

Rhode Island Research Alliance Collaborative Grant Award Guidelines

Submission Due Dates

Letter of Intent: September 24, 2021

Full Proposal: October 22, 2021

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INTRODUCTION

About the Rhode Island Science and Technology Advisory Council (STAC)

The Rhode Island Science and Technology Advisory Council (STAC) is a coalition of business, academic, medical and government leaders with the mission to recommend and initiate strategic investments that drive economic development and job creation by maximizing the economic impact of research, technology and innovation. STAC initiatives support the state's research and development activities by promoting collaboration across institutions and encouraging entrepreneurship and new company creation through the transfer of new technologies and discoveries into the marketplace. STAC is the State Governing Committee for RI NSF EPSCoR.

About Rhode Island NSF EPSCoR

The National Science Foundation (NSF) founded the Established Program to Stimulate Competitive Research (EPSCoR) as a mechanism to foster research and economic development. Rhode Island became an EPSCoR jurisdiction in 2004. By supporting research infrastructure statewide, RI NSF EPSCoR aims to: increase competitiveness for future funding; stimulate collaborative research; enhance public understanding of scientific research; establish STEM professional development pathways; and broaden participation of diverse groups in STEM. Rhode Island NSF EPSCoR partners with eight academic institutions across the state as well as with, government, and industry and supports Core Research Centers in Marine Life Sciences, Genomics, Computational Visualization, and Nanotechnology that provide analytical, biological, computational, and microscopy facilities to researchers and students statewide.

About the Rhode Island Research Alliance (RIRA)

To create stronger connections across the state's research organizations, STAC created RIRA to serve as a platform for promoting collaboration, maximizing state and federal investment in research and enhancing the state's R&D-related economic development opportunities. By promoting collaboration among the state's research universities, research hospitals, corporations and government agencies, the Alliance supports current research activities, strengthens the ability of Rhode Island investigators to attract federal and corporate research investment and spurs economic development and job growth.

About the Collaborative Research Grant Awards

RIRA provides grants to support a catalytic stage of inter-organizational, inter-disciplinary, collaborative research projects that are well positioned to attract substantial follow-on investment or have significant potential for technology development and commercialization. Funding from the Research Alliance provides a mechanism for teams of individuals to work together on important and promising research projects across Rhode Island's research colleges and universities, research hospitals, businesses and government agencies. To receive funding, proposals must clearly show how the combined efforts of the institutions can lead to results that could not be achieved by either alone. Research Alliance funding is also used to support research infrastructure development.

Research Thrusts

Approximately **\$380,000** in competitive funding is offered as part of STAC's participation in Rhode Island's Cooperative Agreement with the National Science Foundation's (NSF) Established Program to Stimulate Competitive Research (EPSCoR). Projects for the 2022 Call for Proposals are eligible that address research questions related to the current Rhode Island NSF EPSCoR Track-1 that will create the RI Consortium for Coastal Ecology Assessment, Innovation, and Modeling (RI C-AIM).

Understanding, predicting, and enhancing the ecological health of coastal environments is vital to workforce development, economic growth, and coastal resilience in RI. Increasing anthropogenic and natural stressors, such as global warming and sea level rise, impact coastal environments. These impacts yield complex and evolving biological interactions that respond to and influence ecosystem function. Predicting changes in ecosystem function and identifying biogeochemical markers that correlate with harmful events will enable us to devise and implement plans to mitigate these effects with intervening technologies or through changes in environmental policy and human behavior.

Eligible proposals will address one or more of the following research questions:

- What are the key data, methods, and/or techniques needed to assess the current health of Narragansett Bay and its resilience to both natural and anthropogenic stressors in real time?
- How can our present understanding and observations of the physical, biogeochemical, ecological and socio-environmental processes of coastal estuarine ecosystems be applied to Narragansett Bay for evaluating existing models, guiding new innovative models or developing forecast models?
- What new innovations in sensor development and deployment are needed to improve the collection of physical, biogeochemical, and ecological data that are relevant to monitoring and assessing the impacts of anthropogenic (e.g., pollution, climate warming) and/or natural (e.g. seasonal cycles) stressors on Narragansett Bay?
- How can novel approaches to the visualization of complex information, coastal species and environmental change, fostered through the collaboration of artists, designers, engineers and scientists, promote broader engagement in and understanding of scientific research, data, and findings?
- How does the coastal environment affect humans and how can human behavior and responses be modified to improve coastal ecological and economic sustainability?
- What new tools or techniques are needed to capture, analyze, and disseminate large data sets that engage and inform academic, industry, government, and community stakeholders?

Proposals should explain how the work 1) would directly address one or more of the six research questions listed above; 2) would lead to new research opportunities that can be supported by federal agencies, corporations and/or foundations; 3) would contribute towards current or future economic development of the state through workforce and technology development; and/or 4) would contribute to infrastructure development that significantly advances the competitiveness of scientists and engineers in Rhode Island to

secure additional funding. Proposals presenting creative inter-disciplinary approaches and that seek to build collaborations across institutions are encouraged. Proposals are also encouraged that provide measures to translate research into K-12 and undergraduate classrooms to provide new learning experiences and to broaden participation of underrepresented minorities or include clear plans to broaden the participation of underrepresented minorities, for example by working with diversity officers and/or minority-serving organizations.

Who May Apply

Rhode Island research institutions, including higher education, academic, or business and government organizations, may collaborate in applying for grant funding. Project teams must be collaborative in nature and **include investigators from at least two RI C-AIM partner institutions**. These include the University of Rhode Island, Brown University, Bryant University, Providence College, Rhode Island College, the Rhode Island School of Design, Roger Williams University, and Salve Regina University. A partner institution in RI C-AIM shall serve as the prime grantee and the other entity(s) shall serve as the sub-recipient(s).

Persons are limited to serving as Principal Investigator (PI) on only one proposal and PIs must be tenure track or research faculty or the equivalent since these funds are intended to support long-term avenues of research activity. Projects currently funded by the Research Alliance are not eligible for continuation funding. Submission of a revised proposal that was not previously selected for funding is acceptable with an explanation of how the project has been revised.

Amount of Award & Length of Award

The maximum amount of any given award is \$80,000 between the period of January 1, 2022 to December 31, 2022.

Submission Deadlines

All applicants are required to submit an electronic copy of a Letter of Intent by September 24, 2021. An electronic copy of the full proposal is due by October 22, 2021.

Letter of Intent Review

Letters of Intent are required for all proposed projects. The Letters of Intent will be reviewed for eligibility of the proposed team and responsiveness to the stated research thrusts. If there is a concern with a proposed project, the Primary Investigator will be contacted to discuss the concerns.

Full Proposal Review and Evaluation

Funds will be awarded through a competitive review process conducted by the RI C-AIM leadership team. The competitive granting process will embrace review and evaluation criteria similar to those used by the National Science Foundation including intellectual merit and broader impacts of the proposal. The catalytic and collaborative nature of the proposed research activity will also be considered. STAC will review the recommendation by the RI C-AIM leadership team and determine the awards. Selection

of awardees will consider the quality of the research and its alignment with RI C-AIM research thrusts and the State's Science and Technology Plan, and the ability of the activity to support the development of competitive research infrastructure in Rhode Island.

Award Announcement

Awards will be announced in December 2021.

Intellectual Property

Acceptance of this grant does not transfer any intellectual property rights. All information and findings derived from activities funded by Research Alliance grants remain the property of the grantees.

LETTER OF INTENT INSTRUCTIONS

Format

A one to two-page Letter of Intent should be submitted by September 24, 2021 which includes:

- 1) the name of the PI and a list of the team of investigators involved, including names, titles, affiliated research organizations and area of expertise contributed to the project;
- 2) the project title;
- 3) research question(s) addressed by project;
- 4) a clear and concise concept statement of the project including rationale, goals and relation to the eligible RI C-AIM research thrusts;
- 5) a description of how the project will produce data or other results that can lead to new research opportunities that can be supported by federal agencies, corporations and/or foundations; advance the project's potential for technology development; advance or leverage Rhode Island's core capacity for visualization of science.

Letters of Intent should be typed, font size no smaller than 10 point, with standard margins (at least one inch).

Submission

Letters of Intent should be emailed by September 24, 2021 to riresearchalliance@commerceri.com. The subject line should read **PI last name, PI first name, Letter of Intent** (i.e. Harrington, Kaleena, Letter of Intent). Word and PDF format will be accepted and multiple documents should be scanned or combined into one file. Submissions will receive confirmation of receipt.

Review

The Letters of Intent will be reviewed for eligibility of the proposed team and responsiveness to the stated research themes. If there is a concern, the Primary Investigator will be contacted to discuss the concern.

Applicants should assume eligibility and continue work on full proposals, unless otherwise notified by STAC staff.

FULL PROPOSAL INSTRUCTIONS

Conformance with Instructions

Proposals should provide a concise, complete and clear description of the applicants' ability to meet the requirements set forth in the guidelines. It is important that all proposals conform to instructions and be complete. **Incomplete or late applications will be ineligible and will not be reviewed.**

Format

Proposals should be typed, font size no smaller than 10 point, with clearly marked pagination. Standard margins should be used (at least one inch). Sections to be included are listed below with an estimated length of each section provided for the PI's reference:

- Face Page (one page)
- Project Overview (one page)
- Table of Contents (one page)
- Project Summary (not to exceed one page)
- Project Description (not to exceed five pages)
- References (as needed)
- NSF formatted Bio sketches (two pages for each investigator)
- Budget (as needed including justification)
- Unfunded Collaborations (letters of support as needed)

Section Content

- 1) **Face Page** as supplied in the Appendix of these guidelines listing
 - project title, name, contact information and affiliated Rhode Island research institution for each principal investigator and co-principal investigator(s);
 - name and contact information for administrative official to be notified if award is made;
 - name and signature of institutional office submitting the proposal. **This Sheet must have the authorizing signature of the lead institution proposing the work.**
- 2) **Project Overview** as supplied in the Appendix of the guidelines clearly stating
 - budget summaries (for each individual institution and aggregate);
 - catalytic nature of proposal;
 - relation to eligible research thrusts;
 - title and narrative description of the proposal suitable for use in the public press.
- 3) **Table of Contents (one page)** listing all sections and pagination.

- 4) **Project Summary (one page)** listing the intellectual merit and broader impacts of the project as well as the anticipated resulting activity related to follow-on funding or technology development.
- 5) **Project Description (not to exceed 5 pages)**. Brevity will assist the reviewers and STAC staff in evaluating proposals. The Project Description should provide a clear statement of the work to be undertaken and must include:
 - objectives for the period of the proposed work and expected significance;
 - relation to the present state of knowledge in the field, to work in progress by the PI under other support and to work in progress elsewhere;
 - an outline of the general plan of work, including the broad design of activities to be undertaken, and, where appropriate, a clear description of experimental methods and procedures and plans for preservation, documentation, and sharing of data, samples, physical collections, curriculum materials and other related research and education products;
 - how the activity meets the specific collaborative and catalytic requirements of this grant regarding: how the combined efforts of the institutions can lead to results that could not be achieved by one institution alone;
 - how the activity is catalytic in nature and will lead to new research opportunities that can be supported by federal agencies, corporations and/or foundations;
 - how the activity can contribute towards current or future economic development of the state through workforce and technology development;
 - how the activity significantly advances the research competitiveness of scientists in Rhode Island for federal and/or other funding;
 - how the activity advances state-wide research capacity.
- 6) **Reference information (as needed)**. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. If the document is available electronically, the Website address also should be identified. Proposers must be especially careful to follow accepted scholarly practices in providing citations for source materials relied upon when preparing any section of the proposal. While there is no established page limitation for the references, this section must include bibliographic citations only and must not be used to provide parenthetical information outside of the five-page project description.
- 7) **NSF standard biographical sketches (two pages)**. Biographical information for the principal investigator and all co-principal investigator(s) should include professional preparation, appointment, publications and other activities. NSF instructions for biographical sketch preparation are reprinted in the Appendix.
- 8) **Budgets** for each participating institution for the duration of the research activities detailing all expenses including, when applicable, salaries and wages, equipment, travel and all direct costs. Budget items should follow standard NSF

budget categories. **No indirect cost charges are allowed; funds may not be used for any indirect cost charges at any institutional partner in these grants.** The budget must include a justification narrative of expenses. The justification narrative must stipulate a total budget figure for the project not to exceed \$80,000.

- 9) **Unfunded Collaborations** with individuals not included in the budget should be described and documented with a letter from each collaborator.

Proprietary or Privileged Information: Patentable ideas, trade secrets, privileged or confidential commercial or financial information, disclosure of which may harm the proposer, should be included in proposals only when such information is necessary to convey an understanding of the project. Such information must be clearly marked and appropriately labeled.

Submission

Full proposals are due **October 22, 2021**. Submission instructions will be provided to all invited proposals. Applicants will receive a reply email confirming receipt of their full proposals. **Late or incomplete applications will not be reviewed.**

Residual Funds

Residual funds shall be returned to the grantor.

PROCESSING AND REVIEW

Review Criteria

Each proposal will be reviewed by the RI C-AIM leadership team according to National Science Board approved merit criteria: the intellectual merit and the broader impact of the proposed activity. The catalytic and collaborative nature of the proposed research activity will also be considered.

For intellectual merit, the proposal evaluation will consider i) the importance of the activity to advancing knowledge or understanding within its own field or across different fields; ii) the qualifications of the proposer (individual & team) to conduct the project, iii) the extent that the proposed activity suggests and explores creative and original concepts, and iv) how well the proposed activity is conceived and organized.

For broader impacts, the proposal evaluation will consider the potential for the proposed activity to benefit society and lead to the achievement of desired societal outcomes. These benefits and outcomes could include promoting education and training, broadening participation of under-represented groups, or enhancing infrastructure for research and education, among others.

For catalytic nature, the proposal evaluation will consider i) the degree to which the proposed activity is catalytic in nature; ii) the degree to which the proposed activity has the potential to lead to major research opportunities that can be supported by federal agencies, corporations and/or foundations; and iii) whether the proposed activity has

significant potential to attract follow-on investment and/or technological development/commercialization.

After review the RI C-AIM leadership team will recommend proposals for funding to STAC which will determine the awards. Funded projects will represent an extremely well-organized and well-constructed activity submitted by an experienced and competitive team, that is catalytic and collaborative in nature, provides a clearly identified plan for follow-on funding or technology development, demonstrates outstanding potential to increase research capacity and infrastructure, and contributes to the enhancement of Rhode Island's R&D stature.

Award Notification

Awards will be announced in December 2021. Proposers will be notified by email of the success or declination of their grant request.

POST AWARD

Award Letter

Sponsoring institutions will be required to agree to all conditions regarding acceptance of the award including submission of required narrative and financial reports.

Progress and Final Reports

Progress and final reports will be required to assist the grantor in measuring how the expenditure of the grant 1) advances the research competitiveness of scientists in Rhode Island for federal funding technology development and/or commercialization potential; 2) advances collaboration across the state's academic and commercial research institutions; and 3) promotes current or future economic development.

Progress reports will be required stating the status of the research and any definitive results.

A final report which includes the following will be required within 30 days of the end of the grant performance period:

- how the research answered the goals stated in the proposal;
- a description of next steps for the research;
- revised budget with budget justification explaining changes;
- a brief description of planned or applied for follow-on funding.

RI C-AIM Data Collection

All awardees will be required to assist RI C-AIM in capturing key reporting data required by the National Science Foundation per the Programmatic Terms and Conditions of the RII NSF EPSCoR Track 1 Cooperative Agreement. Data will be collected through a reporting tool, ERcore, from each participant. Participants include PIs, faculty, staff, and students that receive support through the Collaborative Grant award.

APPENDIX

**Rhode Island Research Alliance Grant Application
RIRA-CA-2022
Face Page**

Project Title:

Principal Investigator (PI) Name & Title

Co-PI Name & Title

**Research Institution
Address**

**Research Institution
Address**

**Phone/Email
Signature**

**Phone/Email
Signature**

Co-PI Name & Title

Co-PI Name & Title

**Research Institution
Address**

**Research Institution
Address**

**Phone/Email
Signature**

**Phone/Email
Signature**

Lead Institution

**ADMINISTRATIVE OFFICIAL TO BE
NOTIFIED IF AWARD IS MADE**

**OFFICIAL SIGNING FOR APPLICANT
ORGANIZATION**

SIGNATURE & DATE

Assurances

The institution certifies that this proposal meets all eligibility requirements listed in the General Guidelines, and that all information contained in this application is true and correct to the best of its knowledge. The institution further certifies that it is in compliance with all applicable Federal, state and institutional regulations and policies relevant to the conduct of this project

**Rhode Island Research Alliance Grant Application
RIRA-CA-2022
Project Overview**

Project P.I. and Institution:

Project Title*:

Research thrust(s):

Brief Description:

Catalytic Nature of the Project:

Budgetary Information:

A. Primary Grantee:	Requested Funds
1. Personnel	
Professional	
Student	
2. Equipment	
3. Supplies/Materials	
4. Travel/Meetings/Other	
Primary Grantee Total	
B. Subcontract I:	
1. Personnel	
Professional	
Student	
2. Equipment	
3. Supplies/Materials	
4. Travel/Meetings/Other	
Subcontract I Total	
C. Subcontract II:	<i>(if present)</i>
1. Personnel	
Professional	
Student	
2. Equipment	
3. Supplies/Materials	
4. Travel/Meetings/Other	
Subcontract II Total	
TOTAL	

***The title of the project must be brief, scientifically or technically valid, intelligible to a scientifically or technically literate reader. Information on this sheet should be suitable for use in the public press.**

Instructions for Preparing Biographical Sketches

A biographical sketch (limited to two pages) is required for each individual identified as a Primary or Co-Primary Investigator. The following information must be provided in the order and format specified below:

Professional Preparation

A list of the individual's undergraduate and graduate education and postdoctoral training as indicated below:

Undergraduate Institution(s)	Major	Degree & Year
Graduate Institution(s)	Major	Degree & Year
Postdoctoral Institution(s)	Area	Inclusive Dates (years)

Appointments

A list, in reverse chronological order, of all the individual's academic/professional appointments beginning with the current appointment.

Publications

A list of: (i) up to 5 publications most closely related to the proposed project; and (ii) up to 5 other significant publications, whether or not related to the proposed project. Each publication identified must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. If the document is available electronically, the Website address also should be identified.

For unpublished manuscripts, list only those submitted or accepted for publication (along with most likely date of publication). Patents, copyrights and software systems developed may be substituted for publications. Additional lists of publications, invited lectures, etc., must not be included. Only the list of 10 will be used in the review of the proposal.

Synergistic Activities

A list of up to five examples that demonstrate the broader impact of the individual's professional and scholarly activities that focuses on the integration and transfer of knowledge as well as its creation. Examples could include, among others: innovations in teaching and training (e.g., development of curricular materials and pedagogical methods); contributions to the science of learning; development and/or refinement of research tools; computation methodologies, and algorithms for problem-solving; development of databases to support research and education; broadening the participation of groups underrepresented in science, mathematics, engineering and technology; and service to the scientific and engineering community outside of the individual's immediate organization.

Collaborators & Other Affiliations

The following information is used to help identify potential conflicts or bias in the selection of reviewers.

Collaborators and Co-Editors. A list of all persons in alphabetical order (including their current organizational affiliations) who are currently, or who have been collaborators or co-authors with the individual on a project, book, article, report, abstract or paper during the 48 months preceding the submission of this proposal. Also include those individuals who are currently or have been co-editors of a

journal, compendium, or conference proceedings during the 24 months preceding the submission of the proposal. If there are no collaborators or co-editors to report, this should be so indicated.

Graduate and Postdoctoral Advisors. A list of the names of the individual's own graduate advisor(s) and principal postdoctoral sponsor(s), and their current organizational affiliations.

Thesis Advisor and Postgraduate-Scholar Sponsor. A list of all persons (including their organizational affiliations), with whom the individual has had an association as thesis advisor, or with whom the individual has had an association within the last five years as a postgraduate-scholar sponsor. The total number of graduate students advised and postdoctoral scholars sponsored also must be identified.

Other Personnel

For the personnel categories listed below, the proposal also may include information on exceptional qualifications that merit consideration in the evaluation of the proposal.

- (a) Postdoctoral associates
- (b) Other professionals
- (c) Students (research assistants)

(iii) Equipment Proposals

For equipment proposals, the following must be provided for each auxiliary user:

- (a) Short biographical sketch; and
- (b) List of up to five publications most closely related to the proposed acquisition.