

the GRO Forum



Environmental Protection Agency Greater Research Opportunities Undergraduate Student Fellowships

issue 2, 2010

where are they now? Catching up with GRO Alumni

Cynthia Williams

When 2007 GRO Fellow Cynthia Williams traveled to EPA Region 9 Headquarters in San Francisco, CA, for her internship, she expected to spend 8 hours a day in the office working on the Toxic Release Inventory (TRI) Program. TRI ensures that the public has access to accurate data on toxic chemicals made, used, and released in their neighborhoods. Cynthia didn't expect that she would get to collect fish samples for mercury testing and assist in a drinking water inspection of chemical levels and regulations in a water tank and wells.

On the drinking water inspection trip to Arvin, CA, Cynthia attended a "town hall" meeting about water quality. During the question and answer session, Cynthia saw that residents weren't asking about scientific methods, data analysis, or molecular structure. "The community wanted to know that their families were safe and that the EPA and local water facility were taking the necessary steps to ensure their safety," she said. "This made me step back and realize that when I'm in the laboratory with my sample and the four walls, what I'm doing has a bigger significance than I could even imagine."

"I absolutely loved my internship with Region 9 in San Francisco," Cynthia said. "I was a part of so many other projects and programs along with my original project." She credits her EPA hosts, Nancy Levin and Russell Frazer, with ensuring that she was warmly welcomed and presented with many interesting opportunities in the office, field, and lab. Cynthia successfully completed analyses of TRI data and made recommendations to the TRI team during her internship.

Her internship work with TRI and her interactions with the community influenced Cynthia's interest in increasing environmental awareness. "If you look on the news or Internet, you see environmentalists, government officials, and scientists all covering major issues, such as climate change, air pollution, and waste," she said. "However, there is little about awareness."

After her internship, Cynthia asked family and friends what they knew about environmental issues and did some research on environmental programs in her home town of Greenville, MS, and at her school, Howard University, in Washington, DC. "I found that many people weren't aware of environmental issues in their local area," she said. "They were also not aware that changing a single lifestyle habit can make a huge difference, and that they have access to EPA, State, and local resources."



Finding that her own friends and family didn't have much information, Cynthia said, "made me wonder who else isn't aware of environmental issues." Subsequently, Cynthia coordinated an awareness meeting between a Region 9 Superfund specialist and her sorority, Phi Sigma Rho National Engineering Sorority. She also wrote to the mayor of Greenville about implementing recycling programs and expressing concerns about water quality.

Cynthia graduated from Howard in 2009 with a BS in chemistry. Howard, a Historically Black College and University, was founded shortly after the end of the Civil War. It is named for one of its founders, General Oliver O. Howard, a Civil War

hero and commissioner of the Freedman's Bureau. Cynthia maintained her focus on the human side of science while deciding on graduate school. One of her criteria for selecting a research direction was to be able to work on a project that focused on solving or improving an issue in society. As Cynthia put it, "What fuels me to continue research is knowing that I have the potential to help, protect, or better people."

Now, in her second year of PhD studies at the University of California-Davis, Cynthia is still working to raise environmental awareness, now with her chemistry students. "During lab, I teach them that pouring chemicals down the sink or being wasteful with materials negatively affects the environment," she said.

Cynthia credits many people and experiences for getting her to where she is today. "If I had to list in order," she said, "it would be God, confidence in myself, support of my family, academic and professional networks, good and bad experiences, and positive friends."

GRO Fellow awarded EPA STAR Graduate Fellowship

Jonathan McKinney

Congratulations to 2008-2010 GRO Fellow Jonathan McKinney, who was recently awarded an EPA STAR Graduate Fellowship! The Fellowship provides support to Jon as he pursues a Master's degree in chemical engineering at the Missouri University of Science and Technology (Missouri S&T), Rolla, MO.

Jon has already earned a Bachelor's degree in environmental engineering, and plans to pursue a doctorate in the same field. He explains the field like this, "A major portion of environmental engineering is using a process design approach to meet the needs of people, while at the same time being environmentally friendly." He sees the Master's as a way to strengthen the theoretical underpinnings of his work: "I feel having a Master's in chemical engineering, which involves designing chemical



"A major portion of environmental engineering is using a process design approach to meet the needs of people, while at the same time being environmentally friendly."

processes, will provide a broader theory-based background that will strengthen my future research on environmental processes."

Jon has been researching the forensic analysis of historical indoor air pollution events since he was an undergraduate. With the support of the GRO Fellowship, he created a reactor system to simulate indoor air pollution events. "During my graduate work, I'm concentrating on data analysis methods and uncertainty analysis. I also plan on doing some field tests with an undergraduate student," Jon said. His work will be applicable to addressing health problems resulting from indoor air pollution.

In addition to providing Jon with the opportunity to conduct interesting and relevant research, being a GRO Fellow was a learning experience. First of all, he said, "A Fellowship is actually quite a lot of responsibility!" Jon also learned to work with other students. "That was kind of hard," he said. "I'm extremely picky about my work. I had to learn to let small differences go." During his GRO summer internship at EPA's Western Ecology Division, Corvallis, OR, Jon saw how EPA research responded to social and regulatory priorities. "In my opinion, the EPA is doing its part to answer important environmental questions with enough detail to support a decision about regulation, but not so much detail that time and resources are wasted, which is what EPA is supposed to do," he said.

Introducing the 2010-2012 GRO Fellows

Benjamin Auch
St. Olaf College

Allison Baker
Northern Arizona University

Cailie Carlile
Missouri University of
Science and Technology

Janique Cheesman
Syracuse University

Stephen Cotter
Clemson University

Kelsi Dana
Western Oregon University

Ethan Degner
Gustavus Adolphus College

Erin Delman
Union College-NY

Ciarra Greene
Arizona University

Alexander Guzzetta
California State University
- Fresno

Melissa Haber
Lafayette College

Jessica Helgesen
University of Wisconsin -
Milwaukee

Melinda Hopper
Virginia Wesleyan College

Rachel King
Scripps College

Rachel Lamb
Wheaton College

Thomas Langer
University of St. Thomas

Sarah Larsen
Florida Gulf Coast University

Phoebe Lewis
Langston University

Jillianne Matus
Southern Methodist
University

Allison McAtee
University of Arkansas
at Fayetteville

Jesyka Melendez
University of Puerto Rico
at Cayey

Brett Murdoch
University of Arkansas
at Fayetteville

Justin Paul
Juniata College

Brian Peacock
Lafayette College

Amy Prescott
Middlebury College

Robert Reynolds
Loyola Marymount University

Starlyn Robinson
NC A&T State University

Deandra Smith
Spelman College

Corina Solis
Saint Edward's University

Jessica Taylor
James Madison University

Michael Thompson
Lafayette College

Emily Thorpe
Salisbury University

Jonne Woodard
Salisbury University

Chelsea Woodworth
Clemson University

Fellows' reflections – summer 2010 GRO internships



I'll be sad to leave the wonderful weather and all the friendly folks I've had the pleasure to meet and work with at the Mid-Continent Ecology Division in Duluth, but one thing I won't have to leave is the experience that has made me who I am at the end of a short 12 weeks.

Elizabeth Medlock
DePauw University

After gaining all the experience and knowledge I have over the three months interning here in the Region 2 Lab, I feel I have become a better steward towards the environment. Looking back, I believe the time spent interning here was eternally beneficial towards my academic and employment future.

Nikita Peperni
Southern Connecticut State University



Overall, I was quite impressed with the Agency, although it was a bit different from what I had expected. I had worked in very structured and rigid office settings before. I had expected to find a similar situation in Denver but I was pleasantly surprised to find that the office culture was quite different. While there is a very clear hierarchy, collaboration and synergy are strongly encouraged.

John Maravich
Virginia Wesleyan College



I really enjoyed being part of a team where I was depended on. I was trusted to be in charge of instrumentation and data and not treated like an intern who doesn't know anything. It has helped my sense of responsibility and shown me what it is like to work in the real world.

Shannon Klotsko
Coastal Carolina University



The atmosphere of the EPA lab was always welcoming, which allowed an easy transition. The experience was invaluable because I developed contacts, increased my laboratory skills, and strengthened my career choice.

Matt Tancos
Ball State University



It was easy to become comfortable interacting and getting to know the people I worked with at the Atlantic Ecology Division, whether during a lunch break or while working on a project together. I also enjoyed getting to hear about the wide variety of projects being done among the different branches. It was a very rewarding place to learn, not to mention a great place to live for the summer.

Ellen Perkins
Wheaton College

Being at EPA this summer has entrenched me yet more deeply in my environmentalist views, and in believing that what EPA does is vitally important. I think that many people at EPA are working very hard for that mission.

Amanda Hayes
Calvin College



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Fellows' reflections – summer 2010 GRO internships ... continued



I have learned to not underestimate myself and more fully appreciate the significance of my accomplishments.

Jarymar Arana
St. Edward's University

I came to Boston with a vague understanding of how the federal government operated. My internship experience helped me to develop a greater understanding and respect for the EPA and its mission. The EPA tackles large national issues with limited resources and works efficiently to improve environmental issues across the United States.

Jessica Pulliam
Eastern Kentucky University

I have never been exposed to so many scientists working on environmental issues. Everyone at the EPA is environmentally conscious, which gave me a sense of belonging.

Angel Casanova
University of Puerto Rico at Humacao



I have very much enjoyed learning how EPA employees fuse together science, technology, and policy to help preserve our Nation's most precious natural resources and hope to emulate their work ethic and prowess throughout my own future career endeavors.

Kristin Waller
Syracuse University

The internship itself is an incredible opportunity that I don't think I could have had through other programs. I was able to do meaningful work that actually helped with ongoing projects; this is far superior to many internships that mainly involve making copies.

Kelsey Boyd
Lafayette College