



Internal news and events

AMR Network events 2020/21

Thursday 17 June, 12.15pm – GW4 Crucible Project Updates: Interdisciplinary Approaches to AMR

GW4 comprises the Universities of Bath, Bristol, Exeter and Cardiff, and antimicrobial resistance is a major research strand on which the four universities are collaborating. Each year, GW4 Crucible brings together 30 competitively-selected future research leaders and, through a seed funding opportunity, supports a small number of projects. In 2020, the theme was "Interdisciplinary Approaches to AMR" and, of the five projects selected, four were led by a member of the University of Exeter, with several other Exeter ECRs collaborating within those research groups.

Through short presentations, we will hear from some of those involved, including:

- [Dr Matt Lloyd Jones: Exploring antibiotic use practices in livestock production through a novel, game-based approach](#)
- [Dr Tobias Bergmiller: Developing experimental and theoretical models to study antimicrobial resistance and resilience in polymicrobial biofilms](#)
- [Dr Ray Chan: Building a communicative pathway to reduce AMR: a study of cattle farmers' perceptions of on-farm E.coli infections in the UK](#)

The full list of the GW4 Crucible cohort for 2020 is available [here](#). Information on all five seed projects that were funded in 2020, and the researchers involved in each one, can be found [here](#).

Tuesday 20 July, 12.15pm – Interdisciplinary research grant applications

An interactive event in which we will explore some of the challenges and frustrations involved in making interdisciplinary research grant applications, and hopefully hear from some of those who have navigated these funding calls successfully.

If you are able to be one of the contributors and share your reflections and experiences on this, please get in touch via AMR-Network@exeter.ac.uk

Events start at 12.15pm and finish by 1.45pm. If you can only attend part of the webinar, you are still very welcome to come along.

Other internal news and publications

International workshop jointly hosted by University of Exeter and Medical Research Council

The University of Exeter and the Medical Research Council (MRC) jointly hosted a workshop on “Drivers of Antifungal Resistance” on 4 May 2021. The workshop was attended by over one hundred contributors including representatives from academia around the world, Public Health England (PHE), Centers for Disease Control and Prevention (CDC) Atlanta, the National Institutes of Health (NIH), government and several pharmaceutical industries. The workshop was opened with a recorded statement from Professor Dame Sally Davies, the UK’s special envoy on AMR and former Chief Medical Officer for England, and included speakers representing AMR policy, discovery and clinical research and industry. Early Career Researchers (ECRs) acted as moderators and rapporteurs in a series of breakout sessions that debated key issues. A formal report is being generated by the MRC and arrangements are in place to publish the recommendations of the workshop in a high profile academic journal.



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

Publications and other media

Publication: Dr Jehangir Cama (University of Exeter) and Dr Zubin Shroff, a global health systems expert (currently at WHO), have co-authored an op-ed on AMR that has just been published in the Hindu, one of India's leading newspapers. Their piece was titled "[Antimicrobial Resistance: the Silent Threat](#)". The article is behind a paywall but permission was given for an image of it to be shared on social media so it is also available [here](#).

Publication: Jehangir Cama and Stefano Pagliara are part of a large academic/industry team that has just published a paper reporting a new series of peptide based antibacterials: [Switching Cytolytic Nanopores into Antimicrobial Fractal Ruptures by a Single Side Chain Mutation](#). ACS Publications <https://pubs.acs.org/doi/abs/10.1021/acsnano.1c00218>

Publication: Aimee K Murray, Isobel Stanton, William H Gaze, Jason Snape: [Dawning of a new ERA: Environmental Risk Assessment of antibiotics and their potential to select for antimicrobial resistance](#). *Water Research (Science Direct)*

Publication: Will Gaze is a co-author in a paper on wastewater-based epidemiology of human viruses helps measure the effectiveness of interventions: [Monitoring SARS-CoV-2 in municipal wastewater to evaluate the success of lockdown measures for controlling COVID-19 in the UK](#). *Water Research (Science Direct)*

Updates: Covid-19 associated mucormycosis has been in the news recently with headlines to the effect of "Deadly black fungus threatening India's COVID-19 patients". The MRC Centre for Medical

Mycology has been publishing regular updates throughout the pandemic on COVID-19 and Aspergillus co-infections. You can read more about this and their update relating to mucormycosis on their website [here](#).

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

GW4 AMR Alliance



**“GW4 AMR Alliance: Our Interdisciplinary Approach to One Health AMR”
- an online symposium with a research showcase and roundtable discussions.**

On behalf of the GW4 Alliance Board, members of the University of Exeter AMR Network are warmly invited to attend the formal launch which will be held online on **Wednesday 16 June 2021**, from 1.00pm-5.00pm.

The GW4 AMR Alliance brings together four of the most research-intensive and innovative universities in the UK: Bath, Bristol, Cardiff and Exeter, and the AMR Alliance will enhance our universities' strong and diverse portfolio of AMR research, particularly in our 'One Health' approach to help achieve optimal health outcomes for people, animals and the environment.

Our vision is to become the UK's leading One Health AMR research consortium, recognised globally, and to be the partner of choice for future AMR research consortia funding to help drive the global One Health effort to mitigate the urgent threat of AMR.

Our GW4 AMR investigators will be showcasing their One Health AMR research and our keynote speaker is [Dr Timothy Jinks](#) (Head of Drug-Resistant Infections Programme, Wellcome Trust). There will also be Q&A and roundtable discussion sessions.

We would be delighted if you could attend by registering via our Eventbrite site: [GW4 AMR Alliance Launch](#)

Launch of the GW4 AMR Alliance – calling all disciplines!

A reminder about the opportunity to sign-up to the GW4 AMR Alliance. We are keen to hear from researchers 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



Multidisciplinary Approaches to AMR: Pandemics, Practices and Innovation

Hosted by early career researchers from the GW4 Alliance, this symposium is designed to facilitate networking between researchers working across different disciplines with an interest in antimicrobial resistance (AMR). This three-day event aims to create a space for discussion and knowledge exchange about the different realities and challenges of AMR. We will also reflect on how the COVID-19 pandemic has catalysed changes to research, society and public health policy and how these may influence the future of AMR. Over the three days, and through Zoom webinars, panel discussions and interactive online poster sessions, this symposium will aim to address the broad themes of:

- AMR and global health

- Practices and context
- Molecular innovations
- Mechanisms of AMR
- AMR and the environment
- Lessons learnt from COVID-19

Online event: **Monday 5 – Wednesday 7 July 2021**

Cost: **free to attend**

Registration deadline: **Monday 28 June 2021**

Abstract submission deadline: **Tuesday 1 June 2021**

For more details and to register, please go to the [event website](#).

External news and events

Publications of interest

Tired of reading? London School of Hygiene and Tropical Medicine has a podcast series, *LSHTM Viral*. This episode from 11 May 2021 is titled “[From Lab to Jab – How to Make a Vaccine](#)” (season 3, episode 6). This episode, and others in the series, can be explored [here](#).

Isabel Frost, Geetanjali Kapoor, Jessica Craig, Daniel Liu, Ramanan Laxminarayan: [Status, challenges and gaps in antimicrobial resistance surveillance around the world](#). *Journal of Global Antimicrobial Resistance (Science Direct)*

Anita Kotwani, Jyoti Joshi, Deeksha Kaloni: [Pharmaceutical effluent: a critical link in the interconnected ecosystem promoting antimicrobial resistance](#). *NIH (PMC)*

Syed Imran Ali Meerza, Kathleen R Brooks, Christopher R Gustafson, Amalia Yiannaka: [Information avoidance behaviour: Does ignorance keep us uninformed about antimicrobial resistance?](#) *Food Policy (Science Direct)*

Jacqueline Meredith, Jennifer Onsrud, Lisa Davidson, Leigh Ann Medaris, Marc Kowalkowski, Kristin Fischer, Jennifer Priem, Micahel Leonard, Lewis McMurdy: [Successful Use of Telemedicine Infectious Diseases Consultation with an Antimicrobial Stewardship-Led *Staphylococcus aureus* Bacteremia Care Bundle](#). *Open Forum Infectious Diseases*

Spotlight on...

Ashley Bell is a PhD student at the University of Exeter, partnered with [CEFAS](#) (Centre for Environment, Fisheries and Aquaculture Science) and part of the [GW4 FRESH](#) Centre for Doctoral Training. He has a background in bioinformatics and metagenomics from his MbyRes investigating SAR11 and how this abundant marine bacteria escapes viral predation. His project on the effects of antibiotics on fish skin and gill microbiomes, with a focus on antimicrobial resistance. He is primarily looking at the effect of antibiotic pollution within UK rivers on roaches (*Rutilus rutilus*) and how their perturbed microbiomes drive the



acquisition of AMR. He aims to characterise the community and function dynamics of microbiomes within fish skin and gills using metagenomics and address how they may act as "playgrounds" for pathogenic evolution. His University profile page can be viewed [here](#).

Albert Chen is an Associate Professor at the Centre for Water Systems (CWS), University of Exeter with over 20 years of experience in Water and Human Environments studies. His research career started with computer modelling of urban floods and he has created a series of modelling tools to advance scientific knowledge on the interrelationships between different phenomena, services, and consequences related to water, human and environment. His research topics include water resources, hydrology, hydraulics, hydroinformatics, water and health, hazard impact assessment, disaster risk management, climate change, adaptations and resilience strategies. He is currently collaborating with ECEHH, JBC/DHSC, Environment Agency, NHS Trust, and South West Water in the national wastewater surveillance programme - Exeter pilot to monitor SARS-COV-2 spreading in the University Campus and in the city. He is also coordinating the UKRI GCRF funded OVERCOME project to explore digital innovations for climate hazard early warning and related disease prevention to strengthen community resilience to flood and drought. Recently, he was appointed as a UK Senior Expert in the NERC [Digital Environment Expert Network](#), as a part of NERC/UKRI [Constructing a Digital Environment Programme](#), to develop the thinking and practice around a 'digitally enabled environment', providing benefits for policy makers, businesses, communities and individuals. He also co-leads the Policy Action Group in the European Commission's [ICT4Water Cluster](#) to review existing challenges and to identify the advantages and opportunities of integrated ICT applications within water sector. His full profile can be viewed [here](#).



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