

DISL-FDA Graduate Fellowships

The Dauphin Island Sea Lab (DISL) and the US Food and Drug Administration (FDA) announce the availability of graduate research fellowship(s) for students in the marine sciences.

Qualifications/Restrictions:

Fellowships will provide stipends to students whose academic and research activities may take place at the Dauphin Island Sea Lab campus and the US FDA Gulf Coast Seafood Laboratory, located on Dauphin Island, Alabama and the University of South Alabama in Mobile, Alabama.

Fellowships are open to in-coming and existing graduate students working under the direction of a DISL resident faculty member and FDA researcher. Students must have applied to or be currently enrolled at a DISL member school.

Both new and current graduate students must meet the minimum requirements for unconditional enrollment status at their home institution. Provisional students are not considered eligible for these fellowships. International students must confirm their eligibility prior to application.

Applicants will be evaluated on: 1) the student's undergraduate and graduate (if applicable) academic and research records and 2) the quality and importance of the proposed research topic with respect to both ecological or fisheries science and seafood safety or public health applications. Students are responsible for seeking faculty advisors from each institution (DISL and FDA) and developing a research project concept. A list of possible project concepts and mentors is provided below, and other ideas will be considered.

Compensation:

Fellowships will be awarded for twelve (12) months typically beginning in the fall or spring semester and, depending on the availability of funds, may be annually renewed up to a total award time of 3 years for each MS student and 5 years for each PhD student. Stipends for twelve (12) months will be consistent with fellowship levels for MS and PhD students at home institutions at the time of the award.

Depending on availability of funding, awards typically include a spending allowance of support funds that can be used to cover research travel, supplies, small equipment, meeting attendance, and other costs to support research progress and career development.

A student's home institution may additionally provide a tuition fellowship and insurance, but neither the DISL nor FDA guarantees tuition waivers or insurance coverage. Please discuss the possibility of tuition and insurance provisions with your Faculty Advisor and Department Chair. Fees from the student's home institution, such as laboratory, student activity, computer fees, etc. are the responsibility of the student. There are no additional fees at DISL or FDA.

Application:

A complete application must include the following documentation: 1) current CV (include full contact information, current and former academic institutions, degrees awarded, awards and honors, publications and presentations, other pertinent information), 2) brief letter of interest that includes a summary of the proposed project and identified mentors at each institution (2 page maximum), 3) copy of GRE scores and transcripts submitted to the home institution, if

required, 4) two letters of recommendation, and 5) a statement of commitment from each of the faculty mentors identified at DISL and FDA (statements can be emailed and must recognize intellectual support for the student and the proposed project and confirm the student's enrollment in a qualified graduate program). All materials should be sent to DISL as indicated below.

If arranged by the student applicant, supporting materials submitted to main campus admissions departments can be transferred to DISL from home institutions by administrative personnel; it is the applicants' responsibility to send supporting materials (or have them sent) to DISL.

Deadline:

Students wishing to apply for a DISL-FDA Graduate Fellowship should contact a potential faculty mentor (some possible mentors are listed below) and inquire about current submission deadlines to Dr. R. H. Carmichael (rcarmichael@disl.org). Review of applications may begin upon submittal.

Applications will be reviewed by members of the DISL-FDA Joint Program Committee, which includes DISL faculty and FDA researchers. Recipients will need to inform DISL of acceptance of the fellowship within two weeks of receiving an offer.

Address applications via email to:

DISLFDA@disl.org

Subject line: DISL-FDA Graduate Fellowships (Applicant's last name)

Examples projects (and potential faculty mentors) available for student participation:

1. Exposure of oysters to microbial indicators associated with rainfall events that are beyond the treatment capacity of local wastewater treatment plants. Projects may include development of methods to prevent shellfish contamination. (K. Calci Kevin.Calci@fda.hhs.gov, R. Carmichael rcarmichael@disl.org, A. Tarnecki atarnecki@disl.org)
2. Relative risk of vibrio associated with cultured shellfish, from harvest to consumer: effects of environmental culture, handling, transport, and storage conditions. (J. Jones Jessica.Jones@fda.hhs.gov, A. Tarnecki atarnecki@disl.org)
3. Environmental drivers of vibrio ecology: understanding how environmental fitness contributes to human pathogenicity. (J. Jones Jessica.Jones@fda.hhs.gov, A. Tarnecki atarnecki@disl.org)
4. Field or lab study of exposure to HAB toxins for the purpose of modifying or refining depuration in fishery species and NSP guidance (A. Robertson arobertson@disl.org)
5. Impact of oil exposure on burrowing depth and surface visibility (as well as other endpoints), physiological endpoints and toxin accumulation. (K. Dorgan kdorgan@disl.org)
6. Tracking of biogenic amine-producing bacteria and bacterial communities during seafood (Spanish Mackerel, Mahi, Tuna, Shrimp) decomposition using next generation sequencing.

Does the harvest environment affect biogenic amine formation (rate of decomposition)? (Ron Benner Ronald.Benner@fda.hhs.gov, R. Carmichael rcarmichael@disl.org)

7. Advanced microbial source tracking from human and wildlife sources and relationships to classical microbial indicator values in seafood harvest waters (J. Jones, K. Calci, B. Kiel-Reese bkielreese@disl.org, R. Carmichael).
8. Testing for pathogen indicator concentrations in marine mammal feces to determine potential for contribution to water quality in tidal rivers; general assessment of wildlife sources (birds, mammals) to water quality and local area fishing, swimming closures. (K. Calci, R. Carmichael)
9. Pathogen related BMPs for triploid oysters; local or regional comparisons. This project would focus on environmental attributes that affect accumulation and depuration as opposed to gear type. (J. Jones, K. Calci, W. Burkhardt, R. Carmichael, A. Tarnecki atarnecki@disl.org)
10. Identifying sources and transport pathways associated with potential shellfish contaminants. Could include determining how temporal and spatial patterns in environmental conditions affect pathogen exposure and productivity of shellfish beds. (B. Dzwonkowski bdzwonkowski@disl.org, J. Jones)
11. Detecting harmful heavy or trace metals in water, sediments, and shell- and/or finfish in the Mobile Bay (R. Carmichael, S. Powers spowers@disl.org)
12. Environmental factors affecting microbial concentrations and communities in Mobile Bay and nearby waters: Monitoring harmful algae, spoilage bacteria, and *Vibrio* species. (J. Krause jkrause@disl.org, J. Jones, A. Tarnecki atarnecki@disl.org)
13. Prevalence of and environmental factors driving antimicrobial production and resistance in coastal and estuarine waters. (B. Kiel Reese)
14. Continuation of existing studies (expansion of a project with a new student or continuation of an existing student up to program limits; e.g. enhancing an MS student's project to a Ph.D. level project)

Project proposals should address the following questions.

1. What is current state of knowledge and status of the research concept or topic?
2. What is the public health concern; is there urgency and need for the research to support the mission of the FDA?
3. What is the ecological merit of the work?
4. If we do this work, will it affect policy or guidance; how will it protect public health? (be prepared to name the tangible public health output)
5. What are potential tangible products (beyond gaining knowledge and understanding)?