

Wanting It All . . .

Cecilia H. Marzabadi



My Story

Growing up in the 1960s and 1970s when so many changes were happening in American society made me believe that my dreams could be fulfilled and that being a woman was no longer a barrier to the career that I wanted. I could be married and have children and have a successful career. However, along with “wanting it all” is the reality that you have to prioritize and learn to balance what is most important to you in life. This is my story of how I have managed to wear the many hats that I do: as a chemistry professor at a mid-sized, private Catholic university, as a research mentor, as a wife, daughter, sister, and friend, and as a mother.

As a child. . . I don’t think I even knew any scientists. My mom was a commercial artist who drew department store ads for the newspaper. My dad was the owner of an industrial laundry. I am the only child from a second marriage; I have 2 half-brothers and 2 half-sisters. Growing up I had an interest in everything, including science. I loved reading and learning.

C.H. Marzabadi (✉)

Department of Chemistry & Biochemistry, Seton Hall University, 400 South Orange Ave,
South Orange, NJ 07079, USA

e-mail: cecilia.marzabadi@shu.edu

When I began my undergraduate studies at Saint Louis University (SLU), I had no idea what I wanted to major in. I knew I wanted to work with people and that I enjoyed solving problems. I also enjoyed science in general. I took one of those career aptitude tests and it said that good careers for me based on my interests would be as a physician or as a college science professor. I took both biology and chemistry courses initially and after about a year decided that being a chemistry major was more suited to me. Biology seemed like too much memorization, whereas chemistry involved more problem solving. Organic chemistry in particular appealed to me; it wasn't as mathematical and had a large mechanistic component.

As an undergraduate I began doing research in organic chemistry in the area of organometallic chemistry. This enabled me to get to know the professors and other undergraduate and graduate chemistry students. It also gave me the feel of what it was like working on a research project in a lab; I loved it! During this time, I met my future husband, Mohammad, who was my teaching assistant in first semester organic lab. In my senior year, we began dating. Our relationship would significantly alter the subsequent career paths for both of us. He decided to stay local and pursue his Ph.D. degree at Washington University. I decided to stay at SLU and to get my research MS degree in organic chemistry. I had the hope that by the time I finished my MS degree, he would be finished with his dissertation work and we could plan our next moves together, including my further pursuit of a Ph.D. Well, as they say... "the best laid plans". Unfortunately, Ph.D. research doesn't always follow a time clock, so I finished my studies before he did and looked for a job in the St. Louis area.

I was hired by Monsanto Agricultural Products Company, working in their metabolism group. Although my background was in synthesis, I readily learned how to do the analytical work required in metabolism. It was a very interesting job that taught me many new skills, including working with biological samples. In spite of this, I knew that eventually I would be limited in advancement in industry without a Ph.D. degree. After 2 years at Monsanto, I left to pursue my doctoral degree. My husband was wrapping up things at Washington University. I had applied to and been accepted at several top chemistry departments. I had decided I would likely begin my studies at the University of Illinois-Champaign Urbana. There was only one problem... what about Mohammad... what if he could not get a postdoc or a job in Champaign? In the end, I decided not to go. But this was also influenced by another unfortunate event... the death of my father.

So my return to graduate school would ultimately be delayed three additional years as we sold my family home of almost three decades. Mohammad and I subsequently married and after 2 years of marriage our son John was born. I restarted my graduate studies at the University of Missouri-St. Louis when our son was 9 months old. I was 29.

Initially, I was very apprehensive about returning to school. I wasn't sure if I could keep up with my peers. I was concerned that I might have forgotten many things that I had learned both in my bachelor's and master's programs. I was my doctoral advisor's second graduate student. He was a new, untenured Assistant professor with a lot of enthusiasm for organic chemistry.

We hired a retired lady to come to our house and stay with John while I was at school and my husband was at work. Although it took most of my teaching assistant salary from the university, my son was well cared for and we had greater flexibility than if we had to take him to day care. I had to get my work done within a normal 40 h week. I learned to utilize my time at school effectively. Most of my studying was done at night after everyone else went to sleep as I would spend the evenings with my family. Cumulative exams were held on Saturday mornings once a month. On the Fridays before I would pull an all-nighter studying for my exams. Things worked out just fine, in spite of losing a little sleep. I excelled in the program, achieving straight A's in my course work and being the first student of my entering class to pass my cumes.

If I had to go to school on the weekend, I would try to save that time for running NMRs so my son could come with me and draw his own NMRs with the colored pens in the NMR room. Otherwise, my husband would watch John. Unfortunately, we did not have family members who could help us out with babysitting.

At my graduate school, I was surprised that there was only one female faculty member in my doctoral department (out of 21 faculty). After all, there seemed like there were a fair number of female graduate and undergraduate students. In my entering graduate class at least a third of us were women. The other graduate students said this female faculty member was very tough and that she didn't like it when female graduate students were too passive. Eventually I had this professor for a course and got to know her by going to her office during office hours for questions about the course material. She wasn't as scary as people had made her out to be; in fact, I quite enjoyed talking to her. When I think back on things, I think she was just trying to prepare us for what lay ahead. I continued to interact with this female professor throughout my time in graduate school. She learned about my interest in a future career in academe and would often put articles in my mailbox about the glass ceiling for women in academic chemistry. I was a bit hurt at the time, when she told me I might do better in industry than in academe. Now I understand what she meant; as I am now, even in this day and time, the only female in my department.

In the meantime, my husband had done two postdocs in the area. He was offered a "real job" at a small start-up pharmaceutical company in NJ during my fourth year of graduate school. He moved to NJ and my son and I stayed in St. Louis. In my fifth year, when I was writing my dissertation, my son moved to NJ to live with my husband. It was difficult being apart from both of "my boys" for that year, but it forced me to focus on finishing my graduate studies.

The NYC area proved to offer a variety of postdoc positions for which I applied. I defended my dissertation and moved to New Jersey over Labor Day weekend. I started working the Tuesday after Labor Day at Hunter College/CUNY. My postdoc involved a commute into Manhattan every day.

I would catch the bus at 7 AM every day and often would not get home until 9 or 10 PM. My husband's work on the other hand was only about 15 min away from home. My son attended kindergarten and elementary school near home so my husband would pick him up every day from after school care. I would do my best

to make it home for school concerts, back to school nights, etc. My husband really held down most of the childcare responsibilities during this time; his help and support were critical.

I started looking for academic positions after about 2 years in my postdoc. Again, I was geographically limited as I did not want to live apart from my family. I would apply for any openings I saw in New York and New Jersey. Sometimes I would even apply for positions in Connecticut and Pennsylvania, knowing that I would have to commute. I applied to all types of academic jobs, including those at predominately undergraduate institutions, though I knew I would not be happy at these types of schools. I had research in my blood and having only part-time access to a fume hood in the physical chemistry teaching lab was not going to give me much opportunity for that. I wound up staying in my postdoc much longer than I had planned—almost 5 years. Now the question was . . . was I damaged goods because of my age . . . for starting as an Assistant Professor in a doctoral program?

In December of 1998, I interviewed at Seton Hall University in South Orange, NJ. It is a private, Catholic university with both undergraduate and graduate programs (MS and Ph.D.). The Catholic environment was very reminiscent of my undergraduate and MS days at Saint Louis University. But I especially liked the fact that I would be able to mentor doctoral students. What I wasn't really cognizant of at the time were the difficulties associated with doing graduate research in a small Ph.D.-granting department, such as lack of resources and collaborators and difficulty getting grant funding.

Also, the start-up money for setting up my lab was not great. However, Seton Hall is also one of the schools designated to receive money from the Clare Boothe Luce (CBL) fund for promoting women in the sciences. As such, I was hired as a Clare Boothe Luce Assistant Professor of Chemistry. CBL paid my salary for the first 5 years I was at the university and also paid an additional 20% of my salary as a stipend that could be used in any way I deemed necessary (including for childcare). I used the money to help pay for lab supplies when I was first starting out. I am forever grateful to the Luce fund for this support; it really made a difference!

My new department had 13 other faculty members (12 men and 1 woman). The other female faculty member had a lot of physical problems and 2 years after I was hired, she died. I was unfortunately unable to go to her for help and advice. Some of the senior male faculty in my department tried to help me along, though this was very informal and sometimes, quite frankly, wasn't even obvious. There was a Women's Faculty Association at the university and I reached out to them for a female mentor. The mentor assigned to me was in the math department which was exclusively an undergraduate department. So my assigned mentor and I had different sets of issues. I think we spoke briefly on only a couple of instances. I also became very active on different committees and on the Faculty Senate. This enabled me to meet women and other faculty in other departments. I attended local Women Chemist Committee (WCC) meetings and met more female chemists at other universities and at local companies. At one of these meetings I met Valerie Kuck, a retired industrial chemist and an active volunteer for the American Chemical Society (ACS). Valerie had an interest in doing research to elucidate the

reasons for the underrepresentation of women on the faculty at top-ranked chemistry doctoral programs. This was a problem I had been keenly aware of since I was a doctoral student, and was also interested in. We recruited two psychologists from Seton Hall, Susan Nolan and Janine Buckner, and began a collaboration that lasted almost a decade. To this day I ascribe this collaboration as one of the major factors that helped me survive the isolation I felt in my department. Though the research we were doing was not chemistry, and probably wasn't respected by some of my departmental colleagues for this reason, we were able to get several grant applications funded and published and presented papers in multiple social science and chemical education venues. In fact, I remember an off-colored remark at a faculty meeting about how "maybe we all should apply for grants for basket weaving." In spite of this disdain for our work, I believe this collaboration helped strengthen my tenure application package and definitely gave me a support network.

I received tenure in 2005; my son turned 17 that year. I went for my first sabbatical, the year my son left home for college. Looking back, I always thought that I would have more than one child, but I just couldn't find a way to manage it. About a month after I was offered the job at Seton Hall, I found out I was pregnant. I worried and lamented on how to handle the discussion with my new department, but I never had to as I miscarried a month later. I am in awe of those people who have managed to have several children and to have productive and successful careers. There are different formulas for working out a successful professor-mother balance and having other supportive people to help you out is key. You have to follow your instincts and not be afraid to do for yourself what you feel is necessary.

Since coming to Seton Hall, I have mentored more than 50 high school, undergraduate, and graduate students as well as postdocs and visiting scholars. I have graduated six Ph.D. students. I was promoted to Full Professor in 2012. I look back on the days when I was struggling to balance work and being a parent. How much I worried at the time about not being there for all of my son's school events and the guilt I felt. I am blessed to have a wonderful, intelligent young man for a son with a good head on his shoulders. After all, everything did work out.

Lessons Learned

You can't do it all. Marriage and child rearing require a partnership. When both spouses work, there has to be a mechanism to share household and child rearing responsibilities. In my case, my husband is not a good cleaner and only in recent years has he begun helping with the cooking. He was extremely helpful to me in terms of taking care of my son so that I could stay late at work or get school work done at home. For about the past 10 years or so, we have also hired outside help for cleaning the house and doing the yard work. The helpers only come every other week, but it makes such a huge difference. It is so nice to come home to a clean house and to have time to relax on the weekends and spend time with the family.

Pick your department wisely. Some departments do not have a children-friendly mentality. For example, at my university, all of our graduate courses and departmental seminars are held in the evening. This is done to accommodate our large number of part-time students. This makes it difficult when you have children and need to be at home in the evenings. Also, ask yourself whether many of the faculty (male and female) in your department have children. This may affect their views on your needs to be available for your family.

Don't limit where you look for mentors and support. If there is no formal network of support in your department or university, don't hesitate to find your mentors elsewhere. Get involved with university/college committees. Go to the faculty lunch room and meet people in other departments. Go to local and national ACS events and network.

Don't be afraid to say no. As a professor and a mother, you have plenty to do without being talked into all kinds of university, departmental, or community service. Pre-tenure, it may be difficult to refuse, but don't be afraid to step away from these jobs once you have done your service. Also, I think it is important that everyone does their fair share.

Don't beat yourself up. There will always be guilty feelings about why you were not there for this or that with your children. Simultaneously we feel guilty for not getting work done: not getting the paper submitted when planned, not putting enough time on that grant application, etc. Just do the best you can and realize there will have to be give and take.

Don't be afraid to do what is right for you. Listen to your inner self and do what you need to be happy. Don't worry about what others think . . .and remember *there is more than one possible formula to success and also more than one definition for it.*



John and Cecilia Marzabadi—Summer 2013

Main Steps in Cecilia's Career

Education and Professional Career

| | |
|--------------|---|
| 1982 | A.B. Chemistry, St. Louis University, MO |
| 1984 | M.S. Chemistry, St. Louis University, MO |
| 1984–1986 | Research Chemist, Monsanto Agricultural Products Company, MO |
| 1987–1989 | Laboratory Technician, Washington University, MO |
| 1989–1994 | Teaching & Research Assistant, University of Missouri-St. Louis, MO |
| 1994 | Ph.D. Chemistry, University of Missouri-St. Louis, MO |
| 1994–1996 | Postdoctoral Research Associate, Hunter College-CUNY, NY |
| 1996–1999 | Adjunct Professor, Hunter College-CUNY |
| 1999–2004 | Clare Boothe Luce Assistant Professor of Chemistry, Seton Hall University, NJ |
| 2005–2012 | Associate Professor, Seton Hall University, NJ |
| 2006–2007 | Visiting Associate Professor, Harvard University Medical School, Boston, MA |
| 2012–present | Professor, Seton Hall University, NJ |
| 2013–present | Visiting Researcher, Sloan Kettering Cancer Center, NY |

Honors & Awards (selected)

| | |
|-------------------|--|
| 1993 | University of Missouri – St. Louis, Dissertation Fellowship |
| Sep 2003/Aug 2008 | ACS Project SEED Service Awards |
| 2004 | Manchester's <i>Who's Who Among Executive and Professional Women</i> |

Since 2001 Cecilia has been involved in Seton Hall University's Women's Studies Program, for which she has an Adjunct Appointment and was Acting Director (2005–2006).