

RENEW Strategic SEED Investment Opportunity

UB's Institute on Research and Education in Energy, Environment and Water (RENEW) seeks to promote interdisciplinary research activities to position UB as a global leader in select areas of Energy, Environment and Water. The institute's interdisciplinary focus — involving the faculties of the School of Architecture and Planning, College of Arts and Sciences, School of Engineering and Applied Sciences, Law School, School of Management, School of Public Health and Health Professions and the School of Medicine — is designed to foster new collaborations and produce new ideas. The initiative taps the leadership and vision of deans and faculty at these seven UB schools and colleges.

The institute's overarching goal is to advance Energy, Water and Environmental Sustainability as a foundation for a Regenerative Economy. We will accomplish this via research and education in focus areas of - Next-Generation Materials for Energy, Environment & Water; Sustainable Urban Environments; Freshwater Coastal Ecosystems and Blue Economy; Environmental Exposures, Genomes and Health; and Climate Change & Socio-Economic Impacts. These cut across the areas of Energy, Environment & Water. Further details on RENEW focus areas can be found on the RENEW website at www.buffalo.edu/renew. The institute recently announced funding of five seed projects in the areas of Next-Generation Materials for Energy, Environment & Water, Freshwater Coastal Ecosystems and Blue Economy and Climate Change & Socio-Economic Impacts (see - <http://www.buffalo.edu/news/releases/2016/05/054.html>).

In this call, proposals are specifically sought in the following RENEW focus areas:

- i) *Environmental Exposures, Genomes and Health*: Interdisciplinary proposals that incorporate the affects of environmental pollutants with biomarkers and genomics data are solicited to understand effects on human health and disease progression. Reference documents: (a) <https://www.buffalo.edu/renew/research/renew-focus-areas/Environmental-Exposures.html>. (b) <http://www.genome.gov/19518663> (c) <http://www.cdc.gov/genomics/public/features/environment.htm>.
- ii) *Sustainable Urban Environments*: Interdisciplinary proposals that address the built environment including green infrastructure innovations are solicited. References: (a) <https://www.buffalo.edu/renew/research/renew-focus-areas/Sustainable-Urban-Environments.html>. (b) <http://phys.org/news/2015-05-stormwater-cities-dont-flush-rainwater.html>. (c) <https://www.buffalo.edu/renew/research/renew-focus-areas/Sustainable-Urban-Environments.html>. Interdisciplinary proposals that address the Whitehouse Smart Cities initiative to realize transformational progress on important challenges such as health and wellness, energy efficiency, building

automation and public safety are solicited. Reference documents: (a) <https://www.whitehouse.gov/the-press-office/2015/09/14/fact-sheet-administration-announces-new-smart-cities-initiative-help>.

Highly *innovative* proposals in the remaining three RENEW focus areas not especially called out are also solicited. These are the focus areas of Next-Generation Materials for Energy, Environment & Water, Freshwater Coastal Ecosystems and Blue Economy and Climate Change & Socio-Economic Impacts.

Interdisciplinary research proposals based on innovative and transformational concepts are solicited to enable thriving working groups within the institute by providing glue funding to bring faculty together to engage in multidisciplinary work. All PI's and co-PI's of successful proposals are expected to actively participate in monthly meetings of focus area groups. A key goal is to use these seed projects to bring appropriate faculty from seven schools and colleges together in working groups for achieving defining impact. This could include planning for and developing large grant proposals, developing strategic positioning, and enabling true interdisciplinary collaborative research and educational offerings. Proposals that focus on the interplay between social, economic and policy aspects are particularly of interest.

Funding Details:

A) Standard seed grants:

- *Award amount:* Awards will not exceed \$35,000 in direct costs (no overhead allowed) for projects of one year or less.
- *Scope of awards:* Funding can support a variety of expenses, including but not limited to salaries to support graduate students, prototype development costs, materials and supplies, and equipment usage. Faculty salaries are not allowed. Award recipients are required to submit a proposal for competitive external funding, based on the project, within 24 months of the award start date.
- *Eligibility:* All RENEW affiliated¹ faculty whose appointments allow them to submit external proposals through the UB Sponsored Projects Services Office are eligible to apply. Proposals must involve at least 3-5 faculty members from different disciplines.
- *Review process:* Proposals will be reviewed by ad-hoc panels of faculty who will make recommendations to the RENEW Director. The RENEW office will make the final recommendation to the VPRED's office for approval. The proposals will be reviewed according to these general selection criteria:
 - Scientific, scholarly, or creative merit
 - Innovation and potential impact
 - Project investigative team

¹ Affiliated faculty are shown on the RENEW website - <http://www.buffalo.edu/renew/faculty/affiliated-faculty.html>. UB faculty can become affiliated by joining on the RENEW website.

- Likelihood that project can lead to the development of a large interdisciplinary project.

In addition to these general criteria, proposals will be evaluated based on quality and the extent to which the project truly employs interdisciplinary and collaborative strategies. Budgets will be reviewed for reasonableness in relation to the proposed project.

Leveraging current resources or departmental/school cost-sharing to ensure the success of the project is very highly encouraged.

- *Award terms:* All PI's and co-PI's of successful proposals are expected to actively participate in monthly meetings of focus area groups. Prior to issuance of the award all regulatory approvals needed to conduct the work must be in place. A progress report must be submitted midway through the project and a final report is due within 30 days after the conclusion of the funding period summarizing the results in relation to the stated goals of the application. External funding success related to RENEW SEED awards will be tracked. The awardees will be required to report annually on proposals submitted and awards generated for five years. The application for extramural funding must be submitted within 24 months of the project start date and a copy should be sent to the RENEW office; reviews from the sponsor also should be sent, whether the project is funded or not.
- *Application format:* Applications, single spaced using 12 point font and 1-inch margins, must include:
 1. Cover page with title, names, department affiliation and contact information for each investigator.
 2. 500-word (maximum) abstract using lay terms accessible to a broad audience.
 3. 5-page proposal (maximum) plus 1-page of references. The proposal must include sufficient detail to convince reviewers of the project's scientific, scholarly, or creative merit and relevance. The proposal should provide the information to demonstrate to reviewers the merit of the project and potential for external funding, including the following elements:
 - i. Introduction
 - a. State a clear research question that defines the purpose of the project
 - b. Describe how the project is innovative and distinct from other activities going on at UB.
 - c. Provide background/rationale that addresses the significance and impact of the project to the field.
 - d. Describe the project's short-term objectives and how meeting these objectives will lead to a larger externally-funded project.
 - ii. Proposed Plan
 - a. Describe the research/scholarly methods that will be used to conduct the project.
 - b. Describe the expected results or outcomes.
 - c. Describe what the seed grant will accomplish that cannot be achieved through other means.
 - iii. Timeline for external funding proposal submission (< 24 months)
 - a. Identify specific external funding opportunities (program and funding agency), submission deadlines, and submission timelines
 - b. Articulate the fit of the proposed project, explaining how the project aligns with the funding opportunity.

4. **Current & Pending Support:** Submitters to disclose any similar proposals that are currently under review for any other internal funding opportunity or any external opportunity. If the project was previously submitted to an internal or external funding agency and declined, please attach the reviews.
5. **References to prior work:** Submitters to include all relevant references to prior or related work in the field. References do not count towards the page limit.
6. **Key Personnel:** Attach a 2-page NSF-style biographical sketch/vitae summary for each co-investigator participating in the project including current and pending funding.
7. **Project Budget:** Attach a 1-page line item budget and a 1-page detailed justification including a description of other resources or cost-sharing that will be applied to the project. The budget justification is important since budget reasonableness will be considered. Cost-sharing will be viewed favorably.

B) Small seed grants:

- *Award amount:* Awards will not exceed \$7,500 in direct costs (no overhead allowed) for projects of one year or less.
- *Scope of awards:* Funding can support a variety of expenses, including but not limited to faculty salaries, travel, graduate students, prototype development costs, materials and supplies, and equipment usage. Award recipients are required to submit a proposal for competitive external funding, based on the project, within 24 months of the award start date.
- *Eligibility:* All RENEW affiliated faculty whose appointments allow them to submit external proposals through the UB Sponsored Projects Services Office are eligible to apply. Proposals must involve at least 2 faculty members from different disciplines.
- *Review process:* Proposals will be reviewed by Ad hoc panels of faculty who will make recommendations to the RENEW Director. The RENEW office will make the final recommendation to the VPRED's office for approval. The proposals will be reviewed according to these general selection criteria:
 - Scientific, scholarly, or creative merit
 - Innovation and potential impact
 - Project investigative team
 - Likelihood that project can lead to significant impact.

In addition to these general criteria, proposals will be evaluated based on quality and the extent to which the project truly employs interdisciplinary and collaborative strategies. Budgets will be reviewed for reasonableness in relation to the proposed project.

Leveraging current resources or departmental/school cost-sharing to ensure the success of the project is very highly encouraged.

- *Award terms:* All PI's and co-PI's of successful proposals are expected to actively participate in monthly meetings of focus area groups. Prior to issuance of the award all regulatory approvals needed to conduct the work must be in place. A progress report must be submitted midway through the project and a final report is due within 30 days after the conclusion of the funding period summarizing the results in relation to the stated goals of the application. External funding success related to RENEW SEED awards will be tracked. The awardees will be required to report annually on proposals submitted and awards

generated for five years. The application for extramural funding must be submitted within 24 months of the project start date and a copy should be sent to the RENEW office; reviews from the sponsor also should be sent, whether the project is funded or not.

• *Application format:* Applications, single spaced using 12 point font and 1-inch margins, must include:

1. Cover page with title, names, department affiliation and contact information for each investigator.
2. 250-word (maximum) abstract using lay terms accessible to a broad audience.
3. 3-page proposal (maximum) plus 1-page of references. The proposal must include sufficient detail to convince reviewers of the project's scientific, scholarly, or creative merit and relevance. The proposal should provide the information to demonstrate to reviewers the merit of the project and potential for external funding, including the following elements:
 - i. Introduction
 - a. State a clear research question that defines the purpose of the project
 - b. Describe how the project is innovative and distinct from other activities going on at UB.
 - c. Provide background/rationale that addresses the significance and impact of the project to the field.
 - d. Describe the project's short-term objectives and how meeting these objectives will lead to a larger externally-funded project.
 - ii. Proposed Plan
 - a. Describe the research/scholarly methods that will be used to conduct the project.
 - b. Describe the expected results or outcomes.
 - c. Describe what the seed grant will accomplish that cannot be achieved through other means.
 - iii. Timeline for external funding proposal submission (< 24 months)
 - a. Identify specific external funding opportunities (program and funding agency), submission deadlines, and submission timelines
 - b. Articulate the fit of the proposed project, explaining how the project aligns with the funding opportunity.
4. Current & Pending Support: Current & Pending Support: Submitters to disclose any similar proposals that are currently under review for any other internal funding opportunity or any external opportunity. If the project was previously submitted to an internal or external funding agency and declined, please attach the reviews.
5. References to prior work: Submitters to include all relevant references to prior or related work in the field. References do not count towards the page limit.
6. Key Personnel: Attach a 2-page NSF-style biographical sketch/vitae summary for each co-investigator participating in the project including current and pending funding.
7. Project Budget: Attach a 1-page line item budget and a 1-page detailed justification including a description of other resources or cost-sharing that will be applied to the project. The budget justification is important since budget reasonableness will be considered.

Release date: June 24th, 2016.

Submission deadline: Submit via email in a single PDF to the RENEW offices at renew@buffalo.edu by Thursday, September 15th, 2016, 5 p.m. (EST)