

## Seven habits

By Laleh Talebian, Ph.D.

**Y**ou must stop experiments and start writing,” my Ph.D. advisor, cancer researcher Nancy Speck, told me last February. I had never thought that moment would come. In a few months I would be finishing my dissertation, receiving my doctorate, and achieving the dream that I had been chasing for so long—I would be “a scientist.”

My first exposure to the word “scientist” was in 1981, when I was 11. My 17-year-old sister, Mojdeh, was my role model. I wanted to be just like her, so I began watching her favorite TV program with her. It was a nerdy science and math game show, and the host was a famous Iranian scientist.

“What is a scientist?” I once asked my father, who was a retired environmental and agricultural engineer. He replied, “A person whose curiosity and hunger for knowledge drives him to become ever more eager to learn everything and who does whatever it takes to get there.” He pointed to the show’s host. “He, for instance, is a scientist.”

**Dream:** I was fascinated by this real live scientist who seemed to know absolutely everything. (Later, I learned that although the guy was a very smart chemist, he was given the answers.) I took science courses at school and continued to watch the show religiously. By 1983, when I was 13, I had decided that I was going to become a scientist one day. I was willing to do anything to achieve that dream.

My teachers encouraged me. One said, “As long as you want it badly and work hard, anything becomes possible.”

But for a while just getting into college seemed impossible. The political environment in post-revolutionary Iran made life difficult for my family. In 1980, our world had started to crash when Islamic guards took my favorite uncle, who had been an officer in the former government, out of our house to jail. On the day he was supposed to be released, he was executed. The execution photos appeared in the newspaper. Then my father’s retail business was shut down. People like us, with those black marks on their names, couldn’t get into the country’s universities. Even my sister, who had achieved high scores in the college entrance exams, wasn’t admitted.

**Cancer:** In 1984, my dad was diagnosed with cancer. He underwent a risky surgery; most of his cancer-infected organs, including his entire stomach, spleen, and gallbladder, part of his intestine, and one kidney, were removed. A year later, on my 15th birthday, he died. That’s when my war against cancer began.

Iran was extremely unsafe by 1987, and there was still little hope of my getting into university. So I fled to Belgium, leaving my moth-



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er behind, and quickly learned to speak Flemish and French. By now Mojdeh was in college in the United States. She had joined our oldest sister, who had been there since before the Iran revolution had started.

Finally, when I was 21, I was reunited with my sisters in the U.S. First I attended a community college and supported myself by tutoring other students and by caring for an Alzheimer’s patient in exchange for room and board. Then I transferred to the University of California at Davis and completed a bachelor’s degree in

genetics while working as a research assistant at Monsanto.

During my last term, I discovered I had dyslexia. At first, I was worried that the disability might keep me from getting into graduate school. But I had gotten this far and wasn’t about to give up. If anything, the diagnosis helped me understand why it took me longer to complete reading assignments and why taking certain kinds of tests was so difficult for me. So I vowed to work even harder and to double- and triple-check my work to avoid making mistakes.

I entered Dartmouth’s molecular and cellular biology graduate program in 1999, and by the summer of 2000 I had completed my third rotation, in Nancy Speck’s lab. I subsequently decided to join her lab for my thesis research, more determined than ever to work on cancer. My best friend had died of acute myeloid leukemia (AML) a few years before. My project was generating mouse models of leukemia.

**Habits:** Finally, five years later, I was ready to start writing my thesis. My defense date was set—the finish line was in sight—though I still had a few laps to go. Now, as I look back, I realize that there were seven habits (to borrow from the title of the famous motivational book!) that helped me successfully complete my Ph.D.:

1. Believe in yourself. Don’t let pessimistic people discourage you; stay positive.
2. Focus on your strengths and don’t get sidetracked.
3. Communicate. Demand clarifications and confirmations.
4. Be flexible. Your thesis is your one and only priority but not your advisor’s. No matter how organized you are, accept that things won’t always happen on your schedule.
5. Be persistent.
6. Don’t lose sight of your loved ones. Spend time with family and friends; they are your support group.
7. Your health is important, so be sure to exercise, eat right, and get enough sleep.

And my most important advice is that you can do anything you want if you set your mind to it and work hard to deal with the challenges that arise along the way. I know there is still so much more I need to learn, but I have finally become a scientist. ■

*The “Student Notebook” essay shares word of the activities or opinions of students and trainees. Talebian (pronounced “ta-LEE-be-an”) received her Ph.D. from Dartmouth Medical School in 2005. She did her thesis on transcription factors involved in blood development and leukemia and recently began doing research at DMS on cystic fibrosis.*