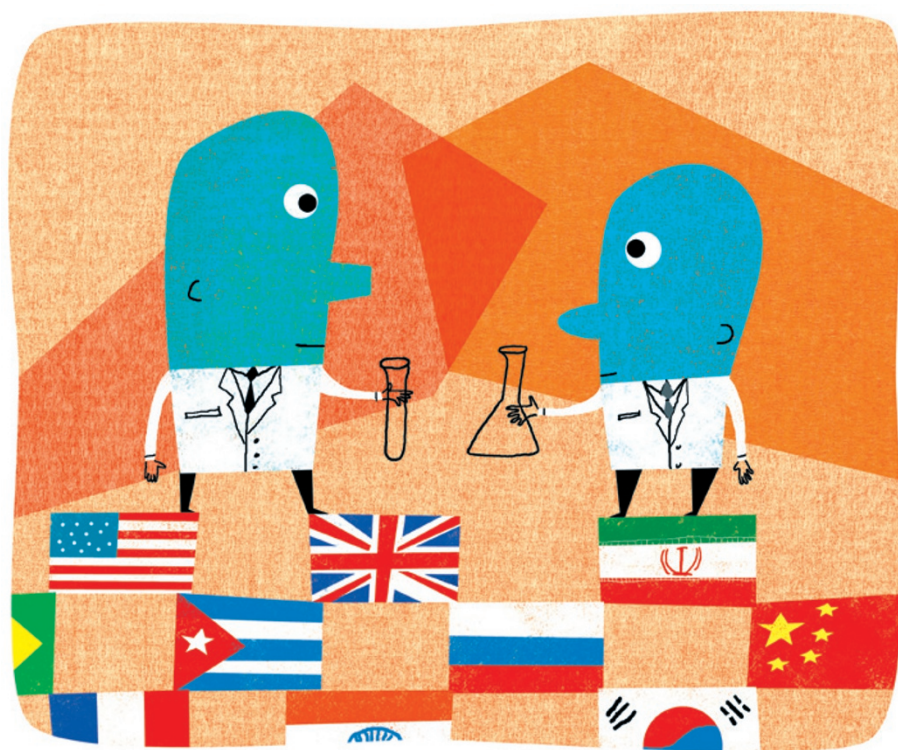


# CAREERS

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## PROFESSIONAL SOCIETIES

# Come together

*Scientific organizations can help researchers — especially in developing countries — to make contacts and boost their skills.*

BY KAREN KAPLAN

Environmental scientist Henry Roman was partway through his second postdoc when he stumbled across the website of the World Association of Young Scientists (WAYS) in 2006. He read about how the then-fledgling group was developing a global network to help early-career researchers to exchange job and careers information, form collaborations and promote their work. Intrigued, he registered — then promptly forgot about the whole thing.

But a few months later, Roman got an e-mail from a regional office of the International Council for Science in Pretoria. WAYS wanted to establish a branch in Africa and was meeting that year in Pretoria, where Roman

was working at the South African Council for Scientific and Industrial Research. Leaders wanted to invite him to the meeting; he accepted.

Today, Roman is chairman of WAYS-Africa, a task he fits around his busy job as director of environmental services and technologies for the Department of Science and Technology in Pretoria. He tackles the mission with passion: he sets the association's strategic direction, launches and manages partnerships, and raises funds. Roman says that his involvement in WAYS has helped him to build skills and develop his professional network in ways that he had not imagined as a student or early postdoc. He earned his degrees and completed his postdocs in his native South Africa, and before he joined WAYS he had rarely interacted with

anyone outside the country. But the association quickly introduced him to international colleagues. Through those contacts, he was invited to a 2009 international science forum in Budapest, where he met another environmental scientist from Pretoria — who turned out to be on the ministry's application-review panel when Roman applied for his current position. WAYS membership "has opened up the world to me", says Roman.

Early-career scientists have plenty of excuses not to join a scientific organization. Researchers spend hundreds of hours a week in the lab and have no spare time; they might have a partner, children or pets at home and be unable to travel to meetings; they might already be striving to build a network through social media and conferences (see "Trouble maintaining members").

But joining and actively participating in associations for junior researchers can confer many advantages. It can help scientists to expand and grow their networks, which in turn can lead to new research ideas, collaborations, papers or even job offers. Members learn skills such as public speaking, fund-raising, organizing meetings, working in groups beyond the lab and navigating different cultures. And they can broaden their understanding of domestic and international science policy. Through WAYS, Roman says, he developed a perspective that vastly improved his chances of nabbing his current post. "It forces you to knock on many doors," he says.

## MEMBERS WITH BENEFITS

The social pay-offs are obvious: members often form close friendships, and annual meetings typically feature parties that encourage mingling and having a drink or two. But scientific organizations also deliver more substantive returns. Some, among them the US National Postdoctoral Association (NPA) in Washington DC, focus on benefits such as providing advice on professional and career-development challenges and opportunities. Lorraine Tracey, chair of the board of directors of the NPA and a medical-science liaison at Teva Pharmaceuticals in Tampa, Florida, says that working with the NPA as a postdoc changed how she did science. "I was involved in conversations with people outside my lab and department about their research, and that informed mine," she says.

The Global Young Academy (GYA), based in Berlin, offers science-centred rewards. The three-year-old organization aims to bring together early-career researchers to ▶

► find remedies to global challenges such as tainted water and food supplies. Bernard Slippers, a GYA founding member, credits his previous work as academy co-chair and executive-committee member with helping him to reach career milestones: being named full professor in microbial ecology at the University of Pretoria, for example, and being invited to Thailand to attend a meeting of a joint programme of the US National Science Foundation (NSF) and the US Agency for International Development. He also credits his academy activity with helping him to launch a research project on new ecosystems and sustainability: he met his collaborators during a workshop co-presented by the GYA and two similar groups, the South African Young Academy of Science and the German Young Academy. “Being part of this global organization — what that has done for my perspective and output is profound,” says Slippers.

### MEET AND GREET

Labs and conferences are often international, but they do not always allow for much interaction between disciplines; nor do they require researchers to take an active role in organizing or designing activities. Vinitha Thadhani, a member of the GYA and founding member and current president of the Sri Lankan Academy of Young Scientists in Colombo, recalls

the vast array of scientists that she met in China in 2008, during the GYA’s pre-launch talks at an annual forum. Thadhani, a senior lecturer in chemistry at the University of Sri Jaywardenepura, was one of 43 scientists representing 32 nations at the forum. Through such events, “you come to know what other eminent young scientists around the globe do and [their] work in different fields”, she says.

When members discuss their research at meetings or on group chat boards, new ideas can emerge. In one case, Thadhani and the Sri Lankan academy were seeking expertise about the effects of a particular chemical on the environment and human health. They turned to the GYA, whose larger and broader membership includes chemists, economists, toxicologists and medical professionals. The GYA mentioned the issue in its newsletter,



**“It’s provided opportunities to establish collaborations with people I would not meet in my regular line of work.”**

Patrick Arthur

generating responses that contained enough information for the Sri Lankan academy to write an article that will be published on its website and in Sri Lankan newspapers.

But it is not just contacts that make a difference. Sometimes society membership provides insight into how institutions operate. Patrick Tuij, treasurer of the European Council of Doctoral Candidates and Junior Researchers (Eurodoc) in Brussels, says that his role on the council — a federation of 34 national organizations — has taught him about European funding schemes. He has learned in particular about Horizon 2020, the European Union’s main research-funding mechanism for 2014–20, and the Marie Curie Actions mobility research grants. He understands how they function, who is eligible and how to improve the likelihood of winning grants — which in turn helps him to advise other doctoral students and informs his own decisions. “I have a clearer grasp on what’s going to happen in five years,” says Tuij, an assistant professor of finance at the University of Amsterdam and a PhD student in financial economics at Tilburg University in the Netherlands.

On a more altruistic level, says Tracey, the NPA offers emotional and strategic support to its members, and she joined the association to be part of that. “My driving reason for wanting to be involved is to give back,” she says. She has helped US funding agencies to understand the importance of mentoring for postdocs; as a result of the NPAs’ work, the NSF now requires its grant applicants to set out a plan for how they will mentor their postdocs. Tracey has also worked to increase the US National Institutes of Health’s Ruth L. Kirschstein National Research Service Award postdoc stipend, on which many universities base their postdoc salaries. “I got a lot of satisfaction out of that,” she says.

### DEVELOPING CONNECTIONS

Membership of global scientific associations and academies can be especially useful for scientists in developing countries. “It’s provided opportunities to establish collaborations with scientists I would not meet in my regular line of work,” says GYA member Patrick Arthur, a biochemist at the University of Ghana in Accra. He is working with an analytical chemist in Egypt on the effects of aluminium leaching into food from cookware, and with a group in the Netherlands to seek medically useful compounds in wild mushrooms. International collaborations increase researchers’ chances of getting grants, he notes, and lead to improved visibility and more invitations to present at prestigious conferences. These, in turn, lead to further collaborations and funding opportunities (see ‘Joining up’).

Thadhani agrees. “You are made aware of various scholarships, awards, conferences and workshops, in addition to meeting people you can collaborate with,” she says. Global-association membership “helps in bridging

## PARTICIPATION

### Trouble maintaining members

It is not easy to keep an association or society powering along when its membership is transient and short-term. A postdoc or contract researcher’s highest priority is their next job, which often means that they are not committed to membership or leadership of a society, says Nicola Woodward, a scientist at the Institute of Food Research in Norwich, UK, and co-chair of the committee of the UK Research Staff Association (UKRSA) in Cambridge.

She says that some UKRSA members avoid taking on projects that might continue after their current posts end. As young researchers move on to a new postdoc or a permanent job, it can be difficult to recruit more members or fill administrative posts. When administrative posts are left vacant, it can adversely affect member services and events. And a smaller membership means fewer new colleagues to meet, network with and exchange ideas with.

The US National Postdoctoral Association (NPA) in Washington DC also struggles with recruitment and service hurdles, says Ian Brooks, its international officer and director of the office of biomedical informatics at the University

of Tennessee Health Science Center in Memphis. He thinks that some prospective members, knowing that postdocs receive little respect at many institutions, may refrain from embracing the label and joining the association. “That’s the biggest hurdle the NPA faces,” he says.

Similar obstacles face the International Consortium of Research Staff Associations (ICoRSA), launched last year as an umbrella organization for groups including the NPA and the UKRSA. Despite an international pool of potential members, ICoRSA, which is based in Cork, Ireland, is having trouble recruiting, says chair Gordon Dalton, a senior research fellow in ocean energy economics at University College Cork.

Dalton, who was active in his university and national research-staff associations before the ICoRSA formed, knew that he wanted to serve but says that he can do so only because he has a seven-year renewable research contract. Many researchers have too many other duties and feel as if their principal investigators (PIs) are looking over their shoulders. “Some people attend meetings,” he says, “and ask that their PIs not be told.” **K.K.**



## NETWORKING

## Joining up

Most professional associations for early-career researchers require only that members fit certain criteria, such as being a postdoc in a particular country. Others have stricter rules.

- **Global Young Academy, Berlin:** Members are chosen for the excellence of their science and their commitment to solving global problems. Prospective members must apply with a letter of support from their national academy, an equivalent body, their employer, their institution or another professional.

- **World Association of Young Scientists:** Membership is open to any early-career scientist who agrees with the association's goals, including promoting excellence and helping young scientists in their careers.

- **US National Postdoctoral Association, Washington DC:** Open, with varying membership fees, to any graduate student or postdoctoral researcher from any nation who endorses the association's mission of supporting the postdoctoral experience.

- **UK Research Staff Association, Cambridge:** Any UK early-career researcher can join to interact online, participate in activities or get involved in the advisory group.

- **International Consortium of Research Staff Associations, Cork, Ireland:** Membership is open to early-career researchers who belong to a research-staff association in a member nation.

- **Eurodoc, Brussels:** Members must belong to a research-staff association that represents doctoral candidates and/or junior researchers in a European Union or Council of Europe member state. If their country does not have such a group, researchers may be able to join with observer status. **K.K.**

the gap between developing and developed countries?

"It's all about extending your networks and building new networks," says Nicola Woodward, co-chair of the committee of the UK Research Staff Association in Cambridge. "The whole focus is to encourage people to expand." ■

**Karen Kaplan** is associate editor of *Nature Careers*.

## COLUMN

## A good investment

Success involves acknowledging past accomplishments as well as looking ahead to future value, says **Yoshimi Rii**.

When I became the inaugural recipient of a research fellowship this year, my department commemorated the occasion with a ceremony for which they asked me to prepare a ten-minute talk. I was to thank the foundation that funded the fellowship, and describe my research. I have given many talks in my life, but I found myself stumped as to what I should focus on.

"Keep it pretty simple on the science, because they want to know who you are," the foundation director advised me. I can easily talk for ten minutes about the role of phytoplankton in nutrient cycling, even slipping in some poop jokes, but this time the talk had to focus on me. How was I supposed to reassure the foundation that I deserved its investment while still sounding humble?

I thought about what 'investment' really means. Investing involves expectation of future gain. To invest is to believe in potential, and a good investment is gauged by the end result.

The thought of being a good investment riddled me with anxiety. With financial freedom came an ocean of expectations. Was I really worthy of this award, and why? I suddenly feared for my future, wondering whether I would make it in the scientific world and uphold the legacy of oceanographic research. Would the foundation still be proud of me if I did not end up pursuing a postdoc and the conventional route to academia? Would I still be able to call myself a scientist? I am 34. I got married in August, and starting a family was on my mind — and still is. Was it wrong to consider getting pregnant while on this fellowship?

I grew obsessed with what I would become, but it was my present self that had won the fellowship. As I drew up the outline for my talk, I tried to focus on my PhD journey. I thought about being in the right place at the right time, and about the collaborations and the help of many wonderful people that got me here. My ten-minute talk was starting to sound like a list of acknowledgements at the Oscars.

That night, I watched Sheryl Sandberg, chief operating officer of Facebook and author of *Lean In: Women, Work, and the Will to Lead* (Knopf, 2013), in an interview on the television news programme *60 Minutes*. "Women attribute their success to working hard, luck and help from other people," she said. "Men will attribute that same success to their own core skills." Sandberg insisted that the reason



JONATHAN EVANS/GETTY

there are fewer women than men in top leadership roles is that women hold themselves back.

I listened with fascination. I did not see myself as someone who leaned back, but here I was, attributing my fellowship to everyone else and completely anxious about my future job and an imaginary baby.

Empowered by Sandberg's words, I re-evaluated how I should be leaning in with my speech. To move others, I needed to draw on my own inspirations and reflect on why I study the ocean. Most of the time, I am too exhausted, too cynical and too concerned with minute details to take a step back and acknowledge that I am here because I put myself here. But at some point between the sleepless hours at sea and in the lab, I became a person worth investing in. So in my speech, I told the foundation members about my first research cruise 11 years ago, when I threw up for five days straight. I told them how I almost quit grad school when my PhD adviser moved across the continent, and how grateful and honoured I felt to be standing in front of them, supported by my friends and colleagues. Persistence, I felt, is something anyone can relate to — and find worthy of investment.

Pressures and anxieties will always be there. But I learned how important it is, as graduate students and postdocs — and eventually as professors, educators, industry managers and whatever else we hope to be — to focus not only on what we will become, but also on who we are now. ■

**Yoshimi Rii** is a graduate student in microbial oceanography at the University of Hawaii at Manoa.