

VIEWPOINT

Women in STEM becoming independent: Asking for help creates opportunities for connections and kindness

Michela Frascoli¹, Dequina Nicholas², Ada Weinstock¹, Chia-Lin Hsu¹, Anushka Dongre¹, Jessica A. Osterhout¹, Anna-Maria Globig¹, Deepshika Ramanan¹, Martine Therrien, and Alexandra McCubbrey¹

This year at *JEM*, we are highlighting women in science by sharing their stories and amplifying their voices. In this Viewpoint, we hear from a cross section of women, across multiple research fields,

discussing their science and the process of setting up a lab as an independent researcher. As well as being able to celebrate the positives of becoming an independent researcher, we would also like to use this

platform to discuss the unique challenges they face as women scientists in their respective scientific environments. This Viewpoint is part of an ongoing series at *JEM*.



Michela Frascoli
Assistant Professor, Department of Pathology, University of Massachusetts Chan Medical School, Worcester, MA, USA

I am a developmental immunologist, and my lab studies how early-life immune development shapes immune responses at barrier tissues.

I grew up and studied in Italy, but during university I quickly realized that more opportunities to pursue a scientific career were available abroad. That awareness drove me to pursue a PhD in immunology in Switzerland at the Institute for Research in Biomedicine, followed by a postdoc in the USA at the University of California, San Francisco and a few years as an instructor at UMass Chan Medical School before establishing my own lab. While my trajectory wasn't the typical postdoc-to-PI path, it gave me time to mature scientifically and gain the experience and perspective needed to step confidently into independence.

I've wanted to be a biologist for as long as I can remember, drawn by curiosity and captivated by nature documentaries as a child. My best advice is to choose mentors wisely. I've been incredibly fortunate: great mentors don't just guide your work, they shape who you become as a scientist.



Dequina Nicholas
Assistant Professor, Department of Molecular Biology and Biochemistry, Charlie Dunlop School of Biological Sciences, University of California, Irvine, Irvine, CA, USA

The Nicholas lab at UC Irvine investigates the immune system's role in endocrine diseases, focusing on type 2 diabetes and polycystic ovary syndrome, with the goal of developing immunotherapies. In grad school, I was consumed with understanding immune cell-lipid interactions and knew I needed to become an academic PI. Starting my lab in 2021, the COVID-19 pandemic and current attacks on DEI and research have tested my resilience. On top of these shared experiences, and coping with having a young child, personal loss, miscarriages, and emergency surgery, I learned this journey is impossible without a support system. I am living my dream, only made possible by mentors who have read my grants, colleagues who have institutional knowledge, structured programs that prepared me to lead a lab, and the sponsors who have advocated for me. Starting a lab is challenging but has been the privilege of my life. Build a support network—you'll need it. Photo credit: Carrie Rosema.



Ada Weinstock
Department of Medicine, Section of Genetic Medicine, University of Chicago, Chicago, IL, USA

My journey to independence was unconventional; when my PhD advisor retired two years into my training, I found myself without funding or colleagues. This challenge taught me early on the importance of proactively building my own networks. During my fellowship at NYU, I founded the NYU-GFP (Group of Future PIs), a peer-mentoring initiative that prepared postdocs for the faculty job market—with all participants securing positions that year.

With this proactive mindset, I went on to establish my own group, working to discover new immunological therapies for obesity-related diseases. With a similar mentality, at the University of Chicago, I co-founded a junior faculty group, supported by our dean, focused on peer mentorship, grant writing, people management, and community building. These experiences have demonstrated the power of creating what's missing, both for myself and others, and I encourage my mentees to do the same.

My advice: if the support you need doesn't exist, find peers in a similar situation, join forces, and make it happen together. You'll help yourself and empower those around you.

Chia-Lin Hsu

Professor and Director of the Institute of Microbiology and Immunology, National Yang Ming Chiao Tung University, Taipei, Taiwan

I am an immunologist who received training in Taiwan and the USA. After gaining invaluable experience in US industrial sectors, I eventually returned to my homeland, Taiwan, and set up my own lab with a research focus on immunometabolism, particularly metabolite transporters.

The journey of moving from industry back to academia is a challenging one—it requires a lot of readjustment, particularly on starting my own lab with limited budgets and young students without experience in conducting experiments. I was blessed with mentorship from multiple established PIs and congeniality from colleagues. It was a bumpy ride, but I learned that asking for help is not a sign of weakness, but creates opportunities for connections and spaces for kindness.

The academic career is packed with joy and excitement, but definitely not short of frustration and setbacks. If I could offer one piece of advice: keep your sense of humor—it will carry you through the tough times, and one day you'll look back and smile with pride.

Anushka Dongre

Assistant Professor, Cornell University, Ithaca, NY, USA

I am an assistant professor in the Department of Biomedical Sciences at Cornell University. The central focus of my lab is to better understand how epithelial-mesenchymal plasticity drives resistance of breast tumors to immune checkpoint blockade therapies. My graduate and postdoctoral experiences, along with the invaluable mentorship that I received during these times, significantly impacted my decision to become a PI. Starting a laboratory and research program is both challenging and exciting at the same time. However, the freedom to pursue unanswered questions at the intersection of two fields, the thrill of discovery, and the opportunity to mentor trainees are just a few highlights that make it worthwhile. A key to hit the ground running is to be in a supportive environment, surrounded by colleagues who are always willing to listen and lend a helping hand. I consider myself very fortunate to have received such opportunities and consider it my responsibility to continue to pay it forward.

Jessica A. Osterhout

Assistant Professor, Department of Neurobiology, University of Utah, Salt Lake City, UT, USA

I am interested in the neurobiology of sickness. I started my lab at the University of Utah in 2022. Transitioning to this position can be tricky even for the best of us! It helps to find your allies quickly. My department chair helped me navigate space issues and early funding strategies. My first hire was a lab manager who was familiar with the university systems. Finally, I had a network of early PI friends to ask for advice. Here is the best advice I received: when a problem seems stuck, be the squeaky wheel. Continue to bring up the issue and possible solutions, in a respectful way, until there is a resolution. As a woman in science, I often felt uncomfortable with confrontation, but I realized there is a way to continue communication without negative emotions, which can drive conflict. This strategy has helped resolve several administrative and interpersonal issues.

Anna-Maria Globig

Assistant Investigator, Allen Institute for Immunology, Seattle, WA, USA

I lead a research group that studies how the nervous system shapes immune responses to infection and cancer. As a physician by training, I completed my medical doctorate in T cell immunology—originally planning to spend just six months in the lab. But I was quickly drawn in by the joy of asking hard questions and testing ideas, and I never left immunology. Scientific training has taught me patience, resilience, and that successful scientists are often those who can quickly motivate themselves to try again after a failed experiment.

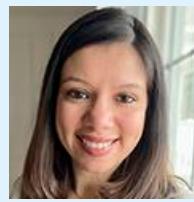
Becoming independent has been both challenging and deeply rewarding. I've learned to rely heavily on the guidance of experienced mentors and of peers just ahead of me—their hindsight is your foresight. Protecting time to focus on scientific data is also essential, as administrative work can easily take over the day.

To women considering a PI career: find strong female mentors who lead by example and can help navigate the realities of balancing science and family—and celebrate every step along the way. Building a career in science is a long and demanding process; it's important to enjoy the journey and remember why we do it—science is fun! Photo credit Chris Keeney.

Deepshika Ramanan

Assistant Professor, NOMIS Center for Immunobiology and Microbial Pathogenesis, Salk Institute for Biological Studies, La Jolla, CA, USA

I'm an assistant professor at the Salk Institute, where I launched my lab in 2023 to study how maternal immunity supports and shapes offspring immunity. I started the lab just one day after a cross-country move—with a six-week-old baby and a toddler in tow. Being an immigrant without nearby family support, the early transition was particularly challenging. Balancing the demands of academia and parenting was a constant tug-of-war; spending more time on one often brought guilt about being less present in the other—and honestly, it still does. Navigating this balance hasn't been easy, but I've been incredibly grateful for the openness and generosity of mentors and fellow junior faculty. They've offered thoughtful guidance not only on managing deadlines, trade-offs, and setbacks, but also on how to lead a team, grow as a manager, and make space for both ambition and family. Their support has made a meaningful difference in my journey, and I hope to pay it forward by offering the same encouragement to others facing similar challenges. I'm incredibly proud of the team I've built—working alongside such motivated, thoughtful trainees has been one of the most fulfilling parts of this journey and continues to energize me every day. I have come to realize that this career path is not a marathon—it's more like a long, winding hike, with steep climbs and moments to catch your breath. Despite the challenges, the journey is rewarding, so it's important to pause and appreciate the view along the way. Photo credit: Salk Institute.



**Martine Therrien**

Assistant Professor, Center for Neuroscience, Department of Molecular and Cellular Biology, University of California, Davis, CA, USA

I started my lab in March 2024 at the Center for Neuroscience at UC Davis, and we study how genetics and environment impact microglia, the immune cells of the brain. During my postdoctoral fellowship at the Broad Institute, I was involved in the postdoctoral association, and we organized multiple career development workshops. While attending these events helped me understand the general academic job application process, the most valuable outcome was meeting Aleksandrina Goeva. She was also a postdoctoral researcher at the Broad, and we realized we would be applying for jobs at the same time.

Having an application buddy is the best advice I can give. Applying for jobs and then starting a lab is full of uncertainty. Having someone who is going through the same process as you are, someone to discuss strategy with, and someone who will celebrate the small victories and motivate you to submit one more application in December when you're tired is crucial.

There is no workshop that can fully prepare someone to navigate the roller coaster of the academic job application and starting a lab. Doing the process with someone is so beneficial, and it's one more person to discuss science with! We both started our labs last year, and we are still in contact, discussing how to recruit postdocs and juggling teaching, lab, and service duties.

**Alexandra McCubrey**

Associate Professor, Department of Medicine at National Jewish Health and the University of Colorado, Denver, CO, USA

I am an immunologist studying phagocyte biology and the role that dead cell clearance plays during tissue repair. I started my lab in 2018. A strong support system has been critical to my success. Mentorship by established experts trained me as a scientist and helped advance my career, but it's peer mentorship that has been crucial for my resilience in navigating day-to-day issues. Running a lab is my dream job, but the responsibility can feel overwhelming. When I became assistant professor in 2020, I began meeting regularly with a small group of other early-stage investigators at my institution. It has been motivating to see my peers persevere through the same struggles and worries that I have, plus their advice for me has been phenomenal. My advice to new investigators is: don't be afraid to put yourself out there and ask for mentorship! We started our peer group because I went up to three awesome researchers and said, I'm looking for peer mentors, I admire you, would you be willing to meet with me? Five years later, we've all been promoted and we're all still meeting. Photo credit: Eliza Nolte (at National Jewish Health).