



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

## TrendsTalk

### Navigating during the Pandemic: Dialogues across Career Stages

There is no doubting the fact that the ongoing coronavirus disease 2019 (COVID-19) pandemic has had a tremendous impact on every aspect of our life over the past year and a half. Fueled by the lack of voices by young researchers and investigators, Dr Shabaana Khader [Professor of Microbiology, Washington University in St Louis (WUSTL)] and I decided that it was time that we had a panel to discuss how the pandemic has impacted scientists across different career stages. Our (all-women) panel included Liza Loza, a graduate student at WUSTL, Dr Leticia Monin, a postdoctoral researcher at the Francis Crick Institute, and Dr Alissa Rothchild, an Assistant Professor at University of Massachusetts Amherst (UMass Amherst). I hope that the following conversation strikes a chord with the readers of the journal.



Liza Loza

Washington University in St Louis, St. Louis, MO, USA



Leticia Monin

The Francis Crick Institute, London, UK



Alissa Rothchild

University of Massachusetts Amherst, Amherst, MA, USA

#### What impact has the pandemic had on your career path? Or if this does not apply to you, how has it affected your work?

Liza Loza (LL): The biggest effect for me has been the severe loss of bench time in the laboratory, which in turn has slowed my research progress. In terms of networking opportunities, my first research conference as well as other events with more senior researchers were cancelled due to the pandemic. While I do miss these, I would like to note that, for junior graduate students, it has been even more difficult, given that they have also not been able to establish networks with their own peers.

Leticia Monin (LM): I agree with Liza that the loss of bench time was one of the biggest effects of the pandemic. I was lucky in that I could channel my previous experiences into COVID-19-related projects, but my core projects did come to a halt. Another concern has been that, just like any other expatriate researcher, I am worried about the uncertainty surrounding future visits to my family (who live in Uruguay). The pandemic has made distances feel much larger. I will add that I have been fortunate enough to work in a place where regular testing has been in place since June 2020, which has resulted in all of us feeling particularly safe about our work environment.

Alissa Rothchild (AR): My academic journey over the past couple of years has been interesting. I went into the job market in the Fall of 2019, and luckily, I was able to accept an offer (UMass Amherst) within the first quarter of 2020. I have been thankful to my previous research group for allowing me to finish up work on my past projects. The collaborative power of academic research has never been more obvious to me as when I moved here: everyone around me has offered immense help in setting the laboratory up. That being said, I do miss having discussions with my peers; even a small question, which could have been asked/answered during coffee breaks, has now become an entire email thread. I realize how grateful I am to be working at the intersection of immunology and infectious diseases at a time when there are so many relevant questions to ask about how one pathogen has completely upturned our lives.

#### What support have you received from your university/institution during this time? Also, what do you feel has been neglected?

LL: At the research group level, I have received a lot of support from my graduate mentor in the form of in-depth meetings about my research and career as well as writing opportunities while I was working from home. At the institutional level, I unfortunately didn't feel as well supported. For instance, COVID-19 tests were not made available to graduate students until January this year, and even then they weren't free of charge. Moreover,



until I was vaccinated, I did not feel safe at work as there was a lack of transparency when it came to communications regarding COVID-19 transmission in research labs. On the academic side, I feel like there has been no acknowledgment of the impact of the pandemic on students' productivity or recalibration of the timeline within which one is expected to graduate. I feel like this type of recalibration is necessary and would help ease a lot of the pressure faced by graduate students in their efforts to be competitive for post-doc positions.

LM: I have also been fortunate enough to receive a lot of support from my Principal Investigator (PI) in the form of personal meetings to discuss and plan potential grant applications and my career trajectory. The Francis Crick Institute has also been extremely understanding about familial obligations during this time and has been very flexible about researchers with children working from home. Reflecting on Liza's response, I want to add here that I find it surprising that free testing is not the norm in certain institutions/universities.

One of the biggest challenges that I see concerns the funding situation in the UK. A large portion of the funding here relies on charities, which in turn gain visibility and fundraise by holding events. With COVID-19, many of these have had to be cancelled and have left a funding gap, which has compounded with the uncertainty around Brexit and with other budget cuts. As an early career investigator, this is one of the issues that I would certainly wish for more clarity on.

AR: As mentioned before, I have received a great deal of support from both the scientific community here at UMass Amherst and also from the previous research group (where I was a postdoctoral researcher). We have been fortunate enough to keep the doors to our laboratories here open, given the readily available COVID-19 testing that the university has in place for students and researchers. I agree with Liza's comment about the importance of recalibration of expectations. In my case, faculty members who were hired a year prior to me and my peers (i.e., those who were hired in 2019) were automatically granted 1-year extensions of their tenure decisions. However, in our case (hired in 2020), it was initially unclear whether we would receive similar extensions. The university just recently announced that the automatic one-year delay for tenure decisions would also be granted to faculty who started in 2020.

**Were there any changes in what you were promised prior to being hired versus what you received? Were there special committees that were set up to help you navigate through your duties, especially considering that you were hired in the middle of a pandemic?**

AR: The university did set up virtual New Faculty mentoring groups and workshops to help with orientation of new faculty members. Through these, we were able to connect with our peers and meet with the dean and other people on campus who could provide support. With regard to your first question, I was lucky in that the promises that were made to me when I was hired have been kept. However, it has still been a difficult year. Like many universities facing a budget shortfall, UMass Amherst implemented mandatory temporary furloughs for staff in the fall. Losing access to personnel in the business offices, HR, research administration, etc., especially when I was just getting started, led to significant delays in various processes.



Shabaana Khader

Washington University in St Louis, St. Louis, MO, USA

**Can you tell me anything about the differential impacts of the schemes introduced by universities/institutions during this ongoing pandemic, across career stages?**

Shabaana Khader (SK): Given the rate at which grants were awarded for COVID-19 projects during the beginning of the pandemic, which meant having all the necessary amenities already set up in your laboratory, I feel that younger investigators were adversely impacted. It is also important to note that connections/networks also matter here. For instance, we received COVID-19 supplements for work, primarily due to the strong networks that we had built with our project officers and collaborators such that we could pivot our BSL-3 platforms for TB work to apply it to COVID-19 research. This would certainly not be the case for younger investigators who are yet to establish these connections.

AR: While I did appreciate the networking opportunities that were provided to me (for instance, I was invited to collaborate with a few other researchers to put together a COVID-19 grant application), I entirely agree with Shabaana that we were going up against established laboratories/research groups. The opportunities were tremendous, but the scales were skewed.

**Have there been solutions that you have been seeing PIs implement to address the concerns of their students? How effective have they been?**

AR: Based on my interactions with first-year graduate students, I recognize lack of interactions among their peers (especially, one-on-one) as a big point of concern. I believe that platforms like Gather have been helpful in this regard, at least until we can be back in person.

SK: In order to combat the feeling of isolation among my group members, we organize a social hour every fourth week, instead of a lab meeting, where we participate in virtual games organized by different groups. I have found these to be incredibly helpful. I think ensuring that researchers do not feel isolated should be a big priority, especially now.

LM: Back in March, my PI set up a buddy system. That is, he paired every lab member with another person in the laboratory who would check-in on you and vice versa. This was very useful for the research group in terms of feeling supported and maintaining day-to-day interactions within the group.

**Rather than being the only one asking questions, at this point, I would also like to provide the panelists with the opportunity to engage with each other:**

LM → LL: I have been teaching online which, as you can imagine, has been very challenging. I am curious to know if you have had any positive experiences or tips in order to keep the students engaged.

LL: While I have not taught any classes, I did lead a discussion session for first-year graduate students last year, which I had done in person the year before (facilitating comparison). While the online session certainly was tricky, once I switched to a format that was a lot less structured I saw that there was more engagement from the students.

SK: WUSTL has actually set up an academic learning center, wherein people can obtain ideas to tailor their content to an increasingly online world and gather feedback on their lessons.

AR: Given that UMass Amherst is primarily tailored to undergraduate students, the university definitely has a lot of resources in place for moving content/lessons online. It definitely felt strange to be guest lecturing in an immunology class to a bunch of black squares on zoom. However, I found that connecting the assignments to what was happening outside definitely did help. For instance, the professor asked students to write an essay comparing various COVID-19 vaccines (that were still in trials at the time), which was received well.

LM → SK/AR: What tips do you have for those of us who are about to navigate the academic job market? Also, going forward, how much of a presence/impact do you think COVID-19 would have on research and funding?

AR: This year has taught us different ways to connect with the community and present our findings, which has greatly improved visibility. In light of that, I feel like it has been easier to connect with different researchers for opportunities as well.

SK: With regard to your second question, with so much that is still unknown about the different variants and with preparedness for future pandemics being a point of concern, I definitely believe that the presence of COVID-19 in future areas of research and funding will be palpable for a while. Given the extenuating circumstances that have impacted all of us, I think there is a great sense of solidarity and understanding within the scientific community, and the grounds for networking have never been more fertile than now.

### How have you been dealing with misinformation during the pandemic?

LL: While I am not on social media, I have become the point of contact for pandemic-related questions among my friends and family. As such, I try and distil scientific information from papers and reports as accurately as I can. Overall, I think it is an exciting time to be a microbiologist right now because our expertise is relevant to literally everyone.

LM: I remember giving a zoom seminar on virology/immunology back in April last year to my father and his friends (who are around 60–80). I received a lot of questions from them, which was fantastic. I do try and do my part when it comes to communicating the science about vaccines, testing, etc. among family and friends. For instance, my family regularly forward messages which have been circulating on WhatsApp, and in addition to discussing the misinformation, I try and discuss ways to question the authenticity of the information presented, for future messages. I am now part of something called *Team Halo* (#teamhalo) on TikTok, which was set up with the aim of promoting vaccine advocacy in young people (teenagers and young adults). While I have only made one video so far, I do want to make more. Through that route, I am making videos in Spanish as well, given the higher vaccine hesitancy among Latino groups.

AR: While I am not an avid social media user, I do try to amplify critical public health messages as much as I can. Sometimes, the misinformation that is in circulation is really

a misunderstanding about how the scientific process works, for example, how facts can be revised in light of new data, and I think it is an important component of being a scientist (right now) to explain this process.

**SK: Do you feel that journals are doing enough to amplify the voices of younger investigators/researchers? Do you feel that you receive ample opportunities?**

LL: This is the first time that I have been asked to be part of such a panel. I think it is definitely a rarity. I hope this the start of a trend towards the amplification of more diverse voices from different career stages.

LM: While there is certainly an ongoing trend to showcase more diversity and amplify younger voices, several scientific opinion pieces, for instance, still tend to come from very established researchers. As a postdoctoral researcher, who has never had to navigate interactions with editors, there is much uncertainty on establishing communication with editors.

AR: I would just quickly like to reflect on the rarity of an all-women panel. I strongly feel that all of the efforts that are aimed at increasing the diversity of voices that better reflect the people who are doing the actual research, is critical.

I hope that all of you enjoyed that panel discussion. We would like to continue showcasing the voices of young researchers within the community and provide a platform for them to tell their stories. Please do reach out to us at [tim@cell.com](mailto:tim@cell.com). As part of our Trends Voices initiative, we also organize Meet the Editor sessions. More information about these sessions can be found here.

<https://doi.org/10.1016/j.tim.2021.06.005>