Akshata Udyavar traces her interest in science to her early high school years in India when her older brother, a medical student, would bring home small animal specimens to dissect for his comparative anatomy class. She remembers being at first repelled and then fascinated as she watched him reveal the intricacies of the inner workings of a frog. By the age of 15, when students in India must choose between further education in science, the arts, or commerce, Akshata knew she wanted to study science, and she ultimately obtained a Bachelor’s Degree in pharmaceutical sciences from the Bombay College of Pharmacy. Wanting to learn more, she applied to twelve different institutions for graduate studies, in most cases in pharmaceutics. But two of the programs to which she applied held a particular attraction because they offered an opportunity to expand her horizons into the broader biomedical sciences. So, when she was accepted for graduate school at the University of Tennessee Health Science Center, she happily enrolled as a Biomedical Sciences graduate student, working in the laboratory of Terrence Geiger at St. Jude Children’s Hospital.

Although originally planning to obtain a Ph.D. degree at UT, Akshata left the program after two years with a Master’s Degree and two first-author publications due to a combination of low laboratory funding and a husband studying in Nashville. She moved to Nashville and quickly obtained a position at Vanderbilt as Research Assistant in the laboratory of Vito Quaranta (Department of Cancer Biology). There she was exposed to the rapidly growing fields of bioinformatics and systems biology. Although somewhat daunted at first by the complexity of the mathematics being employed in the lab, she was intrigued by the application of mathematical analysis to biological problems, and she agreed with Professor Quaranta that quantitative systems biology was the future of the biomedical sciences. So, she applied to Vanderbilt’s Chemical and Physical Biology Program and became a graduate student in the Quaranta lab.

As her studies progressed, Akshata began to view Professor Quaranta as a role model. With no formal training in bioinformatics or systems biology, he had secured major funding to support the development of the Center for Quantitative and Systems Biology at Vanderbilt, and his research was leading to important discoveries in the field. Akshata initially thought that she would like to follow his career path, establishing an independent academic laboratory that melded state-of-the-art biology with computational modeling. However, as she watched two postdoctoral fellows whom she respected struggle to obtain funding and establish independent careers, Akshata began to have second thoughts, and when both of these colleagues chose careers in industry, she started to consider that as a career path for herself.

As Akshata’s goals changed, she availed herself of career planning and counseling opportunities offered by the Biomedical Research Education and Training Office’s ASPIRE program, including ASPIRE to Connect, two Career Symposia, six Ph.D. Career Connections seminars, and resumé preparation and negotiation workshops. It was through these experiences, that Akshata obtained some very valuable advice. Specifically, she learned the importance of networking, of maintaining an up-to-date LinkedIn profile, and of having and distributing business cards. Initially, she viewed the idea of networking with dread. “I was very shy,” she said. “I couldn’t imagine going up to a top executive from a company and talking to him or her. Why would such
a person want to talk to me? I was just a graduate student!” Yet, she summoned her courage and gave it a try, and to her surprise, she found most people were quite willing to talk, particularly when she asked them about their own career paths. “Most people like to talk about themselves,” she observes.

Akshata found that AACR (American Association for Cancer Research) meetings were particularly fertile ground for networking. It was at the 2014 meeting that she met a representative from Novartis who was very interested in her work and provided further insights into a career in industry. She also met Morag Park, Director of the Goodman Cancer Center at McGill University in Montréal. Dr. Park was very impressed by Akshata’s work and had a keen interest in bringing systems biology research to McGill. She offered Akshata a position as a postdoctoral fellow, but Akshata politely declined.

It was at this point that Akshata’s career goals became clear. She knew she wanted a position in industry, and she knew that she did not want to be a postdoctoral fellow for an extended period of time. After completing a master’s degree, two years as a research assistant, and her Ph.D., she felt that she was ready to move past training and on to starting her independent career. Unfortunately, she soon came to realize that the vast majority of industrial positions required multiple years of postdoctoral training, so her two goals appeared at first, to be incompatible. That is when she updated her LinkedIn profile to include her systems biology expertise, and amazingly, people started calling her. She received a new offer for a faculty position at the McGill Cancer Center. She also received offers from Novartis, Bristol Myers Squibb, the Sarah Cannon Research Institute, St. Jude Children’s Hospital, and Genentech. Clearly, Professor Quaranta had been right. Systems and quantitative biology were the wave of the future, and people with that training were in high demand.

With six job offers, Akshata had an important decision to make. She chose Genentech because it offered a challenging atmosphere, an opportunity to carry out interesting research, and a supportive environment for balancing work and family life. She acknowledges that, in industry, she cannot choose her own projects; however, she finds the intellectual atmosphere and scientifically driven research at Genentech to be very similar to what she experienced at Vanderbilt, and she is pleased that researchers are encouraged to publish their findings. So, she feels that she has made the right decision for her career. Yet, even though she has found her career path, she continues to network with people she has met along the way. She feels that this is very important, as one never knows when a contact might be valuable.

To others preparing to enter the workforce, her advice is to: “Go and talk to everyone, be kind to everyone, help others, and stay in touch!”