

## Career Development Seminar Overview: Careers in Science Outreach

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The November installment of the career development seminar series featured five speakers representing different facets of Science Outreach. From curriculum development to outreach and communications at professional societies, the panelists had an incredible range of experiences and great advice for fellows interested in careers in outreach.

The first speaker was Dr. Jennifer Childress, presently the Director of Instructional Support for Science at the non-profit, non-partisan organization Achieve, which works on multiple fronts to improve science education standards and accountability for K-12 students. Dr. Childress earned her PhD in Biomedical Science from the University of Texas-Houston. While working on her degree, Dr. Childress spent a few hours each week volunteering and tutoring at local schools and discovered she liked it more than being in the lab; this led her to apply to education internships and fellowships here in DC. During a fellowship at the National Science Resources Center (now the Smithsonian Science Education Center), Dr. Childress worked on implementing science education programs in school districts throughout the country. She transitioned to her current position about four years ago and has overseen the development and the beginning of implementation of shared science education standards (aka Common Core State Standards). Most days involve a lot of phone calls, meetings and emails, with the occasional trip to a local school to observe and/or meet with teachers, as well as monthly trips to schools around the country. Dr. Childress' advice to those thinking of transitioning away from the bench is to find something you really love and volunteer in that area; most employers, she says, won't hire someone without some sort of applicable experience to the position.

Dr. Childress was followed on the panel by Dr. Geoff Hunt, the staff liaison for the American Society for Biochemistry and Molecular Biology's (ASBMB) Public Outreach Committee. Dr. Hunt received his PhD from Princeton University for work on the effects of extracellular matrix proteins on embryonic stem cell behavior. During graduate school, Dr. Hunt realized laboratory science was not his passion; he discovered his true calling—explaining and translating science for the public—by taking an environmental policy class. He then took more policy-related courses and, like Dr. Childress, applied to a lot of policy fellowships. Dr. Hunt's favorite part about his fellowship with ASBMB was getting scientists to show their enthusiasm and explain the importance of their work to the outside world. Thus, when a position on ASBMB's Public Outreach Committee opened up at the end of his fellowship, Dr. Hunt was happy to stay on. Dr. Hunt describes his job as "getting scientists to talk science to people who aren't scientists," which he does by developing outreach materials and programs that the Society's members can use in their own backyards. Dr. Hunt encouraged everyone to find out what IS and ISN'T their passion by volunteering, and then to use that knowledge to figure out how to make a career out of what they care most about. Importantly, don't worry if your path isn't a straight line!

Next was Dr. Erika Shugart. Dr. Shugart is the Director of Communications and Marketing Strategy at the American Society of Microbiology (ASM), where she oversees public outreach, media relations and strategic marketing. Dr. Shugart got her PhD in Biology from the University of Virginia, but along the way realized she didn't like the frustration and drudgery of day-to-day lab work. Mostly for her own benefit, Dr. Shugart started one of the first websites dedicated to "alternative" science careers, for which she would go on informational interviews and write them up. Through these interviews, Dr. Shugart found an internship at the National Research Council (NRC) and worked her way up from intern to Director of

the Office on Public Understanding of Science. When the National Academies of Science, the parent organization of NRC, opened the Marian Koshland Science Museum, Dr. Shugart joined on, again working her way up to Deputy Director. She oversaw the development of numerous hands-on and virtual exhibits in this capacity before her position was eliminated due to budget cuts. After wallowing in “a dark depression” for a while, Dr. Shugart formed her own consulting company directed at science outreach. At the same time she resumed her informational interviews, which ultimately led her to her current position at ASM. As upper management, Shugart says she spends 80 percent of her time in meetings; those lower on the ASM totem pole would likely spend more time writing. Dr. Shugart offered four pieces of advice: 1) “marry well” and/or have a good support network because if you’re looking to switch fields or careers you will need lots of emotional (and financial) support; 2) differentiate yourself—don’t just volunteer, show leadership in some capacity; 3) network and do informational interviews; and 4) consider hiring/visiting a career counselor.

Another University of Virginia alumna, Dr. Catherine Swanwick, was the fourth speaker. Before coming to her current position at Ideaventions as Director of Life Sciences Programs and Director of Early Childhood Programs, Dr. Swanwick earned her PhD in Neuroscience and spent five years as a postdoctoral fellow at the NIH (NIMH). After realizing that she really wanted a career in science education, Dr. Swanwick discovered Ideaventions, a children’s science center in Oakton, VA, that was started by a husband and wife team with the goal of making science education more hands-on and inquiry-based. Ideaventions offers after-school classes, workshops, field trips and summer camps to teach kids, aged 3-13, about STEM subjects. Last summer Dr. Swanwick created a new program, the **Biomedical Research Academy in Neuroscience (BRAIN)**, as a two-week camp to introduce gifted middle school students to “real” neuroscience research. For every class or program she leads, Swanwick does all of the teaching, writing of lesson plans, finding of materials, grading of assignments and dealing with parents. It’s very time-consuming and stressful, she said, but she loves the innovation and meaningfulness inherent in teaching. Dr. Swanwick’s advice is to look for something that energizes you; in this job she comes home more excited than when she left in the morning, mostly because she loves getting to see “the light bulb go off” for kids every day. She noted that Ideaventions is looking for more instructors, but that you need to REALLY love education, teaching and kids to work there.

Finally we heard from Dr. Amy D’Amico, Director of Professional Services at the Smithsonian Science Education Center (SSEC), who received her PhD in Biology from Northeastern University in Boston, MA. Before going to graduate school Dr. D’Amico taught middle school for four years and loved it. She chose to go back to school because of some very positive interactions she had with PhD scientists while teaching. As a graduate student Dr. D’Amico realized she was equally passionate about science and teaching, so when she finished her degree, she tried to find a job that would marry her passions. She moved from Boston to DC and set up informational interviews with professional societies, universities and outreach organizations like SSEC. Dr. D’Amico was lucky enough to find a fulltime teaching position at Georgetown University as well as a contract position with SSEC, working on professional and leadership development materials for science teachers over the summers. About two years ago she flipped these commitments to work fulltime at SSEC and as an adjunct professor at Georgetown. Dr. D’Amico loves that she still has face-to-face contact with students (at Georgetown), but also a wider impact as the curricula SSEC develops is in the hands of over six million students across the country. Dr. D’Amico advised fellows to use volunteer and contracting opportunities (like those available at SSEC!) to get education/outreach experience.

TAKE HOME MESSAGES:

- 1) Informational interviews are your best friend! These are the best way to find out what kinds of jobs are out there, to meet people active in the field(s) you're interested in and learn how they got there, and to network—ask each person you talk with to recommend one other person you should contact. Just remember, the purpose of informational interviews IS NOT for you to ask for jobs, but to listen to what the interviewees say and try to find something that resonates with you.
- 2) Volunteer! All of the panelists mentioned volunteering as a key way to get experience and demonstrate interest, which you will need when applying for fellowships/internships/jobs. Moreover, try to get leadership experience through volunteering—don't just show up, serve as the coordinator or organizer of an event/program.
- 3) Find a career that motivates and fulfills you, and don't worry if doing so means that your career path zigs and zags and goes in loops. Each of the speakers talked about weeding through jobs they didn't like, sometimes for years, before finding their "passion."