

**Xiomara Sinisterra**, who was a AAAS Fellow on the International Research and Biotechnology Team in the Office of Environment and Science Policy at the U.S. Agency for International Development (USAID), was one of the first Afro-Colombian women at the National University of Colombia in Bogotá. She and her family moved to Bogotá for better schools and opportunities. “I always felt that I needed to give back, and that’s why I wanted a placement at USAID,” she says. “I wanted to work with developing countries and to help people.”

Xiomara’s academic research has directly affected her work as a Fellow. She received her PhD in plant pathology from the University of Florida studying Ug99, a wheat stem rust that has had serious effects in Africa and the Middle East. “Developing varieties that are resistant to the pathogen can help countries that are most vulnerable to attacks of this disease,” she explains. Countries such as Kenya, Egypt, Afghanistan, Nepal, and Pakistan are some of the most vulnerable, but the disease could have effects all over the world.

“USAID gave \$5.2 million to famine relief to distribute rust-resistant seed, and I coordinated an ad hoc group that encouraged the donor community to go beyond that amount.”

“The fellowship has been a life changing experience,” she says. “I have met people around the world who have become close to my heart. I have the understanding that we are more similar than different and we all want to have a peaceful environment.”

Xiomara plans to stay in the field of international agricultural development, and hopes to work in Latin America or Africa. “Agriculture is the basis for everything. It improves nutrition and people’s lives.”

**Christa Speekman** is now an expert in citrus seeds. She has a PhD in marine science from the University of Texas at Austin, and chose her placement at the Plant Protection and Quarantine office in the division of Commodity Import, Analysis and Operations at the USDA Animal Plant Health Inspection Service (APHIS) as a departure from her educational expertise.

“I wanted experience with science and policy, but didn’t feel it had to be what my degree is in,” she

says. “USDA is a great agency. It has a good history of fellowship opportunities, and it also retains many of its Fellows.”

Through her fellowship, Christa was able to take a leading role on citrus seed import regulations. “There are already regulations on citrus,” she explains. “But seeds are also a possible pathway for disease.” She had to quickly learn how to build consensus and provide input on federal orders, so that they would protect American citrus farmers and not hinder international trade. “Science is a foundation of policy,” she notes. “But in policy, you have to be aware of all who are going to be affected.”

Christa renewed her fellowship for a second year, and was then hired full-time at APHIS in the Office of Veterinary Service as an aquaculture import-export specialist. Although the goals in her fellowship office and current office are similar, her new position is a blend of her fellowship experience and her expertise in marine science.

“I give credit to the fellowship for getting this position. Not only do the AAAS Fellowships staff encourage you to do informational interviews, I was able to use some of my fellowship travel and training funds to go to aquaculture conferences and remain current on marine science issues.”

**Federico “Ico” San Martini** had already lived on three continents by the time he was in his early twenties. He was born in Italy, raised in both the United States and Germany, did post-doctoral work in the United Kingdom, and spent some time in Ecuador, so he knew that international issues were in his future.

After finishing his PhD in chemical engineering at MIT, Ico took a job as a program officer at the National Academy of Sciences for the Board on Chemical Sciences and Technology. Because of his interest in international policy, he decided to apply for the AAAS Science & Technology Policy Fellowship.

“At the core, many of the challenges are the same in international policy as in domestic policy,” he says. “Explaining clearly the science and the uncertainties without undermining the argument is important.”

Ico’s placement at the Office of Environmental Policy at the U.S. Department of State provided the oppor-

tunity to work on one of the world's most pressing issues: water. He put together a working group and wrote about U.S. policy on climate and water for the *Senator Paul Simon Water for the Poor Act of 2005 Report* to Congress, released in June 2009.

"One of the emerging challenges is climate," he says. "The nexus between water and climate will pose challenges because of the severity and frequency of extreme events such as floods and droughts. We will need to determine what risk reduction strategies the U.S. should support in developing countries to help make them more aware of those risks."

Ico is serving a second year in his office, and then hopes to continue to work in international environmental science policy. "The Diplomacy Fellowship is a great entrée into government and international organizations," he says.

**Jay Graham** had a ten-year career evaluating environmental health interventions on the U.S.-Mexico border when he decided to return to school to get a PhD. "I did monitoring and evaluation work for a non-profit based out of El Paso," he says. "I applied for and received grants, but could never be the PI [principal investigator] because I didn't have a PhD." So he decided to go back to school in mid-career.

After finishing his PhD in environmental health engineering at Johns Hopkins University, Jay went to visit a friend, John Borrazzo, at the U.S. Agency for International Development (USAID) to ask for a job. Borrazzo, a former AAAS Fellow at the EPA and USAID, told him there wasn't a position, but to apply for the AAAS Fellowship. Jay did and then went back to his friend at USAID and a fellowship opportunity was created tailored to Jay's strengths. "The timing was perfect," he says. "I've always had an interest in safe sanitation and 2008 was the international year of sanitation, so there has been a lot going on."

Jay had the opportunity to work in West Africa where he focused on water and sanitation issues. Because of his experience, he also was able to jump in and take the lead on a study of sanitation in Singapore, Malaysia, and Thailand, his biggest accomplishment to date. "We did interviews over a two-week time frame to assess changes in sanitation coverage."

After the fellowship, Jay would like to continue focusing on the fundamental elements of basic health. "I enjoy programmatic and policy research," he says. "I'm also interested in a position at a university that would include community interaction and outreach." His experiences as a AAAS Fellow are preparing him for both.

**Federico "Ico" San Martini, PhD**

Chemical Engineering  
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2008-09 Diplomacy Fellow; Department of State, Bureau of Oceans and International Environmental and Scientific Affairs, Office of Environmental Policy

**Jay Graham, PhD, Environmental Health Engineering, Johns Hopkins Bloomberg School of Public Health**

2008-09 Diplomacy Fellow; Agency for International Development, Bureau for Global Health, Office of Health, Infectious Diseases and Nutrition, Maternal and Child Health Division

**Xiomara Sinisterra, PhD, Plant Pathology University of Florida**

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