



ADVANCED RESEARCH GRANTS PROGRAM

REQUEST FOR PROPOSALS FOR
SCIENCE AND TECHNOLOGY PROJECTS

REFERENCE: FY 2019-20

PROGRAM GUIDELINES

ADVANCED RESEARCH GRANTS

Revised on February, 2020



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Introduction

The mission of the Puerto Rico Science Technology and Research Trust (the Trust) is to invest, facilitate and build capacity to continually advance Puerto Rico's economy and its citizens' well-being through innovation-driven enterprises, science and technology and its industrial base. To fulfill its objectives, the Trust shall perform the following tasks, among others:

- Increase the financing available for science and technology development activities in Puerto Rico;
- Support the commercialization of products and services based on science, technology or research;
- Foster private investments in science and technology research or development activities and projects, and in expanding high technology and multinational companies highly active in Puerto Rico;
- Increase the investment in innovations through the alliance of public and private institutions.

In light of its mission, and to further the objectives as described above, the Trust is pleased to issue this Request for Proposal (RFP) for the **Advanced Research Grants Program (ARG)** as a solicited proposal mechanism to entice the science and technology community in Puerto Rico to submit proposals for funding consideration. As such, the goal through this RFP process is to provide proof-of-concept funding to advance locally developed science and technology projects to a point where these will be able to be further developed through alternate sources of funding (e.g. federal R&D funding, angel and private investments, etc.) and/or commercialized (through licensing, sales, acquisitions, vertical venture integration or a combination of these).

The purpose of the ARG Program Guidelines is to disseminate information to prospective applicants to enable them to develop and submit proposals to the Trust. As such, this document,

- Describes the types of projects for which applications will be considered;



- Describes the funding available and the process and requirements for submitting applications; and,
- Explains the criteria for evaluating proposals.

*Please, note that the Trust reserves the right to fund any or none of the proposals submitted under this RFP process.

Points of Contact

For questions about the ARG process, you might contact the Grants Advisory Team, **only** through grants@prsciencetrust.org. Answers will be provided in 48-72 hours.

Eligible Applicants

Proposals are solicited from the following entities duly incorporated in Puerto Rico according the laws of the Commonwealth of Puerto Rico:

- Startups
- Established companies
- Private and State Academic Institutions
- Other Non-Profit Research Institutions

Natural persons are not eligible to submit proposals.

Although collaborations with entities outside of Puerto Rico and abroad are allowable, funding will be awarded to **entities duly established in Puerto Rico for work done primarily and for the benefit of Puerto Rico.**

Eligible Activities

To be eligible for funding, Basic/Translational Research and Technology/Product Development for Commercialization projects must be presented in one of the following strategic fields:

- Aerospace
- Agriculture
- Biotechnology and Natural Sciences
- Clean Technologies and/or Renewable Energy
- Clinical Trials
- Conservation Sciences
- Electronics
- Environmental Sciences
- Information and communication technologies
- Medical Devices
- Other areas that the Trust, in its discretion, determine will result in the growth of research, development and commercialization of science and technology in Puerto Rico.

Award and Funding Information

- Funding Mechanism: Awards will be made in the form of Cooperative Agreements. This funding instrument enables the Trust to exert, as necessary, programmatic involvement before and after the award is made, including the successful monitoring of the awardee's accomplishment of mutually-agreed milestones.

**It is important to point out that the ARG does not allow multiple submissions by the same applicant.

**In the case that the Research Grants Program have more than one RFP open at the same time, applicants can only apply to one funding mechanism.



- Estimated Number of Awards: 8-10. Note, however, that the Trust reserves the right to fund any or none of the proposals submitted under this RFP process.
- Funding per Award: Under this solicitation, proposals may be submitted for funding up to \$150,000, including direct and indirect costs. Awardees will receive \$75,000 at the time of execution of the agreement. The final disbursement of \$75,000 will be payable after grantee presents a mid-point progress report showing successful compliance with the project milestones as presented in the proposal.
- Project Period: Project duration must be a minimum of twelve months but not greater than twenty four months. Funding awards are expected to be issued during the period of November-December of 2020 for proposals submitted under this solicitation.

**The Cooperative Agreement will be issued for 24 months, however this does not prevent the researcher to complete the project in twelve months if that was established in the proposal.
- Matching Requirements: Matching is not required but is highly encouraged. Matching may be in the form of cash and/or relevant in-kind contributions.

Allowable Costs

The following costs are eligible to conduct research and development efforts pertaining to an Eligible Activity as described above:

Direct Costs:

- Personnel Costs: Salaries of key personnel to conduct the work as presented in the proposal.
- Fringe benefits: Only those required by law: social security, federal and state unemployment, state disability, etc.
- Consultant Fees: Fees for consulting services or any other type of remuneration paid to technical advisors consulted with regard to research and development.

- Materials and supplies: Item of property other than equipment, costing less than \$5,000 each.
- Equipment, Item of property that has an acquisition cost of \$5,000 or more and an expected service life of more than one year. Equipment purchase must be essential for project and must be fully justified.
- Out-of-Jurisdiction-Travel: Only if necessary for the completion of the work proposed. Must be fully justified and itemized by destination and cost. Can include travel-related costs for transportation, lodging, and meals. Allowance for air travel normally will not exceed the cost of round-trip, economy airfares. All travel must be pre-approved by the Trust. Travel should not exceed \$5,000 per award. Travel in Puerto Rico (including mileage, meals, lodging) is not allowed.
- Sub award: to engage a third party organization, when needed, to perform a scientific or programmatic portion of the sponsored project. Must be less than 50% of the costs for the entire grant.

Indirect Costs:

- Indirect Costs: costs that are not readily identifiable with a particular cost objective (e.g., direct organizational activity or project), but nevertheless are necessary for the general operation of an organization. Indirect costs include salary and related expenses of individuals working in accounting, personnel, purchasing functions, rent, depreciation and utilities. Indirect costs are limited to a rate of 20% out of the total funding awarded.

The following costs are not eligible:

- Unreasonable costs based on the proposed scope of work. All costs must be fully justified.
- Acquisition of real property;



- Costs incurred pre-award, including proposal preparation costs;
- Maternity or sick leave expenses;
- Redundancy or other terminations costs;
- Contingency costs;
- Hospitality and entertainment costs;
- Journal subscription costs; and
- Relocation expenses.
- Travel in Puerto Rico, including mileage, meals and lodging.
- Direct or indirect support for any lobbying effort or for contribution to the political campaign of any candidate or for contribution to any political party or similar organization.

Info Sessions

The Trust will be holding a few briefings for those interested in submitting a proposal. These sessions will provide an overview of the submission and evaluation process as well as a forum for getting potential applicants' questions answered. Specific sessions' dates will be announced through <https://prsciencetrust.org/research-grants-program>.

Application Process

The Advanced Research Grants RFP application process consists of two phases: Letter of Intent (LOI) and Full Proposal. The LOI phase is open to all eligible applicants while the Full proposal phase is by invitation only.

Applications will be received only through our Grants application platform (powered by Wizehive) available at <https://prsciencetrust.org/research-grants-program>, under the section titled **Advanced Research Grants Program**.

User Profile

In order to gain access to the application forms the applicant must first register by creating a user profile. Information on the User Profile will be used as a statistical metric and will not be used as an evaluation criteria. The Principal Investigator must submit both the LOI and the Full proposal. The user profile must provide information about the PI as well as the contact information for the Institution's Research and Development Administrator.

Letters of Intent (LOI)

Interested applicants must first submit a LOI. The applicant will have the option to apply under one of the following categories: **Basic/Translational Research** and **Technology/Product Development for Commercialization**. LOIs under both categories must provide the following information:

- Description of the Research or Technology to be developed, including the current status of the project, significance and innovation (7,000 characters with spaces).
- Rationale for funds requested including the project's plan and the goals expected to be accomplished with the Trust funds (3,500 characters with spaces).
- Description of the Project Management Team (5,600 characters with spaces) including the involvement of third parties when applicable.

LOIs under Technology/Product Development for Commercialization must also include:

- Statement of Market opportunity (3,500 characters with spaces).

LOIs are only to be submitted electronically through the Grants Application Platform at <https://prsciencetrust.org/research-grants-program>, under the section titled *Advance Research Grants Program*. No other forms of LOI submission (including .pdf or MSWord documents, etc.) will be accepted. Attachments to the LOI will not be reviewed.



If the Puerto Rico Science, Technology & Research Trust finds that the project proposed in the LOI is responsive to the selection criteria and have the potential to contribute to the strategic research and technology areas of interest of the Trust, the applicant will be invited to submit a Full Proposal.

**Please note that an invitation to submit a Full Proposal will not constitute intent to award.

Full Proposals

Proposal Format

Proposals must be submitted using the Grants application platform available through the Trust website. Only applicants invited to submit a full proposal will have access to the application form. Key personnel curriculum vitae documents, support letters, figures, and bibliography (see *Proposal Content* section) should be included as attachments through the same application platform.

Confidential Information

The Trust discourages the inclusion of confidential/proprietary information as part of the proposal. Patentable ideas, trade secrets, privileged or confidential commercial or financial information, disclosure of which may harm the applicant, should be included in applications only when such information is necessary to convey an understanding of the proposed project.

If the application includes such information, clearly mark each line or paragraph on the pages containing the proprietary/privileged information with a legend similar to: “The following contains proprietary/privileged information that (name of applicant) requests not be released to persons outside the Trust, except for purposes of review and evaluation.”

Proposal Content

The following information will be requested during proposal submission:

- **Title:** include project title, proposing institution, name and contact email of principal investigator.
- **Abstract** (1,500 characters with spaces): A brief technical summary including project

background, significance, main objectives and expected outcomes. The abstract of awarded proposals will be published in the Trust website.

- **Executive Summary** (3,500 characters with spaces): Include an overall technical project description at a level that will be accessible to a technically competent non-specialist. Include a summary of project length, cost, key performance milestones, and deliverables. Proposer should identify the novelty/originality in their proposal, (whether technical, market-focus, or both).
- **Research/Technology Background** (7, 000 characters with spaces): The technology and/or proposed scientific advancement should be placed in a state-of-the-art context of similar, related and competing efforts being carried out worldwide. Explain the technology and/or scientific advancement and answer the following: How is the technology/discovery novel and unique? In the case of technology development, if the technology is being transferred from a local research institution, provide the name of the institution and explain briefly the type of agreement reached with the institution. For all proposals, in this section we encourage a brief discussion of why this funding mechanism is particularly adequate for the idea (as opposed to funding from other agencies or other funding mechanisms).
- **Preliminary Data** (7, 000 characters with spaces): What has the proposer accomplished to date in terms of research, development and/or commercialization efforts? Describe how preliminary data supports the hypothesis to be tested and the feasibility of the project. Figures should be mentioned in the text and included as an attachment.
- **Research Plan, Statement of Work (SOW), Milestones, and Deliverables** (10,500 characters with spaces): Include an overall project plan that includes a Statement of Work with task descriptions, quarterly technical performance milestones, and specific final program deliverables. The inclusion of timelines or Gantt charts is highly encouraged. How will success on the project be measured? Proposals should state clearly the expected duration of the project and a rationale for it.



- **Project Management and External Collaborators** (7, 000 characters with spaces): Provide a brief summary of the project team members, including their relevant skills and time commitment to the proposed project. Curriculum vitae of key personnel are to be included in appendix material (see below). If the project is to be conducted in collaboration with a third party entity (e.g. a collaboration with academia, other private entity, etc.) please provide information about the third party entity and their expected scope of work. If specific consultants will be critical for the project's success, please also include a summary of their role and include their CV in the appendix.
- **Resources and Environment** (3,500 characters with spaces): Describe the resources (e.g. equipment and facilities) that will be used to conduct the proposed work and how these contribute to the probability of success. If resources are to be accessed from third-party collaborators, provide evidence of third party's support to the project.
- **Budget and Budget Narrative** (10,500 characters with spaces): Itemize and justify all proposed direct costs for personnel, materials, equipment, travel, subcontractors, consultants, and/or suppliers, and facilities.

Proposals under the category **Technology/Product Development for Commercialization** must also include the following information:

- **Intellectual Property** (3,500 characters with spaces): If appropriate, include a description of the intellectual property (IP) landscape for the technology or innovation. How does the applicant plan to protect any IP resulting from this project? Describe any IP obtained at present and/or any IP that is planned on being sought and protected prospectively.
- **Commercialization Plan** (7, 000 characters with spaces): When applicable, provide a clear and concise description of the proposed technology's market potential and the planned path to commercialization. The description needs to, at a minimum, address the following basic questions:
 - Who will be doing the commercialization?

- What is the timetable for commercialization?
- How will the plan be carried out?
- How much (in round numbers) will the commercialization cost?
- What are the initial target markets and their approximate size?
- Who are your initial customers and what value does the technology provide to them?
- What is the competitive advantage that will help your product succeed?
- The potential economic development impact (e.g. company collaborations, startups, spinouts, new or enhanced product offerings, job creation, licensing opportunities, etc.) and any related special circumstances should be clearly described.

Appendix Material (not included in within characters limit established for full proposals):

- **Key Personnel Curriculum Vitae** – (4 pages maximum per person, NIH, NSF or equivalent bio-sketch format encouraged)
- **Support Letters** – Provide all appropriate letters of support, including any letters necessary to demonstrate the support of key consultants and collaborators included in the application. Also include, if applicable, letters from current and/or prospective customers or commercialization partner in support of the proposed project (these must be submitted on institution letterhead from authorized personnel). This section **must** also include a letter of institutional commitment from authorized personnel that acknowledges support for the application, describes any institutional support (e.g. resources, intellectual environment, administrative structures, etc.) available to the research team, and, if applicable, includes information regarding matching funds or in-kind support for the application. In-kind support in the form of faculty time-release is highly encouraged.



- **Figures** – Include only relevant figures mentioned in the text.
- **Bibliography**, if applicable.

Evaluation Criteria

Applications will be reviewed for completeness and for responsiveness to this program. Incomplete or non-responsive applications will not be considered.

Proposal review will be carried out according to the following criteria:

- **Approach and technical merit** - Are the overall strategy, methodology, and analyses well-reasoned and appropriate to accomplish the specific aims of the project? Are potential problems, alternative strategies, and benchmarks for success presented? If the project is in the early stages of development, will the strategy establish feasibility and will particularly risky aspects be managed?
- **Innovation** - Does the application challenge and seek to shift current research or clinical practice paradigms by utilizing novel theoretical concepts, approaches or methodologies, instrumentation, or interventions? Are the concepts, approaches or methodologies, instrumentation, or interventions novel to one field of research or novel in a broad sense? Is a refinement, improvement, or new application of theoretical concepts, approaches or methodologies, instrumentation, or interventions proposed?
- **Significance** - Does the project address an important problem, a critical barrier or a market need? If the aims of the project are achieved, how will scientific knowledge, technical capability, and/or clinical practice be improved? How will successful completion of the aims change the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field? Does the proposed project have commercial potential to lead to a marketable product, process or service?
- **Investigator(s)** - Are the Proposers' and their teams' capability and experience commensurate and relevant to the proposed work and their ability to execute the proposed project and show meaningful results?

- **Environment and Collaboration** - Will the scientific environment in which the work will be done contribute to the probability of success? Are the institutional support, equipment and other physical resources available to the investigators adequate for the project proposed? Will the project benefit from unique features of the scientific environment, subject populations, or collaborative arrangement? Projects that involve industry-academia collaborations leading to technology transfer and/or commercialization will be given additional consideration, as will projects that synergize with existing resources and enhance the research landscape in Puerto Rico.
- **Budget and Budget Justification** - Appropriateness of budget, project duration, and level of effort proposed. Although not required matching funds will be interpreted as a demonstration of the proposer's commitment to the project.

Proposals under the category **Technology/Product Development for Commercialization** will also be evaluated under the following criteria.

- **Viability of the Commercialization Plan.** Reviewers will be asked to evaluate each proposal on the quality of this section. This evaluation will include how well the proposer makes his/her case in terms of: a) market potential, b) path to commercialization (who, when, how, how much) and, c) potential economic development impact (company collaborations, startups, spinouts, new or enhanced product offerings, job creation, licensing opportunities, etc.)

As part of the Trust economic development strategy, the Trust actively encourages collaborative projects, be it between researchers, between institutions or between industry and academia. A proposal selected for an award will have, at a minimum, the following attributes:

- A high potential for enhancement of the scientific and educational landscape in Puerto Rico in a way that synergizes with local or global initiatives.
- A high-quality, technically relevant and innovative project with explicit deliverables and performance milestones.

- When applicable, a high potential for economic impact in Puerto Rico as described in the Commercialization Plan. This potential can, for example, take the form of technology licensing, company creation, job creation, company collaboration(s), or product development or expansion.

Selection Process

Award recommendation decisions will be made by the Trust's Board of Trustees, based on the advice of an External Peer Review Committee (**EPRC**) and the Scientific Revision Board (**SRB**).

The EPRC will be comprised of experts in areas of relevance to the funding priorities of the Trust and appropriate to the topics covered by the letters of intent selected for the second round of applications. To ensure a fair and open competition, EPRC members will not take part in the review and selection deliberations involving any situation which could create a clear conflict of interest. EPRC members will be required to sign a *Conflict of Interest and Confidentiality Statement* and respect the confidentiality of the information provided in proposals.

The role of the SRB is to provide technical, administrative, and scientific expertise in order to help the Puerto Rico Science, Technology & Research Trust's Grants Program determine which research projects better fit its funding priorities as an organization. They will revise the top ranked proposals and provide recommendations on which research projects we should present to the Board of Trustees for funding.

Final grant funding approval, however, is bestowed upon the Board of Trustees. The Trust reserves the right to: a) select for award all, some, or none of the proposals received and b) select portions of individual proposals for awards.

Scoring

The Trust utilizes a 9-point rating scale (1 = exceptional; 9 = poor), similar to the NIH's rating scale. Each reviewer assigned to an application evaluates the proposal's strengths and weaknesses within each review criteria and scores each separately. In addition, each reviewer to an application gives a preliminary overall impact score for that application. The preliminary scores are used to determine

which applications will be discussed in full at the EPRC panels. For each application that is discussed, a final impact score is given by all eligible EPRC members (i.e. without conflicts of interest), including the assigned reviewers. Each member's score reflects his/her evaluation of the overall impact that the project is likely to have based on the Trust priorities and requirements.

Feedback to Applicants

All applicants will receive a copy of the ARG Review and Critique form. Copies will not include the reviewer's names or any other identifying information. These materials will be sent directly to the principal investigator.

Funds, Due Diligence and Contractual Terms

The Trust will use a Cooperative Agreement as the funding mechanism to award funds. Prior to receiving funding, selected grantees must successfully complete a due diligence review to the Trust's satisfaction and thereafter enter into an agreement setting forth the material terms of the award.

Negotiation Prior to Award of Contract

The Trust reserves the right to negotiate each and every aspect of any proposal received in response to this RFP. In addition, the Trust may require additional cost data or documentation prior to award of a grant that may result from this RFP. The Trust reserves the right to negotiate all terms and conditions of a final contract whether or not such terms and conditions are specified by this RFP.