

Career in focus: Science Policy

To get the inside track into careers in Science Policy, our Executive Board Member, Shalini, researched available opportunities and spoke with Dr. Melanie Roberts, Director of the Emerging Leaders in Science and Society Program hosted by AAAS. We hope that our FAQs section and the interview with Dr. Roberts will give you crucial insight into Science Policy as a career.

SCIENCE POLICY FAQs

What is science policy?

“Telling someone that you work in science policy inevitably leads to the same response: “What does that mean?” You try to explain that it involves some vague combination of science writing, communication and advocacy, but that just leads to blank stares and sympathetic head-nodding. The truth is, there is no good, short response that adequately can answer the question. Fortunately, the long answer is much more interesting.”

- [Geoffrey Hunt](#), ASBMB Public Outreach Coordinator. Read Geoffrey Hunt's full article [here](#).

Why switch?

Working in science policy allows you to use your expertise to influence the direction of the nation's growth. You can advocate for policies that determine how science is conducted (funding, ethics, regulations), or facilitate and improve policies on issues ranging from energy to defense.

What positions can one hold in science policy?

The following is a non-comprehensive list of positions in science policy with examples of their responsibilities. Many other opportunities are available to scientists interested in policy and job descriptions may vary widely.

Analyst: Collect data relevant to a particular issue and evaluate policy options.

Project manager: Organize advisory committees and oversee technical contracts.

Liaison: Act as translator between the scientific community and policy makers or the public.

Advisor: Make recommendations to policy makers.

Diplomat: As scientific attaché at embassies, one represents the nation's science policies as they pertain to foreign policies and international issues.

Advocate/Lobbyist: Support and lobby for/against specific policies in science, healthcare, conservation, energy, business etc.

Policy maker: Upper management in non-governmental organizations (NGOs), professional organizations, educational institutions, government agencies. One can also run for government office.

Unique positions: Organizations sometimes create new and unique positions to specifically utilize the talents of their personnel.

Where will you work?

With experience in science policy, you can work for the federal government, state department, various government agencies and non-profit, professional or international organizations, as well as in public communications or in private businesses. In addition, nearly a quarter of science policy fellows return to academia.

How to make the transition?

The best way for US Citizens to transition into science policy is to apply for an [AAAS S&T Policy Fellowship](#) after completing a PhD. Fellowships allow you to gain relevant experience and expand your skills beyond the laboratory bench. One can also join a formal program in policy. Numerous resources including opportunities available at Yale, fellowships and book reviews are listed on our [blog](#), for the benefit of those interested in a career in science policy.

Interview with Dr. Melanie Roberts

Founder and Director, Emerging Leaders in Science & Society, Hosted by AAAS

How did you become interested in science policy?

I originally went to graduate school because I wanted to contribute to treatments for disease. For the first time, human embryonic stem cells could be grown in culture and I was excited to work on them. Soon after, in 2001, President Bush announced restrictions on stem cell research. First I thought, "How can THEY tell me what I can or cannot study?" Then it occurred to me, "Well, I guess I am paid by taxpayers... so who *should* decide what to study?" As I began to explore the intersection of science and society, I became more convinced of the need for scientists and other scholars to engage in dialogue with both the public and policy makers, so that they can make better decisions about complex issues and so that scientists better understand how their work fits into the bigger picture. In my 4th year of grad school, I recruited a team of graduate students and post-docs to establish a grassroots organization at the University of Washington called the Forum on Science Ethics and Policy (FOSEP), which promotes dialogue among scholars, the public, and policy makers.

Please describe your own career path to date.

After completing a Ph.D. in neurobiology, I served in the office of Senator Jeff Bingaman (2006-7) and then at the National Science Foundation (2007-8) as an AAAS Science and Technology Policy Fellow. I then joined the University of Colorado, first as a visiting fellow at the Center for Science and Technology Policy Research and then the Assistant Director of the Biofrontiers Institute. Currently, I am director of a new program, Emerging Leaders in Science and Society, which is hosted by the American Association for the Advancement of Science.

Could you tell us a little about ELISS?

ELISS is a new program that prepares graduate and professional students to collaborate across boundaries to tackle complex challenges in society. It's a one-year, competitive, hands-on experience for students from all disciplines. ELISS fellows will improve their leadership skills by helping local communities and the nation to better understand and address tough issues in areas ranging from health to energy to education. They will collaborate with a team of ELISS fellows from other campuses and mentors to synthesize lessons from around the country into an online resource and a final briefing for national leaders in Washington DC. We've designed ELISS as an extracurricular, volunteer activity that fellows will pursue simultaneously with their course of study, and in collaboration with other student groups on their campus.

We will be partnering with five universities for the pilot class beginning in January 2014, and expanding to other campuses in the coming years.

Could you tell us a little about one of your favorite projects/initiatives?

I'd have to say that my most profound professional experience, even after working for a senator and a Nobel Prize winner, was co-founding and developing FOSEP as a graduate student. We (the co-founders) didn't really know what we were doing and didn't have huge expectations, but we figured it out together and made a bigger impact than we had ever dreamed. It was also the best team with which I've ever worked. For example, 750 people from the community attended a public forum we organized on stem cell science, ethics, and policy. We were honored when VIPs - like our US Congressman - accepted invitations to participate in our events, when the local NPR station asked us to suggest guests for science-related shows, or the science museum invited us to collaborate on public outreach events. Though my advisor was slightly skeptical of my policy interests at first, the project management skills I learned through that experience actually increased my productivity in lab. It was a sweet moment when he said to me as he was leaving an event that I had planned, "I had better be nice to you, because I have a feeling that someday you'll be deciding my funding."

What are one's options after a policy fellowship?

Nearly half of the AAAS S&T Policy fellows continue in policy careers in the federal government and elsewhere. About a quarter returns to academia and a quarter does something completely different.

How difficult would it be to return to academia after a policy fellowship or internship?

If you're fairly certain that you want to return to academia after your fellowship, it's a good idea to have a position, like a postdoctoral appointment, lined up in advance. You may be able to make a case that an 'insider's understanding' of science policy will help the lab or institution. You could also wait until a sabbatical to do a fellowship. Alternatively, you could serve as a fellow at the National Science Foundation, Department of Energy or other science funding agency and stay close to your area of expertise. Not only would this give you a big picture view of science and upcoming funding opportunities, but would allow you to make many new contacts in academia.

Another strategy is to keep up your scientific publications by maintaining small collaborations, reviewing work in your area of expertise, or writing up data from previously completed experiments.

In your opinion, what is the best time to make the transition into science policy?

As soon as you know this is what you want to do! In most cases, you don't gain significant added value for a policy career by continuing in research after completing your graduate degree. In fact, if you know that you want to do policy early in your career, you may even consider switching to a masters program in policy rather than completing your graduate degree in science. For those who want to test the policy waters before transitioning to something full time, there are opportunities such as the 3-month Mirzayan Science & Technology fellowships at the National Academies.

What is a typical day like? What is work-life balance like?

Both day-to-day activities and work hours vary between offices in congress and from organization to organization, quite similarly to variations between different labs. Usually, for AAAS fellowships, you interview with individual offices and can evaluate the functions, requirements and work hours before selecting a position that best suits your priorities.

What, in your opinion, are the most important skills for success in a science policy career?

If you had to pick one, it would be people skills – including both written and verbal communication, a friendly demeanor, and a personality that makes one easy to work with. In addition, success in science policy requires one to be a “systems thinker,” a person who can see

the big picture and recognize how the various aspects of economics, politics, culture, and science fit together. When I first became an AAAS fellow, someone gave the advice to “be a problem solver, not just a problem spotter.” In science, we are trained to pick holes in other people's work. In policy, it's best not to point out a problem without offering a better idea!

What advice would you give to graduate students & postdocs in science, who wish to make the transition into policy?

When considering career options, many people ask themselves, “do I want to go into industry, academia, or government?” I think that's the wrong question. Instead, ask yourself, “what problem am I really passionate about solving?” Then explore a variety of ways to address that problem. The problem I want to solve is to better connect university research & education with benefits for society. I've worked on this problem from government, then academia, and now a non-profit.

Second, get real-life experience. Books and classes can give you some helpful background, but policy is a field where you really have to learn by doing. So much is not written down, and relationships are critical. When I first started as an AAAS S&T Policy fellow in Congress, my boss kept scolding me to, “Stop reading! Go talk to people!” “But I don't even know enough to know what to ask,” I told her. She said, “Just tell them to tell you everything you need to know.” It turns out that she was quite right.

I gained experience in graduate school partly by showing up in the right place at the right time. I was interested in stem cell policy, so I drove down to the state capitol and signed up to testify at a stem cell hearing. I might not have been the #1 expert on stem cell science in the world, but I can assure you I was the #1 expert in that room. I ended up serving as an advisor to state congresswoman who sponsored the bill.

Thank you for reading!

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