

NEVER GIVE UP

Alice Ferng | BS BMB, 2009

“Never give up”—this is a catch phrase that my friends since elementary school always recall my saying to them in their lowest moments. These three words capture the spirit of perseverance and courage with which I choose to confront the many challenges I have faced throughout my life.

Ever since I can remember thinking about a career, I wanted to be a surgeon. Although I had hobbies in many different disciplines and subjects, including programming, writing websites or silly programs into my friends’ TI-83+ calculators, playing musical instruments, or trolling my siblings (also CBC alumni), I became especially enamored with scientific research. One of my greatest mentors and inspirations was my high school biology teacher, Ms. Laurie Cale, who helped me discover my passion for scientific innovation and engineering through state and national science competitions and gene-silencing research at the UA.

When I was applying for medical school, I discovered there was an option to com-

bine my drive to further both scientific inquiry and medicine. My dream pivoted from practicing surgeon to academic physician as I pursued a dual-doctorate MD/PhD degree from the UA, where I continued conducting research in multiple interdisciplinary fields.

My PhD was a period of self-rediscovery. With the support of my advisor and friend Dr. Zain Khalpey who encouraged me to innovate, I found myself growing human hearts in bioreactors—going as far as to design and build my own 3D bioprinter for stem cells and biologics. In my free time I worked for various innovative medical education platforms (Osmosis, Picmonic, Kenhub), built medical devices, and wrote mobile health applications. I competed in several hackathons during this time, and much to my surprise, won first place at several of them with projects such as creating a mental health app, autonomous virus-inactivating drone, and PTSD/phobia treatment using virtual reality headsets.

My participation in these types of events and projects revived and fueled a growing passion that brought me full circle with my past hobbyist programmer and engineer self who was captivated by mathematics and technology. After having pursued a singular career goal for much of my life, I found myself reflecting on the Buddhist principle of letting go of attachments and re-evaluating what it meant to “never give up.” Instead of using the phrase to pursue one specific career goal, I realized the phrase was more valuable when applied



to believing in my own abilities and instincts to find a rewarding career path.

With the goal of becoming a medical technologist, my close friends, family, and amazing mentors helped convince me that I could make a drastic career change into engineering and making this leap was one of the toughest and most terrifying things I have done—to leave a prestigious and stable path in medicine for the emerging field of MedTech. Having had some time to acclimate, I am already happier and know that I made the right decision by listening to my heart.

I am currently a systems engineer working on various industrial machines and devices (aerospace, military, medical), as well as a professor through the UA Department of Surgery. Other exciting roles include being the Chief Medical Officer of Autonomic Systems, a heart rate variability wearable device company, and an editor of MedGadget, an online blog that reports the latest and greatest upcoming medical technologies and research. In my spare time, I enjoy meditation, CrossFit, building things, and music. It’s been a wild ride, and I can’t wait to see where my perseverance and application of “never give up” will lead me next.



Alice with siblings Shiana and Jonathan