

Non-Traditional Careers

By Mindy Levine

When Dr. Christine Bellon was in graduate school at MIT, she spent “every waking hour” studying ligand-accelerated catalysis under the guidance of Professor K. Barry Sharpless. “MIT was a great place to go to graduate school,” Dr. Bellon said. “There was so much focus on research and doing good science.”

Nonetheless, after finishing graduate school, Dr. Bellon, Vice President of Intellectual Property & Legal Affairs for Hydra Biosciences, decided to pursue a “non-traditional” career as an intellectual property (IP) attorney. She decided on this pathway partially because she had lost interest in laboratory research. Additionally, she saw how excited some of her colleagues at MIT were about chemistry and felt that she lacked the kind of excitement necessary to pursue a more traditional career in academia or chemical industry.

Many graduate students in chemistry consider careers in academia or industry as their two primary options. However, they may not realize that there are a whole range of “non-traditional” career options available. These options include careers in law, science writing, informal science education, and consulting.

For Dr. Dana Gordon, partner at Foley Hoag, LLP, the decision to pursue a career as an attorney came at a much later point in his career, after Dr. Gordon had spent four years as a tenure-track assistant professor at Brandeis University. He decided to switch career paths once he realized that being an assistant professor required him to devote substantial amounts of time to administrative work, grant writing, and teaching, when he would rather be doing research.

“It was the rudest awakening,” Dr. Gordon said. Being a university professor requires a substantial amount of sacrifice, he said, “and I didn’t feel like I would have the sort of vibrant research program that would justify those sacrifices.”

In choosing what non-traditional career to pursue, Dr. Gordon looked to use his chemistry knowledge, as well as the administrative and leadership experience he had gained as a professor. “I had gone much further in my career as a scientist than most people do before they make this transition,” Dr. Gordon said, “and I wanted to go somewhere where that experience would be recognized.” Dr. Gordon considered a career in consulting, but decided that working as an attorney would allow him more opportunities to manage and lead others.

Deciding to pursue a non-traditional” career was an “incredibly difficult” decision for Dr. Gordon. Nonetheless, 13 years after having left academia Dr. Gordon enumerated several aspects of his work environment that he enjoys. In particular, he enjoys that the work occurs at a much faster pace than in academia, and that almost by definition he is

working on projects that relate to cutting-edge science. “It’s not like when I was working on a ten substep synthesis and was stuck on step five,” Dr. Gordon said. Rather, he has the opportunity to work on several projects simultaneously, each of which may be at a different stage of development.

Dr. Mary Bacaj, a consultant at McKinsey and Company, concurred that one of the benefits of her work is its fast-paced nature. Part of the nature of her consulting work is that she switches projects every 2 to 3 months, usually consulting for a different company and sometimes to a totally different industry. “This makes it difficult to get bored,” she said, although sometimes it is difficult to plan ahead.

Non-traditional career options generally make use of one’s previous scientific training, either directly or indirectly. Dr. Bacaj explained that she uses the problem-solving skills that she learned in graduate school to help her on projects. At one time, Dr. Bacaj worked on a project for a chemical supply company. “During this project, I interviewed 40 scientists from all industries and around the globe,” Dr. Bacaj said. “It really helped to be able to say, ‘I’m a chemist and I understand all the terms you are using.’”

Ms. Amy Christuk, who works for Chemical Abstracts Service (CAS), received her master’s degree in chemistry from Northwestern University and her MBA from Southern New Hampshire University. In her job at CAS, she uses her chemistry knowledge on a daily basis, training chemists and other researchers in SciFinder® and other CAS products. “I am the voice of my customers,” she said. “I listen to what they like, and especially to what they don’t like.”

In general, chemists in non-traditional careers have substantially different work responsibilities than more traditional chemists do. Ms. Jennifer Larese worked as a bench chemist for a large pharmaceutical company before she decided to make a career transition. “I found the culture to be a little corporate and stressful,” Ms. Larese said, as there were deadlines that she had to meet for various projects.

Now Ms. Larese is the outreach coordinator for Nova of WGBH. In this job she is responsible for coordinating outreach activities targeted both at high school students and at the general population. Ms. Larese’s goal is to increase the general science literacy of the population. Her daily activities and responsibilities are substantially different from what she used to do at the pharmaceutical company. For example, Ms. Larese is responsible for coordinating “Science Cafes” in the greater Boston area, a program in which local scientists meet with the general public at various cafes and coffee houses to talk about science.

“We are increasing the science literacy of everyone and encouraging them to learn,” she said.

Some chemists who decide to pursue non-traditional careers may miss various aspects of being in a lab. For example, Ms. Christuk explained that she misses the camaraderie that she had with her lab mates while working in the lab. “The thing about being at the bench

is that you really get to know your lab mates,” she said.

In contrast to Ms. Christuk, both Dr. Bellon and Dr. Bacaj denied missing any aspect of bench chemistry. Dr. Bacaj said, “I think a lot harder now than I ever did as a bench chemist, since things move so much faster.”

Dr. Bellon added, “I don’t miss it [bench chemistry] at all, but I know a lot of people who do. It is hard to give up.”

When asked what advice she would give to students who are considering a career as an IP attorney, Dr. Bellon said, “Talk to as many people as possible. There are many ways to do this [pursue an alternative career].” Dr. Bacaj gave similar advice. “Take advantage of opportunities outside of your research at your university where you can be valued as a scientist,” she said. “This could be as simple as organizing a speaker series on topics that interest you or taking a class in other disciplines.”

Additionally, people who are interested in pursuing a career in consulting will have to prepare for the “case interview,” where the interviewer presents a short business problem, and the interviewee has to explain how he or she would solve the problem. Dr. Bacaj said the case interview “can be fun, but requires preparation” to learn how to handle the situation properly.

Overall, the five chemists interviewed for this article were uniformly pleased with their career decisions and enthusiastically endorsed non-traditional career pathways. Ms. Larese said, “If someone had asked me four years ago where I see myself, I never would have imagined that I would be here.” Nonetheless,” she continued, “I am incredibly excited to be here.”