Chapter 9: Be Less Curious about People and More Curious about Ideas

Camilla Jandus

> *"Be less curious about people and more curious about ideas."*
> — Marie Sklodowska Curie (1867–1934), Polish-French physicist and chemist, Nobel Prize in Physics 1903, Nobel Prize in Chemistry 1911.

It all started during my secondary school years, when I initially had the idea of becoming a criminologist or a detective in order to decipher difficult unresolved cases and identify the culprit. Then, watching a documentary on Marie Sklodowska Curie's life and works changed the context of my "detective" mindset. As many others before and after me, I found myself fascinated by this passionate and pioneering scientist with an insatiable curiosity, who persevered in her meticulous efforts to identify and characterize radium and polonium. This encounter fundamentally changed the trajectories of my aspirations. Although not in chemistry or physics, I realized that I wanted to become a scientist: the human body would become my daily "crime scene" to investigate. Consequently, I enrolled in medical school, not with the intention of becoming a clinical practitioner, but with the desire to better understand human (patho)physiology. My aim was not to interrogate murderers and solve crimes, but rather to unravel the mysteries of diseased tissues, identifying the culpable cells or molecules underlying human disorders. While

my peers at medical school were busy with their first clinical trainings auscultating patients and evaluating chest radiographs, I left for New York, where I was exposed for the first time to daily bench laboratory life.

Today, travelling for private and professional reasons seems natural, whereas student mobility was a rarity in the early 2000s. My parents always motivated us to follow our dreams, even if they were unconventional. Hence, despite the 9/11 terrorist attack, which happened shortly before I left, and despite the nonexistence of social media, Zoom, or Skype, they offered me my first, old-fashioned cell phone and accompanied me and my dreams to Bellinzona's train station on my way to the Big Apple. Confident in my English proficiency, I soon realized upon arrival that I struggled to keep up with conversations. Nonetheless, I had the chance to engage with pioneers in the field, which convinced me to pursue my scientific path in the field of tumor immunology. Viewing cancer cells as my adversaries, I dedicated myself to investigating which cells, receptors, and mediators would play accomplice roles in supporting cancer development and metastasis. Back in Switzerland, I was fortunate to receive generous support from various grants from the Swiss National Science Foundation (SNSF) and from other private and public sources. I progressed in the path from MD-PhD student to postdoctoral fellow to senior scientist to principal investigator, continuing my journey of investigations.

While this journey might seem simple and without obstacles at first glance, managing work, children, and the obligations of an academically active husband was not easy. I defended my doctoral thesis while seven months pregnant with our second child, which required many sacrifices and the anxiety that something could go wrong. Despite these challenges, my determination was fueled by a curiosity to understand the mechanisms and principles of immune cell interactions within the tumor micro-environment. I have dedicated countless hours sketching diagrams that depict cells trafficking between organs, connecting cell types with arrows, and speculating on potential interactions, a process similar to the meticulous work of police detectives tracking down a dangerous fugitive. I am very grateful for the freedom given to me by my

mentors to explore ideas, to test new hypotheses, to think critically and outside the box, and, most importantly, to learn rigorous scientific work. I was lucky enough to be selected twice for the final round of the European Research Council (ERC) Starting grant interviews in Brussels. I attended these interviews with a mix of enthusiasm, humility, and hope to see my ideas progressing towards concrete projects to work on in the lab. Regrettably, after all the efforts to optimally prepare for the D-Day, twice, I received a negative answer: a short email during the vacation period. That was tough! The frustrations from rejections, the disappointment of disproved ideas that we initially considered brilliant, and the discouragement from all the hard work met with negative results have all been counterbalanced by the immense joy of seeing some of our findings contribute to the understanding of tumor immunology and be translated to clinics to help cancer patients. Ultimately, some of the suspects at the crime scene turned out to be guilty. Luckily, through collaborative efforts that would also involve private companies, we can attempt to neutralize these offenders and their weapons. I appreciate with gratitude all the lessons I have learned from supervisors and colleagues, which I try to share with my team in my daily life, to pass on to junior scientists my passion for science, innovation, and quality work. The interactions within the tumor immunology community as well as with colleagues from other disciplines have been critical to developing an interdisciplinary view of our findings and contributed greatly to considering our own results from new angles and perspectives. The continued commitment and the winding path of a scientist dealing with heavy family duties with three children would not have been possible without the support of my partner, family, friends, mentors, and colleagues.

On top of all this, we were unexpectedly confronted with the COVID-19 pandemic just a few months after opening my laboratory in Geneva. During that sensitive period, managing the new team, the lockdown, and the homeschooling of three children, with a husband working at the hospital, proved to be more challenging than expected. Fortunately, the SNSF PRIMA program assigns individual coaches to the candidates. It was fundamental for me to have a competent contact person with whom I could discuss my difficulties, plans, unexpected

events, and future goals. It felt like being confronted with a very difficult case to solve but being supported by a seasoned detective, who assisted in sorting out priorities and uncertainties. Sharing with her and my family the desire to humbly contribute to the advancement of tumor immunology has helped me deal with sacrifice and periods of hard work with a difficult work-life balance. In particular, when I confronted my husband with provocative and atypical ideas, I felt encouraged and supported to go beyond my comfort zone. He was the one convincing me not to give up and to take risks, even if the success of the project seemed unlikely at first. His support and the precious moments of free time spent with our children and their engaging naivety proved restful, unforgettable, and inspiring. But above all, what cheers me up the most is that I can live in my daily life, together with the people I care, the intimate meaning of my life motto: "*Normal is boring*." The vision that cancer will become largely preventable and a chronic manageable disease, in large part due to our community-borne mastering of the immune system's weapons to control early-detected tumors, continues to animate my dreams.

If you were to ask me what has driven me in my career, I would answer without hesitation:
My *PASSION* for thinking, for doubting, and for understanding. My detective mindset.

My take-home messages of this journey in science are:
Master the dogmas. BUT doubt.
Be visionary and curious. BUT be patient.
Open new fields. BUT accept critique.
Contribute to the puzzle of science with your own little piece.
Be grateful.
Improve every day.
AND enjoy.