

The 85 percent

By Marcella Lucas

After three years studying biochemistry at the University of Bath in the United Kingdom, an additional year as a scientific intern at Dartmouth-Hitchcock's Norris Cotton Cancer Center, and three years as a Ph.D. student, I have a lot of experience doing research.

My current research, though, is not going to end up in a scientific journal. Like many Ph.D. students, I am exploring what I might do with the advanced degree I will eventually receive.

Only about 15% of people who earn a Ph.D. in the sciences will become a tenured faculty member. So what happens to the other 85%? What happens to Ph.D. students who decide that academia is not for them? The truth is that their options are endless, but Ph.D. students often underestimate the importance of their degree, how much they have to offer, and the opportunities available to them outside academia.

If you ask Ph.D. candidates what they plan to do after completing their degree, you will likely hear that they are going to look for a postdoctoral position—or “postdoc.” After all, that is traditionally what new Ph.D.’s do. After two or perhaps three postdocs, maybe they will become a junior faculty member and start climbing the academic ladder.

At some point along the way, however, many students realize that they do not want to follow the traditional route and become an academic scientist—and I’m one of them. That’s why as I have pursued my scientific research, I have also worked on professional development. My extracurricular activities over the past few years have enriched my experience at Dartmouth. They have also helped me to understand my strengths and weaknesses and given me better insight into what might make me competitive on the job market.

I would encourage all Ph.D. students to experiment with these kinds of activities to expand their skills and interests. The medical school and graduate programs at Dartmouth offer many opportunities for students to develop their teamwork and leadership skills. Leadership positions, such as being a representative to the Graduate Student Council or leading hikes with the Graduate Outing Club, are great ways to meet new people—including graduate students and alumni from Tuck School of Business and Thayer School of Engineering—and to explore new career possibilities.

Another path to explore is teaching. Many students don’t realize how much they enjoy teaching until they have taught a



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class or worked as a teaching assistant. Not all departments require teaching, but if students are interested, they can seek out an opportunity to teach even if it is not required.

Taking classes in other departments or even other professional schools is a great way to gain insight into a different field. Another possibility is to gain work experience in a new field. The Graduate Studies Office recently started an “externship” program, offering students the opportunity to spend a day at the workplace of an alum, without requiring that the students take off time for a long-term internship.

For some students, the lab is their life and branching out sounds overwhelming.

Another approach, then, is simply to collaborate with other labs, an experience that provides the chance to share scientific knowledge and to develop teamwork and presentation skills.

Earning a Ph.D. is more than a full-time job, so how can there be time to pursue other interests and still have time to eat and sleep? I suggest exploring a broad range of interests and options and then focusing on the things you are most passionate about. Pursuing other interests may also require compromise. For example, during my time as president of the Graduate Student Council, I knew that I would be very busy in the fall, particularly around orientation. As a result, I worked a little harder on my research over the summer to free up a bit of time in September and October.

Before taking on the responsibility of GSC president, I discussed the opportunity with my mentors. I explained that I might not be able to work in the lab 60 hours a week, but I’d have the chance to find out whether I enjoyed—and could succeed in—a leadership position. Both my advisor and principal investigator (PI) readily agreed that the compromise was worthwhile. Keeping your mentors in the loop about your future aspirations can be daunting, but it’s an important step. Many Ph.D. students never sit down and discuss their future with their PI unless it is to ask for a letter of recommendation for a postdoc position. But students may be surprised to find that their PI is supportive of their goals and wants to see them succeed even if that means taking a different career path. It is also a great opportunity to practice communication skills and build confidence.

Becoming a well-rounded Ph.D. student is no easy task. But we all have a great deal of experience conducting research. Perhaps it’s time to apply those hard-earned skills to our own future. ■

The Student Notebook essay offers insight or opinion from a Dartmouth student or trainee. Marcella Lucas is a Ph.D. student in the Program in Experimental and Molecular Medicine. She was president of the Graduate Student Council in 2010-2011 and is now a coordinator of the International Graduate Mentoring Program. She is currently completing her Ph.D. and plans to pursue a career in health-care consulting.