

YES, A PHD CAN BE A TICKET TO TENURE. BUT GROWING NUMBERS OF EMORY ALUMNI **ARE TAKING THEIR GRADUATE DEGREES** ON A RIDE BEYOND THE ACADEMY GATES

HEN KAREN VENTII 08PHD joined the cancer biology program in Emory's Graduate Division of Biological and Biomedical Sciences more than a decade ago, she wasn't entirely sure where the experience would lead—nor did she know exactly where she wanted her education to take her. She was simply interested in the field and hopeful that her graduate degree would open up the right doors.

"I enjoyed science and biology and their application to medicine and health, and I knew I wanted to stay in the health field, but I didn't know how I could parlay that into a career I was passionate about. I didn't know what niche was for me," says Ventii.

With the encouragement of her adviser, Professor of Biochemistry Keith Wilkinson, Ventii took every opportunity during her graduate studies to attend networking and career events organized by groups such as Georgia Bio, a nonprofit organization in Atlanta that promotes the interests and growth of the life sciences industry. A seminar featuring a medical writer ignited Ventii's interest in a career that could combine her love of science, education, and outreach.

"My experience in graduate school allows me to synthesize complex information and understand it in its simplest element," says Ventii, who now runs Gold Star Communications, a medical communications agency in Atlanta. "That helps me in the medical writing world where, on any given day, you are faced with the challenge of explaining complex medical information at the patient level. It helped make me a better communicator."

The support and flexibility offered by her PhD adviser was integral to her success in finding her niche, Ventii says. Grateful for that support, she has given workshops on medical writing at Emory.

"It is important for me to be involved, because my path in grad school was very self-motivated, but I recognize that some grad students don't have the time or resources to help them with that," she says. "I love being a medical writer, and I am passionate about telling people to be aware of what's out there, because they really might find the career of their dreams."

In higher education, the pinnacle of academic achievement is the PhD, a degree that long has been equated with the prestige of professorship. But as the number of PhD graduates in all fields has risen during the past two decades, the percentage of those finding careers in academia has declined.

The James T. Laney School of Graduate Studies has launched several programs to provide resources to students who are exploring a range of career options. Among these is Pathways Beyond the Professoriate (PBP), a series that connects students with alumni from a variety of fields who share their career experiences and how they use their advanced degrees in positions current students may not have considered.

"The doctoral degree is, first and foremost, a research degree. The most essential task is always to prepare future researchers—future intellectual leaders—in the field of the degree, and that is where graduate faculty are truly experts," says Laney Graduate School Dean Lisa Tedesco. "At the same time, faculty members and programs are becoming more aware of and open to the variety of professions that their graduates pursue, and this may affect some aspects of how they train and advise their doctoral students. In many ways, this is where the Laney Graduate School is stepping in, by putting together programs like the PBP and others to provide training and guidance in areas where the faculty have limited experience."

Since it was launched in 2010, PBP has grown from occasional sessions to monthly panels of alumni speakers that attract capacity crowds of students.

BY MARIA M. LAMEIRAS

ILLUSTRATIONS BY CHRIS LYONS

MEETING ALUMNI WHO HAVE FORGED DIFFERENT CAREER PATHS, LISTENING TO THEIR STORIES AND APPRECIATING THEIR PROFESSIONAL LIVES, KEEPS TEACHING US THAT GRADUATE EDUCATION IS AN ENORMOUSLY VALUABLE RESOURCE—BOTH IN THE LIVES OF THE INDIVIDUAL GRADUATES AND IN THE RICH VARIETY OF PROFESSIONAL SPHERES WHERE THEY MAKE THEIR CONTRIBUTIONS WORLDWIDE.

LISA TEDESCO, DEAN, LANEY GRADUATE SCHOOL

49,000

PHD GRADUATES

The number of PhD graduates in all fields rose from 31,355 in 1981 to 49,010 in 2011, according to a "Survey of Earned Doctorates" by the National Science Foundation, the National Institutes of Health, the National Endowment of the Humanities, NASA, and the USDA.

82%

ARE NOT ACADEMICS

Of that total number of graduates, 15,902 had jobs lined up at graduation, and 8,428 had jobs in academia.

>15%

ARE TENURE-TRACK

Despite the rising number of PhD graduates in all disciplines, the proportion of science, engineering, and health sciences PhDs holding tenure and tenure-track appointments at academic institutions within three years of receiving their degree declined from a high of 18.6 percent in 2003 to 14.7 percent in 2010.

Laney Graduate School (LGS) also has started offshoot programs such as the Campus Connections professional development series and Mentors on Call, a searchable database that allows graduate students to contact alumni who have volunteered to offer guidance.

"The concept is not unique, but I think we have a more developed and systematic approach than most of our peers," Tedesco says. "We offer sessions that span the full breadth of the graduate school programs as well as a variety of employment sectors. We also work hard to contact alumni and develop sessions that pull together perspectives from different fields and professions."

Armed with bachelor's and master's degrees in biomedical engineering, **Gina Alesi 16PhD** entered the cancer biology program in the Graduate Division of Biological and Biomedical Sciences in 2011, confident of her plans to become a researcher and lead her own lab to fight the disease.

At the time—three years after Ventii had completed the same program—the US Congress had recently passed a law that would require a trillion dollars in across-the-board budget cuts beginning in March 2013 if lawmakers could not formulate and pass a plan to reduce the burgeoning federal deficit. As the deadline approached, the National Science Foundation and the National Institutes of Health—each anticipating five percent in cuts from their overall budgets—announced they would fund thousands fewer grants and reduce the funding offered to existing grantees.

Scientists and researchers across the country, whose work depended on already-competitive federal funding, began to fear for their programs, and students pursuing advanced degrees in science and research found themselves uncertain about the futures they had planned.

Alesi, recipient of a William and Catherine Rice Endowed Research Award, says it was a talk by her benefactor, William Rice 86PhD, founder of Cylene Pharmaceuticals, that got her thinking about careers outside academia.

"Dr. Rice mentioned that there are many job opportunities for PhDs in government, industry, and business," says Alesi, who went on to join the Advanced Degree Consulting Club at Laney Graduate School. "I attended a strategic communication workshop to learn more about business and consulting. After attending the workshop, as well as a related PBP session, I learned that I could leverage my PhD experiences to analyze and communicate solutions for complex business problems."

Now Alesi has an offer to work for a global consulting firm after she graduates in 2016.

"Preparation is necessary to transition into a career outside of academia after earning a PhD," she says. "It's invaluable to have PhD alumni come back and share their experiences and knowledge about transitioning into alternative career paths."

Contemplating that transition can be worrisome for a PhD candidate, says Chris Curfman ooPhD, who earned bachelor's and master's degrees in chemistry at Virginia Tech before coming to Emory for his doctoral studies.

"My intention then was to become a research professor. I enjoyed teaching a lot and wanted to pursue that path," Curfman says. "My fallback was going into industry and being a research chemist. Those were the only two ideas I'd entertained."

About halfway through the program, though, he began to question whether a career centered on full-time lab research was the best option for him.

"I enjoyed reading and writing about chemistry, learning what others were doing in the field, and teaching and giving presentations, but the day-to-day activity of lab work wasn't something I was enjoying," Curfman says.

He began researching postdoctoral positions, but was still unsure about a career in research. He talked with his adviser, Professor Dennis Liotta, who had experience with taking research to market.

"Dennis was very open and encouraging. He is the one who actually asked me if I would like patent law as a possible alternative. He had a lot of experience in that field because of his work, and I saw those activities going on a lot in his group," Curfman says. "He was very positive about careers in patent law, and he opened the door for me."

Curfman says Liotta's willingness to discuss alterative careers with him—and to introduce him to patent attorneys—prepared him for his next step. In his final year at Emory, Curfman applied and was accepted to law school. He took a job as a science adviser, and then patent agent, while earning a JD.

"The goal of Liotta's group was not just to churn

out more professors; they were trying to make sure students were growing in their knowledge of chemistry and pursuing what was in line with their interests," says Curfman, who is now a principal with Meunier Carlin and Curfman, one of the largest intellectual property law firms in the Southeast. He specializes in helping companies and universities with the patenting process.

Curfman also is an adjunct professor of patent law at Emory's School of Law and participates as a speaker and mentor in the BEST (Broadening Experience in Scientific Education) program at LGS, a program sponsored by the National Institutes of Health that "aims to better prepare predoctoral and postdoctoral scientists for the breadth of possible careers in the biomedical research workforce."

Fulbright postgraduate scholar Chris Brown 16PhD appreciates opportunities, like BEST and Pathways, to gain exposure to alumni who have channeled their interests into successful careers.

Within two years of enrolling at LGS in 2011, Brown's own scholarly interests completely shifted direction, from purely historical to purposefully practical.

Combining his studies of sports history, urban history, Latin American studies, and sustainability, Brown's dissertation will use soccer as a lens for examining the history of Manaus, a city at the heart of the Brazilian Amazon. He'll explore how the evolution of urban soccer fields and spectator venues, games, and social commentary helped shape public policies and cultural dynamics in the city.

"I am really looking to pursue an academic path, but also to make as much of an impact beyond the walls of academia," says Brown, who is interested in urban and sports planning. "Learning about consulting options through the PBP program was one of the best presentations I have been to, as was one on writing for a nonacademic audience. It makes you realize it is not about turning away from the academic side, but thinking of ways to combine the two."

Like many students, a personal quest for knowledge and understanding led Leah Wolfson o1C o8PhD to study a particular subject. Her interest in Jewish history and the Holocaust eventually grew into a career in research and faculty development within the context of Holocaust studies.

As senior program officer for University Programs at the United States Holocaust Memorial Museum's Jack, Joseph and Morton Mandel Center for Advanced Holocaust Studies, Wolfson conceives and organizes a range of programming and educational opportunities for faculty, graduate students, and undergraduates. She is also involved in one of the Mandel Center's major research initiatives.

Wolfson started a doctoral program in comparative literature with the intent of teaching, but a challenging academic job market and shifting career goals prompted her to keep an open mind.

"You go to grad school to become a faculty member; that is the point of the whole process. That is where you get the most support," Wolfson says. "I'm glad to see that the PBP program is starting to provide a more structured resource to grad students on all the potential career pathways available to them. For busy graduate students, it can be difficult to carve out another space to investigate and gain skills to do other things."

When speaking to graduate students through the PBP program, Amy Fasula o5PhD o5MPH hopes she can impress on them that they don't have to be absolutely sure of what they want to do when they begin the PhD process.

A behavioral scientist with the Centers for Disease Control and Prevention, Fasula works on projects designed to reduce risk and improve sexual health among vulnerable populations—a career made possible by the combination of academic concentrations she was able to pursue while at LGS.

"I was interested in women's studies and sociology and, at the time, there was the Center for Health, Culture, and Society at Emory. You could apply to get funding for one year to take courses in the School of Public Health. That was very attractive to me because it was a place where I could combine my work in sociology with broader academic topics and apply them to a public health realm," she says.

Fasula credits her PhD adviser, Cathryn Johnson, for allowing her to tailor her comprehensive exams to combine public health applications with her sociology research, and for helping her craft her advanced education in a practical way. She also was able to take advantage of the certificate program to pursue her interest in women's studies.

"My path was not straight and narrow. In grad school, it can feel like everyone has it all together except you, and I want to share things I have learned along the way that might help others," she says. "There are some logistics and things that are hard to navigate and figure out, like how to write a resume for jobs outside of academia, that were practical things I had to figure out myself. I am more than happy to share my experiences and lessons learned."

PBP is a valuable learning tool not only for students but graduate educators as well, says Tedesco.

"In graduate education, we can sometimes become a bit myopic, since we spend so much of our lives within the academy," Tedesco says. "Meeting alumni who have forged different career paths, listening to their stories, and appreciating their professional lives keeps teaching us that graduate education is an enormously valuable resource—both in the lives of the individual graduates and in the rich variety of professional spheres where they make their contributions worldwide."



CHRIS CURFMAN OOPHD

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