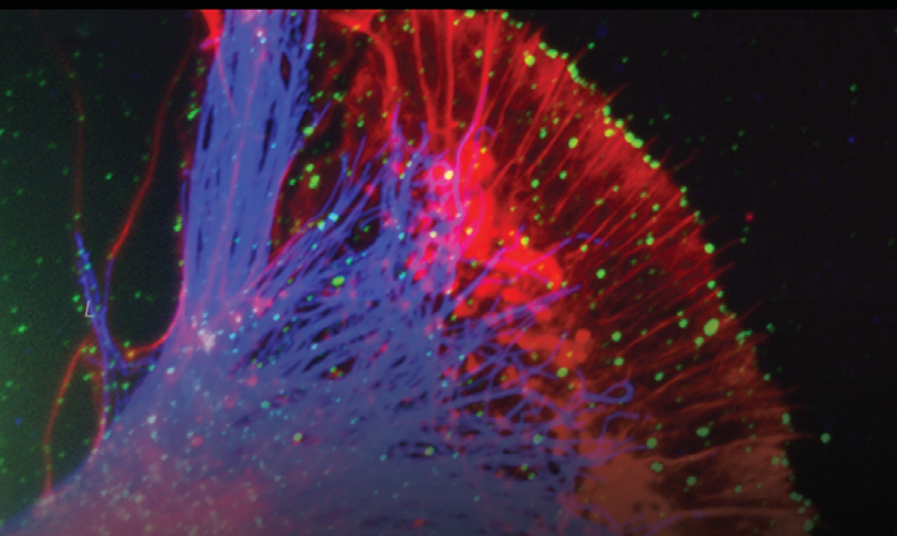
**PURDUE**  
UNIVERSITY

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Technologies in molecular and cellular biology, advanced imaging, electrophysiology, experimental embryology, and behavior assessment have undergone significant advances in recent years. The **Neuroscience and Physiology Research Area** brings together laboratories employing these technological advances to study the development, structure, function, and regeneration of the nervous system, as well as the functional and mechanistic basis of a broad range of fundamental behaviors such as vision, hearing, movement, learning, and social interactions.

We combine these tools with the power of several model systems including zebrafish, mouse, rat, chick, *Drosophila*, and *Aplysia* to tackle unsolved problems of development and disease of the nervous and endocrine systems. In addition to studying the development and function of the nervous system, several laboratories also investigate neurological disorders, including blindness, deafness, neurodegenerative diseases, autism, and musculoskeletal disorders. One of the strengths of our area is the multiple approaches and techniques used to answer important questions at the genetic, cellular, physiological, and organismal levels.

The group provides interdisciplinary training in a collaborative environment for undergraduates, graduate students, and postdoctoral fellows. Resources and opportunities for collaboration are provided to the group through the Purdue Institute for Integrative Neuroscience, the Bindley Bioscience Center, the Birck Nanotechnology Center, the Genomics Center, and numerous colleges and departments across Purdue, particularly Biomedical Engineering and Medicinal Chemistry and Molecular Pharmacology. Our research is supported by grants from the NIH, the NSF, and other extramural and intramural funding agencies.



Front image: *Drosophila* pupal eye labeled for Ire 1 nuclease activity (green) and membranes (red); courtesy of Ready lab.

Back image: *Aplysia* growth cone stained for F-actin (red), microtubules (blue), and active Src (green); courtesy of Suter lab.