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## Internal news and events

### AMR Network Events Calendar 2021/22

**Tuesday 16 November 2021:** formal launch event of *Researching Resistance*, a commission to celebrate AMR research and researchers at the University of Exeter

**Wednesday 15 December 2021:** following the popularity of last year's AMR Speed Collaborating event, we are going to run the event again with two new topics. The premise of this event is that members will be split into small interdisciplinary breakout groups and tasked with developing a seed corn AMR project in response to a specific challenge - in just 10 minutes. If you have an idea for a challenge topic, please get in touch with us at [AMR-Network@exeter.ac.uk](mailto:AMR-Network@exeter.ac.uk)

**January 2022** (date tbc): [Professor John Dupré](#), Professor in Philosophy of Science and Director of Egenis

### Internal events

If you missed [Dr Laura Newsome](#)'s State of the Art talk as the featured ESI Academic of the Month in September, or would like to watch it again, you can catch up with it via the ESI site [here](#).

Previous members of the University of Exeter AMR Network who have also featured as the ESI Academic of the Month are [Dr Anne Leonard](#), [Professor Stuart Townley](#) and [Professor Edze Westra](#), and their State of the Art lectures are also available on the same webpage.



Image: Environment & Sustainability Institute, Penryn Campus

### **Superbugs pop-up science shop – get involved**

[Translational Research Exchange @ Exeter](#) (TREE) have Wellcome funding to deliver an exciting AMR-related public engagement event: Superbugs pop-up science shop. We are currently looking for expressions of interest from academics of all levels working in AMR at the University of Exeter - including PGR students and early career researchers - to be part of a working group that will design and deliver the event with the support from the Communities Engagement Manager at TREE. The shop will be based on a [successful shop delivered by Cardiff University](#) and we plan to deliver it in Spring/Summer 2022. The aim of the shop is to increase public awareness of the microbial world in, on and around us, and the threat of antibiotic resistance, through an innovative delivery model.

Please contact TREE Communities Engagement Manager Katharine Fitzpatrick [k.fitzpatrick@exeter.ac.uk](mailto:k.fitzpatrick@exeter.ac.uk) to register your interest and find out more



Image: [Cardiff University SuperBugs Pop-Up Shop](#), July 2019

## Internal news

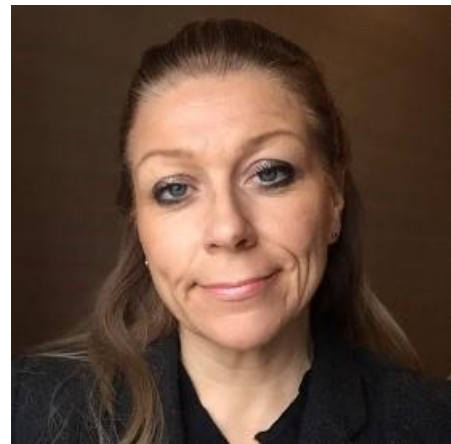
### Recent awards: Congratulations to...

[Professor Elaine Bignell](#) who has recently been awarded two new grants.

The first of these is joint with Dr Darren Thompson, also of the MRC Centre for Medical Mycology, and is a one-year GILEAD contract research award for a project on *Live cell imaging of fungal responses to antifungal drugs*. The other grant is a three-year award from the BBSRC for a project on *Chemigenetic analysis and efficacy of novel antifungal drugs that target fungal pH signalling*.

[Professor Will Gaze](#) who is one of eleven scientists from across the UK who has been awarded a NERC Knowledge Exchange (KE) Fellowship.

The KE fellowships have been awarded to drive forward science exploration in a number of disciplines within environmental science. Professor Gaze's work will be on *The environmental dimension of antimicrobial resistance: the transition from policy formation to implementation*.





**World Health  
Organization**

**World Antimicrobial  
Awareness Week 2021-  
Spread awareness, stop  
resistance**



**Antibiotics  
Antivirals  
Antifungals  
Antiparasitics**

## Project update

**Researching Resistance – a creative project that celebrates research into AMR at the University of Exeter and the breadth of expertise tackling this global challenge**

Following the successful hosting of a Creative Fellow in 2020/21, the AMR Network commissioned artist Simon Ryder for another creative project that will celebrate the diversity of the University of Exeter's AMR research and its distinctive interdisciplinary approach.

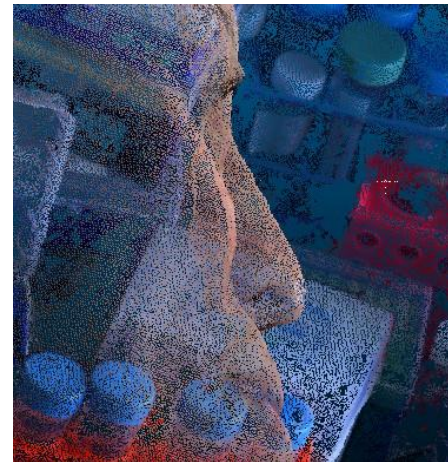
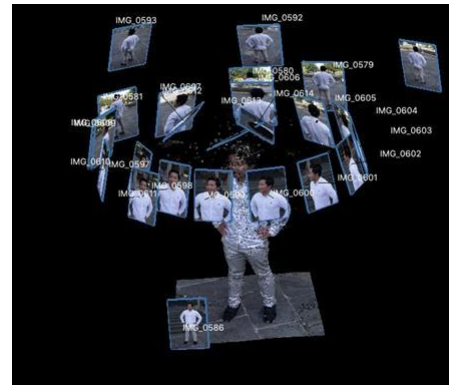
Jointly-funded by the MRC Centre for Medical Mycology and the initial Provost's Fund grant that helped to establish the University of Exeter AMR Network, fifteen members of the AMR Network, spanning the breadth of subjects and career stages, were invited to feature in a series of photographic works. Drawing on images and words that relate to participating individuals' research, the exhibition will present a series of portraits that, in themselves, are a creative response to the challenges of AMR and a celebration of those whose work is helping to address those challenges.

The exhibition will be open in The Forum at the Streatham Campus for World Antibiotic Awareness Week 2021, before travelling to the Environment and Sustainability Institute on the Penryn Campus in spring 2022. The collection will also be shown in an online exhibition on the University of Exeter's Arts and Culture website.

Thank you to the researchers who have so willingly taken part in this project around many other pressures, and all other colleagues who have put in enormous efforts to bring this project to life, particularly within the MRC Centre for Medical Mycology and the Environment and Sustainability Institute/ European Centre for Environment and Human Health.

**Researching Resistance will be in The Forum, Streatham Campus, from 15-26 November 2021, available online, and showing in the Environment & Sustainability Institute, Penryn Campus, in spring 2022.**

*Both images © [Simon Ryder](#): top: working with photogrammetry as part of the process to produce a final portrait: bottom: detail from a work-in-progress for another portrait at a later stage of development*



If you have project updates or resources that you think might be of interest to other members of the Network, we would be pleased to highlight them through this monthly newsletter – contact us on [AMR-Network@exeter.ac.uk](mailto:AMR-Network@exeter.ac.uk)

## Publications and other media

**Podcast:** Following the UN's description of AMR as "the silent pandemic" within our food system, threatening food security, the environment, industries from farming to pharmaceuticals, and global public health, Professor Will Gaze joined Jo Raven of FAIRR and David Tsoupros of AllianceBernstein to discuss the environmental impacts of AMR and what investors are doing to address this risk. [Feeding Resistance: Part One](#). (FAIRR)

**Publication:** M. Motta, M. Wilcock, A. Heald. [Using defined daily doses to review antibiotic prescribing](#). (Wiley)

**Publication:** J. Cama, K. Al Nahas, M. Fletcher, K. Hammond, M. G. Ryadnov, U. F. Keyser, S. Pagliara. [An ultrasensitive microfluidic approach reveals correlations between the physico-chemical and biological activity of experimental peptide antibiotics](#). (bioRxiv)

**Publication:** K. Al Nahas, M. Fletcher, K. Hammond, C. Nehls, J. Cama, M. G. Ryadnov, U. F. Keyser. [Measuring thousands of single vesicle leakage events reveals the mode of action of antimicrobial peptides](#). (bioRxiv).

**Publication:** E. L. Attrill, R Claydon, U. Łapińska, S. Meaden, A. T. Brown, E. Westra, S. V. Harding, S. Pagliara. [Individual bacteria in structured environments rely on phenotypic resistance to phage](#). (PLoS Biology) - read the University press release [here](#)

**Report:** A. C. Singer, I. C. Stanton, H. J. Tipper, D.S. Read. [ERAMMP Report-55: Evidence Review on the Entry and Spread of Antimicrobial Resistance \(AMR\) in the Rural Water Environment in Wales](#). (UK Centre for Ecology & Hydrology)

Don't forget to use **#ExeterAMR**

## Spotlight on...

**Emily Stevenson** has recently started a PhD investigating microplastics as vectors for antimicrobial resistance in aquatic systems, under the supervision of Dr Aimee Murray and Professor Angus Buckling at the University of Exeter, and Professor Pennie Lindeque and Dr Matthew Cole at Plymouth Marine Laboratory. Emily's research aims to investigate whether microplastics are important platforms for the growth, enrichment and dissemination of AMR biofilms, and whether there are associated ecological implications of microplastics, antimicrobials and AMR on the gut microbiota of marine organisms. This builds on research Emily carried out during her Masters degree in 2019/20 in which she researched the role of microplastics in the dissemination of potentially pathogenic or antibiotic resistant bacteria. Between completing her Masters and beginning her PhD, Emily worked on a project with the University of Exeter's Medical School, MRC Centre for Medical Mycology and the Environment Agency, investigating antifungal resistance in the environment, and she has also continued to research antimicrobial resistance in the environment as a research technician for Dr Aimee Murray, working on Dr Murray's '[SELECT method](#)'. Emily is also actively engaged in public engagement and policy-influencing: in 2021, she joined the official youth engagement group of the G7 on the 'climate and environment policy track', ensuring that the environmental policy priorities of the youth (those aged 18-30) are heard and considered at the highest level of international decision making. Her full profile can be viewed [here](#).



GW4 AMR Alliance



# ANTIMICROBIAL RESISTANCE ALLIANCE

## Calling ECRs and PGR students

The GW4 AMR Alliance is launching a network aimed specifically at Early Career Researchers\* and Postgraduate Research students.

The idea of the ECR/PGR network is to connect you, and the various disciplines in which you study and work on AMR, together, and to promote interdisciplinary approaches to AMR, collaboration and training opportunities. We are envisaging, for example, a seminar series (with opportunities for you to present your research), guest seminars from academics, UK funders and AMR organisations etc and we will work with you to develop a network that helps and represents you in the GW4's AMR research strategy.

The network will be invited to form its own committee of 8 members - one ECR and one PGR from each of the four partner universities (Bath, Bristol, Cardiff and Exeter) who will liaise closely with the GW4 AMR Officer in your respective universities. They will provide administrative support to the ECR/PGR network for purposes of your committee. In addition, the AMR Alliance Officer at each university partner will provide a point of contact locally for all members.

**Please email [amr@gw4.ac.uk](mailto:amr@gw4.ac.uk) to join. All ECRs and PGR students are welcome to join at any time but the deadline for expressing an interest in joining the committee is 15 October 2021.**

*\*The GW4 AMR Alliance Steering Group has defined "Early Career Researcher" as "those who have completed their postgraduate research studies and are moving towards independence as the academic and research leaders of the future". If you are keen to be involved but are not sure if this definition includes you, please get in touch with us via [AMR-Network@exeter.ac.uk](mailto:AMR-Network@exeter.ac.uk)*

## GW4 AMR Alliance – calling all disciplines

As we enter the new academic year, this is a reminder about the opportunity to sign-up to the GW4 AMR Alliance, particularly as new academic staff and research students join the University. We are

keen to hear from researchers either already working, or with an interest in working, in areas related to antimicrobial resistance. We welcome researchers working at any level and across all disciplines. We are particularly keen to encourage the participation of researchers working in social science, law, business, humanities and other under-represented disciplines.

### How to join

Please sign up [here](#) to complete a short online registration form (this link can also be found on the [website](#) along with our Privacy Policy).

Many thanks and we look forward to you joining us. If you have any queries, please do contact the AMR Alliance team at [amr@gw4.ac.uk](mailto:amr@gw4.ac.uk)

If you would like to find out more about the GW4 AMR Alliance and its aims, as well as hear about some of the research that is taking place across the four partner universities of Bath, Bristol Cardiff and Exeter, please have a look at the launch event [here](#).



Image: Researching environmental AMR, European Centre for Environment & Human Health

## External news and events

### Sector news

International Centre for Diarrhoeal Disease Research, Bangladesh: [Pandemic of antibiotic resistance is killing children in Bangladesh, researchers find.](#)



**Financial Times:** [Governments fall behind in race to stem antimicrobial resistance.](#)

**MedicalXpress:** [Vaccination guards against certain bacterial infections and slows the spread of superbugs in populations](#)

### Sector events

**LSHTM Centre for Mathematical Modelling of Infectious Diseases Annual Lecture** is taking place online on **Tuesday 19 October**, 4.00pm-5.30pm. The speaker will be Dr Maria D. Van Kerhove, Infectious Disease Epidemiologist and COVID-19 Technical Lead at the World Health Organisation. More information and a link to the webinar are [published here](#).

**EADA 2021** (Emerging Antimicrobials & Diagnostics in AMR) is a leading partnering event on R&D and AMR and takes place on **18 November 2021**. For more information, [click here](#).

**AMRelay 2021** is a 24-hour, online event that will offer a series of 96 consecutive contributions by global stakeholders involved in curbing antimicrobial resistance. It will take place on **24 November 2021**, the final day of World Antibiotic Awareness Week and the deadline for registering to contribute is **31 October 2021**. To find out more, visit the [AMRelay 2021 website](#).

### Publications of interest

P. B. Pavlinac, B. O Singa, K. D Tickell, R. L Brander, C. J McGrath, M. Amondi, J. Otieno, E. Akinyi, D. Rwigy, J. D. Carreon, S. N. Tornberg-Belanger, R. Nduati, J. B. Babigumira, L. Meshak, G. Bogonko, S. Kariuki, B. A. Richardson, G. C. John-Stewart, J. L. Walson. [Azithromycin for the prevention of rehospitalisation and death among Kenyan children being discharged from hospital: a double-blind, placebo-controlled, randomised controlled trial](#) (*The Lancet*)

D. J. Buehrle, M. M. Wagener, M. Hong Nguyen, C. J. Clancy. [Trends in Outpatient Antibiotic Prescriptions in the United States During the COVID-19 Pandemic in 2020](#). (*Jama Network Open*)

N. G. Davies, S. Flasche, M. Jit, K. E. Atkins. [Modeling the effect of vaccination on selection for antibiotic resistance in \*Streptococcus pneumoniae\*](#). (*Science Translational Medicine*)

S. Ozawa, H-H. Chen, G. G. Rao, T. Eguale, A. Stringer. [Value of pneumococcal vaccination in controlling the development of antimicrobial resistance \(AMR\): Case study using DREAMR in Ethiopia](#). (*Vaccine*)

D. Schar, C. Zhao, Y. Wang, D. G. J. Larsson, M. Gilbert, T. P. Van Boeckel. [Twenty-year trends in antimicrobial resistance from aquaculture and fisheries in Asia](#). (*Nature Communications*)



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