By **Senka Holzer**

Don't panic

I was interviewing for the Ph.D. program of my dreams when my potential adviser invited me to look at a sample under the microscope. I meant to grab the eyepiece, but my maneuver went spectacularly wrong when my finger got caught between the two middle buttons of his shirt. My hasty attempt to remove it only made things worse, as the shirt popped open all the way down and even his undershirt pulled out of the waist of his pants. Even now, 15 years later, just writing about it is incredibly embarrassing. But my ability to not panic in that moment landed me the position, and became one of my greatest life lessons.

It was the second phase of the selection process for an international Ph.D. program. Coming from the war-torn country of ex-Yugoslavia, I had passion for research but zero experience. The 2-day interview got off to a rocky start when another professor—the one I most wanted to work with—was so impressed by my competitor's presentation he gave her a high-five. I went to the bathroom to cry, then reminded myself there was more than one spot to be filled, washed my face, and headed to the networking dinner. There, my future adviser found me. "It's brave of you to apply with such a track record," he said. "Don't miss visiting my lab tomorrow." I wasn't sure whether to be flattered or insulted, but I knew I needed to impress him to have a chance at the program.

The next day, things seemed to go from bad to worse. The shuttle that was supposed to take me to the lab never showed up. I desperately hailed a taxi, but was stymied by a language barrier until I thought to show the driver the hospital's logo on my paperwork. After he dropped me off, I had to find my way through a block of 40 hospital buildings. When I finally entered the room full of my competitors, with large sweat circles under my armpits and my face like a swollen tomato, the professor seemed amused. That's when he invited me to the microscope and I "undressed him," as the story was retold by those who witnessed the scene.

The rest of the group was frozen with embarrassment, but I managed to keep my composure. Compared with what I had seen growing up—bombings, widespread corruption, catastrophic inflation—this seemed like a relatively minor disruption. I took charge of the situation. "I'm so sorry," I said, then turned to the science. "There is a nonuniformly stained part of the cell. Which organelle is it?"

"When confronted with challenges, I have managed to keep a cool head and stay positive."

Years later, I asked my adviser why he selected me for the position, even though my track record was weak and I had made a total fool of myself. "Oh, that's simple," he replied. "I was looking for a dedicated troubleshooter who won't freak out at the time of crisis. And this is *exactly* what you demonstrated during the interview." At that moment, I realized that maybe the apparent setbacks during the interview happened not *to* me but *for* me, because otherwise I would have had no chance to stand out.

Looking back, I see my whole life as a series of such experiences. I was denied Ph.D. funding in my home country as its institutions crumbled. My adviser relocated to another country in the middle of my Ph.D. My application for a prestigious grant was rejected when I was already stretched thin maintaining my career after my second child was born. But when confronted with challenges, I have managed to keep a cool head and stay positive—an approach that has helped me find my way through, all the way to the tenure-track position I recently secured.

My intensely difficult early experiences amid political and economic turmoil helped me develop resilience in the heat of crisis. Bad things happen, and not everything has a silver lining. But I've learned to accept what I can't control and take charge of what I can. I certainly don't have it all figured out. But I know that, whatever I am going through, and however undeserved and devastating it feels, it helps tremendously to ask myself a single question: What if this is happening not *to* me, but *for* me? ■

Senka Holzer is a group leader at the Medical University of Graz.
Send your career story to SciCareerEditor@aaas.org.

ILLUSTRATION: ROBERT NEUBECKER

By **Mary O'Reilly**

An artist at heart

Three years into my postdoc, I started to wonder whether I needed a new career plan. After applying for more than two dozen faculty jobs, I hadn't landed a single interview. I felt dejected but not particularly surprised. I was applying in the middle of the 2008 financial crisis, when many universities had instituted hiring freezes and faculty openings were scarce, and my publication record didn't stand out. I could have spent another year or two as a postdoc waiting out the financial storm and building up my CV. But my future husband lived across the country and we were eager to close the gap one way or another. I needed a plan B—and a long dormant dream of becoming an artist began to stir.

I had once considered going to art school but had put that notion to the side when I decided to pursue chemistry as an undergraduate. In the years that followed, I kept up my interest in art by taking drawing and painting classes at night. My family was bursting with mathematicians, computer programmers, and engineers who pursued music and devoured literature in their spare time, so it had felt natural to have my daily life revolve around science, with art as my dreamy lunar companion.

But in the spring after my failed job search, that started to change after an office mate excitedly showed me proofs for a review article. She was wowed by what the journal's scientific illustrator had done with her rudimentary sketches. "That would be such a fun job," I mused.

"I love that I get to combine my scientific and artistic sides."

I decided to test out a new career direction by volunteering to create similar illustrations for my institute's newsletters. I spent my nights and weekends reading scientific papers and thinking about how to illustrate the results. It was a fun task—something that engaged my artistic, creative side and made use of my scientific training. I felt I was perhaps on the right path. But could I make a full-time career work?

Searching online, I tracked down people who had that kind of job. I found many had training through scientific illustration master's degree programs. After living on grad student and postdoc salaries for years, I didn't have enough money saved up for tuition, so I decided to get a certificate in digital design and forge my own path.

It was exciting to find a career that drew on my diverse skill set and would allow me to work as a freelancer from wherever my partner got a job. I did feel a sense of loss as I began to let go of my dream of becoming a faculty member, and I worried I'd be letting down the people and institutions who'd invested time and resources in me. But it helped to remind myself that my new career path wasn't removed from science. I was harnessing my passion for art in the service of science. And some key early projects, which required me to thoroughly understand the research, convinced me that my background was a crucial part of this niche I was carving out for myself.

As I launched my fledgling career, I took an adjunct position teaching chemistry at a university near where we were living. The income gave me breathing room to get my freelance business off the ground, which wasn't easy. I misguidedly spent much of the money I earned from illustrating on marketing to try to drum up business. But I quickly learned that word of mouth and online searches, not advertising, were the best sources of new projects for me. Fortunately, as my client list grew, so too did the referrals. It took more than 3 years, but eventually my business grew sufficiently large that I decided to stop teaching.

I now work as a visual designer at a biomedical research institute, where I spend my days working with researchers to communicate their work visually. I love that I get to combine my scientific and artistic sides and contribute to the dissemination of knowledge to the scientific community. And though I can't in good conscience recommend my long and winding path to this career, I wouldn't change a thing about the stops I made along the way. ■

Mary O'Reilly is a visual designer for Pattern, a design and data visualization group at the Broad Institute.

ILLUSTRATION: ROBERT NEUBECKER

WORKING LIFE

By **Kim Hunter-Schaedle**

When science fails a scientist

In August 2012, a phone call from Scotland told me that my sister had been diagnosed with advanced breast cancer. Six weeks later she was dead. In between was a blur of travel, family tensions, and—one bright spot—making my sister laugh one more time. But my sharpest memory of those weeks is the helplessness of sitting in a hospital office learning that estrogen receptor-negative breast cancer cells in my sister's body had metastasized to her bones, lungs, and brain. We could make her comfortable, the doctor said. That was it.

When I learned about my sister's cancer, I was in the midst of a career transition—the second in my professional life. Back in my 30s, I had decided to leave the bench because I felt I could have a greater impact on the human condition as a medical research foundation administrator than I could as a decent, but not great, neuroscientist. For 6 years, I was the chief scientific officer of a foundation that researched drug treatments for benign but deforming tumors that could become malignant. I was the one sitting at the other end of the table, facing people who were relying on science to change, and possibly save, the life of their loved one. "We are going to get there," I would say. "We will find drugs that will work." I truly believed it.

"My decision has been to grab life—now."

I got the news about my sister after my husband and I had taken the radical step of moving from a city-centered life to the rural one we had fallen in love with. I was working from our new home, consulting for cancer foundations and walking my dog in the woods at lunchtime. For the first time, my career had slowed down. I was quietly torn between fully embracing this change and returning to the career fast track, but I couldn't quite figure out what it was that I missed. Was it the prestige, the salary, or leading the charge to find cancer treatments? Traveling to our annual international conference 6 years straight (always at the time of my June wedding anniversary)? Strategizing with 30 researchers and clinicians about curing brain tumors (which caused me to miss a celebration dear to my in-laws)?

After the phone call from Scotland, I emailed my sister's medical reports to many of the doctors I'd worked with while at the foundation, in the hope they could help. But their responses, though sensitive and thoughtful, could only try to prepare me for my big sister's death at age 56.

First, the helplessness grew. Then the anger: Why was hospice the only option she had? Weren't there off-label drugs or clinical trials? Shouldn't I know this? Had my sister been in denial? How could she not know she was riddled with cancer? She'd feared breast exams, so she didn't get them. We'd argued about that, and about her smoking. Eventually, my anger gave way to resignation: Her cancer had simply eluded the options science had to offer.

We knew my mother's large family had a history of breast and ovarian cancer, and one cousin had a *BRCA1* mutation. But it wasn't until after my sister's death that I investigated and mapped the family cancer tree. When my gynecologist saw it, she said wow. We'll never know if my sister had a *BRCA1* mutation, but the summer after she died I learned that I did. The decision to have prophylactic surgery was easy.

Science may have helped me protect my health, but I no longer assume that we'll have translated enough science into better drugs for cancer if I ever need them. Meanwhile, this difficult couple of years has helped me make peace with my decision to abandon the high-profile career ladder. Just a year before she died, my sister had retired and she was looking forward to freedom. So my decision has been to grab life—now. At 50, I finally have a work-life balance. I found a job in mental health administration where I can make an intellectual contribution, and which also allows me to go home and live life. I have given enough to the "cures" cause. It is a long road, and it is time for others to lead the way. ■

Kim Hunter-Schaedle lives in western Massachusetts and works at Austen Riggs Center, a psychiatric hospital in Stockbridge. For more on life and careers, visit sciencecareers.org. Send your story to SciCareerEditor@aaas.org.

ILLUSTRATION: ROBERT NEUBECKER

By **Bec Roldan**

Coming out

My hands shook as I sat down to write the email. "I wanted to let y'all know that I use they/them/theirs pronouns," I typed. "I know that gender-neutral/non-binary pronouns are not a common staple in our language, but I ask that you please do your best to respect them." Proclaiming my identity—one I had still not quite figured out yet—to a group of co-workers made me feel incredibly vulnerable. But I knew that if I wanted to survive graduate school, I needed to be open with my labmates, no matter how scared I was. After a few anxious moments, I clicked "send."

During the months leading up to graduate school, I had been exploring the idea of using gender-neutral pronouns. I didn't know whether they'd suit me; I just knew the words "she" and "woman" didn't feel quite right when they were used to describe me.

I had come out as queer during my last year of college, thanks in large part to support from the tight-knit queer community I'd discovered there. Starting graduate school at a new institution, I wouldn't have that support system. I feared I'd be navigating my journey to discover myself completely on my own.

Those fears evaporated when I learned that roughly one-quarter of my Ph.D. cohort identified as LGBTQ. We gravitated toward one another, and I decided to come out as nonbinary to some of them. From then on, whenever our small group got together, my friends would say "they" when speaking about me. The more I heard that word roll off their tongues, the more I felt at home in my own body.

As time wore on, it became increasingly difficult to show up to work and exist as a gender that no longer felt like my own. Hiding what I knew to be true about myself was exhausting and painful. So, at the start of my second semester, I decided I needed to come out to my adviser and labmates.

A flurry of questions ran through my mind: "What should I tell them? How long will it take colleagues to get used to my pronouns? Will some people choose to actively misgender me?" For advice, I turned to my friend Isaac, who is a year ahead of me in my program and is nonbinary. We met up for a coffee and they told me their own story of coming out to their lab. It was a relief to hear that their experience had been largely positive, and they put me at ease about my own decision.

I set up a time to meet with my adviser the following day. When I stepped into his office, he could tell how nervous I was, and he was concerned. I told him not to worry. As soon as I informed him about my identity, he was supportive, asking what he could do to help me come out to others in the lab. For the first time in months, my fears eased.

"I'm constantly learning how to exist in this world as my true self."

I sent the email to my labmates the next morning, not knowing what to expect. That day was surprisingly quiet. But the 6 months that have passed since then haven't always been easy. The word "she" has slipped out in conversations more times than I can count, and every time, it feels like a knife is being stabbed into my stomach. Whether malicious or accidental, the impact is always the same: I feel as though the act of misgendering erases the person I have worked so long and hard to become. After one particularly tough week, I cried in the bathroom and left work early.

But I've also been heartened to see how many people have stepped up to support me. My adviser and closest friends in the lab quickly caught on to my pronouns, and they soon took the responsibility to correct others when they misgender me. They've listened to me patiently as I've explained how transphobia makes it hard for me to show up to work. And my adviser invited Isaac to speak to our lab group about gender identity and inclusivity, so I didn't have to carry the burden of education and advocacy all by myself.

I'm still navigating my path forward. But I will never regret my decision to come out. I'm constantly learning how to exist in this world as my true self, and I know I'm not on this journey alone. Many friends and colleagues—both cisgender and transgender, queer and straight—are standing by me every step of the way. That means the world to me. ■

Bec Roldan is a Ph.D. student at the University of Michigan, Ann Arbor.

ILLUSTRATION: ROBERT NEUBECKER

By **Phil De Luna**

Choosing from the heart

After I returned from a monthslong research trip, my partner sat me down to talk. We'd moved in together shortly before my departure and, in my absence, she'd been pondering our future. "I don't want to leave Toronto. I love it here and so do you," she said. I was in the third year of my Ph.D., and she worried my career plans would lead us elsewhere, first for a postdoc and then for a faculty position. Deep down, I knew this conversation was coming. Until then I hadn't given the issue much thought, but I knew she was right. I wanted to be with her more than I wanted to be a professor.

My partner's career as an operating room nurse was mobile in theory. But she loved the hospital where she worked, loved Toronto (the city where she grew up), and wanted to stick close to friends and family. She wanted to build our life where we were, to make the city our home.

During my time in grad school, I had grown to love Toronto as well. The energy in the streets was exhilarating, and as a Filipino immigrant to Canada, I enjoyed the cultural diversity. But I wasn't aware of jobs that would allow me to stay without compromising the academic career I had been working toward for my entire life.

My partner's concerns about our future forced me to focus on my career plans and to reassess the academic career path I'd been blindly following up to that point. And the more I thought about it, the more I realized that path might not be right for me after all. There were aspects of academia I didn't like, such as the power disparity between students and professors and the pervasive view that only academic success was real success. I also realized many careers outside academia—in industry and policy, for instance—offered a chance to make a more rapid impact in the real world.

I started to explore options by contacting Ph.D. graduates who had followed career paths I found interesting, asking for informational interviews. I spoke with venture capitalists, energy company executives, management consultants, former politicians, and startup founders. I'd always end the phone call with the same question: "If you could talk to yourself when you were in your mid-20s, knowing everything you know now, what advice would you give?" Often, the answer was that career paths are not straight or neatly assembled. It's important to be willing to fail and pivot to something new, as doing so often leads you to better places.

"The conversations opened my eyes to a universe of career options."

The conversations opened my eyes to a universe of career options and showed me that no one path interested me most; rather, I wanted to experience them all! From then on, I started to envision my career as a set of chapters: Perhaps I'd start with one option, then move on to another at some point in the future. That perspective freed me to explore many possibilities without worrying that diving into one meant giving up a chance to pursue another.

When I was in my last year of graduate school, I looked into starting a company to build the clean-energy technology I'd been researching during my Ph.D. But my adviser felt the technology was too early for commercialization, so I started to look for jobs. One day on LinkedIn, I noticed a job posting for a government position. A national lab wanted someone to lead the development of technologies to help Canada reach net zero carbon emissions. I hadn't been seeking government jobs, but I was excited. The work had the potential to make a real impact—and it was based in Toronto. I applied, was offered the job, and accepted.

Two years later, I can say with confidence that my career transition was right for me. I might not stay in this job forever, but it feels like the perfect first step for me to take postgraduation. I love what I do—and I get to wake up every morning with a smile on my face next to the person I love most. I wouldn't trade that for anything. ■

Phil De Luna is a director at a national lab in Toronto, Canada.
Do you have an interesting career story that you would like to share? Send it to SciCareerEditor@aaas.org.

ILLUSTRATION: ROBERT NEUBECKER

By **Eric R. Wengert**

Learning to unplug

Nestled in a state park, the wedding was a perfect opportunity to take a break from my Ph.D. and celebrate the union of my close friends. But my mind was somewhere else. Moments earlier, as my wife and I were waiting for the ceremony to begin, I took out my phone and compulsively checked my email. I spotted an urgent message from one of my collaborators, outlining analyses they needed me to complete for a manuscript resubmission. I pocketed my phone, but the damage was done: For the rest of the weekend my mind was thrust back into research mode, anxiously trying to figure out how I was going to get the work done.

Throughout grad school, establishing a healthy work-life balance was a challenge. During a lab rotation, I listened with disbelief as the principal investigator (PI) told me he expected trainees to work 12-hour days 6 days per week. No one else appeared to be bothered by his demanding work routine. His trainees would regularly stay in the lab until midnight, only to return first thing the next morning. I started waking up as early as possible to get into the lab and demonstrate my dedication. But after 1 week, I knew that the research group, with its skewed approach to work-life balance, wasn't for me.

"I began to push back on my habit of mindlessly reaching for my phone."

For another rotation, I chose a group that had more reasonable working hours. The PI and other lab members went home for dinner, made time for family, and exercised regularly. Instead of racking up hours, they focused on being efficient with the time they dedicated to research. For the first time, I didn't feel guilty for seeking a life outside the lab. Not long after, I signed on to stay in that lab for the rest of my Ph.D.

With my new PI's support, I succeeded in staying productive while keeping reasonable work hours, regularly leaving the lab by 5 p.m. Yet, I often found myself thinking about work well into the evening. Instead of unwinding and cooking dinner, I would anxiously ruminate on my experiments. While watching TV, I would scroll through newly published scientific articles during commercial breaks. My conversations with family members and friends always seemed to gravitate toward the status of my research. One evening, my wife asked whether, during dinner, we could talk about something—anything—other than my work.

A turning point came during my second year, when that single email hijacked my attention at the wedding. Frustrated, I asked myself, "Have I really achieved work-life balance if, regardless of where I am, my mind is in the lab?" I realized that my habitual email checking was key to my problem. In one instance, I opened an email containing peer-review feedback at 10:30 p.m. and instantly read through the detailed list of criticisms. No wonder I had a fitful sleep that night.

So I set a new boundary for myself: Only deal with work-related tasks—opening emails, reading journal articles—when I can give them my full attention. I began to push back on my habit of mindlessly reaching for my phone whenever I had a spare moment. Instead, I forced myself to stop and question whether the time was right. I also began to turn off my phone during some events, such as parties and family gatherings. Although it took time to develop better habits, I was pleased to find that this strategy cut down on anxious mind-whirring when I was trying to relax.

I also started to practice being mentally present during activities outside the lab. For instance, I found it helpful to go for an evening walk and try to notice the birds and flowers around me, a practice that drew me out of my thoughts and into my surroundings. It was challenging at first, but as my walk became a part of my daily rhythm, it became easier to ground myself and take these moments to recharge.

Now a postdoc, I still catch myself on occasion thinking about experiments when I'm trying to fall asleep at night. But I'm making progress toward being mentally present when I step away from my workspace. By bringing work-life balance to my inner world as well as my schedule, I hope to become a less anxious scientist, a more attentive husband, and a much happier wedding guest. ■

Eric R. Wengert is a postdoctoral researcher at the Children's Hospital of Philadelphia. Send your career story to SciCareerEditor@aaas.org.

By **Karishma Bisht**

A ghost author speaks up

When I stumbled on the research paper from one of my former labs, related to a project I had contributed to, I was taken by surprise. No one had told me our work was going to be published! A quick glance showed I was acknowledged, which was gratifying. However, when I looked at the figures, my surprise turned to shock. I had generated two of the figures, as well as the underlying data, a couple years earlier, when I was a research fellow in the lab after finishing my master's degree. Based on my contribution, I should have been included as an author. Then I discovered the group had published other papers about our work without even acknowledging me. I had become a ghost author, my contributions used without credit.

I knew this wasn't right. Still, I was hesitant to speak up. What if it went badly?

Luckily, I had my Ph.D. adviser to guide me. Not only is she a great mentor, she also taught a responsible conduct of research (RCR) course—inspired by her postdoc adviser, who ran a similar discussion group—which I had taken early in my Ph.D. journey. Since then, we've discussed authorship practices, peer review, data management, and more. Her course and our conversations have been invaluable for me, especially as someone who came to the United States for my Ph.D. after training elsewhere. They helped me adjust to a new research environment and learn the nuances of conducting research to the highest ethical standards.

"Another co-author had known about my contribution but chose not to credit me."

My adviser suggested I contact the corresponding author, but urged me to choose my words wisely. I knew I risked burning bridges by complaining to my former group, but I took comfort in the fact that I have moved to a different research area and will not be needing any recommendation letters from that lab.

I mustered the courage to email the corresponding author. I had a good relationship with them, and I guessed they had simply forgotten about my work on the project. I started by congratulating them on the publication; noted my contribution, attaching the original data and figures while keeping my tone respectful; and requested they submit a formal correction to add me as a co-author on the paper.

My former colleague was quick to respond, and I was relieved that they shared my concerns. They assured me they would work on fixing the issue. But after 1 month of silence, I followed up—only to find out that another co-author had known about my contribution but chose not to credit me. The corresponding author assured me that things would be taken care of, but 9 months have now passed with no progress.

Still, I am proud that I spoke up, and I've resolved not to become a ghost author again. Staying in touch with my former lab and standing up for myself prior to publication might have made a difference. I realize that won't always work: A few months before the paper that made me a ghost was published, I had emailed one of the authors to ask about the status of the work, only to receive a brush off. And sometimes there's no need to take the initiative: When my work from a different former lab was ready to be published, the group leader and co-author did a great job keeping me in the loop throughout the manuscript submission and revision process. But I've learned that I can't expect that, and it is on me—and early-career researchers more broadly—to be proactive and persistent in reaching out to discuss authorship and credit on future publications.

When I recently graduated from my Ph.D. program, I initiated a thorough discussion with my adviser about my contributions to potential manuscripts from the lab to avoid future conflicts. Luckily, my adviser's RCR focus and our strong relationship helped the conversation go smoothly, and I don't have any concerns about being recognized in the future for my work in her lab. Still, I'll make sure to keep in touch. ■

Karishma Bisht is a postdoctoral research associate at Princeton University. Send your career story to SciCareerEditor@aaas.org.

By **Samantha J. Butler**

The confidence to question

It was almost business as usual when I rose from the audience to ask a question after a research talk. I was nervous, as I often am in these situations. Since the beginning of my career, my brain's fear center in the amygdala has been determined to warn me that no good will come from speaking up. Over the years I've learned to project confidence, even though I still question the validity of my question right up to the moment I start to talk. But I also know a penetrating question can be invaluable. I hope to receive such questions when I give a talk, and I teach my students to lean into them. So, I asked the presenter to put her data slides back up and drilled into them for a couple minutes. I posed an alternative hypothesis; the presenter pushed back. Others had questions, so I sat down. It was a tense but healthy debate, I thought.

But this exchange didn't happen at a scientific meeting. It was at an informational session at my child's elementary school, which is run by my university. The speaker, a colleague in the education department, had presented data showing pupils' math test scores had increased, which the school attributed to its teaching method emphasizing storytelling and group discussion. I had countered that, because the school did not keep statistics on which children were tutored—something that my casual observations suggested was increasingly common—it was impossible to determine whether its teaching method or the tutoring was responsible for the test score gains.

I had hoped I was helping the school and the research group. That's not how they saw it. Within days of the meeting, the principal called me into her office to tell me that my behavior was "a threat to the democratic values of the school." I was asked to pledge my loyalty to the school's leadership and educational methods. When I refused, I was removed from the school's board of advisers.

My amygdala had been right all along. I felt burning shame. I was also confused: I believed I shared the school's values, so how was my speaking up a threat? I questioned my abilities to advocate for my child and worried this incident would impact him at school. These doubts seeped into my professional life as well. In faculty meetings, I began to monitor how colleagues responded to me and tried to keep my questions as concise as possible. During a meeting about how to navigate diversity concerns, I teared up unexpectedly, suddenly overwhelmed with fear about the consequences of speaking up. Was it better to remain silent?

"Speaking up can take an emotional toll—but staying silent would be so much worse."

It was unnerving to find myself questioning a hard-won capability that is central to my success as a scientist. In graduate school, I lacked the confidence to ask questions in most public settings, but I greatly admired a student who did so at the end of every seminar. As a postdoc, inspired by brilliant, fearless friends who asked the most devastating questions, I finally mastered my anxieties enough to begin to do so myself. I was commended for my critical eye, which gave me confidence as I started my own laboratory.

Yet what made me good at my job had now made me an unacceptably confrontational mother. My professional and personal roles seemed to be pushing me in opposite directions, leaving me feeling stuck in the middle.

With some time and support, I realized I needed to master my amygdala again. A school mother I didn't know well confided that she admired what I had said, which added to my confidence that I had done the right thing. When I agonized to a colleague that perhaps I had spoken too stridently, she fiercely defended my right to speak critically.

Slowly, a tide turned in my mind. I have worked hard at generating and asking probing questions, and it's a valuable skill. Yes, speaking up can take an emotional toll—but staying silent would be so much worse. ■

Samantha J. Butler is a professor at the University of California, Los Angeles. Send your career story to SciCareerEditor@aaas.org.

ILLUSTRATION: ROBERT NEUBECKER

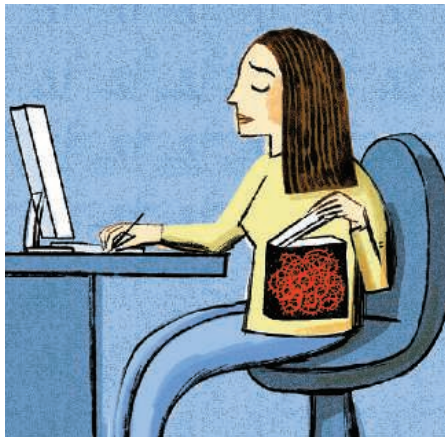
By **Astrid C. H. Jaeger**

No shame in my pain

At the beginning of my second year as a Ph.D. student, I started to spend hours each month curled in the fetal position on the floor, unable to leave the house, let alone work. I thought the stabbing pelvic pain and alarming blood loss were just part of having a period, to be handled with painkillers and an extra-large menstruation cup. As the months passed, the pain and cramps became constant, interfering with my days, my Ph.D., my life. The doctor said it was just stress, but I was at the end physically and emotionally. When I took sick time I felt I was failing as a Ph.D. student, and I tried to make up for the missed hours by working extra in the evenings and on weekends. Yet because of the stigma around many women's health issues, I was too embarrassed to tell my colleagues what I was going through.

When people asked how I was doing, I put on my best smile and told them I was OK, just tired. I worried that if I complained they might see me as too sensitive. But I was desperate to find an answer.

After three doctor's visits within 2 months, I saw a specialist. A lengthy investigation of my uterus by 3D ultrasound revealed lesions and a mandarin-size ovarian cyst—signs of endometriosis, a chronic disorder in which tissue that typically lines the uterus grows outside it. The disease, which strikes one in 10 people who menstruate, causes extreme pain and often results in infertility. I was relieved the pain finally had a name and that, more than a year after the symptoms began, I had a diagnosis. But there is no cure, and the root of the disease is unknown.



"I thought the stabbing pelvic pain and alarming blood loss were just part of having a period."

I couldn't control what was going on inside my body, so I started to focus on what I could control—including sharing my story with colleagues, despite the stigma. I wanted them to know why I had not been around as much, and I hoped being open about my experience might help others going through anything similar. So, during a coffee break, I gathered all my courage and opened up to my colleagues about the pain and how being ill interfered with my work. Telling my story led to an entire conversation about everyone's period problems, including laughing about our most embarrassing experiences. It felt good to be understood.

I also felt the need to tell my supervisor. I was afraid he would be disappointed with me or even question whether I should continue as a Ph.D. student, and I spent many sleepless nights working out how to approach the conversation. To my relief, when we finally met, he was very understanding. We talked about my health and how it affects my quality of life and my work. We adjusted my schedule, and he told me I could ask our lab technician to help with my experiments and delegate some analyses to student assistants and interns.

Unburdening myself to my colleagues, and the support I received in return, helped me regain my motivation. I felt ready to beat the pain. Four months after getting diagnosed, I had a small surgery to remove a cyst. I changed my diet and started hormone therapy to halt the growth of the disease—though that treatment comes with its own side effects. I also learned how to manage the pain with pelvic floor physiotherapy, herbal medications, and acupuncture instead of massive loads of painkillers. I still experience 1 or 2 days of pain every month—not as severe as before, but enough that I need to use sick leave and do not forget my disease.

For many years, endometriosis was known as the "career woman's disease." It was believed to afflict women who put off marriage and pregnancy to pursue their careers. But it is not our career paths that shape our disease; it is the disease that disrupts our careers. Endometriosis is just one of many women's health issues that are too often stigmatized or ignored—often with dire consequences for our health and well-being, not to mention our careers. But being open and seeking help can open the way back into work and life. ■

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Send your career story to SciCareerEditor@aaas.org.

By **Pijar Religia**

Full circle

In the exit interview after my Ph.D. defense, a professor on my thesis committee asked why I had accepted an industry job. Puzzled, I answered that it was the only offer I received; surely that was reason enough, even if the company's semiconductor business had nothing to do with my degree in biotechnology. The truth was that I had decided to pursue an industry job in my adopted country of Japan because I was tired of academia. I don't speak the language fluently, so I applied to just two companies that interviewed in English. I was relieved to land the job at the semiconductor company. I felt some anxiety about going into a totally new field, but the job would offer a new environment and keep me in Japan. I thought that was enough for me.

In the first month, my new supervisor asked me why I had chosen to work at the company, even though my degree was in a completely different field. I said I wanted to learn how industry works, and I thought this position was my only chance to do that. He didn't seem completely satisfied, and his reaction made me think more deeply about my motivations and goals. Was I just settling for whatever job came to me?

I put these concerns aside for a while. Everyone was happy with my work and assured me I was on track for a promotion. But in every quarterly meeting with my supervisor, he asked about my career plans. Every time, I felt blank. I had no vision of what I wanted to be in the company. It was like walking without a map, which felt disconcerting. Still, I carried on, hoping that maybe eventually I would come to love the work.

"I found myself reminiscing about working in academic labs."

Everything changed when my mentor at the company—a longtime employee who, in addition to my formal supervisor, served as my guide—resigned and my husband moved away for a new job. I lost my closest support system, and amid pandemic restrictions I couldn't see my husband for months. I also took on my mentor's job, which significantly increased my workload. I became lonely, depressed, and physically and mentally exhausted.

Amid these difficulties, I found myself reminiscing about working in academic labs. When I took the semiconductor job, I was burned out on academia. In the midst of the stress of completing my Ph.D., and after having spent the past decade at universities, I just wanted to get away. But in my current role, I felt I was primarily executing others' plans, leaving little room for creativity. I longed for the time when I discussed and explored ideas with my advisers, read papers, and designed my own experiments. Perhaps I had been too hasty in leaving.

Feeling lost, I talked to my family and a therapist about my growing desire to leave my job, live in the same place as my husband, and return to academia. Ultimately, I knew I needed to choose what was best for my physical and mental health. After 9 months on the job, I told my supervisor I was resigning in 3 months. He mentioned he had a hunch since our first meeting that I wouldn't stay long. He told me to get a job I really enjoy, which seemed to validate my decision.

I moved to the city where my husband was—which is also where I did my Ph.D.—and applied for postdoc positions, with the ultimate goal of securing a tenure-track job. Of course, the feeling of "what if it doesn't work again?" haunted me at first. But I reminded myself of how differently I had approached the two decisions. When I took the industry job, I had no vision of what I wanted to be. In deciding to return to academia for a postdoc, in contrast, I had reflected a lot and discussed with those dear to me. Now, I have a clearer map. I know doing research will add meaning to my life.

The director of the center where I now work is the same professor who initially asked me why I took the semiconductor job. When he interviewed me for my current position, he asked why I left the job—and I had a better answer. I told him I realized I still wanted to do academic research, and that I wanted to stay near my husband. He smiled and said, "It's good to see you again." ■

Pijar Religia is a postdoctoral researcher at Osaka University.
Send your career story to SciCareerEditor@aaas.org.

ILLUSTRATION: ROBERT NEUBECKER

By **Kasper Bonnesen**

Stepping out of my comfort zone

"Do you want to go to Sunday brunch?" It was a question I'd never dared ask an office mate, but I was feeling desperate. I'd relocated from Denmark to the United States 2 months earlier for a research abroad experience during my Ph.D. I hadn't made any friends by that point so I decided to ask another Ph.D. student in my office whether they'd meet up outside work. He looked at me, smiled, and then uttered "Yes." It was a little thing, but it was a victory. I had finally conquered my shyness and dared to step out of my comfort zone.

My university encourages Ph.D. students to spend time abroad, so I planned from the beginning to work at a U.S. university for 6 months under a collaborator of my adviser's. I was excited to travel, improve my English, and expand my scientific network. But I was also afraid that my shy, introverted self would keep me from getting to know people, leading to a level of sadness and loneliness that would eventually force me to abandon the adventure and go back to Denmark.

It had happened twice before. The first time was immediately after medical school when I took a job at a small hospital in Greenland. I had always wanted to go to the island, and the challenge of living in a small, isolated community and doing my best to help people appealed to me. But I had barely put my feet on Greenlandic soil before something felt wrong. Despite working with open and friendly colleagues, I never felt I belonged and was lonely and sad. Two weeks after my start date, I told the hospital manager I needed to go back to Denmark. The second time was during the pandemic. I moved to Copenhagen because I'd always wanted to live there and because my Ph.D. adviser was fine with me working remotely. That relocation only lasted 3 months—again because of loneliness. I missed my friends and family who lived near my university, which is less than an hour's drive from my hometown.

When my departure date neared for my research abroad experience in Atlanta, I vowed that this time would be different. I wanted to make more of an effort to get to know people and feel comfortable in the community, and I thought it would be easier because my outgoing younger sister happened to be doing her Ph.D. in the same city.

Still, the initial few months were difficult. Finding myself in a foreign country without my habitual life terrified me. I felt I had to learn everything from scratch—where do I get my groceries? How do I get to work? If my sister was busy, who could I spend time with? It didn't help that students were largely away from campus for the first 2 months—first because classes weren't in session and later because Atlanta was hit by a wave of COVID-19.

"Even little interactions at work helped me feel part of a community."

My sister helped me come up with a plan. We decided that, once the COVID-19 situation eased, I would go to campus every day. There, I would try to engage in conversations with my colleagues—for instance, by greeting people I passed in the hallway or by asking other students how their weekends went while waiting for the coffee to brew. Every weekend, I would also plan outings with at least one person, whether it be going out for brunch, visiting a museum, traveling to another city, or going on a hike.

The advice made a huge difference—I suddenly felt much less lonely. Even little interactions at work helped me feel part of a community. Gradually, I built up a small group of friends—from both within and outside the office—whom I could call on to do things with, including the Ph.D. student I had invited to brunch. By the end of my time in Atlanta, I felt so comfortable that I actually had mixed feelings about going home.

I returned to Denmark in May, feeling fulfilled by my time abroad. I was able to travel to new places, meet interesting people, and learn new professional skills. I also came to appreciate the benefits of stepping outside my comfort zone. I encourage every young scientist to do a research stay abroad—and to have the courage to open up to people while you're there. You never know what you'll learn. ■

Kasper Bonnesen is a Ph.D. student at Aarhus University. Do you have an interesting career story to share? Send it to SciCareerEditor@aaas.org.

By **Hannah Gurholt**

Revising my mental health checklist

"Struggling Ph.D. student checklist, December 2021: Anxiety. Caffeine addiction. Depression. Emotional support cat that then causes stress. Imposter syndrome. Stress twitches. Hair loss." When I recently came across these words, I couldn't believe I had written them just 6 months earlier. Since then, I have tried three different antidepressants and acquired an unruly number of pill cutters. I have experienced migraines, drowsiness, weight loss, weight gain, and fatigue. At times I have still felt numb, lonely, and frustrated. But I have also felt hopeful and reinvigorated, confident in the knowledge that I am on the path of healing.

My troubles started early in graduate school. In addition to the typical stressors of starting a Ph.D., my advisers decided to move to a new university. They wanted me to go with them, whereas many of my classmates and other professors wanted me to stay. I felt pulled in two directions, and as a devout people-pleaser, my ever-present anxiety began to rear its ugly head.

I started seeing a therapist to help unpack the loaded question of what I wanted to do with my life. I shared my hesitancy about medication, having lost a beloved family member to suicide while they were taking antidepressants. My therapist and I decided we would explore every other option. We practiced coping mechanisms for when I felt particularly anxious. We discussed how to respond to the never-ending questions from colleagues about whether I was moving. I left each session with a positive feeling in my stomach.

But despite our efforts, anxiety and depression continued to creep up on me. With classes being held online due to the pandemic, I spent my days at a desk in the corner of my bedroom, searching the familiar walls for any distraction from reading papers. I spent nights lying awake with my thoughts. When I did sleep, I woke to frightening anxiety. I battled nausea, appetite loss, fatigue, panic attacks, and lack of motivation. I lost my eyebrow hair. My period became irregular to the point of spotting every day, with anemia close behind. My friends and family were concerned about my rapid weight loss. When a panic attack forced me to miss an important meeting with my advisers, I scheduled an emergency session with my therapist. She could tell everything she needed to know from my eyes, glassy and sunken with defeat. It was time to consider medication.

I went to a doctor, and with her support, I decided to take the plunge and start on antidepressants. After the appointment, I felt hopeful—an emotion I hadn't experienced in months. I called my parents and assured them I would be all right.

"Antidepressants aren't magic pills ... but they helped me when nothing else could."

My optimism was temporarily dampened when, shortly after starting the medicines, I was hit with intense migraines. But soon I began to see real benefit. I was sleeping again. My nausea dissipated and my appetite returned. My eyebrows grew back. My smile felt more genuine and my laughter less forced. I no longer felt like an imposter in my own body. I picked up my old hobbies of running, reading, drawing, and doing puzzles, and developed new ones, including cleaning and being an obnoxious cat mom. I returned to therapy with newfound light in my eyes. I began to work from local coffee shops, which helped keep me motivated, focused, mentally charged, and caffeinated. I visited my advisers' new university and finally decided to move with them, lifting a massive weight off my shoulders.

That isn't to say everything was suddenly perfect. The first medications made me feel emotionally numb, so my doctor and I tried a different one, which hit me with extreme drowsiness and weight gain. But my doctor and I will keep working to find the medications that work best for me, and I will continue therapy as well. Antidepressants aren't magic pills, and the side effects are no joke. But they helped me when nothing else could.

These days, I have a new checklist. Healing Ph.D. student checklist, July 2022: Drowsiness. Caffeine addiction. Appetite changes. Weight fluctuations. Newfound motivation. Transparency. Hope. ■

Hannah Gurholt is a Ph.D. student at Washington University in St. Louis.

By **Ahmed Elbassiouny**

Unequal undertakings

When I started graduate school, I knew it was not going to be an easy ride—not only because of the work, but also financially. My graduate stipend is thousands of dollars below the federal poverty line. This is perhaps adequate when graduate students have family support to fall back on, or at least minimal expenses. But for me, and for many others, this couldn't be further from the truth. I left behind my family, friends, and support system in Egypt when I was 17 to pursue higher education in Canada and chase the dream of working alongside world-renowned scientists. I also have a chronic disease that knows no break. To stay alive, I rely on daily medications and supplies that are not fully covered by the national health care system. My graduate stipend is barely enough to pay for basic living costs, and my medical expenses are nearly impossible to afford.

To make ends meet, I have taken on extra hours working as a teaching assistant. I'm lucky this is even an option for me; in many departments, graduate students are not allowed to hold extra teaching appointments as it "distracts" from thesis research. The prevailing assumption seems to be that all students can and should dedicate every minute to their thesis, and failure to do so is a sign of lack of devotion or drive.

But my teaching has nothing to do with a lack of passion for my field of study. I love my research. Sometimes, when I go home after setting up an exciting experiment, I find myself counting the hours until I can return to the lab and see the results the next morning. What distracts me from my science is not my teaching per se, but my financial worries.

"What distracts me from my science is not my teaching per se, but my financial worries."

Even though my department allows me to take on extra teaching, my peers and advisers often judge me for doing it. In one particularly memorable instance, a junior lab mate asked about my plans for the summer, and I mentioned I was going to be teaching in addition to presenting at a conference, conducting experiments, and doing everything else involved in pursuing a Ph.D. "Again?!" he exclaimed. "You are teaching way too much! You should spend the summer focusing on your research and increasing your productivity." He had no idea what I was juggling.

I don't tell my colleagues about my health condition because I don't want it to define me or my scientific capabilities. I thought working hard to hide my struggles and meet expectations was the best way forward. At one point, I was teaching three times the expected number of hours while also spending late nights and weekends on my thesis work. I put on a brave face, but in reality I was scared, lonely, and exhausted.

Eventually my unhealthy hamster wheel got to me. My health suffered significantly and I developed complications. I spent the latter half of 2019 and the first years of the pandemic running from one specialist to another, at one point requiring biweekly invasive eye procedures that left me in debilitating pain. Still, I continued to work on my thesis, returning to the lab as soon as my blurry vision returned to normal. I was trying to devote everything to my academic journey, like my peers who have easier circumstances—despite my health condition, greater expenses, and lack of family support.

As I approach the final stretch of my Ph.D., I look forward to leaving academia for a job where my efforts are appreciated and my well-being respected. I am grateful for the scientific training I have received, but the cost has been too high. To truly foster inclusivity in academia, we must understand that academics have outside commitments including taking care of children, parents, and our own health. We should be helped through those challenges—for example, with less humiliating pay and reasonable work expectations—instead of being judged for being insufficiently dedicated. Inclusion means ensuring everyone feels comfortable, valued, and supported, whatever our circumstances. ■

Ahmed Elbassiouny is a Ph.D. student at the University of Toronto.
Send your career story to SciCareerEditor@aaas.org.

By **Kaitlin Rasmussen**

My life as a photon

Growing up, I asked a lot of questions. Many of them foretold my future in astronomy: Why is the Sun yellow? Why do the constellations look like that? Why does Jupiter have a spot? My parents answered what they could, and bought me books to answer the rest. But my most frequent question, starting when I was about 5 years old, was why am I a girl? And for that, my parents had no answer. In fact, in the 1990s, in the foothills of the Appalachians, no one did. It was my first encounter with a question that has no simple answer.

It faded in and out of my consciousness until middle school, when puberty brought feelings of dismay and disgust. Every day meant performing femininity while feeling increasingly isolated from it.

On the academic front, things weren't much better. In high school, I particularly hated freshman physics and its inflexible rules, which seemed to mirror the society I lived in. The same way we learned to expect a pendulum to swing, a block to slide down a slope, a ball to fall off a cliff, I felt I was expected to go to church, meet a man, marry young, and have kids. This seemingly inescapable trajectory left me depressed and numb to the world.

I went to college because I wanted out. I felt purposeless, hollow, void of meaning—but at the same time, standing at the crossroads to 1000 different futures. Like a particle atop a perfect sphere, I could have fallen in any direction. It was by pure chance that I wandered into a bookstore and saw Stephen Hawking's *The Grand Design* on the front table. I cannot tell you what inspired me to pick up a book on cosmology. But I did, and in a few short minutes I had discovered a doorway into a new kind of physics—the kind of physics that doesn't have all the answers, the kind of physics that disagrees with itself, the kind of physics that is messy and chaotic and, God forbid, *fun*. I changed my major to astrophysics the next week.

Over the following years, I learned about relativity, and how in the right circumstances time itself can slow. I learned about quantum mechanics, where anything can happen. Rules were no longer absolute. Things I had accepted as fact were really just approximations of unknowable truths.

In college, I would also hear the word "transgender" for the first time. I would meet queer folks in loving relationships. It was drastically different from my first brush with queerness—an encounter with a slur on a sign wielded by members of the Westboro Baptist Church, who came to my hometown to demonstrate when I was 13. At the end of college, I would realize that I myself am bisexual—attracted to my own gender as well as others, just as gravity draws every single thing in the universe to every other thing. It felt natural, like I had found a lower energy state of existence. Yet I still wasn't in my ground state.

"Being nonbinary means challenging the status quo every day."

That finally happened halfway through graduate school, when I found the label "nonbinary" through friends on Twitter. With its fluidity and disavowal of the traditional two-gender system, nonbinary felt right. It felt like home. It felt like I had spent my whole life trying to solve a chaotic system only to realize there wasn't one answer, but many. It was then I realized that I am a photon—possessing qualities inherent to either side of the binary, but ultimately belonging to neither.

It hasn't always been easy. I lived a bit of a double life for a while, authentic in my internet presence and closeted while I finished my Ph.D. But when I was ready, embracing my identity brought me into an incredible community.

Now, I realize the power of my identity. Being nonbinary means challenging the status quo every day. It means everything can and must be questioned. It means exploring things others take to be fundamental in new ways from new angles. In my everyday life, my gender identity compels me to find unconventional solutions to difficult problems. I turn over unseen stones. I try unorthodox methods. I wrestle with big, fundamental questions. All of these things make me a better scientist.

Physics is always evolving, and gender is, too. When we understand that things are more complex than they appear, we learn. When scientists embrace the complexity of the universe, our science can only improve. ■

Kaitlin Rasmussen is a postdoc at the University of Washington, Seattle, and a member of the International Society of Nonbinary Scientists.

ILLUSTRATION: ROBERT NEUBECKER

CAREERS | WORKING LIFE

Winter Is Coming

27 MAY 2014 · BY CHRISTINA REED

SHARE:

Elena Stautzebach CREDIT: HOLGER BAUER, ALFRED WEGENER INSTITUTE

In Antarctica this week, the daylight is dimming as the polar night approaches. "The weather is pretty changing at the moment. There are a lot of low-pressure systems coming from the Weddell Sea, leading to high wind speeds up to 55 knots and a lot of snowdrift," says meteorologist Elena Stautzebach. She is part of a small team of early-career scientists overwintering at the German research base Neumayer-Station III. "In between, we have periods of sunny weather and temperatures around −10°C." But the darkness will be continuous starting on 28 May. It will last 56 days.

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Located 450 kilometers from its closest neighbor, the station has a proud meteorological history: Scientists have conducted measurements and observations there every 3 hours for more than 30 years. Many measurements run on a programmed schedule. But visual observations—cloud and weather conditions, air pressure, dew-point temperature, wind speed and direction, and visibility, for example—must be made by people, rather, a person. "We have just one meteorologist, who has to sleep now and then," says the team's lead off-continent contact, Gert König-Langlo of the Alfred Wegener Institute for Polar and Marine Research in Bremerhaven, Germany. This winter, that meteorologist is Stautzebach. The team operates on Coordinated Universal Time. At 9 a.m., noon, 3 p.m., 6 p.m., 9 p.m., and midnight, she is outside collecting data, whatever the weather.

> I often experienced temperatures below -20°C, but I was always disappointed as soon as the temperature started to rise again.
> —Elena Stautzebach

"As it gets darker, it is getting more difficult to distinguish between different cloud layers and types. Observations are therefore taking a lot longer without daylight, as you have to stay outside longer in order to adapt your eyes to the darkness. But this also means that you have time to watch the beautiful stars of the Southern Hemisphere and that you have higher chances of seeing polar lights," she says.

To ensure that her measurements are accurate, Stautzebach must do daily rounds, dusting snow and breaking off ice crystals from 10 radiation sensors, two ventilated temperature sensors, two wind anemometers (one of them 10 meters above the ground), three humidity sensors, and snow depth and air pressure sensors—all located 200 meters from the station to avoid wind and shadow influences. Stautzebach also climbs up on the station's roof to check the visibility sensor and the ceilometer, which detects cloud height.

As the temperature drops, Stautzebach will start to travel 20 kilometers by snowmobile every 3 weeks to Atka Bay, where she will measure the first growth of sea ice and platelet ice. As winter digs in, the ice will become strong enough to support an automated meteorological station equipped with radiation sensors.

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"Overwintering and being in charge of a scientific observatory in Antarctica is a challenge," Stautzebach says. "During the winter season, we have to deal with all sorts of situations on our own. Our team includes one engineer who is responsible for the functioning of the entire station, one IT-specialist who has to maintain the communication with the world outside Antarctica, and one doctor. Additionally, in case of a fire, we have to turn into our own firefighters."

Just getting to Antarctica required months of preparation. Stautzebach had to get a number of medical tests: a stress test, blood tests, and x-rays. Then she met the rest of the team at the Alfred Wegener Institute, where they spent the next several months together before traveling to Antarctica. "We did not know each other, and I didn't have any information about my new colleagues except that we would be seven men and two women: Nine complete strangers with different personalities who will have to work and live together for around 20 months and solve every problem together as a team."

CREDIT: HOLGER BAUER, ALFRED WEGENER INSTITUTE

They began their preparations by reading up on the basics about the continent: its climate, the wildlife, the political agreements, and the dangers. The preparations included a glacier rescue course, a first-aid course, and fire training. Equipped with polar clothing, they then spent a week practicing rescue techniques in the Austrian Alps.

Stautzebach grew up there, in the Austrian Alps, and she always looked forward to winter holidays. "I am really fond of extreme weather," she says. "I often experienced temperatures below -20°C, but I was always disappointed as soon as the temperature started to rise again." Her cold-climate resume also lists a semester spent doing

polar research at The University Centre in Svalbard in the Norwegian Arctic, and glacier work around Mont Blanc with researchers from the Laboratory of Glaciology and Geophysical Environment in Grenoble, France, where she completed her Ph.D.

Despite her enthusiasm for cold weather—and for the idea of overwintering—it took some time to come to terms with the idea of living in Antarctica. "Getting a contract that says that you are going to spend more than a year in Antarctica is probably the first moment you realize how your life is going to be different in the next months. I had a lot of feelings and thoughts while realizing that I will stay in Antarctica for more than a year, completely cut off from any civilization," she says. "... [R]ealizing that I won't be able to see any family or friends and also have limited contact with them is not easy. But it is part of this great experience."

Winter officially started at the end of February "when the last plane left Antarctica," Stautzebach says. "We are now on our own until November." The team will then continue its work through the following Antarctic summer, helping the next overwintering team prepare for what is coming.

"Now that I am in Antarctica, the continent with the harshest weather conditions in the world, I can't wait to experience probably the most extreme weather in my life. Even more exciting than cold temperatures are storm events with snowdrift and whiteouts. As soon as the highest wind speeds of a storm event are reached, I often go outside with one of my colleagues (and a radio and GPS of course) in order to experience the strength of the wind.

"This winter I will simply enjoy the harsh weather conditions in Antarctica, and as soon as I am back in Europe, I'll think back to storm events that I had the chance to experience down here."

(Stay tuned for part 2 of Stautzebach's story as midwinter approaches.)

doi: 10.1126/science.caredit.a1400129

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