Cross-Cutting Initiative
Cross-disciplinary Research Grants 2015-2016

To:
Columbia University Faculty
Columbia University Research Scientists
Columbia University Research Scholars
Columbia University Postdoctoral Scientists and Scholars

Typical Award Amounts:
Seed funding: $10,000 - $30,000
Colloquia-type projects: $10,000 maximum

Proposal Deadline
Friday, April 24, 2015 12 noon

Award Notification
Wednesday, July 1, 2015
Call for Proposals – Cross-disciplinary Research Grants

Proposals are solicited from the Columbia University faculty and research staff to advance the goals and objectives of the Earth Institute’s Cross-Cutting Initiative (CCI). Under CCI, scholars from a wide range of fields (e.g. biology, engineering, public health, and the social, political, and earth sciences) join forces to address complex global challenges and possible solutions to the most pressing problems in the field of sustainable development. The CCI aims to establish new methods for bridging disciplines and enabling scientists from different fields to address intrinsically cross-disciplinary problems and work towards practical solutions. Current projects include corruption and post-disaster economic recovery; promoting organic fertilizer use in Africa; and facilitating combined heat and power projects in New York City among many others. The CCI’s website (http://www.earth.columbia.edu/articles/view/61) provides information about current and past CCI awards and recipients.

For additional information, contact Flora Moir at fmoir@ei.columbia.edu or 212-854-7071, or George Sarrinikolaou at gsarrinikolaou@ei.columbia.edu or 212-854-3871.

Eligibility and Composition of Research Team

Cross-Cutting Initiative funds are only available for projects in which a member of the Columbia University (CU) community is the Principal Investigator (PI).

- The lead PI must be a full-time Columbia University officer of instruction or officer of research of higher rank than postdoctoral researcher. An EI or Columbia postdoctoral research scientist or scholar may be the PI of a project as long as a full-time Columbia University officer of instruction or officer of research of higher rank listed as co-PI, signs an agreement to assume responsibility of the project in the case that the he or she leaves CU before the project is complete. The dates of the appointment term must be included in the proposal. Postdoctoral researchers may be listed as co-PIs without a signed agreement.

- Individuals not listed in the categories above must fill out a PI waiver request prior to the start of the project. Proposals should indicate if a PI waiver will be needed should the project be awarded. The PI waiver template can be obtained from Tim Johnston.

- Adjunct appointments may only be listed as co-PIs in the proposal.

- There can be up to four co-PIs per proposal. Co-PIs need not be members of the Columbia University community. There is no limit to the number of project team members.

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• The project team will ideally comprise a mix of senior and junior scientists, including Earth Institute postdoctoral researchers, and undergraduate or graduate students. The team may include collaborators outside of the Columbia University community.

N.B. A project that receives funding from the Cross-Cutting Initiative is an Earth Institute project and will remain so regardless of changes in project leadership.

**Awards, Funding Guidelines, and Project Renewal**

Awards typically range from $10,000 to $30,000 for each proposal granted. Proposals for community building and for defining new lines of inquiry through seminar/colloquia-type activities may request grants of under $10,000. In addition to funding original proposals, the Steering Committee may also consider proposals that emerge from previously funded Cross-Cutting Initiative projects.

The Steering Committee may stipulate changes to any proposal as a requirement for funding. It may also, at its discretion, award less money than was originally requested by a project team.

**Terms of usage:**
All funds must remain within Columbia University except for products and services explicitly outlined in the proposal budget (*i.e.* consultants). Typically, non-Columbia University co-PIs cannot be compensated with CCI funds for their effort. Any exceptions should be justified in the proposal.

Continued access to project funds is contingent upon the timely submission or progress and final reports.

Any unspent funds must be returned to the CCI fund at the close of a project unless written approval has been granted to extend the award past the project’s end date. No-cost extensions must be requested one month prior to the project close date.

Proposals for renewed funding may be submitted for consideration provided the initial project goals have been completed and the funds spent as planned. Any such renewed funding must be used to ensure the long-term benefit of the project.

**Project Requirements**

All proposals must meet the following requirements for consideration:

1. The project should reflect the mission of the Earth Institute and address pressing issues in the field of sustainable development.

2. The project should be interdisciplinary, seeking new and innovative ways of drawing together faculty and research staff across academic disciplines. The goal must be to bring their knowledge, experience and expertise to bear on the task of finding practicable

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solutions to complex global challenges.

3. Priority will be given to proposals that address three or more of the following nine cross-cutting themes:
   • Climate and society interactions
   • Water scarcity management
   • Clean energy
   • Poverty alleviation
   • Ecosystems health and monitoring
   • Global, environmental or public health and global health delivery systems
   • Food, ecology and nutrition
   • Hazards and risk reduction
   • Urbanization

4. Intellectual inquiry should be outcome-driven. Examples include creating technologies that improve the quality of life, or using new kinds of science and public policy to have direct impacts on individuals.

5. The proposed work should reinforce existing research within the five clusters of the Earth Institute: Earth Sciences, Biological Sciences, Engineering Sciences, Social Sciences, and Health Sciences.

6. Projects may be place-specific, but the overarching theme should be relevant on a global scale.

7. The project should aim to create a legacy, such as institution building, receipt of external funds to further the research, published papers in peer-reviewed journals, etc. The proposal should discuss how the experience gained from the project might be leveraged for external funding in the future.

The following criteria will also be taken into consideration by the CCI Steering Committee:

   • Creativity of the research
   • Strategies for communicating the results to the public
   • Composition of the project team
   • Legacy

**Proposal Format**

The proposal should include the following documents:

   • New project proposal coversheet (attached)
   • Project description
     • Up to five (5) pages covering the information outlined in the Project

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Description section below. *Only the first five pages of the proposal will be considered.*

- Two-page CVs for each the PI and co-PIs
- References (up to one page, no smaller than a 10-point font).
- Appendices are not permitted
- All proposals, including itemized budgets, must be submitted as a PDF and written in 12-point font with one-inch margins.

**Project Description**

**Abstract** (200 words maximum)

**Title and Scope of Project** (half page maximum)
This section should include the project title and a description of the goals and objectives of the project. The seven “Project Requirements” above must be addressed in this section. This section should also address the scale of the project and the possibility of increasing its scope in the future.

**Methodology**
This section should lay out the basic project plan. The plan should include the hypotheses being tested and the experimental design used to test them, including the data collection and analysis methods. PIs must demonstrate why the proposed research methods are the most appropriate relative to alternative approaches to test their hypotheses.

If secondary data analysis is needed, the proposal should identify the data sets to be used, their sources and how they will be obtained. It is required that PIs provide letters of support, or other documentation, from data sources to confirm access to the data needed. If the project proposes to develop a new tool or modify an existing one, PIs should articulate the rationale and clearly state the methods, with supporting references, for developing these tools.

**Fieldwork Site, Project Client and Project Partners**
This section should clearly identify the fieldwork site, the project client and/or partners involved. It is required that these all be identified before the start of the project. The section should also describe the project team’s prior experience, if any, working in the proposed locations and with the clients and partners listed. It is also recommended that PIs limit the initial number of field sites or proposed interventions with a view of scaling up in the future based on preliminary results.

**Legacy**
The section should clearly identify the legacy and the deliverables the project will result in, such as institution building, receipt of external funds to further the research, published papers in peer-reviewed journals, etc. The proposal should discuss how the experience gained from the project might be leveraged for external funding in the future and if possible identify possible funding sources.

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**Project Timeline**
This section should describe the timing of the project plan and anticipated project milestones during the 18-month project period. PIs will be expected to provide written progress reports to the Cross-Cutting Initiative Steering Committee nine months into the project. Updates should include progress toward milestones, challenges and any need for extension. The timeline should clearly identify the time necessary for logistical planning, including approval processes, before travel to field sites. One six-month extension may be requested.

**Required Equipment and Approvals**
It is required that letters of intent, endorsement and commitment from partners be acquired prior to the start of the project. The proposal should list the approvals necessary for project initiation (e.g. Institutional Review Board). Projects will not be funded until all necessary approvals have been obtained. This section should also describe the equipment to be used and should state and justify the need for any new equipment. Seed funding can be used to purchase software if needed but cannot be used to purchase new computers.

**Names and Titles of Contributors and their Role in the Project**
This section should identify the project team and any collaborators, as well as provide a brief description of what specific activities each member of the team will conduct. A list of existing collaborations within the EI and CU community related to this project should be provided here.

**Conflicts of Interest**
This section should list any member of the Cross-Cutting Steering Committee that has a conflict of interest with the proposed project. Members of the Steering Committee who are directly or indirectly involved with the development of the proposal. Although it may not be considered a conflict of interest, the project team should state whether it had any discussions with committee members in preparing the proposal. Present committee membership includes Peter Schlosser (chair), Steve Cohen, Richard Deckelbaum, Hugh Ducklow, Pierre Gentine, Art Lerner-Lam, Richard Plunz, Roseline Remans, Wolfram Schlenker, Mingfang Ting, Maria Uriarte, and Alexander van Geen.¹

**Itemized Budget**
This section should contain an itemized budget projected for the seed funding. If this request is part of a larger project, please indicate how the remainder of the funds will be obtained or what portion can be accomplished with the requested seed funds. The budget should be separated by fiscal year (i.e. July 1-June 30). Projects may extend beyond a single fiscal year.

Indirect costs should not be included in the budget, except fringe benefits on salaries, which should be calculated at the rate of 30.5% for Officers of Research, Instruction and Administration. This rate does not apply to students. Please use Columbia University’s guidelines for calculating fringe rates: [http://finance.columbia.edu/content/fringe-benefit-rates](http://finance.columbia.edu/content/fringe-benefit-rates).

The grant money cannot be used to cover student tuition, but it can be used for interns, research assistants and work stipends. Grant money can be allotted, at the discretion of the project

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leader, to cover faculty time or to provide additional funds to complement existing salaries. The CCI Steering Committee recommends that grant money be applied to junior staff salaries instead of senior staff.

**Deadlines**

*Proposal Submission*
Proposals must be received electronically by 12 noon, on April 24, 2015, to cci@ei.columbia.edu. Late submissions will not be considered.

*Award Notification*
Award notifications will be made by July 1, 2015.

*Midterm and Final Progress Reports*
Pls will be expected to provide a one-page written progress report nine months into the project to the Cross-Cutting Initiative Steering Committee. A final report is due at the end of the project. The final report form will be provided one month before of the deadline but can also be requested in advance from Flora Moir, fmoir@ei.columbia.edu.

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