



## M.S. Research Assistantships (Two Positions available)

Aquaculture/Fisheries Center  
University of Arkansas at Pine Bluff  
Pine Bluff, AR 71601



### **STRESS MEMORY AS A POTENTIAL STRATEGY TO MITIGATE ADVERSE EFFECTS OF ELEVATED AMMONIA, HYPOXIA AND WATER-BORNE IRON IN AQUACULTURE**

**Description:** For sustainable production of healthy and safe aquatic food, minimizing and/or relieving stress events in farmed organisms are crucial. In vertebrates including some fish, it is established that prior-exposure to stressors improves tolerance to subsequent threats by retaining the imprints of defensive strategies through the formation of 'stress-memory'. To our knowledge, potential consequences of early stress experiences remain unexplored in the aquaculture context. Therefore, overall goal of this project is to evaluate the innovative approach of 'developing stress memory' by artificially pre-exposing catfish to low levels of stressors as a sustainable management strategy in mitigating the lethal/sub-lethal impacts of adverse conditions in culture systems. This is a highly interdisciplinary project using a top-down approach (from whole-organismal to transcriptome level response) to conceive, design, and evaluate the potential of 'stress memory' as a tool to augment the performance and production of a highly prized fish with a well-established US market.

This project is funded by USDA-NIFA, and Principal Investigator (PI) will currently recruit **two graduate research assistants** and **three undergraduate (summer) research assistants to implement this project**.

**Qualifications (for graduate assistantship):** B.S. degree in aquaculture/fisheries, water chemistry, fish physiology, toxicology, or a related field, minimum GPA of 3.0, and GRE score of 297+ (verbal + quantitative) are required. Minimum TOEFL score of 550 on the TOEFL paper version (213 on the computer version, 79 on the internet version), or 6.5 on IELTS is required for international students. A strong interest in water quality, fish biology toxicology as well as good writing skills, excellent work ethic, and demonstrated ability to work independently are required. Prior experience with fish biology and water quality management is desirable.

**Stipend (for graduate assistantship):** Two years of assured funding @ \$18,800/year.

**Closing Date:** The desired starting date is Fall Semester 2024 or Spring/Fall Semester 2025 (or until filled). Descriptions of application procedures and necessary forms can be found at the UAPB Aquaculture/Fisheries Center website, [http://www.uapb.edu/academics/school\\_of\\_agriculture\\_fisheries\\_and\\_human\\_sciences/aquaculture\\_fisheries/jobsnews.aspx](http://www.uapb.edu/academics/school_of_agriculture_fisheries_and_human_sciences/aquaculture_fisheries/jobsnews.aspx)

For further information on this specific opportunity, please contact:

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