Interview with Dr Nita Pillai, Director of Programmes and Operations at Sense about Science

For this issue on disproving urban myths and false science, *The Biochemist* interviewed Dr Nita Pillai, Director of Programmes and Operations at Sense about Science. Sense about Science is an independent charity that promotes public interest in sound science and evidence, working with decision makers, world-leading researchers and community groups to raise the standard of evidence in public life. It focuses on socially or scientifically difficult issues where evidence is neglected, conflicting or misunderstood.

Nita has over 10 years' experience working for a range of non-profit organisations working across policy and research. Nita was previously at the World Federation of Societies of Anaesthesiologists (WFSA) where she oversaw their portfolio of projects focused around training and upskilling anaesthesia providers in low- and middle-income countries. Prior to that, at the Fairtrade Foundation, Nita led the policy and research team before developing the organisation's work on the impact assessment and evaluation of Fairtrade projects. She has extensive experience of working on complex global projects and programmes and working with and coordinating diverse teams. Nita has also worked at Consumers International, the Overseas Development Institute and ActionAid. Nita also has a PhD in Microbiology and a Masters in Public Health Nutrition from the London School of Hygiene and Tropical Medicine.

Tell us a bit about who you are, what you do and why it's important.

I'm the Director of Programmes and Operations at Sense about Science, which means I work across the team making sure that we're delivering our activities on time and to budget. I'm also specifically responsible for oversight of our core Voice of Young Science and Quality and Peer Review programmes, which are supported by research partners including the Biochemical Society and encourage early-career scientists to play an active role in public discussions about science and take responsibility for changing the way the public and media view science and scientists. We offer unique, interactive workshops, equipping ECRs with the confidence and know-how to engage outside of academia and to get started as peer reviewers. I also manage our range of public engagement partnerships where we work with researchers to open up their research – particularly on topics that are misunderstood, complex or controversial – to public scrutiny. *Our ethos is 'public-led, expert-fed' – which means engaging early and directly with the public and addressing people's questions and concerns.*

What is your background, and what led you to Sense about Science?

I'm a microbiologist by training, having done my PhD on the pathogenic mechanisms of commensal bacteria. I then moved from hard science into international development, doing research and policy work with different organizations including the Institute of Development Studies and the Fairtrade Foundation. The common thread is I've always been involved in looking at evidence, whether that's impact assessment

of Fairtrade or evaluating the government's response to the Montserrat volcano emergency. Joining Sense about Science feels like coming full circle as it brings together all that experience in a more academic setting.

What kind of topics have you worked on in the past, and have any been specifically relevant to the biosciences?

Past campaigns at Sense about Science have focused heavily on combatting misinformation about science in the public sphere. Our first ever 'Making Sense of…' guide focused on genetically modified crops, which were hitting headlines back in 2009. It was one of the earliest examples of Sense about Science entering the public discussions around a hot topic, facing backlash for the position we took, despite the evidence backing our stance. The most recent example has been the conspiracy theories surrounding COVID-19 and vaccinations. There was confusion about how COVID-19 testing worked and what it could and couldn't tell us. As COVID-19 testing quickly became a regular part of all of our lives, Sense about Science created a guide, in collaboration with the NIHR Birmingham Biomedical Research Centre and the University of Birmingham, that described what the tests are used for, how they worked, as well as the differences between RT-PCR tests and rapid lateral flow tests, and their limitations.

What has been Sense about Science's biggest success or achievement that you are most proud of?

It's hard to name just one, but our campaign to keep libel laws out of science and protect open scientific discussion achieved changes that had previously been denied to publishers and citizens for a century. Sense about Science, Index on Censorship and English PEN launched the Libel Reform Campaign in 2009 when we became aware that the libel laws were having a chilling effect on scientific discussion and debate. We objected to several high-profile libel cases brought against scientists and were inundated with examples from hundreds of scientific researchers, patient groups, writers and publishers around the world about libel threats being used to silence scientific debate. The Defamation Act was finally passed into law in 2013 and although there had to be many compromises, the *new public interest defence it introduced helped writers everywhere to decide what to publish based on 'is it true?' rather than 'will they sue?'*

Sense about Science awards the John Maddox Prize every year to celebrate those who have stood up for science in the face of adversity. Have any past winners particularly stood out to you for their contributions?

In 2019, the John Maddox Prize for courageously advancing public discourse with sound science was awarded to forest fire expert Bambang Hero Saharjo for his fearlessness in challenging companies causing peatland forest fires in Indonesia. Bambang faced harassment, intimidation and lawsuits from companies with the legal budgets to completely bankrupt him. Despite all this, he has testified in 500 court cases investigating forest fires using his expertise in tracing their route and source, and helps local groups understand the causes and harms of forest fires. Bambang continues to testify and stand up for the Indonesian people's constitutional right to a healthy environment, one of the very few scientists in his field who are prepared to do so. He exemplifies what the John Maddox Prize is about and is an inspiring example of how a scientist can stand up for science. But all the winners shine a light on the challenge researchers face around the world, and the impact individuals can have, not least also this year's winner, Eucharia Nwaichi.

What are you working on at the moment that you are excited about?

We're about to start a project, collaborating with LSHTM, to test how the public engages with policy evidence, so we can come up with clear recommendations on what builds trust when communicating policy evidence. We'll be looking at how to express uncertainty and knowability (what's known and unknown) to the public, as well as exploring how visualization tools such as data dashboards and finding language work for people. We're excited that we'll be able to come up with some concrete examples and recommendations of how science and policy institutions can work towards trustworthiness.

What can scientists do in their day-to-day lives to advocate for sound science?

Scientific misconceptions spread among the public through daily conversations between non-scientists. These misconceptions are often spread by organizations or individuals who are heavily misinformed or who stand to gain from falsehoods spreading. Scientists are uniquely equipped to challenge these misconceptions head on by actively engaging with the people around them: whether that is simply through casual conversations with family members, combatting misinformation online or taking control of how their research is represented by being active in the media. Our Voice of Young Science network of over 6,000 early-career researchers across Europe does exactly that, with members committed to playing an active role in public discussions about science and changing the way the public and the media view science and scientists.

What can scientists learn from your organization, and how can they get involved?

Scientists can learn how to take ownership of their research and its role in society, becoming proactive,

engaged citizen scientists. Sense about Science has written guides and run workshops on how to take research out of the lab and into the public space. Our workshops are a particularly good way to learn how to effectively engage with the media, understand how evidence is used by policy makers and confidently communicate your research – I'd encourage everyone to sign up for our updates. Scientists can also get involved with Sense about Science through engaging with our events and campaigns such as Evidence Week in Parliament, where we connect researchers and parliamentarians around their cutting-edge research and make the case for evidence-based policy making. It's a great opportunity for scientists to engage outside of their research clusters and make their voices heard where it really matters. ■