

Call for Proposals

eDNA Emerging Areas & Commercialization Seed Grants

Maine's iconic coastline is one element of a complex macrosystem linking inland lakes and rivers to the sea through watersheds, estuaries, and nearshore coastal waters to the open Gulf of Maine. The overarching hypothesis of Maine-eDNA is that we can transform our understanding of the ecological dynamics and sustainability of Maine's coastal macrosystem through innovations in environmental DNA (eDNA) science that unlock new spatiotemporal and taxonomic scales of inference.

One of the objectives of the Maine-eDNA project is to encourage valuable contributions from researchers in emerging areas of eDNA technology and its application to marine ecosystem monitoring (*Option 1*). We seek one-year seed grant proposals to be reviewed and awarded on a competitive basis, with total project costs up to \$20,000. For proposals that include commercialization of eDNA technology in the scope of work (*Option-2*), the PI will be eligible to apply for additional matching funds from MTI, with the potential to receive an additional \$20,000.

Institutions and individuals associated with Maine-based research organizations, companies and community organizations are eligible to apply. Early career researchers and entrepreneurs are particularly encouraged to apply, as are individuals from groups who are underrepresented in STEM (women, persons with disabilities, blacks, Hispanics, and American Indians).

Research priority areas for this call include are:

- Priority area 1 - Environmental DNA Technologies: Includes sampling technologies, molecular tools, novel detection methods, bioinformatic tools, data management and visualization technologies. Technologies that advance widespread needs in the field, emerging environmental monitoring needs, and/or community participation and well-being are strongly encouraged.
- Priority area 2 - Sustainable Seafood and Seaproducts: Includes ways that eDNA can improve sustainability and economic value of seafood products, whether aquacultured or harvested. Could include eDNA for improved aquaculture practices (e.g., farm siting), reducing harvest bycatch, improving seafood safety (e.g., pathogen testing), seafood traceability, that benefit Maine's marine fisheries and aquaculture sectors.

Option 1: eDNA Emerging Areas Research Grant Program

eDNA Emerging Areas Research Grant Program applications must use the following format. Only applications submitted in the format required will be accepted for consideration. The application is limited to 3 pages, single spaced, using Times New Roman 12pt font and 1" margins.

1. Abstract: Prepare this section to clearly summarize for non-specialized readers the significance and objectives of the proposed eDNA-related research initiative. Indicate the potential impact on the Maine-eDNA project and the state of Maine. Abstracts must be no longer than 100 words.
2. Background Information: Provide information regarding the research and scholarly activities that may occur, and the relevance of the proposed work to the Maine-eDNA project and the state of Maine.

3. **Specific Goals or Objectives of the Proposed Research or Scholarly Activity:** The initiative's focus and goals should be clearly stated, and link to the body of knowledge surrounding eDNA technology and its application to ecosystem monitoring. Evidence of a plan to ensure adaptive, knowledge to action activities as part of the grant should be clearly presented in the proposal.
4. **Metrics of Success:** Describe clearly the procedures of information/data collection, analysis, and interpretation, associated with measuring the success of the proposed work. Anticipated outcomes of the project (e.g., specific funding opportunities to target, new collaborations with researchers or businesses, partnerships formed, publications, etc.) should be indicated. A final report documenting the outcomes of supported research activities will be required. This report should detail outcomes during the funded period as well as 6-months post-funding.
5. **Bibliography** (does not count toward 3-page limit). Include only those references cited in the text.

A budget table and budget justification are also required as appendices to the application (do not count toward the 3-page limit). Indirect overhead of the home institution may be included in the project's budget, with a total budget request limited to \$20,000.

Possible products resulting from the eDNA Emerging Areas Research project: Collaborative proposal to funding agencies; a collaborative, peer-reviewed manuscript; a white paper or multimedia communications product targeted to a key external partner or stakeholder group, e.g., in local government or state resource management agencies; and/or a tech transfer/commercialization end product.

Evaluation Criteria for the eDNA Emerging Areas Track:

Proposals in the eDNA Emerging Areas Track shall be evaluated on the basis of the following criteria, using the indicated weighting factors.

- Intellectual merit (35 points)
- Relevance to Maine's economy (30 points)
- Likelihood of additional funding (20 points)
- Extent of collaboration with Maine-eDNA project participants (15 points)

Option 2: eDNA Commercialization Grant Program (offered in collaboration with MTI)

For proposals that include the commercialization of eDNA technology in the scope of work, the PI should follow the proposal requirements described under Option 1, but the PI will have the discretion to submit a subsequent application directly to MTI for matching funds consideration. MTI's funding process is described [online](#). To facilitate this process, MTI will host a question and answer session for all interested PIs in June 2021, and a delegate from MTI will be included in the Maine-eDNA seed grant reviewer panel to facilitate continuity between the initial application to the Maine-eDNA program and the subsequent application to MTI for matching funds.