

Some AAAS Science & Technology Policy Fellows find opportunities where they least expect them. For **Mark David Lim**, an invitation to interview at the Office of Biorepositories and Biospecimen Research at the National Cancer Institute, part of the National Institutes of Health, came as a surprise.

“I didn’t even know what biorepositories were,” says Mark, a chemistry PhD from the University of California – Santa Barbara. But after hearing about the exciting work in the office on how research specimens are handled and created, Mark knew it would be a great fit.

“In my own research I wondered why I sometimes couldn’t duplicate results,” he explains. “How specimens are created or handled affects research outcomes. Results may be an artifact of handling, not just from the experiment.”

Because of this experience, Mark appreciated the need to improve communication with physical scientists. “I proposed reaching out to physical scientists and talking with them about how to work better with specimens,” he says. He took the lead on organizing a symposium session on specimen quality. Mark has also contributed to the Innovative Molecular Analysis Technologies (IMAT) program, which works to develop promising technological innovations to fight cancer.

“My fellowship responsibilities have really skyrocketed in my second year,” he says. “It has been a great experience.”

For other AAAS Fellows, it is the culmination of their experiences that helps them chart a new career. **Robin Schafer** learned about the fellowship just one month before the deadline, but knew she was ready for a change. “I wanted to try something different from academia,” says Robin, who received her PhD in linguistics in 1995, and worked for six years as a cognitive neuroscience research scientist at Yale University. “I found myself in a position where a lot of women find themselves in the middle of their careers. As women we often take diverse pathways and end up having unconventional careers,” she says. “The AAAS Fellowship is a great place for valuing that path.”

Robin’s placement at the Office of Solid Waste and Emergency Response at the U.S. Environmental Protection Agency suited her interests perfectly. “I had always done volunteer environmental work and had been involved with a number of grassroots efforts,” she says.

At the EPA, Robin has focused on health-related issues. She organized a workgroup to develop health indicators that will incorporate social determinants of health at waste cleanup sites. “We are not just dealing with land, but also with communities,” she says. “The goal is to remediate for use, and that can affect children’s lives and health.” Robin is also drafting a report about where best to site schools to reduce the risks of contaminants to children.

As someone who has always worked on local environmental issues, Robin was unsure about what could be done at the federal level. “There is the opportunity to accomplish more than I thought,” she says. “And the interesting thing about the fellowship at EPA is that you have a lot of freedom to pursue projects on your own.”

Good timing and a little luck worked well for **Judith Lytle**. Just a few months before the fellowship deadline, Judy heard about the AAAS Science & Technology Policy Fellowships from a former Fellow. “I had to convince my committee to let me defend in time to apply,” Judy explained. She did, knowing that bench science was not her passion. “I prefer lots of breadth and a little depth,” says Judy, who has a PhD in neuroscience from Georgetown University. “I work on topics now that would never have crossed my mind—topics where I’m not a subject expert.”

When she started her fellowship, Judy was assigned to work with Captain Elizabeth Montcalm-Smith, a program officer in the Biomedical & Biological Division of the Warfighter Performance Science and Technology Department in the Office of Naval Research (ONR). “She was a wonderful mentor and I had a lot of autonomy,” Judy says. “She would hand me a project and let me run with it, but was always there if I needed anything.”

Judy’s primary project as a AAAS Fellow was to work on noise-induced hearing loss—one of the

most prevalent conditions suffered by members of the United States military. “The priorities for our programs come from warfighters and are based on their needs,” she explains.

Judy now has a contract position with ONR and is also division director at Avian Engineering, a company that places scientists into jobs like hers. Her work for ONR now involves such problems as decompression sickness, head-neck-back injuries, and post traumatic stress disorder. “I feel like I’m doing something that makes a difference.”

Jessica Tucker knew early on she wanted to do policy work. “I was drawn to areas of medicine that had more to do with science policy than scientific research,” says Jessica, who received a PhD in chemical engineering from Carnegie Mellon University. “I was interested in topics like delivering medication to the underserved more than developing drugs.” The AAAS Fellowships seemed like the perfect opportunity. “But I didn’t get it the first time I applied,” she noted. Undaunted, Jessica applied again the next year and secured a placement in the Office of Medicine, Science and Public Health at the Department of Health and Human Services.

She took on an exciting project involving the health and security risks of synthetic biology, focusing on DNA that could be used to create diseases like anthrax, polio, or smallpox. “For this project, science plays a big role. For example, what part of the DNA sequence do we need to monitor?” You have to know cutting-edge science in this area to answer this policy question.”

Jessica works with other agencies, including the Department of Homeland Security, the Federal Bureau of Investigation, the Department of State, and the National Institutes of Health, to help determine guidelines for synthetic DNA. Working with such a diverse group, it is critical that she understand different perspectives and interests. “NIH, for example, is concerned with legitimate burdens for researchers who need access to synthetic DNA,” explains Jessica. “This is different from the concerns the FBI may have.”

Before the fellowship, her interests leaned more toward public health than security. However, she took this assignment for the experience. “It was a lower profile assignment than some of the other things I could have worked on, but I was able to take more of a lead than I would have on other projects,” Jessica shared. “It’s not an issue I would have engaged in before the fellowship.”

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