A unique calling: Careers in career development for STEM doctorates

Caleb C. McKinney, assistant dean of graduate and postdoctoral training and development at Georgetown University Medical Center in Washington, D.C., laughs when he thinks about how he maneuvered his Ph.D. in virology into a career in career development. As a postdoc at the U.S. National Institutes of Health (NIH), he was training students in his group on the practicalities of conducting research and found the experience to be personally transformative.

“I was writing a letter of recommendation for a student I had helped when I realized that I wanted to have these ‘realized’ moments on a bigger scale,” McKinney says. He approached the Office of Training and Diversity at the National Institute of Allergy and Infectious Diseases (NIAID) about assisting them with their efforts, and subsequently volunteer-coordinated activities that fostered the professional development of NIAID fellows. His career, and his bliss, were on their way.

Some scientists and engineers who have navigated the knotty question of “what should I do with my life?” choose to remain on “Rue de Research” and pursue traditional academic professions. As a few, like McKinney, who respond by deciding they want to help other Ph.D.s find impactful careers. And that’s why we are seeing the emergence of the still fledgling field of career development for doctorates in STEM now buoyed by STEM doctorates themselves. By Alaina G. Levine

One career, many paths

Along these lines, there is now a growth in formal institutional administrative divisions such as postdoc affairs offices, which help STEM grad students and postdocs think about their career opportunities. There are also organizations with missions to advance the careers of those in the career development profession, such as the Graduate Career Consortium (GCC) and the National Postdoctoral Association (NPA). Additionally, “train-the-trainers” programs, such as those organized by NIH that support the knowledge growth of investigators and other mentors who are working with protégés, are making an impact in expanding this profession.

“It’s growing by leaps and bounds,” says Patrick Brandt, director of career development and training in the Office of Graduate Education at the University of North Carolina at Chapel Hill. “10 years ago, there weren’t many institutions hiring Ph.D.-trained professionals in this area.”

Natalie Lundsteen, assistant dean for career and professional development at the University of Texas Southwestern Medical Center in Dallas (UT Southwestern), says her career was launched when she noticed “a need for someone with career skills and a Ph.D. to work with grad students, cont.>
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postdocs

which aligned with a big explosion in the world of career development in the late 2000s.” Her dissertation research followed students pursuing internships at London banks, through which she discovered that the skills students need to succeed in a workplace are not necessarily linked to skills gained in academia. This finding inspired her to take on a career development role at the Massachusetts Institute of Technology, and she was subsequently recruited to UT Southwestern to build its career development division from scratch. Today, she assists biosciences Ph.D. students with their career strategies and is actively involved with GCC. Many of her advisees have gone on to careers in career development themselves.

To paraphrase an old Paul Simon tune, there are “50,000 ways” to leave your research and arrive at career development as a career. Immunologist Lia Paola Zambetti used communications to do so. She was a research fellow at the Singapore Immunology Network (Sign) of the Agency for Science, Technology and Research (A*STAR) in Singapore, but wanted “to get out of the academic grind and find a job that was not related to the bench.” She had already been engaged in science communications and had been freelancing as a popular science writer for several years. Through networking, she found a position in a new communications office at A*STAR. After three years there, she secured her current position at the University of Sydney, where she manages a fellowship program and organizes trainings in soft skills, such as public speaking, networking, and leadership for early-career researchers.

Tracy Costello’s path was crystalized as a postdoc in genetics and biostatistics at the University of Texas MD Anderson Cancer Center in Houston. While still a fellow, she volunteered with and later served on the board of directors of NPA. “It solidified for me that I had the ability to impact people beyond my particular circle, in that some of the things I was working on might not benefit me or my peers, but will benefit postdocs in the future.”

— Tracy Costello

“You have to be OK with doing mundane tasks, such as reserv- ing rooms and caterers and inviting keynote speakers and explain- ing to them what you want them to speak about,” he says. Naturally, strong communication skills are critical. “It’s all about communicating backwards and forwards with the stu- dents, employers, alumni, and entities in the community,” says Lundsteen, who regularly stays apprised of industry trends for her charges by interfacing with the regional chamber of commerce and reading the Dallas Business Journal. “I am a clear- inghouse for opportunities and information, and my job is to be objective and to present alternatives to students.”

Costello adds that the most important skills for success in this sector are being able to listen, to ask insightful ques- tions, and to provide clients “a safe space to explore what they want to do.”

Making the transition

For many career development professionals, the seeds for their career advancement were planted in the institutions in which they conducted their Ph.D. or postdoc research. They sought out opportunities to volunteer, assisted in career counseling efforts, did informational interviews, and demonstrated to the community that this was their passion and aspiration.

“The number one way to position yourself for a role like this is to get involved, whether it is at your local university or at the national level,” urges Costello. “It’s critical that people have a microexperience of a career, whether it is an internship or volunteer experience. It’s a huge plus, because when you’re actually applying for the job, you can say you are already engaged in it.” cont.>
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postdocs

Seek out these opportunities early, says Lundsteen, by getting involved in your university’s grad student or postdoc association. It’s even better to join these organizations’ career committees so you get a greater “understanding of the mechanics of the job,” she advises. And take heed—if your institution doesn’t have one of these organizations or committees, why not be an innovator and start one yourself?

One important aspect of making the transition is to ensure proper communications with your mentor. Regarding principal investigators (PIs) who have already demonstrated that they are open to you pursuing nonbench careers, it would be prudent to start a discussion with them early on to safeguard that smooth transition. With mentors on the other end of the spectrum, who may be less than enthused if you suggest you want to do anything outside the ivory tower, you should be careful about when and how you broach the subject, and try to do so in a safe manner that doesn’t damage your relationship or endanger your employment arrangement.

McKinney took extra care to involve his PI in his plans early on. “I started developing project management platforms and working with my PI every week to make sure I was on target with my experimental deliverables, so I could get that extra time in the volunteer experience,” he says. “I kept her informed as a key stakeholder.”

But while you are engaging your PI and looking to do a side gig to gain experience, it’s important not to sacrifice your research. “Be good in the lab because you want to have high credibility. You have to be taken seriously,” warns Peter J. Peters, university professor and Limburg Chair at Maastricht University in The Netherlands.

While serving as the dean of postdoctoral affairs at the Netherlands Cancer Institute, Peters built the Postdoc Career Development Initiative (PCDI) to mentor and inspire young researchers at early stages of their scientific careers; it was later formally funded by the Dutch Ministry of Economic Affairs and became an independent organization. “People need to recognize you as someone who is good at science and a good citizen in the institution. Then, the director will give you money for your ideas,” he says. “If you are sloppy in your work as a postdoc, you won’t get momentum for your work at the institution.”

The payoff for this path

One of the features of this career path that is especially gratifying for those with STEM degrees is that they get to remain a part of the scientific enterprise while they influence the next generation of scientists. Brandt loves the fact that he is still an active participant in higher education. He still teaches, although now it is in education research.

“I like the flow of the academic year, being on campus, and hearing the bell tower chime—I feel like I’m an academician,” he says. “I also love the science and still feel like I get to vicariously enjoy it.”

And then there is the definitive payoff. “I love my job every day because I get to help people figure things out. Hopefully they don’t feel the pain and struggle I felt at not knowing where to go if it’s not going to be faculty,” says Costello. “Most mentors don’t know how to guide you in any of the other career opportunities.”

Lundsteen agrees: “My life’s mission is showing people their capabilities and possibilities, and that brings me the greatest joy. I see I’m making a difference. I have the luxury of helping people and having them write me and say, ‘You played a part.’”

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