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GRO Forum
Environmental Protection Agency Greater Research Opportunities Undergraduate Student Fellowships

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where are they now? Catching up with GRO Alumni

As a 2002 GRO Fellow, Toiya Goodlow participated in a summer internship with the Office of Wastewater Management (OWM) in Washington, DC. After earning her B.S. in chemistry from Howard University, Toiya was hired by EPA shortly after graduation. Toiya currently works as a chemist for the EPA Office of Pesticide Programs in Washington, DC.

"I had a very positive experience with the GRO program," Toiya commented. "When it was time to apply for a position after graduation, I thought I should consider the EPA. The references from my internship and my professor who introduced me to the GRO program helped tremendously, and I actually had my choice of two positions at the EPA."

During her internship, Toiya compiled a compendium of key outreach, education, research, funding, and management activities supporting decentralized wastewater systems. Decentralized systems (commonly called onsite or septic systems) are a common method of treating individual household waste in rural areas and small towns. If properly designed, installed, and managed, decentralized systems can be an effective option for protecting public health and the environment. On the other hand, if they are not, these systems can pose a significant threat to public health and the environment. Toiya also managed logistics for the Regional Coordinators' Meeting that summer, and acted as a point of contact between EPA HQ and the Decentralized Systems Program Workgroup.

Toiya's GRO summer internship was not just an introduction to the working world or an abstract exercise. As she notes, "Before my work with OWM, I had no idea what decentralized wastewater systems were and how many people used them in their homes. The work I did showed me how real people are connected with the work done in EPA." Her internship experience demonstrated the value of networking; Toiya is still in contact with her internship mentor, Joyce Hudson.

As a current EPA employee, Toiya often applies one of the valuable lessons that she learned during her internship: the importance of maintaining and fostering good working relationships with team members and peers. "The environment in which I work uses teams to complete just about every project," Toiya said. "Our primary documents are human health risk assessments, and toxicologists, chemists, and occupational and residential exposure assessors work together to produce each document." Teamwork is also essential when Toiya co-chairs and participates in workgroups.

For the current class of GRO Fellows, Toiya advises, "Work smart, enjoy your internship and maintain all the contacts you make during the summer." She had a great experience in the summer of 2003 and wishes the same for the students starting their internships in 2008.

Toiya Goodlow

> "I had a very positive experience with the GRO program"
> *- Toiya Goodlow*

reflections on summer 2007 internships

Ashley DeBoard
Ashley was studying environmental science at Northern Arizona University, when she interned at EPA Region 9 in San Francisco, CA. Ashley's project was to conduct an emissions inventory related to the use of diesel equipment and electricity consumption for Superfund sites in Region 9. Ashley had this to say about the experience:

"This internship far exceeded my high expectations of working with the EPA. While I was given a great deal of latitude in developing this project, the guidance provided by many in Region 9 has left a lasting impression. The Cleanup-Clean Air program provided opportunities for networking outside of my specific project and allowed for great exchange of information within the EPA facilities and outside in academic and industry settings. I learned a great deal about renewable energy and clean diesel technology, how to conduct emissions estimates, as well as the process for getting renewable energy pilot projects 'off the ground.'

> "This internship far exceeded my high expectations of working with the EPA."
> *- Ashley DeBoard*

"I also had the opportunity to network and interview several environmental attorneys within the Office of Regional Council (ORC). The relation of their personal experiences and advice, coupled with the background I received in energy and air pollution issues, has helped me to clearly define my future career objectives. I understand more about why there is a substantial need to reexamine our energy sources as a nation as well as evaluating the impacts that fossil fuel combustion contributes to our environmental quality. I would like to pursue this capacity for change though legal and policy avenues, and am hopeful that the background provided through environmental science and technical experience within Superfund will prove to be an asset in pursuing these goals."

Eric Vanderboom
Eric spent his summer internship in the New England Regional Laboratory, North Chelmsford, MA, where he worked with project advisor Hilary Snook on the National Lakes Assessment. Eric, a student at the University of Tulsa, in Oklahoma, summed up his experience like this:

"This project meant traveling all over the New England area. I enjoyed the traveling, seeing new places, and working outside. I believe it was a win, win situation on all accounts. My expectations were greatly exceeded with this internship. I learned so much about how the EPA works and the importance of the EPA. I feel this experience has helped me to narrow my interest area for future employment towards the area of remediation and cleaning up of sites. I had the privilege of working on the Nyanza Superfund site a couple times taking field samples for trace mercury. It was a fantastic experience and I learned a lot about Superfund and how it works. Every aspect of this internship was extremely interesting and educational…..a great experience!"

Frank Calvosa
Frank worked with Dr. Kay Ho and colleagues at the Atlantic Ecology Division lab in Narragansett, RI for his summer 2007 internship. Frank was a chemistry major at Villanova University in Pennsylvania.

"I was responsible for collecting organisms from water matrices that would be used in toxicity tests. This was my first experience participating in field work and I must admit it was quite a challenge. In order to collect the samples, Dr. Ho and I canoed into a body of water and treaded through sticky, loose mud; getting stuck knee deep in the sediment. The truth is that my first field experience was not pleasant. However, with further instruction from Dr. Ho regarding ways to brave the mud, I was able to come to enjoy the field work component of the research; it also proved to be an educational process as well."

> "I learned the importance of knowing what exactly is in our environment."
> *- Frank Calvosa*

"This summer internship was a wonderful experience. I was lucky to be able to have such a unique opportunity. During this summer, I learned the importance of knowing what exactly is in our environment. I also learned that scientific research, and more specifically, environmental research, does not stop once one leaves the lab. In order for any improvements regarding the condition of our environment to occur, we as scientists play a vital role in understanding the issues before legislators can institute solutions to the problems. In providing reliable data on the amount of toxins and contaminants present in various environmental matrices, we enable those who have both political and regulatory powers to ensure that we are moving in a direction towards beneficial change."

Evan Bredeweg
Evan an environmental biology student at Pacific University in Forest Grove, OR, worked with Stephanie Harris at the Region 10 Environmental Laboratory, Port Orchard, WA, investigating pollution sources for water bodies. Evan wrote:

"My experience was very rewarding and enlightening. The project that I worked on was interesting because I had never done work in this particular field before. It gave me the opportunity to interact with abstract knowledge that I had from my science classes and actually see how that knowledge could be applied. I was very pleased with my internship. I was given the opportunity to work on a project by myself and at the same time, I was able to work on an area of biology that I had previously only read about in scientific articles. But more than that, it gave me the opportunity to work in a government lab, which was really valuable to me because it will help me shape my future choices in my career. It has given me a taste of how scientists would work as a part of the greater government organization. It has also proven to me that I want to continue my education with the goal of working in a research lab and have the opportunity to do research of my own."

introducing the 2007-2008 GRO fellows

Terri Ambrose
Spelman College
Major: Environmental Science
Research Interest: Investigation of Endocrine Disrupting Chemicals in the Chattahoochee River
Summer Internship: The Evaluation of Aquatic Communities to Assess Biological Conditions in Rivers, Streams and Lakes (Edison, NJ)

Hannah Bruce
University of Missouri-Rolla
Major: Environmental Engineering
Research Interest: Solid-phase Microextraction (SPME) in Tree Tissue
Summer Internship: Stormwater Discharge Inventories in the South Coastal Basin (Boston area, MA)

Juandalyn Coffen
Spelman College
Major: Environmental Science
Research Interest: Detoxification of Toxic Metals
Summer Internship: Measuring Priority Disinfection By-Products in Drinking Water (Athens, GA)

Amy Combs
University of Memphis
Major: Biology
Research Interest: Interactive Effects of Environmental Contaminants on Disease in Amphibians
Summer Internship: Measuring Chemical Effects on Characteristics of Wild and Laboratory Animal Populations (Narragansett, RI)

Akosua Dosu
Spelman College
Major: Political Science
Research Interest: Sustaining Urban Villages: iTree Urban Forestry Census Project
Summer Internship: Performance Track Program Outreach (Atlanta, GA)

Jay Feitshans
Albright College
Major: Environmental Science
Research Interest: Public Health Policy
Summer Internship: South Carolina Pollution Allocation Plans for the Edisto River Basin (Atlanta, GA)

Hannah Fink
Lafayette College
Major: Biology
Research Interest: An Innovative Technology for the Destruction of Perchlorate
Summer Internship: Measuring Priority Disinfection By-Products in Drinking Water (Athens, GA)

Zachary Hicks
Colgate University
Major: Environmental Geography
Research Interest: Developing a Sustainable and Affordable Community with a Minimal Ecological Footprint
Summer Internship: Grassroots Mercury Education Project (Denver, CO)

Valerie Horstman
Calvin College
Major: Engineering
Research Interest: Effects of Antibiotics on Biologically Active Water Treatment Processes
Summer Internship: Community Energy Challenge (Boston, MA)

Joseph Ifokwe
University of North Texas
Major: Biology
Research Interest: Effect of Novel Proteins that May Impede Carcinogenesis
Summer Internship: Green Chemistry (Washington, DC)

Austin Kana
Hobart College
Major: Environmental Studies/Public Policy
Research Interest: Effects of Global Climate Change and Human Impacts on Tropical Marine Ecosystems
Summer Internship: Community Energy Challenge (Boston, MA)

Rachael Lane
Emporia State University
Major: Chemistry
Research Interest: Polyelectrolyte Enhanced Ultrafiltration (PEUF) for the Selective Removal of Perchlorate
Summer Internship: Emerging Contaminants in Ecological Systems (Narragansett, RI)

Elan Mitchell
Spelman College
Major: International Studies
Research Interest: A Feasibility Study of Wind Resources for Meeting the Energy Needs of Georgia
Summer Internship: Green Buildings (Washington, DC)

Joseph Statwick
Occidental College
Major: Biology
Research Interest: The Effects of Air Pollution and Urban Development on the Genetic Diversity of Yucca
Summer Internship: Long-Term Sediment Quality Assessment in the NY/NJ Harbor (Edison, NJ)

Cynthia Williams
Howard University
Major: Chemistry
Research Interest: Evaluation of Seasonal Wet and Dry Deposition in Washington, DC
Summer Internship: Toxics Release Inventory Data Quality Analysis: Hazardous Waste Facilities (San Francisco, CA)

words of welcome from the Director of NCER

William H. Sanders III, DrPH, is the Director of the National Center for Environmental Research (NCER), within which the GRO Undergraduate Student Fellowship Program is housed. Dr. Sanders is looking forward to GRO Undergraduate Fellows beginning their summer internships at EPA. "I'm personally thrilled to have them come on board," he said. "They will bring a lot to EPA." He urges GRO Fellows to ask lots of questions, bring their own perspectives to bear on problems, and use their unique skills to "connect the dots – even when the dots may be very far apart."

Having joined EPA in 1973, Dr. Sanders has an excellent perspective on the evolution of the Agency's approach to addressing the complex environmental and human health issues it faces. He points out that EPA has made significant progress, but notes that "life is much more complicated now," in terms of the problems that exist. For instance, rather than consider only the immediate outcome of an action, the environmental community must also consider issues such as impacts on future generations and sustainability.

Dr. Sanders urged the Fellows to embrace what Dr. Martin Luther King, Jr., called "the fierce urgency of now," that is, to come to EPA wanting to make progress, to even be a bit impatient, and to "be here to change the world." Those who maintain that attitude, he said, are those who will contribute both to EPA and to society.

In addition, Dr. Sanders observed, future environmental professionals will need the ability to take a multidisciplinary approach. People who can work across different areas of specialization and think about complicated problems from a variety of angles will be successful. The power is in backing up and looking at the bigger picture, Dr. Sanders noted. For instance, it is only recently that environmental professionals have fully realized how the environment is not only connected to human health, but how both these factors are connected to economic growth.

Dr. Sanders holds a DrPH. in environmental and occupational health sciences (1992) from the University of Illinois at Chicago School of Public Health; an MS in management of public service, quantitative methods (1974) from DePaul University, Chicago; and a BS in civil engineering, structural design (1969) from the University of Illinois at Chicago.