



early-career researchers in the country are “going through a bit of a freak-out”, says Inger Mewburn, director of research training at the Australian National University in Canberra and author of the popular Thesis Whisperer blog. “People are going to have a lot of tough conversations and tough decisions.” The situation is especially pressing for researchers with short-term contracts in academia. “If I were a postdoc, I’d be getting the heck out,” she says.

In Germany, where hiring slowdowns and freezes at universities are less common, the last few months have been a time for reflection and rethinking. Cecile Petit, a molecular biologist and the postdoctoral representative at the European Molecular Biology Laboratory (EMBL) in Hamburg, has been reaching out during the months of lockdown to remind fellow postdocs that they have options beyond academia. “Maybe [the pandemic] will actually help them,” she says. If they decide now to head to industry, they won’t spend ten years doing postdocs only to find that there are no permanent academic positions in sight, she adds.

Petit, who is approaching the last year of her postdoctoral contract, says that she realized academia wasn’t for her before she even finished her PhD in 2018 at the University of Toledo in Ohio. She says that she was discouraged by the numbers: too many postdocs were vying for too few tenure-track positions, leaving many trapped for years in dead-end posts. The pandemic and the resulting economic downturn have only strengthened her convictions, and she doesn’t think she’s alone. “Postdocs and PhD students are realizing that they don’t stand a chance” in academia, she says, “even more so now.”

History suggests that the shortage of tenured and tenure-track university positions will only deepen in the coming years. The sharp recession of 2007–09 offers one strong lesson. In the United States, for example, the recession coincided with a strong shift towards ‘gig’, or temporary, work. According to a report from the US Government Accountability Office, the number of full-time, tenure-track positions per higher-education institution fell slightly from 2007 to 2011. Over the same period, the numbers of full-time ‘contingent’, or non-tenure-track, positions increased by nearly 20% and the number of part-time positions jumped by 14%.

Even if the exodus from academia reaches unprecedented levels, it will still be possible for jobseekers to make their mark, says Christopher Caterine, a communications strategist based in New Orleans, Louisiana,

SEEKING AN ‘EXIT PLAN’

The pandemic is prompting some early-career researchers to rethink their hopes for a university post. **By Chris Woolston**

The full impacts of the COVID-19 pandemic on scientific careers might not be known for years, but hiring freezes and other signs of turmoil at universities have already shaken faith in academia as a career option. As universities try to adapt and survive in a pandemic world, a growing number of PhD students and other early-career researchers will be looking at careers in industry, government and other sectors.

It’s unknown how many of these researchers will eventually leave academia – whether by choice or out of necessity – but observers are expecting a seismic readjustment in scientific careers.

“More and more people who come to me want to leave academia,” says Tracy Bussoli, a London-based career consultant and development coach who works with

universities in the United Kingdom and the rest of Europe. “They’re thinking about an exit plan, but they don’t know how to do it.”

Whatever the magnitude of the academic exodus, researchers will have to prepare themselves to navigate a new career landscape. Those who decide to look for jobs in industry should expect to face stiff competition, but they can take steps to stand out from the crowd.

Global concerns

Unease about academic careers has spread around the world. In the United Kingdom, some 30,000 jobs could be lost in the university sector, according to a report issued in April by the consultancy London Economics.

A May report from Universities Australia projected losses of more than 20,000 university jobs in the second half of the year. Many

Work / Careers

and author of the forthcoming book *Leaving Academia*. For starters, academic escapees need to learn how to emphasize the skills that they developed in their university careers. “Instead of telling people what you do, tell them how you do it,” he says. While describing their work, academics should zero in on the processes and results that matter to the employer. “If I’m talking to someone in business, I don’t tell them that I taught three classes a semester, because that doesn’t mean anything,” he says. “I tell them I generated US\$500,000 a year for the department in tuition revenue.”

Making connections

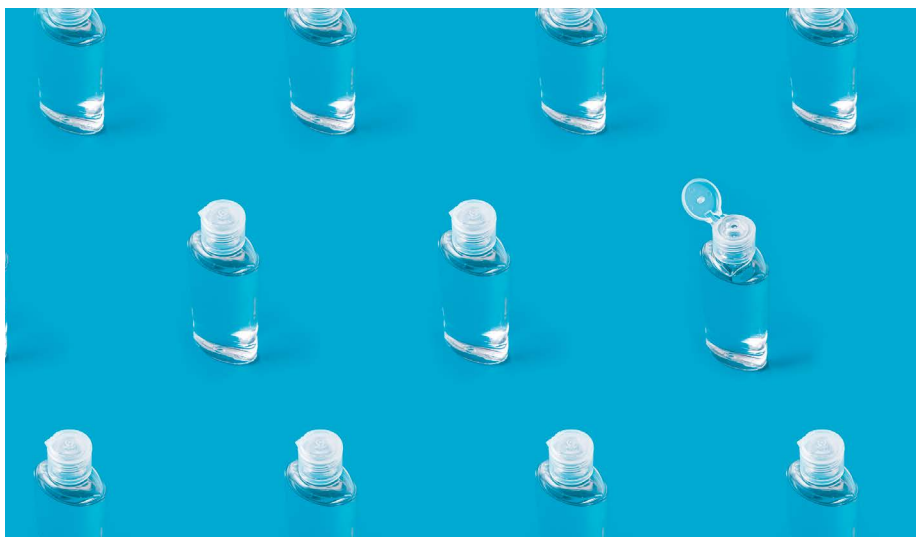
Petit wants to find an industry job in Europe and is already trying to build a network of potential contacts. Among other activities, she is looking for job openings on the professional online network LinkedIn, but for now, she is focusing on finding employees of companies that interest her, to whom she might be able to talk to learn more about working at those firms. She will also reach out to EMBL alumni who have made the move to industry. “The way you get a job is by making connections,” she says. “And you can’t wait until you need a job to start doing that.”

Researchers who are having trouble finding employment outside academia might need to broaden their search, Mewburn says. She and her colleagues have been using machine learning to pinpoint job openings that would be suitable for someone with PhD-level skills. She says that about 80% of jobs identified so far don’t specifically target PhD holders, meaning that jobseekers might be missing out if they are looking for the word ‘PhD’ in the list of eligibility requirements. This October, Mewburn plans to release a subscription-based service that will let researchers around the world browse job openings that have been earmarked as PhD-appropriate.

Despite the current economic climate, PhD holders have a reason to be optimistic, Bussoli says. “PhDs are highly employable,” she says. “There is always going to be industrial research and development. PhDs have to make a case for their skills and experience.” She often reminds researchers that they can reach for positions even if they don’t meet 100% of the job requirements. “Companies are looking for potential and the ability to learn very quickly,” she says. “Early-career researchers have that in buckets.”

Bussoli notes that she still meets many junior scientists who remain wedded to a career in academia. “There’s a real mismatch between reality and people’s aspirations,” she says. “I want people to be flexible and open their minds up.” She adds: “I’m a big believer in PhDs. I believe they’ll get through.”

Chris Woolston is a freelance writer in Billings, Montana.



FLAVIA MORLACCHI/GETTY

REDEFINE SUCCESS AFTER LOCKDOWNS

Academia must embrace different career routes for parents of disabled children. **By Olivier Pourret**

I’ve been deeply disturbed during lockdown by how many people seem to see washing their hands as a new thing. I haven’t shaken hands with anyone for around five years. Other parts of lockdown and social-distancing measures feel familiar, too: I have not attended an international conference since 2014, for example. And I have not done any fieldwork for the past six years.

This is because one of my five-year-old twins has the rare genetic condition Beckwith–Wiedemann syndrome, which increases his risk of cancer. He was diagnosed with his first cancer at the age of five months. His immune system is still suppressed from the treatment he received when he was a small baby, and he is vulnerable to viruses or infections. The cancer treatment also made him deaf. To balance our family’s work–life demands, my wife made a forced decision to take parental leave and put her career as a structural geologist on hold just after he was diagnosed.

I have taken several long periods of unscheduled leave (some of them without notice, in emergencies) from my academic job as a geochemist, spending these at hospital or at home with my son while he recovers.

Altered trajectory

This has taught me to be more productive in the time I do spend working at home and in the office, making each minute count, with no long coffee breaks. Time already spent networking online has helped me to work remotely,

to build international collaborations and to stay connected to the scientific world without unnecessary air travel.

It is important that anyone assessing my career trajectory knows all this, and many organizations now take personal circumstances into account when considering promotions. But I do struggle with whether to mention aspects of my family life in other work situations, and still feel that my personal circumstances have counted against me professionally, especially when applying for big grants. However, my institution always recognizes my situation by giving me more consideration (including extra time off when I have to stay with my son for months).

Many scientists and administrators will have to change their processes now that the coronavirus has held everyone back in the same way. Most of us are currently unable to network at conferences, do laboratory work, work without distractions or even shake hands.

I hope, as we find new ways to measure each other’s success in this new scientific world, that people with disabled children, as well as those in other disadvantaged academic groups, will be remembered long after lockdowns ease.

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