RESEARCH INITIATIVES IN SCIENCE & ENGINEERING (RISE)

Information Session: Wednesday, September 23, 2015
Office of the Executive Vice President for Research
OBJECTIVES

• Support High-Risk & High-Reward Research
• Encourage Interdisciplinary Collaboration & Innovation
• Increase Competitiveness with Funders by Enabling Researchers to Create Preliminary Data
Scope

• Started by Executive Vice President for Research in 2004
• Internal Competition for Seed Funding for Interdisciplinary, Collaborative, Early-Stage, High-Risk Research
• Covers All Scientific, Engineering & Medical Disciplines
• Selects 5-6 “Teams” per Year to Receive $80,000 per Year (Maximum of Two Years)
• Seeks to Fund Projects that Cannot be Funded Through Any Other Sources (Either Public or Private) Because They Are Viewed As:
  • Too Preliminary (Not Enough Data)
  • Too Risky (May Not Succeed)
  • Too Boundary-Pushing (Not Within Traditional Disciplinary Limits; Unusual Disciplinary Marriages)
• Funding Strengthens Initial Proof of Concept, Thereby Strengthening Future Proposals

<table>
<thead>
<tr>
<th>Competition Year</th>
<th>Number of Applications</th>
<th>Number of Winners</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>110</td>
<td>5</td>
</tr>
<tr>
<td>2012</td>
<td>83</td>
<td>6</td>
</tr>
<tr>
<td>2013</td>
<td>47</td>
<td>5</td>
</tr>
<tr>
<td>2014</td>
<td>49</td>
<td>6</td>
</tr>
<tr>
<td>2015</td>
<td>57</td>
<td>6</td>
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“Acceptance Rate”: ~8%
Application & Review Processes

Round 1 Application Materials (Due Oct 5)

Application Form
• Example Questions:
  • What is the proposed research? (3,500 characters)
  • Why is this research innovative? (1,000 characters)
  • Why can this research not receive funding through any other methods? (1,000 characters)
  • What will the researchers do to obtain subsequent funding? (1,000 characters)
• PI and Co-PI CVs (Maximum 2 pages each)
• Proof of Prior Rejections Due to Perceived Risk (If Any)

Round 2 Application Materials
• 4-Page Proposal

Review Process

Round 1 Electronic Review
Assigned to 2-3 Reviewers
Quantitative & Qualitative Evaluations

Cut 50-75%
Top Applications Invited to Submit Round 2 Application

Round 2 Electronic Review
Assigned to 2-7 Reviewers

Winning Teams Selected & Funds Dispersed (By June)
## 2015 Application & Reviewer Statistics

### Applications

- **57 Applications:**
  - 32 Biomedical
  - 25 Non-Biomedical

- **PIs From:**
  - Arts & Sciences: 28
  - Dental: 2
  - Engineering: 24
  - Lamont: 10
  - Law: 1
  - Physicians & Surgeons: 45
  - Public Health: 4

### Reviewers

- **54 Reviewers Across All Science, Engineering & Medical Disciplines**
- **Review as Few as 1, As Many as 6 Applications**

### Confidentiality

- **Names of Reviewers are Never Released Under Any Circumstances**
- **Reviewers Do Not Know Identities of Other Reviewers**
- **New to 2016 Competition: Reviewers May Anonymously Provide Feedback to Applicants**
RISE OUTCOMES

- Since 2004, **55** Projects Funded
- Distributed **$8 Million** to Date
- Funded Projects Have Secured Subsequent Grants & Contracts Totaling Over **$36 Million** (450% RoI)

<table>
<thead>
<tr>
<th>Accomplishments</th>
<th>Number</th>
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<tbody>
<tr>
<td>Publications</td>
<td>101</td>
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<tr>
<td>Publications In Review</td>
<td>12</td>
</tr>
<tr>
<td>Postdocs Trained</td>
<td>24</td>
</tr>
<tr>
<td>Grad Students Trained</td>
<td>59</td>
</tr>
<tr>
<td>Undergrad Students Trained</td>
<td>24</td>
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<tr>
<td>High School Students Trained</td>
<td>2</td>
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<table>
<thead>
<tr>
<th>School</th>
<th>Winners</th>
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</thead>
<tbody>
<tr>
<td>Arts &amp; Sciences</td>
<td>34</td>
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<tr>
<td>Engineering</td>
<td>38</td>
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<tr>
<td>Lamont</td>
<td>17</td>
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<tr>
<td>Physicians &amp; Surgeons</td>
<td>28</td>
</tr>
<tr>
<td>Public Health</td>
<td>2</td>
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CASE STUDIES OF SUCCESS

“RISE-ing to the Occasion” in Biannual EVPR Newsletter
• Developed *Tornado Index* to Project Extreme Weather Variations One Month in Advance of Impact
  • Current Standard: 4 Days
• 3 Publications Accepted in American Meteorological Society’s *Journal of Climate*
• Won $300,000 Grant from NOAA’s Climate Program Office (167% RoI)
Graham Barr & Emlyn Hughes
2011 RISE Winners

Pilot Study of Polarized Helium-3 Lung Imaging
Profiled in January 2015 Newsletter

- Polarizing Helium-3 to Align with MRI’s Magnetic Field, Thereby Imaging Lungs of COPD Patients (Without Radiation)
- Won $450,000 R01 Grant (On the First Try) (250% RoI)
• Examines Pediatric Notes to Identify Commonalities in Colic Symptoms, Attempting to Identify Causes, Treatments, and Diagnoses from Evidence

• Outreach via Partnership with BabyCenter

• Won $175,000 Grant from NSF EAGER Program
**Application Components**

- Round 1 Application Form ([link](#))
- CVs for Both PIs and All Co-PIs
- “Pink Sheet” Reviews From External Agencies (If Applicable)

- 2016 Request for Proposals ([link](#))
- Round 1 Evaluation Form (*For Reference Purposes Only*) ([link](#))

**2016 RISE Competition**

- Round 1 Application Due: 9:00 a.m. EST on Monday, October 5th, 2015
- Round 2 Application Invitations: April 2016
- Winners Announced: June 2016
Common Applicant Mistakes

- **Project Can Be Reasonably Submitted Elsewhere**: RISE will only fund projects that are too risky, too unconventional, and/or too preliminary to be submitted to traditional funding sources. If reviewers believe that the project can be submitted to funding agencies or foundations, the project will not win RISE funding.

- **Project Is Not Novel**: RISE will only fund projects that push conceptual boundaries, and either ask a question or propose a methodology never before witnessed by the discipline(s). “Logical next step” research will not win RISE funding.

  The project must be novel according to the discipline(s) affected, not according to the PI’s career history.

- **Project is Non-Collaborative**: RISE funds encourage cross-disciplinary collaboration between two PIs. Projects involving only one PI are discouraged.
RISE Leadership
G. Michael Purdy, Executive Vice President for Research

RISE Staff
Victoria Hamilton, Executive Director of Research Initiatives
Marley Bauce, Manager of Research Initiatives

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