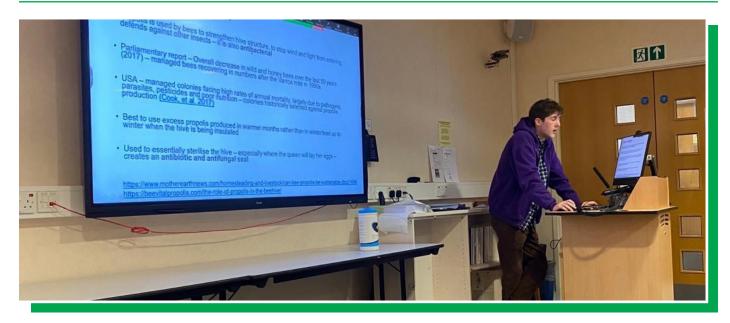
One Health Showcase report

Tomas Nicholas

Dentistry, University of Plymouth Email: tomas.nicholas@students.plymouth.ac.uk



On 10 November 2022, the One Health Showcase took place at the University of Bristol. The event had a focus on the intersection between human health, animal health and environmental health, creating an interdisciplinary framework. Funded by the INSPIRE scheme between the universities of Plymouth, Exeter, Bristol and Cardiff, it was both online and in-person, to allow for networking but also access to the event where travel was not possible.

There was a total of five speakers from a range of backgrounds, including medicine, dentistry and veterinary science. The variety of talks given showed how the concept of One Health can be applied to multiple disciplines and can be taken into consideration in the work carried out by both clinicians and researchers. This event provided a great platform for the One Health message to be delivered and allowed students to understand the multitude of ways it can be applied and woven within their disciplines.

The first talk was given by the author of 'Tickets for the Ark' Rebecca Nesbit (see interview on page 34). An overview of some of the issues to be considered with conservation was given, which provoked some interesting thoughts about where and how efforts should be focused. How we decide on what species to focus on conserving and how we go about this is something I had never previously thought about. This is an ever-important topic today, where global warming, trophy hunting and the ethics of how we treat animals is discussed a lot more openly. The intersection of how conservation efforts and its commercialisation can impact humans with a potential for both a negative and positive impact on local communities was interesting, due to the differing socio-economic landscapes where conservation efforts are happening.

Following this were the student talks, with the first presented by Virginija Vikelyte, a fourth-year medical student at the University of Exeter presenting 'Living with Environmental Change' where the talk focused on antibiotic (colistin) resistance due to aquacultural dissemination.



The second presentation was by Jessica Williams, also a fourth-year medical student at the University of Exeter, who discussed bacteriophages and their potential place in finding a solution to antimicrobial resistance (AMR). This talk particularly focused on their use in chronic suppurative lung disease. Both talks had a common theme of AMR, which is often described as a "silent pandemic" with an increasing sense of urgency surrounding this, and very topical with antibiotic resistance week starting soon after the showcase.\(^1\) After these talks, it opened up a discussion surrounding antimicrobial use, such as in the meat industry, where animals are often fed antibiotics as part of their diet to prevent infections occurring within the populations to ensure no loss of product, with this having the potential to drive antibiotic resistance, predicted to kill 10 million people a year by 2050.\(^2\)

The third student talk was presented by myself, an intercalating dental student at the University of Plymouth. The talk was titled 'The sustainability of bee propolis and the effects of propolis mouthwash on markers of oral health' which took into consideration the preservation of the oral microbiome, oral health and the ecological impact of using products derived from animal sources. This talk also had themes of AMR and considered the environmental impacts of using products derived from animal sources, particularly in this case how it may influence bee survival and populations.

The final presentation was a veterinary focused talk by Jamil Dowling, a veterinary medicine student at the University of Bristol who shared his experience of conservation work abroad. This gave a great overview of what conservation work actually involves, bringing to life some of the other aspects of the event, and I think it was great that this introduced further discussions of how to get involved with similar projects and research.

The evening finished with some food, drinks and an opportunity to socialise and network. It was an excellent to discuss further thoughts evoked by the talks, especially as the three groups of medical, dental and veterinary clinicians do not get the opportunity to share ideas with each other regularly. I think this is incredibly important that these discussions start with students in these fields, as they will be shaping the future of clinical practice and research.

I found a common theme between the medical and dental students was the apparent lack of awareness of One Health in comparison to veterinary students, which we thought should change and be integrated into more curriculums. A topic brought up that I though was interesting was the use of single use plastics, which are convenient and aid infection control, but ultimately has a negative impact upon the planet that we live in and should be taken seriously. From my own experience, I feel as though consumption of single use plastics is excessive in dentistry and more efforts should be made to reduce this usage.

Thank you to Sofia Croppi and all others involved in the organisation of this wonderful event.

References

- Mahoney, A. R. Safee, M. M. Wuest, W. M. Furst, A. L. The silent pandemic: Emergent antibiotic resistances following the global response to SARS-CoV-2 iScience 2021;24: 102304
- O'Neill, J. Antimicrobial Resistance: Tackling a crisis for the health and wealth of nations. Review on Antimicrobial Resistance 2014.
- O'Neil, J. Tackling drug-resistant infections globally: final report and recommendations. Review on Antimicrobial Resistance 2016.