

POSTDOC SPOTLIGHT

Shabnam Sharifzadeh, PhD

Why did you choose this area of study and where did you receive your graduate degree?

When I was a child, every adult in my life could guess that I'll become a scientist. I was the curious kid who didn't mind spending time with her books and Legos or join the science club and competitions in school. When it came to choosing an academic major, my passion for life sciences led me to pharmacy school and later on, made me cross the Atlantic ocean all the way to the Midwest to pursue a PhD in the relatively new but fast growing field of chemical biology. As my doctoral dissertation at University of Minnesota (Adviser: Prof. Erin Carlson), I developed chemical probes that I used to monitor the activity of individual penicillin-binding proteins, which are essential enzymes involved with the biosynthesis of bacterial cell wall.



Why did you choose to become a postdoc fellow at DFCI?

I found my current research position as I was entertaining the shift to the field of cancer research towards the end of my graduate studies. Although undecided about conducting research in a biopharmaceutical company or an academic institution at the time, I instantly became fascinated by the culture and the research model in my current research group (Prof. Jarrod Marto) and the chemical biology core within the cancer biology department, during my visit.

What is the focus of your current research?

My postdoctoral research focuses on developing chemoproteomics platforms that provide quantitative and proteome-wide information about targets of covalent inhibitors of protein kinases. More specifically, I apply these platforms to study small molecule inhibitors that modify cysteine residues to determine their selectivity profile, identify novel pharmacologically targetable cysteine residues and inform drug design campaigns. Despite the hardships imposed by the ongoing covid-19 pandemic and the temporary shutdown of research labs, I have obtained advanced technical knowledge and hands-on experience of mass spectrometry-based proteomics research during my first year at Dana-Farber. On the other hand, I have achieved a better understanding of cancer biology and the conduct of translational research through collaborations and exposure to the vibrant research community at DFCI and greater Boston biohub.

How has working at Dana-Farber enhanced your career?

My training at Dana-Farber has been a turning point in my career as a life scientist and I am proud to be part of a team that lives by its core values and strives to serve the scientific community and cancer patients.

When you're not doing science, where might we find you? (i.e., any outside activities or hobbies you enjoy?)

When not working, I enjoy hiking adventures, biking, reading books, listening to philosophy or psychology podcasts or being active at the gym.