

## DoR/PROVOST FACULTY RESEARCH INVIGORATION PROGRAMS HIGH PRIORITY AREA RESEARCH SEED GRANTS 2018-2019 GUIDELINES

### Purpose

The Provost and the Vice President for Research have initiated a program to invigorate the university research enterprise through targeted investment of seed research funds in high priority areas (see the examples in Figure 1). The purpose of the program is to invigorate research labs and groups with funds that would permit submission of competitive research proposals. The seed funding grant program is closely tied with the four institutional thrusts that the Vice President for Research and the Provost have developed in consultation with college deans, and which the Chancellor has endorsed: (1) physical and cyber security, (2) drug discovery and development, (3) sustainable communities and infrastructure, and (4) accessible healthcare. Each of the thrusts is described in Figure 1, which provides the general area of emphasis and some examples. Formation of interdisciplinary research teams is encouraged to build capabilities to address these complex issues. Further details can be accessed from <http://www.uh.edu/research/research-dev/internal-awards/>.

Figure 1. Four Institutional Thrusts and Technology Enablers that Support this Research

	Cyber-Physical Security	Drug Development/-Discovery	Sustainable Communities, Infrastructure	Accessible Healthcare
DATA	Communications data, screening, mining, image matching, filtering, intrusion detection, non-physical sensing, UVA/UUV/Lidar detection, institutional and regulatory environments	Biodata processing, massive virtual physiological modeling/simulation, genomic sequencing, molecular and evolutionary modeling, target identification, validation and pharmacodynamics, animal model generation/testing, pre-clinical testing, genomic analysis, protein structure and proteomics, pharmacokinetics	Utility, transportation data modeling, real-time data mining and decisions, energy monitoring and adaptation data, institutional and regulatory environments	Personalized health and population data interpretation and correlation, analysis and action on health disparities, institutional and regulatory environments
IMAGING	Surveillance technology, biometric analysis, behavioral analytics, institutional and regulatory environments	Real-time drug screening, dual photon-confocal imaging, protein analysis, proteomics, treatment efficacy, advanced light microscopy, multi-photon, super-resolution imaging, automated drug screening in vitro, in vivo imaging in animal models, flow cytometry, force microscopy, structural analysis	Atmospheric, oceanographic, and surface imaging, coastal mapping, severe weather analysis, corrosion bacterial biomarking, institutional and regulatory environments	High throughput imaging, infectious disease control, management of epidemic diseases, institutional and regulatory environments
AUTOMATION	UVA/UUV, Lidar applications, automated border control devices	Automated screening and sampling (sample handling) and automated sequencing, miniaturized sample handling and transport	Energy integration, self-regulating utility networks, construction management and maintenance robotics, automated E-W-F nexus, energy efficiency	Automated diagnostics, remote diagnostics and intervention, autonomous medical devices, remote immunization
MATERIALS	Stable data storage, energy storage, flexible electronics, shape recognition, super-conductive	Nano- and bio-materials, stem cells, polymers, viral vectors, enhance bioavailability and targeting, organic synthesis, polymers, synthesis of bioactive agents, genetic engineering of cells, non-drug therapeutics	Energy harvesting and storage materials, biodegradable materials in construction, retrofitting materials, sustainable composites, functional polymers	Fabric-based devices, wearable diagnostic devices, transdermal drug delivery materials, non-pharmacological therapies

## Funding Level

For this fiscal year, we anticipate making six to eight 18-month awards at a maximum of \$70,000.

## Reporting Requirements

1. An external grant proposal must be submitted in one of the high priority research areas in Year 1 of the project period. If the applicant intends to apply for a competition that does not fit this timeline, an exception should be noted in the proposed timeline. An exception can be granted by petition provided this extension delays the grant submission for no more than 3 months.
2. A resubmission is expected in the next submission cycle following the receipt of reviewer comments until funding is secured or a new application can be submitted while awaiting the outcome of the previous submission. In Year 2, the PI is expected to submit either a second proposal or resubmit the proposal from Year 1.
3. A final report that captures the research output and funding garnered using this equipment will be due at the end of the Year 2.
4. Should any reporting and submission requirements fail to be met, the DoR reserves the right to terminate funding and the college Dean and department chair will be notified.

## Eligibility

Full-time University of Houston faculty members (tenured, tenure-track, or research faculty) are eligible to apply. Other investigators, employed by UH, may be listed as co-PIs. ***A faculty member may serve as PI on only one application per fiscal year.***

## Proposal Preparation and Submission

The application to this program must be prepared following the requirements outlined below and submitted as a single PDF file via email to: [Seedgrant@share.uh.edu](mailto:Seedgrant@share.uh.edu) by the PI's affiliated pre-award research administrator in the College or the DoR. The signatures of all involved department chairs and college deans must be provided.

## Formatting Requirements

All documents should be prepared on the US Letter size paper (8.5"x11") with 1-inch margins on all sides, Arial font size 11 pt or larger. The proposal narrative must have exactly 1.5 line spacing; all other documents may be single-spaced. An Arial font size of at least 8 pt must be used for the captions to graphics and tables and may be single-spaced. The text in the captions must be legible.

## Proposal Documents

### Cover Page (1 page)

The cover page must identify the proposal title, PI and Co-PI names and affiliations, and the applicable thrust area(s), if applicable, or identify that the proposal does not address a thrust

area. Required signatures from applicant department chairs and college deans should be on the cover page.

**Submit the cover page and include headers for each section below:**

## Abstract/Summary

A 200 word single spaced abstract should be submitted with the proposal.

## Proposal Narrative (Up to 6 pages, includes graphics, tables, equations, and formulas)

- a. The proposal narrative should not exceed six 1.5" spaced pages and the font size of Arial should be no smaller than 11 pt. with 1-inch margins. The following sections should be included:
  - (1) Objectives and Specific Aims
  - (2) Significance and Impact
  - (3) Preliminary Results and Expertise
  - (4) Research Methods
  - (5) Timeline and Plans for Grant Submissions
- b. References Cited are in addition to the 6-page Proposal Narrative and should be single spaced.

## Biosketch(es) (2 pages per investigator)

Provide a two-page biosketch for each PI and Co-PI. NSF style is preferred, but not required.

## Current & Pending Support

Provide a list of current & pending support for each PI and Co-PI. Identify the activities closely related to the proposed acquisition.

## Budget (1 page)

The budget must be constructed and presented using the standard UH budget template (<http://www.uh.edu/research/resources/dor-forms/proposal-processing-forms/>). Please work with your affiliated pre-award personnel to generate the budget. Funding requests may be up to \$70,000 depending upon the type and scope of research. A budget justification is required.

1. Budgets will be critically reviewed. All budget items should have written justifications, and the budget should include fringe benefits for salary requests. The intent of this program is to foster research and as such, food and alcohol are not allowable expenses. There is no page limit for the budget justification, but applicants are encouraged to be succinct.
2. Support for faculty salaries is limited to \$10,000 per grant, including fringe benefits.
3. Support for instructional development activities will **not** be considered for this program.

4. Travel is only allowed if it is directly related to the completion of the research proposal, such as fieldwork, training on new equipment, and related examples clearly justified in the budget request.

### Budget Justification and Fiscal Accountability (1 page)

Each budget should justify all aspects of the requested budget, including faculty salaries. Faculty salaries should be specified as academic or summer months.

### Commitments

Cost sharing or matching from non-DOR sources is allowed by this program. Any financial or tangible commitments must be formally documented. Written commitments signed by the sponsoring unit authorities (i.e., Dean, Center Director, and/or Department Chair) must be submitted when cost sharing or matching is proposed.

### Space

Space availability and requirements should be identified.

- a. Location of the laboratory unit.
- b. What facilities, renovations, and technology needs are anticipated? No funds from this program will be used for renovations.

### **Review Process**

All applications will initially be checked against the eligibility criteria outlined above. In the rare cases that eligibility is not fulfilled, applications will be returned without additional review alongside an appropriate explanation by Division of Research staff. After the initial screening, applications will be submitted to the Research and Scholarship Committee (RSC) of the Faculty Senate to be evaluated. Each accepted proposal will be competitively reviewed and acted upon by a subcommittee of the RSC that will include non-RSC members from the campus. The RSC will make recommendations to the VC/VP for Research, who will be responsible for awarding and administering the grant. The Division of Research reserves the right to review and change budgets and ask for clarifications from potential awardees. Reviewers will be internal to UH and may not be disciplinary experts. For instance, an application from the College of Pharmacy might be reviewed by a colleague from the College of Arts or the College of Education.

### **Criteria for Award**

The proposals should be clear, concise, and explicit about the benefits of the activities to be undertaken. Proposals should be written to be understandable to reviewers who are from a range of disciplinary fields. Reviewers will be internal to UH and some might not be disciplinary experts.

Each proposal must supply convincing evidence that the following criteria have been met or will be met:

1. The proposed activities must represent high-quality research of significant benefit to the University and society.
2. A grant must be submitted in the identified research area during Year 1 of the project period.
3. The PI must demonstrate the potential to compete in the designated area by virtue of publication record and prior funding or the potential to be competitive by virtue of other completed research.
4. The review committee will rank each proposal in five domains on a 1 (highest) to 5 (lowest) scale:
  - a. Impact and innovation of proposed research
  - b. Plan for external grant submission, including the timeline;
  - c. Quality of the Research Methods
  - d. Investigator expertise, track record or potential;
  - e. Long-term prospects for substantive contributions to the selected research area.

## **Congruency Review**

Congruency review by the Research Integrity and Oversight office is required for all research submitted to this program. The review must be conducted within three months of the award announcement or the funds will be forfeited. Congruency review includes human subjects, animal usage, biological materials (rDNA, human samples, microorganisms, etc.), and radiation (radioactive materials, lasers, and x-rays).

All projects involving human subjects must be reviewed and approved by the Institutional Review Board (IRB) before the grant cost center will be established.

All projects involving the use of animals in research must be reviewed and approved by the Institutional Animal Care and Use Committee (IACUC) before the grant cost center will be established.

All projects involving biological materials must be reviewed and approved by the Biological Safety Manager and the Institutional Biosafety Committee (IBC) before the grant cost center will be established.

All projects involving radiation must be reviewed and approved by the Radiation Safety Officer (RSO) & Laser Safety Officer (LSO) and authorized by the Radiation Safety Committee (RSC) before the grant cost center will be established.

## **Intellectual Property**

In accordance with University policy, faculty members and the University share in net income generated from intellectual property. For additional information, refer to the [Faculty Handbook](#) or contact the [Office of Intellectual Property Management](#) at 713-743-9155.

## **Deliverables, Reporting, and Acknowledgment**

The PI is expected to complete the following activities and reporting during the 2 years following the award. An external grant proposal in the selected high priority research area must be submitted during the first year of the award. If the applicant intends to apply for a competition that does not fit this timeframe, an exception should be noted in the proposed time line. An exception can be granted by petition provided this does not delay the grant proposal submission more than 3 months. A resubmission is expected in the next submission cycle following the receipt of reviewer comments until funding is secured or a new application can be submitted while awaiting the outcome of the previous submission. In year 2, the PI is expected to either submit a second proposal or resubmit the proposal from year 1. At the end of the funding period, there will be a final report that captures the research output and funding garnered using this grant. Any investigators who do not submit timely progress reports or show adequate progress will have their funding terminated. It is the responsibility of each award recipient to provide information to the Division of Research concerning all external grant applications that are submitted or awards received as a result of this funding. Such information should include the date of submission, the title of the project, inclusive dates, agency, total amount requested, and the status of each application. Failure to comply with this reporting requirement will disqualify an individual for future consideration in all internal funding programs sponsored by the Division of Research.

Notice must be given of publications or presentations resulting from the award. The grantee must acknowledge University support in all publications or presentations resulting from the award and must provide one copy of the publication to the Division of Research, via SharePoint at [Seedgrant@share.uh.edu](mailto:Seedgrant@share.uh.edu).

## **Proposal Application Procedures, Deadline, and Submission Contact**

The application forms are available through the Division of Research website <http://www.uh.edu/research/research-dev/internal-awards/>. Submission of the compiled proposal as a PDF will be by pre-award teams in the respective college of the PI using a standard UH budget. The proposal must be approved by the department chair(s) and/or dean(s) of the department(s)/college(s) involved to the Division of Research SharePoint submission site [Seedgrant@share.uh.edu](mailto:Seedgrant@share.uh.edu)

The proposal must be submitted by 5 PM, February 18, 2019.

**No late applications will be accepted.**

## **Effective Date Awards**

The Vice President for Research will make decisions on each proposal and the Provost based on the recommendations of the RSC review subcommittee. All applicants will be notified of the review outcome by March 25, 2019. Awards will be effective May 1, 2019, for 24 months (18 months of funding).

## Schedule

October 22, 2018	Program Announcement
February 18, 2019	Full-Proposals due to DOR
March 18, 2019	Initial Review Completed
March 25, 2019	Announcement of Awards
May 1, 2019	Effective Date of Award to April 30, 2021

- **Progress reports due dates:**
  - **May 1—funding available; reports due November 1, 2019, May 1, 2020, November 1, 2020 with final report April 30, 2021.**
- Funds expiration: October 31, 2021

## Assistance

Any question about this program should be referred to Dr. Jack M. Fletcher, [jackfletcher@uh.edu](mailto:jackfletcher@uh.edu)