A Change of Heart. Finding the Right Balance

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Along the way to becoming an Assistant Professor of Biochemistry at a public land-grant university, I explored a career briefly as a faculty member at a liberal arts institution. I want to first talk about the decision to leave a productive research career to teach, and then the change of heart I had after leaving research.

Even as an undergraduate student I knew I wanted to be a professor after finishing graduate school. I chose to study oncogenes at Case Western Reserve University in a PhD program, as I had always been interested in molecular biology and how organisms control growth. My mentor, David Goldthwait, was a wonderful person who encouraged his students to be open to new experiences. Working with successful undergraduates in our laboratory confirmed my interest in and commitment to teaching. Near the end of graduate school, I became very interested in recent plant transformation experiments. In the animal field, construction of transgenic animals was very time consuming, and although I would have liked to test the effects of altering gene expression in mice, opportunities were limited. In contrast, there seemed to be no limits on testing gene function in transgenic plants, which made plants a very attractive system.

At this same time I realized I would need postdoctoral research experience to be competitive for a challenging faculty position. I reasoned I could become a well-rounded scholar if I switched to plant studies and would also develop an amenable research system to work with undergraduates. I began a postdoctoral fellowship with Wilhelm Gruissem at the University of California in plant molecular biology. At this time, the National Science Foundation was offering special fellowships for scientists switching focus from research on animals to plants, and I was awarded one of these.

I quickly adapted to the plant world and found Berkeley to be the most stimulating environment one could imagine. Given my training in animal systems, I quickly realized there were many unexplored avenues in plants. With the new model system Arabidopsis emerging, the possibility of “getting in on the ground floor” was entirely feasible. At this time I began to focus on gene discovery of signaling components and soon was immersed in this new project.

Over this period, what I did not realize was how important research had become to me. It was not something that had to be accomplished to meet degree requirements—I could have stopped at any time after the initial two years and gotten a good teaching position. I rationalized that I was setting up a system for undergraduate research in my future laboratory, but I was really laying the foundation for a productive research career. When I began to look at both teaching and research universities, there were very few positions available. In a single year there might only be a handful of jobs, and thus it was a very competitive situation. Early in the job season of 1995, I interviewed at Bucknell University and I liked the environment at this liberal arts institution and the students with whom I would teach and mentor. I had not yet interviewed at any research institutions, and with the pressure of deciding to turn down a good job doing what I had always dreamed of doing, I decided to take the position.

I found teaching to be immensely rewarding. I thoroughly enjoyed working with the students in the classroom. At a liberal arts institution, you have much latitude to design and implement novel teaching methods. Since tenure is primarily based on teaching, you are rewarded greatly for this effort. The downfall for me, though, was the change of pace in research. Although I had my own laboratory and the necessary equipment to perform research, I did not have the time to make things happen. I spent most of my research time trying to get students “up to speed” in molecular biology. I realized that I was now a teacher, and not a research scientist. My job was to train others to do what I had been taught. My students would be the ones making scientific progress that I would read about in journals, not me.

What do you do when you realize you took a wrong turn on your career path? I quickly put together a letter describing my current research goals. I communicated that I was interested in more than a teaching career, and I applied for positions at large research universities. This approach was successful, probably because of three things: I had previously had a productive research career, I had not been out of research for very long, and my mentors communicated my strengths and earnestness in their letters of support.

As I am very happy at my current institution, I believe if I had it to do over again, I would not take a teaching position. I honed my teaching skills, which has been a timesaver in my current position, but I did lose momentum in my research program. I learned that being an assistant professor anywhere takes a staggering amount of work and energy. Perhaps one misconception I had about teaching was that it would

not take as much time as research. I believe now that quality teaching, like quality research, takes constant on-going effort. I really enjoy my current mix of teaching and research. I am excited by the ongoing discovery process and the research that has come to be a defining activity for me. I balance my time by delivering materials to students and looking for the best way to do this. For me, this balance between teaching and research is a natural outcome of my training and interests.

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