

Office of Research Newsletter – October 17, 2014

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Part I. News and Announcements

Reminder: Proposals to the FY 2015 Knowledge and Innovation Program Due by October 27

On August 20, Vice President for Research Dr. Dordick sent the following memo to the Rensselaer research community. The Office of Research would like to remind you that proposals are due by October 27, 2014. Please submit proposals electronically to Denise Elwell at elweld@rpi.edu. No late proposals will be considered. You may submit proposals even if you did not submit a Letter of Intent. Decisions on funding will be announced around November 21, 2014 with a start date of January 1, 2015.

MEMO

To: Rensselaer Faculty

From: Jonathan S. Dordick, Vice President for Research

Date: August 20, 2014

Re: Seed Funding Program for FY'15

INTRODUCTION

The Rensselaer Office of Research announces the inaugural **Knowledge and Innovation Program (KIP)** for FY'15. KIP replaces the Office of Research Seed Proposal program, which

while beneficial to many investigators and leading to multiple follow-on grants from federal and industrial sponsors, nonetheless was limited in size and scope. KIP seeks to provide sufficient support to spur the development of new ideas, collaborations, and scientific and humanistic contributions to society. KIP will initiate and accelerate impactful research from multidisciplinary teams of faculty. To achieve this goal, the Office of Research will provide the necessary financial, administrative, and mentoring support to ensure greater likelihood of success and impact well beyond Rensselaer.

This year's KIP requests proposals in any of the critical areas (see below) that relate to global challenges, including those areas highlighted in the recent White House Office of Science Technology and Policy (OSTP) (see: <http://www.whitehouse.gov/sites/default/files/omb/memoranda/2014/m-14-11.pdf>), and which relate closely to our signature thrust areas and major core investments. Dramatically departing from the pattern of previous Office of Research seed programs, one proposal will be supported in each of three areas at \$100K each. If possible, we might fund a fourth proposal in an open area.

SUBMISSION AND CONDITIONS FOR ACCEPTING AN AWARD

The KIP will follow a multi-phase submission process. Non-binding optional Letters of Intent (LOI) may be submitted to Jack Huang (huangj7@rpi.edu) in the Office of Research by **September 23, 2014** to allow applicants to receive feedback on their ideas and explore their suitability for this seed program. Full proposals are due **October 27, 2014**. Awards will be announced around **November 21, 2014**. Funding will commence **January 1, 2015** and be for one-year without the opportunity for a no-cost extension.

Because of the critical nature of these funds and the substantial investment made by Rensselaer, accepting the funds will come with the following key conditions.

1. The teams will have at least a month to plan their projects with direct assistance and advice from the Office of Research. This will ensure that the projects will initiate immediately after the New Year.
2. The rate of spending will be monitored closely to ensure that the teams stay focused on the goals of the proposed work.
3. No later than February 28th, the teams will prepare a white paper that the Office of Research can use to help obtain external support.
4. During the Office of Research Retreat (spring 2015), each team will present 15 min overviews. This will be critical to disseminating the work and to obtaining broader research community feedback.
5. By early fall 2015, another progress report will be presented, this time to the Cabinet, Deans, and President.
6. A large-scale proposal must be submitted no later than spring 2016^[1].

^[1] This depends on the nature of the proposal and RFP issued by a relevant agency.

RESEARCH TOPICS RELEVANT TO THIS RFP

The following areas of research will be considered as responsive to the FY'15 KIP:

1. **Advanced Manufacturing** – Including, but not limited to, biomanufacturing and materials manufacturing that address fundamental underpinnings of manufacturing processes and product scale up.
2. **Built Environment** – Development of alternative energy and systems for energy harvesting, storage and distribution, and designing smart infrastructures that are self-sufficient, sustainable and resilient.
3. **Environmental Resilience** – Focus on fundamental understanding of the factors that impact our environment, ranging from the global climate and natural resources to impact on human health.
4. **Advanced Cyberinfrastructure** – Enhancing responsiveness to natural and man-made threats to homeland security, and enhanced data analytics to identify and neutralize threats to computational infrastructure.
5. **Bio-Innovation** – Advance fundamental understanding of complex biological systems, including neuroscience, human-machine interface, and disease mitigation.

In all areas, the expectation is to be multidisciplinary and to address socioeconomic factors that influence decision making, including understanding cultural aspects (scientific and humanistic) of the impact of new discoveries and technologies, and integrating complex multivariate data from myriad sources. A further expectation is that the projects impact STEAM (Science, Technology, Engineering, Arts and Math) education at the undergraduate and graduate levels.

FUNDAMENTAL GOALS OF RESEARCH PROJECTS

The FY'15 KIP-funded projects should accelerate:

- The creation of a collaborative multidisciplinary research team in an area of strategic research importance to Rensselaer and that is critical to advancing our standing in addressing global challenges;
- The development of Rensselaer research leadership in areas aligned with the Signature Thrusts;
- The ability to “get to the next level” of research impact.

Seed funding must:

- Enable / lead to the development of sponsored research proposals;
- Enhance scholarly outputs, including leading to published work in archival journals and/or presentations at major national and international conferences;
- Be collaborative with researchers from HASS and Lally (please note that collaborating with Cognitive Science will **not** be considered responsive to the inclusion of HASS faculty for this seed program);

- Use Rensselaer core facilities when applicable;
- Be completed in 12 months.

Seed funding *may* be used for:

- Research that strengthens or underlies the submission of sponsored research proposals to federal agencies and/or industry;
- Partial support for students or research personnel to develop initial components that will strengthen proposal submissions when other sources of funding are not available;
- Development of prototypes or conduct of initial studies that will support the development of successful proposals when other sources of funding are not available;
- Support for new or deeper engagement with Rensselaer research platforms or core facilities, including core directors, to lay the groundwork for new sponsored research proposals when other sources of funding are not available;
- Procurement of research instrumentation or equipment that will support the development of successful proposals when other sources of funding are not available;
- Enhanced collaboration with industry in partnership with Rensselaer.

Seed funding *may not* be used for:

- Faculty summer or academic year salary;
- Funding for research personnel or infrastructure when sponsored research funding is available;
- Operational items whose strategic value is not directly aligned with sponsored research opportunities or the strengthening of the Rensselaer research enterprise.

Recipients of FY'13 and FY'14 Office of Research Seed Funding are eligible to apply; however, outcomes of previous seed funds will be a criterion for review.

PROPOSAL SUBMISSION INFORMATION

Letter of Intent

In no more than one page, provide the proposed title, proposing team with PI and co-PIs specified and identifying home departments), and short description of the proposed research including its significance and relevance to one or more of the aforementioned RFP topics. If a LOI is submitted that is outside of the RFP topics, please provide rationale for the project's significance and relevance to global challenges facing society.

KIP Proposal Format

Proposal submissions (up to 3 pages in length plus cover page, font consistent with Arial 11 or Times New Roman 12, 1" margins) should include:

- **Cover Page**
 - Abstract of one paragraph (150 words maximum) summarizing the goals and rationale for the KIP seed project;
 - Objectives/specific aims of the project and its “return on investment” to your research program and the Rensselaer research enterprise (up to 1/2 page);
- **Research Plan** – In three pages or less, describe:
 - The significance of the proposed research with respect to national areas of research priority;
 - Details of proposed work;
 - Anticipated outcomes of the project;
 - Why current funding or other sources cannot be used to support the project and how a multidisciplinary team is critical for success.
- **Added Information** (not counted against the page limitation):
 - References (complete citations);
 - Budget and budget justification (see information below; budgets are handled through the Office of Research and not run through RA&F; budget assistance can be provided by the Office of Research);
 - Biosketches for the PI and co-PIs – should be formatted according to the short (2 page) NSF version of PI and co-PI CVs found in NSF’s Proposal Preparation Guide;
 - For previous seed award recipients, provide a one-paragraph summary of outcomes from the previous award(s).

Budget Information

- Seed proposals may request up to \$100K in direct costs;
- Proposers may request funding for the period January 1, 2015 to December 31, 2015 (no-cost extensions are not allowed for seed projects);
- Budgets must:
 - Include fringe benefits (30.2%) on postdocs/staff;
 - Not include indirect costs;
 - Use graduate tuition cost sharing of 35%.

Eligibility Criteria:

KIP is intended to support primarily the tenured and tenure-track faculty. Research Scientists, Research Professors, and Professors of Practice are eligible as co-PIs only. Directors of Rensselaer Institute-Wide Research Initiatives and Deans are ineligible to serve as PI or co-PI, however, they may be engaged in the research as part of the multidisciplinary team.

Evaluation Criteria:

Proposals will be reviewed by an internal research review panel convened by the Office of Research.

Submissions will be evaluated with respect to:

- Strategic significance of the proposed effort to:
 - Global challenges or areas of relevance to federal funding plans (see OSTP document); and
 - The Institute's Signature Thrusts.
- Potential to achieve the proposed outcomes;
- The proposed project's alignment with Rensselaer Institute-Wide Research Initiatives, which include:
 - Center for Biotechnology & Interdisciplinary Studies;
 - Institute for Data Exploration and Applications;
 - Experimental Media and Performing Arts Center;
 - Center for Materials, Devices, and Integrated Systems;
 - Center for Computational Innovations.
- Potential to leverage KIP funding to develop successful sponsored research proposals and research publications.

Key Dates:

Letters of Intent are due September 23, 2014. These are non-binding, but strongly encouraged.

Proposals are due October 27, 2014. Please submit proposals electronically to Denise Elwell at elweld@rpi.edu. *No late proposals will be considered.*

Decisions on funding will be announced around **November 21, 2014** with a start date of **January 1, 2015**.

We greatly appreciate your interest and participation. Please contact Wolf von Maltzahn at vonmaw@rpi.edu (518-276-4873) with any questions about this important program.

A Weekly Newsletter from DOE Office of Energy Efficiency and Renewable Energy (EERE): <http://apps1.eere.energy.gov/news/enn.cfm>

MARK YOUR CALENDAR

November 5, 2014, 8:30 a.m.-5:30 p.m., Center for Biotechnology and Interdisciplinary Studies Auditorium

Medical Device Day—Models, Big Data and Healthcare

More at www.rpi.edu/news/events/mdd/

Part II. Funding Opportunities

AFRL

Research and Development to Advance Better Use of the Electromagnetic Spectrum

https://www.fbo.gov/index?s=opportunity&mode=form&id=9e8f41491f55d28eadc4a3e653e2823a&tab=core&_cvview=0

October 14, 2015

DOE

Solid-State Lighting Advanced Technology Research and Development 2015

<https://eere-exchange.energy.gov/#FoaIde4195533-28bf-4481-959b-597792fd4784>

Concept Paper Due Date: November 14, 2014. Full Application Due Date: January 15, 2015

Photovoltaic Module Recycling

<https://eere-exchange.energy.gov/#FoaIda6d48f0a-3083-4e02-98d2-b8695fe724f2>

Full Application Due Date TBD

NASA

Computational Modeling Algorithms and Cyberinfrastructure

<http://www.grants.gov/web/grants/view-opportunity.html?oppId=268329>

NOI Due Date: October 31, 2014. Application Due Date: January 9, 2014

NASA Innovative Advanced Concepts (NIAC), Phase I

<http://www.grants.gov/web/grants/view-opportunity.html?oppId=268870>

November 12, 2014

NIH

NINDS Institutional Center Core Grants to Support Neuroscience Research (P30)

<http://grants.nih.gov/grants/guide/rfa-files/RFA-NS-14-013.html>

LOI Due Date: November 29, 2014. Application Due Date: December 29, 2014

Innovative Technologies for Differential Diagnosis of Acute Febrile Illnesses (R21/R33)

<http://grants.nih.gov/grants/guide/rfa-files/RFA-AI-14-062.html>

LOI Due Date: January 2, 2015. Application Due Date: February 2, 2015

Systems Developmental Biology for Understanding Embryonic Development and the Ontogeny of Structural Birth Defects (R01)

<http://grants.nih.gov/grants/guide/pa-files/PA-15-020.html>

January 15, 2015; November 10, 2015; November 10, 2016

Biobehavioral and Technological Interventions to Attenuate Cognitive Decline in Individuals with Cognitive Impairment or Dementia (R01)

<http://grants.nih.gov/grants/guide/pa-files/PA-15-017.html>

February 5, 2015

Spatial Uncertainty: Data, Modeling, and Communication (R01)

<http://grants.nih.gov/grants/guide/pa-files/PA-15-010.html>

February 5, 2015

Biobehavioral and Technological Interventions to Attenuate Cognitive Decline in Individuals with Cognitive Impairment or Dementia (R21)

<http://grants.nih.gov/grants/guide/pa-files/PA-15-015.html>

February 16, 2015

Spatial Uncertainty: Data, Modeling, and Communication (R03)

<http://grants.nih.gov/grants/guide/pa-files/PA-15-011.html>

February 16, 2015

Spatial Uncertainty: Data, Modeling, and Communication (R21)

<http://grants.nih.gov/grants/guide/pa-files/PA-15-009.html>

February 16, 2015

NSF

Dear Colleague Letter on the Ebola Virus

http://www.nsf.gov/pubs/2015/nsf15006/nsf15006.jsp?WT.mc_id=USNSF_25&WT.mc_ev=click

Applied Mathematics

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5664&WT.mc_id=USNSF_39&WT.mc_ev=click

November 1, 2014 - November 15, 2014; November 1 - November 15, Annually Thereafter

National Robotics Initiative (NRI): The Realization of Co-Robots Acting in Direct Support of Individuals and Groups

http://www.nsf.gov/pubs/2015/nsf15505/nsf15505.htm?WT.mc_id=USNSF_25&WT.mc_ev=click

January 14, 2015; December 3, 2015; First Thursday in December, Annually Thereafter

Limited Solicitation: Major Research Instrumentation Program (MRI):

http://www.nsf.gov/pubs/2015/nsf15504/nsf15504.htm?WT.mc_id=USNSF_25&WT.mc_ev=click

January 22, 2015; January 13, 2016; Second Wednesday in January, Annually Thereafter

USAID

USAID Development Innovation Accelerator Broad Agency Announcement for Fighting Ebola: A Grand Challenge for Development

<http://www.grants.gov/web/grants/view-opportunity.html?oppId=268349>

Foundations

Dreyfus Prize in the Chemical Sciences

www.dreyfus.org

March 2, 2015

The Dreyfus Prize in the Chemical Sciences recognizes exceptional and original research in a selected area of chemistry that has advanced the field in a major way. The topic of the 2015 Dreyfus Prize is: Making Molecules and Materials. The Prize is open to international nominations of individuals, and consists of a monetary award of \$250,000, a medal, and a certificate. The nomination deadline is March 2, 2015.

Please note that this bulletin is not intended to be an exhaustive listing of funding opportunities. Your input and feedback are always welcome. Please send your comments and requests to be removed from the distribution list to huangj7@rpi.edu.