



REQUEST FOR PRE-PROPOSALS

Please Copy and Distribute to All Interested Parties

The USDA-NIFA Southern Regional Aquaculture Center solicits response from qualified scientists interested in participating in the regional project:

Development of Rapid Detection Methods for Emerging Aquatic Animal Pathogens Threatening Southern Region Aquaculture

SRAC's Board of Directors has authorized up to \$200,000 for a 2-year project to develop rapid detection methods for emerging aquatic animal pathogens threatening southern region aquaculture. This project will be developed using the "individual objective method" where individual scientists having demonstrated records of expertise in the subject submit a pre-proposal that addresses one or more of the project objectives. Proposals will be selected for funding based on review by a committee of scientists not involved in any of the proposals that are submitted. The best of these individual proposals are then combined to form a single project. Based on the total amount of funds available, it is suggested that the pre-proposal for each objective should be limited to \$50,000 for a 2-year project.

Background

Background: Emerging aquatic animal pathogens (EAAPs) are of notable economic significance causing mass mortality epizootics in aquaculture stocks. These epizootics have occurred among commonly aquacultured freshwater and marine finfishes and invertebrates reared for food, bait, or ornamental purposes. Unfortunately, research to combat EAAPs including proper biosecurity procedures, vaccines, chemotherapeutics, and validated detection methods are mostly lacking. To fill this industry need, the development and validation of rapid, sensitive, and specific assays capable of detecting EAAPs in samples from symptomatic (overt disease) aquatic animals is requested.

Objectives

1. Develop and validate a rapid, sensitive, and specific assay to detect an EAAP in the ornamental industry.
2. Develop and validate a rapid, sensitive, and specific assay to detect an EAAP in the food fish industry.
3. Develop and validate a rapid, sensitive, and specific assay to detect an EAAP in the baitfish industry.
4. Develop and validate a rapid, sensitive, and specific assay to detect an EAAP in the shrimp or shellfish industries.

Experimental Approach

Successful proposals will first and foremost include the identification of at least one critically important pathogen causing significant and emerging mortalities within each of the listed commodity groups (i.e. food fish, baitfish, ornamental fish, and shellfish) within the southern region's aquaculture industry. Identification and selection of these pathogens should include documentation of their importance, their threat to producers, and should include letters of support from representatives of the affected commodity group.

Research should focus on development of rapid detection assays and testing techniques such as specific Polymerase Chain Reaction and/or LAMP tests including verification of their sensitivity and accuracy. Detection methods should be thoroughly tested on known infected and control animals to measure their ability to accurately identify the specific target pathogen.

How to Respond

This project will be developed using the "Individual Objective Method" where pre-proposals address only one objective. If you are wanting to address multiple objectives, please submit one pre-proposal for each objective. This allows reviewers to pick the most appropriate pre-proposal for each objective. Preference will be given to pre-proposals that show a potential for a high degree of collaboration and coordination among participants. Successful pre-proposals for each objective will be merged into a final proposal and a work group formed for the project. The pre-proposal must include a one-page vita and a proposed budget. Pre-proposals, vitae, and budgets that are not in the proper format will not be considered. See "Guidelines for Writing a SRAC Pre-Proposal (Individual Objective)" file attached or contact Kristen Walters with the SRAC office at 662-686-3269.

Send an electronic copy of the pre-proposal in Word format to Jimmy Avery, SRAC Director as an email attachment (jimmy.avery@msstate.edu) by **February 5, 2021**. Proposals received after that date will not be considered.