“I don’t have a job, I have a hobby,” says Aaron Ciechanover, Distinguished Research Professor in the Faculty of Medicine at Technion – Israel Institute of Technology. Prof Ciechanover places strong emphasis on doing what one loves in a career and believes that it is never too late to pursue one’s passions.

This line of thinking was certainly shaped by Prof Ciechanover’s own experience. He is a physician by training, but his first love has always been biology and understanding the natural world. During his medical degree, he started to wonder about the mechanisms underlying diseases and realised that a physician’s role is limited to examining diseases after they have developed. Seeing science as the answer to his questions, he pivoted to research and has never looked back.

In many ways, Prof Ciechanover is grateful for his medical training because he felt that the field has enriched his scientific knowledge and contributed to his ability to understand and develop drugs to treat diseases. He joined Professor Avram Hershko’s laboratory as part of his internship requirement to obtain his medical license, and the two have collaborated closely ever since.

Prof Ciechanover, Prof Hershko and the late Professor Irwin Rose worked together to understand protein degradation. Proteins are in all living things and are constantly removed or replaced. Although researchers had figured out how cells produce various proteins, the mechanism to remove and recycle them was unknown at that time.

For their discovery of a small protein called ubiquitin that marks old proteins for destruction, Prof Ciechanover and his colleagues were awarded the Nobel Prize in Chemistry in 2004. Their seminal work advanced our understanding of cellular processes and disease formation as well as contributed to drug development.

Prof Ciechanover sees collaborations as fundamental in research, particularly when scientific fields like biology and physics have expanded tremendously since his days as a student. “You need to collaborate. The multiple hands that make the world these days are not an option anymore, they are essential,” he explains.

However, Prof Ciechanover believes that successful collaborations rely on the individual expertise of each collaborator. He advises young scientists to focus on building their niche, knowledge and skills—in other words, to create demand for themselves and offer expertise that others will seek.

He also equates establishing a career in science to running a long marathon or climbing a mountain, both of which require resilience and patience. He advises budding scientists to see their struggles as progress, their mistakes as learning points and their successes as possibilities. “What I tell young people is this: what you see in front of you when you look at me is not a dream, it's reality. So materialise your own reality,” says Prof Ciechanover.

Prof Ciechanover is a member of many scientific academies, including the Israel National Academy of Sciences and Humanities, European Molecular Biology Organisation, American Academy of Arts and Sciences (as a Foreign Fellow), Chinese Academy of Sciences (as a Foreign Member) and Pontifical Academy of Sciences at the Vatican. Apart from the Nobel Prize, his awards include the 2000 Albert Lasker Award, the 2002 EMET Prize, the 2003 Israel Prize for Biology and the 2006 Sir Hans Krebs Medal.