Water-related Research on Filter Feeding Mollusk & Aquatic Predator
Biotxin Accumulation in Oysters; Rearing Larval Dragonflies and Damselflies to Adulthood

Intern(s) will form hypothesis-driven research projects on an aquatic predator and a filter feeding mollusk. The projects will involve rearing and stress response and exposure to a biotxin. Student goals for the project are to develop laboratory experimental design and procedural skills.

Qualifications:

1. Minimum Qualifications: Rising juniors and seniors from LSU and partner institutions with at least a 3.5 GPA and in B.S. programs in biological sciences, marine sciences, oceanography, wildlife, fisheries, or aquatic sciences are most competitive. Completion of at least one year of biology for science majors courses and laboratories, organic chemistry, and microbiology. Successful applicants will have demonstrated experience working independently. Valid driver’s license and clean background check are required.

2. Preferred Qualifications: Previous experience in a research laboratory setting is preferred. Previous experience with invertebrates or ELISA not necessary, but preferred.

Primary Contact/Advisor: Michael D. Kaller, PhD
Maximum Interns Needed: 2

Weeks 1-2, 8-10
Daily Contact: Michael D. Kaller, PhD
Location: Renewable Natural Resources Building, LSU Campus, Baton Rouge, Louisiana

Primary Tasks:
- Complete laboratory safety, ethics, and sexual harassment training.
- Develop a research hypothesis regarding improving rearing of larval dragonflies and damselflies into adults (confirmatory species identification requires adult specimens).
- Construct and/or modify existing rearing chambers to investigate hypothesis.
- Assist with on-going research projects, including but not limited to: fish and water quality sampling in the Atchafalaya River basin; studies of herbicide application impacts to fish and periphyton; and trophic (feeding) ecology studies of river fishes.
- Evaluate rearing chamber hypothesis and produce a poster based on research experience.
Weeks 3 - 7

**Daily Contact:** Reagan Errera, PhD

**Location:** Renewable Natural Resources Building, LSU Campus, Baton Rouge, Louisiana

**Primary Tasks:**
- Develop a research hypothesis focused on the consumption of a toxic bacteria, *Microcystis aeruginosa*, and accumulation of the biotoxin microcystin in the Eastern Oyster (*Crassostrea virginica*).
- Complete training on identifying and counting *M. aeruginosa* cells.
- Establish *M. aeruginosa* cultures and microcosm for *C. virginica* growth.
- Conduct at least two (2) 6-hour feeding experiments.
- Extract microcystin from *C. virginica* and run ELISA assays to determine accumulation of toxin.
- Evaluate the consumption rate of *M. aeruginosa* and accumulation of microcystin and produce a poster based on research results and experience.

**Success Measures:**
- Interns will meet weekly with Michael Kaller for a brief evaluation of their professionalism and progress. Interns will be provided an opportunity to provide feedback and share positive and negative observations about their experiences.
- Additional contacts will provide evaluation of the interns specific to their experiences.
- Completed posters will be presented (in absentia, if required) at the next Louisiana Association of Professional Biologists or Louisiana Chapter of the American Fisheries Society meeting.