Making a difference

Jude Dineley catches up with three early-career scientists whose work outside the lab is helping improve the academic environment for others.

If you’re aspiring to a life-long career in science, it can often feel like there aren’t enough hours in the week. Finding time to look beyond your own research, however, can be rewarding. At the 69th Lindau Nobel Laureate meeting in Germany this July, I spoke to three early-career scientists active in projects to make academia healthier, more productive and equitable, while picking up valuable experience along the way. Here are their experiences.

Tackling toxic work environments

Originally from Austria, Jana Lasser was a postdoc at the Max Planck Institute for Dynamics and Self-Organisation in Göttingen, Germany, until the end of November this year. In the spring, she finished her PhD investigating the formation of curious geometric patterns on the surface of salt flats such as the Badwater Basin in California. Beyond the lab, last year she served as the elected spokesperson of the Max Planck PhDnet, a network of about 5000 PhD candidates, making her acutely aware of the challenges that early-career researchers face.

With hours approaching that of a full-time job, Lasser’s spokesperson role was tough to balance with her PhD, but well worth it. “It was the best thing I did in my life so far,” she says, adding that it was “like a crash course in everything – leadership, communication, negotiation, conflict management, time management and project management”.

Mental health was a hot topic during Lasser’s term. There is mounting evidence that large numbers of young scientists suffer from stress and mental illness and, typically, problems at work play a significant role. Consequently, when the PhDnet became involved in a Max Planck task force on employee health, Lasser and her colleagues pushed to increase the focus on mental wellbeing. A direct outcome was a 24-hour mental-health crisis hotline for all staff, which launched in April. It has sparked plenty of interest. “Many people asked me, ‘Is it already there? We want it. We need it’,” she says.

Though valuable, Lasser describes the hotline as, ultimately, a “really good band-aid”, naming the publish-or-perish mentality and job insecurity as critical underlying factors. “If you know that you’re probably going to move every second year, then it’s hard to build a network, it’s hard to have a life outside of work…relationships are destroyed,” she says. “I’ve seen that in my circle quite a number of times.”

Supervisor behaviour, too, can have a decisive impact on young researchers, with bullying at one extreme. In 2018 allegations of bullying involving senior researchers at two Max Planck institutes hit the mainstream media. After assisting in the immediate aftermath, Lasser became part of a second task force addressing the issue at a systemic level. She spoke to hundreds of doctoral researchers, many of them victims, about their experiences, informing a white paper she wrote with her colleagues.

Among a long list of recommendations were robust institutional frameworks for handling disputes promptly and mandatory management training for PIs. “When you become a group leader or professor, you are not necessarily educated to be a good manager,” says Lasser. “We have to recognize that and train these people.”

Breaking down barriers

Also based in Göttingen, Salma Sohrabi-Jahromi is a PhD candidate at the Max Planck Institute for Biophysical Chemistry. Barriers – and breaking them down – is a theme that has popped up repeatedly in her career. She is a computational biologist, who switched from biotechnology. A true interdisciplinary, her research sits at the boundary between biology and physics, investigating the behaviour of biomolecular condensates and their physical properties in cells.

Political barriers – albeit indirectly – inspired Sohrabi-Jahromi to become active in the academic community as an undergraduate. Studying in Tehran in her home country Iran, she experienced the isolation of the local science community caused by political sanctions. Then, the city was chosen to host a rare international meeting in her field. She jumped at the chance to help organize it and network with visiting scientists. “It was really rewarding,” she recalls. Guests included a researcher from her current institute and, through them, she learned about the Max Planck international graduate programme, which she eventually ended up joining.

In Germany, outside of her research, Sohrabi-Jahromi has helped tailor computer-science and statistics teaching in her institute, to better engage graduate biologists.