

# CAREERS

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A linear route through academia isn't the only way forward. Keeping your mind — and options — open can lead to unexpected success.

## ADVICE

# Boost your research career

Five scientists offer tips on how to land a rewarding job and make the most of your science.

**MARTIJN BIJKER**

## Overhaul your CV for jobs in industry

*Immunologist and founder of the training company From Science to Pharma in Sydney, Australia.*

Academic scientists who want a job in industry need to get into an industrial mindset, and that starts with the right CV. I've seen it time and time again: academics use the same CV whether they're applying for a job at a pharmaceutical company or an assistant professorship at a university. That's no way to get hired. If you've sent out 50 CVs without a response, you

need to rethink your approach.

One of the biggest mistakes academics make is listing every single thing they've ever done. I've seen CVs that were 17 or 18 pages long, and it's completely unnecessary. If you have a lot of papers, it's good to mention that, but you should list only the most relevant four or five.

Companies aren't especially interested in your papers and poster presentations. They want to know that you can work with a team to get results. To stand out, you should emphasize your collaborations, not your citations. Have you ever served on a committee? Organized a conference or a journal club? Have you done anything that showed initiative and cooperation beyond the lab? Put it at the top of the CV.

Industry is all about outcome, so be sure to highlight your results. You didn't just organize a conference, you organized a highly successful

conference that attracted 20 speakers from around the world. If you don't spell out your success, potential hirers might suspect that you messed everything up.

### NAIL THE INTERVIEW

A good CV can easily land you an interview. But if you get a rejection letter that cites your lack of industry experience, it's fair to say that the interview didn't go well. The most likely explanation: you looked fine on paper, but you didn't seem to know what you were talking about in person.

Preparing for an interview takes work: you can't just go in there and wing it, telling them you're a people person and a fast learner. They've heard that before. You have to talk beforehand to people who are doing or have done the job so that you can get into their mindset. The realities of a job can be very different from the ►

► description. The interviewers need to know that you're really invested in the position.

Bijker contributed to the feature 'How to sail smoothly from academia to industry' (*Nature* **555**, 549–551; 2018).

## PHILIPP KRUGER

### Take the initiative

*Immunologist and career outreach fellow at the University of Oxford, UK*

If you go along doing what you're told, you'll never get far in science. You have to prepare yourself for your future career. Researchers often get three or four years into their PhD before they even think about what's next.

You have to show initiative. Talk to students and postdoctoral researchers about holding career seminars in your department. Get involved with committees. Organize an event. Help to find sponsors. You'll develop a network of contacts that will greatly expand your options for the future. And you'll learn a lot about yourself. If you've never managed a budget, you'll find out whether you could see yourself doing that for the rest of your career.

It helps if your supervisor supports these activities. If not, try going higher up the ladder. Approach your department head or the agency that's providing your funding. Often, people at these levels are more supportive of career development.

These sorts of things take time, but it's all relative. Just think about how much time you spend in the lab working on things that don't pan out. You can spare a few hours for a meeting without sacrificing your science. If you're stuck in a place that doesn't value work outside the lab, you can do your part to change that culture.

Kruger wrote the article 'Why it is not a 'failure' to leave academia' (*Nature* **560**, 133–134; 2018).

## IRINI TOPALIDOU

### Know yourself

*Molecular biologist at the University of Washington in Seattle*

Scientists often see a linear career pathway, and they think that's the only way to go. I see so many young principal investigators who are unhappy. They feel like they were pushed into their position, like they didn't have a choice. But if you know what you want to do and what you're good at, you can find a niche that's right for you.

If you're not sure whether you really like working at the bench, try it for three months to see whether it's right for you. If you aren't really excited about lab work, you can become easily

derailed by failure. You can also learn a lot about yourself by talking to others. Find someone who will listen to your concerns and offer advice without forcing you down a particular path.

And before you think about running your own lab, you should ask yourself a crucially important question: do you really have what it takes to be a good mentor? If you're not good at training people, or if you care more about your experiments than about your team, you probably shouldn't be a mentor unless you can dramatically change your approach. If more scientists were more self-aware, there would be fewer bad mentors, and the whole system would be better off.

#### RESEARCH SCIENTIST: ANOTHER WAY TO LEAD

If you like the idea of running a lab without dealing with a million administrative duties, give some thought to becoming a research scientist. It's not a fall-back position for people who can't make it as professors. Far from it. I'm very ambitious. But I didn't want to be the person who sits behind the closed door. As a research scientist, I can be a leader in the laboratory.

Some research-scientist positions are more rewarding — and more secure — than others. Find a lab that really needs you. Perhaps one with a less-experienced principal investigator who needs help building a lab. Or one helmed by a senior person who is too busy going to conferences to handle the day-to-day needs of a lab. If you make yourself valuable, you can expect to be valued.

Topalidou wrote the article 'Teach undergraduates that doing a PhD will require them to embrace failure' (*Nature* <https://doi.org/10.1038/d41586-018-06905-0>; 2018).

## MIRJANA POVIC

### Connect to the developing world

*Astrophysicist at the Ethiopian Space Science and Technology Institute in Addis Ababa.*

More scientists should consider sharing their experience and knowledge in developing countries. Their expertise can go a long way in Ethiopia and many other countries in Africa, Asia and South America. But the benefits flow both ways. You can make huge personal and professional progress by going outside your normal routine and comfort zone. You learn many things when you adapt to different conditions, and supervising master's and PhD students with totally different perspectives can help you to tackle problems from new angles.

I moved from Europe to work in Africa, far from my home country of Serbia. A lot of Africans are doing great science, and they welcome collaboration. I have many colleagues

who work in Europe but come to Africa to give classes. Some supervise students or give lectures remotely. There are many ways to contribute.

Wondering how to get started? Try contacting a researcher in your field who is already working in a developing country. I'm always happy to share advice and information about different opportunities for research and collaboration. Astronomers can also contact the International Astronomical Union. Other branches of science have similar organizations that can point people in the right direction.

This life isn't easy. We have power outages and intermittent Internet. Sometimes it takes days to download data. But scientists can adapt and find ways to get things done. We learn new ways to do things and discover patience that we didn't know we had. That comes in handy in many areas of life.

Povic was the inaugural winner of Nature Research's Inspiring Science Award, developed in partnership with The Estée Lauder Companies (*Nature* **563**, 148; 2018).

## ANDY KAH PING TAY

### Reach out for help

*Biomedical engineer at Stanford University in California.*

I learned as a PhD student that you can save a lot of the time and hassle of troubleshooting by avoiding the trouble in the first place. When you're trying a new technique, so many things can go wrong. A protocol might miss out certain key details. For example, how do you arrange the microscope? How long do you let a sample set before you do your imaging? And can you save money with a cheaper reagent?

Instead of just hoping that I understand a protocol, I get proactive. I e-mail researchers who have published papers about the technique. I don't contact the corresponding author; usually that person is pretty busy. Instead, I ask the first author, who is usually more junior.

Reaching out to other experts seems like an obvious step, but a lot of people are surprised that I do it. They warn me that someone might try to steal my ideas. But I don't worry about that. Other researchers are often happy to hear that someone wants to replicate their technique and validate their work. But you can't verify their results if you're making mistakes along the way. ■

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#### INTERVIEWS BY CHRIS WOOLSTON

These interviews have been edited for clarity and length.