The strong voice of scientists

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At Sense About Science we look at science and health stories in the press every morning. We often come across sensational science headlines, scare stories and misleading articles about miracle cures. These claims, which tend to frustrate scientists, can also be confusing for the public – one day claiming that red wine is good for you, the next saying it causes cancer.

Sense About Science works with scientists and a network of organizations, including the Biochemical Society, to respond to the claims we see in the media and to the questions the public fires at us about issues they are concerned about – from plasticizers in babies' bottles to GM crops. We debunk misconceptions about science and ensure the public has access to good science and evidence. The role that scientists play in public discussion about science is an important one, not only bringing evidence to these discussions but also sharing their insights to help the public make sense of an issue.

We equip and encourage scientists to speak up on issues that really matter to the public. Often this is on a difficult or controversial issue, where they may be facing hostility, so it’s not an easy thing to do. But we think scientists play an important role and it’s vital they speak up when it really matters.

To reward people for doing just this, Sense About Science in conjunction with Nature this year awarded the inaugural John Maddox Prize for Standing up for Science. The winners were Professor Simon Wessely, who was subsequently knighted in the New Years Honour List, and Shi-min Fang. Simon was awarded the prize for his ambition and courage in the field of research into chronic fatigue syndrome (myalgic encephalomyelitis) and Gulf War syndrome, and the way he has dealt bravely with intimidation and harassment when speaking about his work and that of colleagues. Shi-min, a biochemist by training who is now a freelance science journalist based in Beijing, was awarded the prize for his bravery and determination in standing up to threats against his life when uncovering clinics promoting unproven treatments, and for bringing the importance of looking for evidence to a wider public readership.

It can be difficult even for senior scientists to speak out, but for early career researchers this may be an even more daunting task. Back in 2004, noticing that early career researchers were under-represented in public discussions about science, Sense About Science surveyed them to ask why they weren’t speaking out. We found that many wondered who would want to listen. What if they were misrepresented? They felt that they didn’t have time and that they weren’t expert enough. In response to these concerns, we set up the Voice of Young Science (VoYS) programme, specifically designed to enable and encourage early career scientists to get involved in public debates about science.

This began with a series of media workshops to hear directly from scientists and journalists about how they each contribute to the process of communicating science to the public, about the pros and cons of how they interact, the pressures they each face and about how their relationships with each other are changing. The workshops are designed to address early career researchers’ concerns, give advice and share experiences. Next year we will run five workshops: two in London and one each in Manchester, Newcastle and Glasgow. We found that participants want to stay in touch and do something with what they’ve learnt, so the VoYS network was created. A total of 1800 early career researchers who regularly share ideas and have all taken on responsibility for responding to misinformation in the public now form the VoYS network.
Debunking detox

The VoYS network tackles misinformation and stands up for science. Their ethos is: ‘You don’t have to wait until the end of your career to make a difference’. As a network they take on evidence hunting and myth-busting campaigns. They have been frustrated by claims in advertising and in the media, some of which keep reappearing, such as the idea of food being ‘chemical free’. Something the network members noticed year after year on 1 January was the term ‘detox’. Although scientifically meaningless, they found the word ‘detox’ on the labels of almost any products, from tea to foot patches. So they did something about it. Calling up companies that manufactured detox products, the VoYS members discovered that none were able to provide any evidence for their claims, or even give a comprehensive definition of what they meant by ‘detox’. ‘Detox’ was used in two ways: one that perpetuated a misunderstanding of how the body works – the idea that chemicals accumulate in the body. If you overindulge during the Christmas period, no foot patch will help you as it is your kidneys and liver which take care of that. The second way it was used was as a marketing tool. Science sells, so the term ‘detox’ was put in front of any product; detox hair straighteners are my personal favourite. The VoYS network concluded from this that ‘detox’, as used in product marketing, is a myth.

In response, VoYS launched a ‘detox dossier’ explaining how the body is perfectly capable of dealing with most chemicals we encounter. This VoYS campaign brought evidence into the public discussion with media coverage from local radio to international broadsheets, creating a public debate about why ‘detox’ products don’t work. Debunking detox coverage even appeared in the same magazines in which detox is promoted. But notably it was an opportunity for early career scientists to promote the importance of evidence and speak to the media on a topic they felt comfortable about. Furthermore, they had the support of the VoYS network to help them out. Many early career researchers want to stand up for science – young scientists have a strong voice and can use it to make a change in public discussions about science.

The Biochemical Society sponsors the Sense About Science Standing up for Science media workshops for early career researchers. The next workshop will be held at the University of Manchester in March and members of the Biochemical Society are eligible for priority places. Applications are open now, see www.senseaboutscience.org/pages/upcoming-standing-up-for-science-media-workshops-.html for details or to apply, email Victoria Murphy (vmurphy@senseaboutscience.org) with a short cover letter and CV.

Ask for Evidence

Ask for Evidence was piloted in 2012 to encourage everyone, whatever their experience, to ask for evidence behind claims in policy, media and advertising. The campaign is supported by high-profile scientists, community leaders, public figures and performers, as well as over 50 organizations including the Biochemical Society. Ask for Evidence is an easy way to stand up for science. If you want to know whether a claim is backed by scientific evidence, ask the people making the claim to provide it. Anyone can ask for the evidence behind claims regardless of their level of expertise to demand the evidence for a claim. By doing this we hope that anyone making a claim will ultimately expect to be asked. Ask for Evidence empowers the public by setting out the straightforward question they can ask and gives the message that you don’t need to be an expert to do it.

To counter the tide of scientific misinformation on issues that really matter to the public, all those in science need to get involved and hold people and organizations to account. You don’t need to wait until the end of your career – young scientists have a strong voice and can use it to make a change in public discussions about science.

Panel discussion at the Standing up for Science media workshop held at the University of Glasgow: standing is Julia Wilson (Sense About Science). On the panel are (left to right) Professor Miles Padgett (University of Glasgow), Professor Sergio Della Sala (University of Edinburgh), Victoria Murphy (Sense About Science), and Dr Eleanor Gilroy (James Hutton Institute).

If you want to find out more about the work of Sense About Science or to get involved with VoYS you can visit www.senseaboutscience.org, follow us on Twitter @voiceofyoungsci and @senseaboutsci, or join us on Facebook.