

Internal news and events

AMR Network Events 2020/21

Many thanks to <u>Dr Angela Cassidy</u>, <u>Dr Liliane Mukaremera</u> and <u>Simon Ryder</u> for three extremely interesting presentations in October's jargon-free webinar. The discussion that followed, both in terms of the questions and answers and the comments that were posted in the Chat function, also demonstrated how valuable these webinars are for sharing perspectives and knowledge across disciplines.

November's event will focus on AMR work in government organisations. We will be joined by three external speakers:

- <u>Elizabeth Beech OBE</u> Regional Antimicrobial Stewardship Lead, South-West Region, NHS England and NHS Improvement
- <u>Dr David Verner-Jeffreys</u> Bacteriology Team Lead, Centre for Environment,
 Fisheries and Aquaculture Science (Cefas)
- <u>Dr Alwyn Hart/Dr Wiebke Schmidt</u> Air, Land and Water Research, Environment Agency
- Chair: <u>Professor Will Gaze</u>, Professor of Microbiology, College of Medicine & Health Please join us on **Thursday 12 November**, starting at 12:15pm and finishing by 1:45pm. A Teams invite to this event will follow early in November.

Advance notice: AMR Speed Collaborating event

For our December Network event, we are planning an online event in which participants will be split into small interdisciplinary breakout groups and tasked with developing a seed corn AMR research project in response to a specific call announcement - in just 10 minutes! More details to follow in the November newsletter but please hold the date - Wednesday 9 December, 12:15pm-1:45pm.

Get involved: if you are interested in presenting at one of the AMR Network events, or if you would like to chair one of them, please get in touch with us via the AMR-Network@exeter.ac.uk email address.

Other news

Blog: Read the blog by Aimee Murray, Will Gaze, Isobel Stanton and Anne Leonard "Antibiotics and antibiotic resistance in our waters – are we up a creek without a paddle?" British Society for Antimicrobial Chemotherapy

Publication: Henry Buller, Steve Hinchliffe and Kin Wing (Ray) Chan are all co-authors in "<u>Veterinary</u> <u>Diagnostic Practice and the Use of Rapid Tests in Antimicrobial Stewardship on UK Livestock Farms</u>", *Frontiers in Veterinary Science*

Publication: Kin Wing (Ray) Chan, Steven Hinchliffe and Henry Buller are also all co-authors in "Diagnostics and the challenge of antimicrobial resistance: a survey of UK livestock veterinarians' perceptions and practices" *BMJ Veterinary Record*

Publication: Aimee Murray, Isobel Stanton, Lihong Zhang, and Will Gaze, with Jessica Wright and Jason Snape, have had a paper published <u>"The 'SELection Endpoints in Communities of bacTeria' (SELECT) Method: A Novel Experimental Assay to Facilitate Risk Assessment of Selection for Antimicrobial Resistance in the Environment". *Environmental Health Perspectives*</u>

Publication: Steve Hinchliffe is one of the authors in <u>"Setting the standard: multidisciplinary hallmarks for structural, equitable and tracked antibiotic policy"</u>, *BMJ Global Health* Vol 5, Issue 9.

An **interview** with Professor Richard Smith has informed an article by Benjamin Plackett on "Why big pharma has abandoned antibiotics", published in *Nature*.

New GW4 Board member (WSA): Dr Aimee Murray is now an Exeter Board Member for the GW4 Water Security Alliance (WSA): https://www.gw4water.com/

The WSA have special interest groups, with one on Antimicrobial Resistance. If any AMR researchers conduct research relevant to water, please consider joining the WSA to receive newsletters on relevant upcoming and interdisciplinary events on water and the water/AMR interface, and for networking opportunities.

Email Aimee <u>a.k.murray@exeter.ac.uk</u> for more details, or Hannah Cameron H.C.A.Cameron@exeter.ac.uk to join.

Don't forget to use #ExeterAMR

External news and events

GW4 Early Career Symposia Scheme – deadline for applications extended to 28 October 2020 Last call! The GW4 Alliance, which comprises the Universities of Exeter, Bath, Cardiff and Bristol, invites applications to its exciting initiative to bring together Postgraduate Researchers (PGRs) and Early Career Researchers (ECRs) to deliver a series of flagship PGR- and ECR-led online symposia.

Now in its second year, the scheme aims to create a space where PGRs and ECRs can showcase their research, gain experience in managing the delivery of an online symposium, broaden their networks and form new collaborative, cross-cohort interdisciplinary research communities. This year, the GW4 symposia will focus on two themes: Climate and Antimicrobial Resistance. They are

encouraging a broad interpretation of these themes to harness a wide range of expertise and interests from anthropology through to zoology. They want to ensure diverse and stimulating events which reflect the breadth of research excellence across GW4. If you are a GW4 PGR or ECR with an interest in any of the above themes and interested in this exciting development opportunity, they would like to hear from you! More information available here.

Report: Scoping the Significance of Gender for Antibiotic Resistance – ReAct Action on Antibiotic Resistance and the Institute of Development Studies, Sussex University

Publication: "Antimicrobial stewardship: a COVID casualty?" Journal of Hospital Infection

Request from the British Society for Antimicrobial Chemotherapy (BSAC): Informing the design of an NIHR priory trial on Antifungal Stewardship

The BSAC is conducting a stakeholder survey associated with their project on invasive fungal infection in patients with acute myeloid leukaemia. This survey is intended to inform further the study design. More information about the project and the survey itself are available here">here.

Spotlight

Dr Matt Lloyd Jones is a Postdoctoral Research Fellow at the University of Exeter Medical School, working across the European Centre for Environment and Human Health (ECEHH). Primarily, Matt enjoys combining community ecology and computing to understand and engage with applied microbial problems such as AMR. In his current postdoctoral research, he is conducting a systematic review and meta-analysis of the relationship between antimicrobial use and antimicrobial resistance in beef cattle production, drawing on his PhD background in microbial ecology and R programming. Related to this, he is also leading an interdisciplinary GW4-funded project exploring the potential of video games as training and communication tools for antimicrobial use in livestock production, drawing on his undergraduate background in human geography. He is



currently working from home in Cardiff and needs regular human interaction if you ever want to chat. His full profile can be viewed <u>here</u>.

Professor Krasimira Tsaneva-Atanasova is Professor of Mathematics for Healthcare at Exeter working on a widerange of problems involving mathematical modelling and analysis in Biology and Medicine. She is the Director for the recently awarded EPSRC Hub for Quantitative Modelling in Healthcare at Exeter that will launch in February 2021. One of the Hub's major areas of interest is advancing quantitative modelling techniques that transform healthcare



therapies, treatments and delivery in microbial health, eg community-level antibiotic and antifungal

resistance phenotypes following drug withdrawal. Another current project of relevance to Antimicrobial resistance involves modelling antibiotic drug uptake in gram negative bacteria in collaboration with Dr Stefano Pagliara at the Living Systems Institute at Exeter. Finally, she is also working on modelling microbiomes such as bacterium, mycobiome, virome and their interactions in lung diseases and following treatments with antibiotics. This is a collaboration with Professor Sanjay Chotirmall at the Lee Kong Chian School of Medicine - NTU, Singapore. Her full profile can be viewed here.

Dr Jinwei Zhang is a Lecturer in Medicine at Exeter. He obtained his PhD degree in Marine Microbial Biotechnology from Newcastle University. He then trained with Professor Dario Alessi, FRS, as a post-doctoral fellow at the MRC-Protein Phosphorylation and Ubiquitylation Unit, Dundee. Jinwei's laboratory based in Hatherly Building studies signalling pathways that are associated with human diseases, for example, neuropsychiatric disorders (epilepsy, stroke, autism and hydrocephalus) and hypertension, and are concerned with elucidating and targeting ion transporters, kinases, protein-protein interactions using genetic mouse models, small molecules and gene editing



technologies (eg CRISPR/Cas9 gene knock-out or GFP gene knock-in) to aid discovery and validation of new potential drug targets. He is interested in exploring marine microbial-derived molecules and their potential applications. He is currently a lead Topic Editor on "Marine microbial-derived molecules and their potential medical and cosmetic applications" in collaboration with Frontiers in Microbiology. His full profile can be viewed here.



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