



CRYSTAL MACKALL

USA

Crystal L Mackall, MD, is the Ernest and Amelia Gallo Family Professor of Pediatrics and Medicine at Stanford University, the Founding Director of the Stanford Center for Cancer Cell Therapy, and Director of the Parker Institute for Cancer Immunotherapy at Stanford. During a 27-year tenure at NCI culminating as Chief of the Pediatric Oncology Branch and Head of the Immunology Section and since 2016 at Stanford, she has led an internationally recognized translational research program focused on immune-oncology. Her work has advanced understanding of fundamental immunology and translated this understanding for the treatment of human disease with a major focus on children's cancers. She is a member of the National Academy of Medicine, American Society of Clinical Investigation and American Academy of Physicians, a fellow of the AACR Academy and the Academy of Immunooncology. She received the Smalley Award for outstanding contributions to cancer immunotherapy from the Society for the Immunotherapy of Cancer, the AACR-St. Baldrick's Distinguished Achievement Award for Pediatric Cancer Research, and the Pediatric Oncology Award from the American Society of Clinical Oncology. She has published over 275 manuscripts, her h-index in April 2024 is 207 according to google scholar and has co-founded 4 biotech companies.

"Beyond a wholesome discipline, be gentle with yourself....whether or not it is clear to you, no doubt the universe is unfolding as it should... Strive to be happy."

Max Ehrmann

On Relationships that Influenced My Career

I have been inspired by three physician-scientists. Steve Rosenberg MD, PhD, was the first to inspire me to believe that the immune system can be used to treat cancer. This began with a publication from his group in 1984 and he continues to inspire me to this day with his tireless efforts to cure cancers using our patients' own immune systems. Ron Gress MD was my primary bench mentor. He taught me how to think like a scientist and as a young physician, he taught me the culture of science. He also helped me create a personal ethical framework that I continue to rely on today to navigate the complexities of work as a translational physician-scientist. Phil Pizzo MD inspired me to be bold in my work to improve outcomes for children with dread diseases, always reminding me of the responsibility we have to patients and families to bring cures to children wherever possible.

On Challenges and Overcoming Them

I grew up in a working class family and was a first generation college graduate. I attended college and medical school and matriculated in my Residency at institutions that were designed to train community physicians and were not considered elite academic centers. Transitioning from this world to the rarified world of science and academia was a challenge, requiring not only a steep learning curve regarding the fundamentals of basic science and clinical investigation, but also changing my perspective to open up the possibility that my work could directly change the global status quo. This transition was associated with significant anxiety for me that could have easily resulted in me stepping back and avoiding risk. But I did a lot of personal work to deal with my anxieties and to build my confidence so that I could affect change. Many young people I meet today feel similar anxieties and I encourage them to take the time and do the work needed to listen to their anxieties and develop tools and practices to enable them to move beyond them.

A second challenge relates to maintaining a personally acceptable work-life balance and I continue to navigate this challenge imperfectly, even at this stage of my life and career. The right balance differs for everyone and may vary depending upon where you are in your life. My spouse and I raised two children and I always believed that the most important job I had was that of a parent and a mother. In order to succeed in that role, it was important for me to always have clarity that my family came first even though I was and remain incredibly dedicated to my work. These days, my children are grown and need me less but I find that attending to my own personal wellness is increasingly important as I age. So I am still making sure that the "professional Crystal" hears loud and clear that taking care of the "personal Crystal" comes first. Sustaining an appropriate balance is so important for sustaining us for long haul careers.

On Balancing Career and Other Life Responsibilities

For me, step one in balancing work-life responsibilities is having a clarity of purpose and providing yourself a clear message around what comes first in your life. But beyond that, there is much more to be done if one wants to be both personally and professionally successful. If you have a family, choosing a partner who is truly willing to share the responsibilities that come with running a household and raising children will ease the challenges. Some days, you will step up on the homefront and on other days, your partner will need to do it. I also greatly treasure efficiency because time has always been my scarcest resource. Do not underestimate the value of your future time and when approached about taking on new responsibilities, carefully assess much time the new activity will take and whether it will enhance you professionally or personally. Many women, including myself, have trouble saying no, but sometimes saying no is absolutely the right thing to do.

My Words of Wisdom for the Next Generation of Female Leaders

I encourage each individual to “own your own personal narrative”. It is easy to look around and get the impression that you are somehow less prepared, less talented or have less opportunities than your colleagues but no matter where you came from or what experiences you have, I find that everyone brings attributes that can be turned into strengths given the right attitude. For instance, coming from a non-elite background made me less afraid to fail compared to some of my colleagues for whom the expectations were very high. As a result, I have always felt comfortable taking professional risks and that has been a positive for my career. I also encourage young people to put time and energy into your psychological and emotional health, just as we put time and energy into enhancing our intellectual strengths. As far as advice to my young self, I would encourage myself to be open to the twists and turns that life provides and greet them with openness, because none of us know the road we are destined to travel.

The Desiderata Text by Max Ehrmann speaks to me, here are a few of my favorite excerpts:

“Go placidly amid the noise and haste and remember what peace there may be in silence...Nurture strength of spirit to shield you in sudden misfortune....Beyond a wholesome discipline, be gentle with yourself....whether or not it is clear to you, no doubt the universe is unfolding as it should...Strive to be happy.”