

# The Johns Hopkins University Global Water Program

## Seed Grant Program Announcement

### December 2009

Dear Colleague,

The Global Water Program (GWP) was launched in 2009 following the award of a discovery grant funded by the Office of the Provost's Framework for the Future program [http://web.jhu.edu/bin/s/k/Framework\\_090227.pdf](http://web.jhu.edu/bin/s/k/Framework_090227.pdf). The mission of the GWP is to pursue training and research to meet the global water challenge of providing the quality and quantity of water needed to sustain human health and the environment. Meeting this challenge will require focused collaboration among researchers and students in engineering, public health, medical sciences, natural and biologic sciences, social sciences, and policy analysis.

The GWP will foster such collaboration by bringing together researchers and students throughout all Johns Hopkins affiliated institutions around the six themes of (i) Water and Health, (ii) Water and Food, (iii) Water and Ecology, (iv) Water and Energy, (v) Water Policy, and (vi) Water Infrastructure.

An initial step toward this end is to provide \$25,000 of seed funding supported through the Office of the Provost, the Bloomberg School of Public Health, and the Whiting School of Engineering. **The GWP is now accepting proposals for research projects in the thematic area of "Water and Health." The deadline for submitting a complete proposal application is February 1<sup>st</sup>, 2010.**

Additional information about the initial seed program is provided below. **To learn more about the GWP and/or the seed-grant program, contact our Director Kellogg Schwab [kschwab@jhsph.edu](mailto:kschwab@jhsph.edu), Associate Director Bill Ball [bball@jhu.edu](mailto:bball@jhu.edu) or Program Manager, Luke MacDonald, [lmacдона@jhsph.edu](mailto:lmacдона@jhsph.edu).**

Thank you,

*The Global Water Program Steering Committee*

William Ball, (*Associate Director*) Professor, Department of Geography and Environmental Engineering, Whiting School of Engineering. [bball@jhu.edu](mailto:bball@jhu.edu)

Maria Elena Figueroa, Associate Faculty, Director of the Research and Evaluation Division at the Center for Communication Programs, Bloomberg School of Public Health [mfiguero@jhuccp.org](mailto:mfiguero@jhuccp.org)

Seth Guikema, Assistant Professor, Department of Geography and Environmental Engineering, Whiting School of Engineering. [sguikema@jhu.edu](mailto:sguikema@jhu.edu)

Luke MacDonald (*Program Manager*), Assistant Scientist, Department of Environmental Health Sciences, Bloomberg School of Public Health. [lmacdona@jhsph.edu](mailto:lmacdona@jhsph.edu)

Kellogg Schwab, (*Director*) Associate Professor, Department of Environmental Health Sciences, Bloomberg School of Public Health. [kschwab@jhsph.edu](mailto:kschwab@jhsph.edu)

Charles Young, Senior Scientist, Johns Hopkins University Applied Physics Laboratory  
[Charles.young@jhuapl.edu](mailto:Charles.young@jhuapl.edu)

Benjamin Zaitchik, Assistant Professor. Earth & Planetary Sciences, Krieger School of Arts and Sciences [Zaitchik@jhu.edu](mailto:Zaitchik@jhu.edu)

## **The JHU Global Water Program Solicitation of Proposals for Research Projects focusing on “Water and Health.”**

The GWP intends to fund Johns Hopkins research projects of up to \$25,000 for 12 months of activity, with strong preference given to proposals with a clear research plan that involves cross-divisional collaboration and has clear potential for longer-term funding from external sources.

Funded project start dates can begin as early as March, 2010 and no later than May 1, 2010. Faculty salary support will be permitted on the condition that such support can be clearly linked with helping develop a pathway to reach future external funding targets, as outlined in a letter from the PI’s Departmental Chair (or equivalent) that indicates this pathway.

The deadline for submitting a complete proposal application is February 1<sup>st</sup>, 2010.

Successful proposals will demonstrate clear links between water and human health and will describe an approach by which the research team will achieve the following:

- (1) The development of enhanced collaborations among researchers from more than one discipline.
- (2) Obtaining preliminary research results to motivate and justify future work.
- (3) The development of a written proposal to an identified external funding source for a multi-year, multi-investigator project.

The outcome of each pilot research project will be two short reports to the GWP, at 6 months and 12 months, and evidence of submission of a proposal to an external funding source for a multi-year, multi-investigator project.

Examples of possible lines of inquiry for the proposed seed projects include, but are not limited to, the following:

1. Drinking water in the United States: What have been or are the health impacts of violations over the past decade to the Safe Drinking Water Act? How can we retrofit aging treatment plants to improve public health? What new methods or technologies can help improve detection of leaks and disruptions in water supply and safety? How should emerging contaminants be monitored and controlled?
2. Water quality and health in the developing world: What advances in the design and assessment of water treatment and sanitation technologies can increase use and improve health in developing countries? Which programs are more successful at promoting sustained access to safe water at the household and community levels? How can we deliver safe water to megacities in the developing world? What technologies and models can be developed to increase feasible water reuse in urban settings?

3. Water availability: What tools predict water availability and scarcity? How can remote sensing, GIS networks, and groundwater sensing be combined to provide accurate estimates?
4. Climate Change, Water, and Health: As quantity diminishes, people will turn to low quality water sources. Regionally, how many people will lose access to safe water and how will this impact public health? What behaviors promote sustained water resource use? Are there solutions to capturing extreme water events to diminish runoff and increase aquifer recharges?
5. River networks and disease: What quantitative tools capture the link between upstream use practices, downstream consumption, and disease? What interventions can increase watershed protection and improve access to safe water? What technologies can be devised to substantially reduce river water contamination from sewage discharge in the developing world?
6. Impact of agriculture waste on human health and the environment: What is the threat posed by the export of pathogens in animal waste, including drug-resistant bacteria, to aquatic environments? How does this impact human health? What bio-molecular signals characterize compromised water sources? What downstream ecological consequences result from fertilizer and pesticide use? What new models can be developed to increase the use of recycled water for agriculture?

### **Application Requirements**

Please submit the completed application to Luke MacDonald, lmacdona@jhsph.edu, by Monday February 1, 2010 following the outline below.

- A 300-word abstract of the proposal.
- A 2-page (maximum) proposal with: Title and PI/co-PI's and affiliations. Label your proposal as "Theme: Water and Health." A. Specific Aims; B. Background and Preliminary Studies; C. Research Design (refer to published papers where possible regarding methods). D. Expected impact and future funding opportunities.
- Appendix A: References with all authors listed (underline PI and co-PI's).
- Appendix B: One page budget for 12 months of activity listing key areas of support and justification.
- Appendix C: Biographical sketch for each PI/co-PI modeled after the NIH 398 application <http://grants.nih.gov/grants/funding/phs398/phs398.html>
- Appendix D: Other sources of support (One page maximum). Indicate how Seed Grant funds might be matched by granting agencies or donors.
- Appendix E: List of other grant applications pending for this project.

- Appendix F: Letters of support from the Department Chair (or equivalent), only required for faculty members requesting salary support.

*Note:* Proposals should use 1-inch margins and 10-12 point Times New Roman font. Figure legends may use 9 pt Arial font. **Proposals exceeding funding limit or page limitations will not be reviewed.**

The review committee will make funding decisions and notify all applicants. Funding will begin as early as March, 2010 and no later than May 1, 2010.

In addition, opportunities exist for unsolicited proposals that match GWP themes. Contact Luke MacDonald, GWP Program manager (lmacdona@jhsph.edu), about possible submissions.