



## Internal news and events

### AMR Network Events 2020/21

In November's webinar, we were joined by three external speakers working in AMR who each gave us a perspective on some of the research and work being carried out in government organisations.

[Elizabeth Beech MBE](#) – Regional Antimicrobial Stewardship Lead, South-West Region, NHS England and NHS Improvement

[Dr David Verner-Jeffreys](#) – Bacteriology Team Lead, Centre for Environment, Fisheries and Aquaculture Science (Cefas)

[Dr Alwyn Hart](#) – Air, Land and Water Research, Environment Agency

Thanks to the speakers, [Professor Will Gaze](#) who chaired the event, and all the attendees who contributed to some really interesting discussion.

#### **Next AMR Network event: Wednesday 9 December 12:15-1:45pm**

The next event will take the form of speed collaborating. In this online event, members 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! Afterwards each group will present a very brief (30sec) summary of their idea, followed by a discussion amongst the whole audience. There are two topics and you will have the opportunity to have a go at both, working with two different groups within the event.

**Please note:** to take part in this event, you **must register** by **noon on Monday 7 December**. This can be done either by responding to the email invite that was sent out on 13 November or by dropping us an email to [AMR-Network@exeter.ac.uk](mailto:AMR-Network@exeter.ac.uk)

Everybody is welcome and, if you know of colleagues or research students who are not yet in the Network but might enjoy participating in this event, please ask them to get in touch with us via our email address (above).

### Forthcoming AMR events

Wednesday 13 January 2021 – External Guest Speaker: [Professor Clare Chandler](#), Professor of Medical Anthropology at London School of Hygiene & Tropical Medicine

Tuesday 9 February 2021 – Three more “Jargon-free” presentations: [Dr Carolina Coelho](#) (Mycology), [Dr Katie Ledingham](#) (Business) and [Dr Michiel Vos](#) (Microbiology)

Thursday 18 March 2021 – Fungal Fusion event with colleagues from the [MRC Centre for Medical Mycology](#)

All events start at 12:15pm and finish by 1:45pm. See the [AMR Network webpage](#) for more information.

**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](mailto:AMR-Network@exeter.ac.uk) email address.

### AMR Network webpage

The AMR Network now has its own page attached to the Exeter AMR website, [www.exeter.ac.uk/amr](http://www.exeter.ac.uk/amr). This includes the schedule for Network events that are taking place this academic year and will be regularly updated as the details of speakers and topics are confirmed. Information on past events and an archive of Network newsletters are available on the webpage as well.



### Other news

#### Strategic Partnership agreement signed

On 12 November, we announced the signing of a [strategic partnership between the University and the Medicines Discovery Catapult](#), to facilitate the efficient translation of medicines discovery based on the biomedical research in Exeter.

There will be small seed corn funds available soon as well to take a promising translational drug discovery project forward with the MDC. The call, which will be internal to the University of Exeter, will be announced shortly.

#### All-Party Parliamentary Group presentation

On 24 November, Professor Will Gaze, Dr Aimee Murray and Dr Isobel Stanton are presenting at an [APPG on Antibiotics](#) to inform the forthcoming Environment Bill. The title of their presentation is “Antibiotic residues in sewage and agricultural run-off: can we determine safe thresholds to combat deadly superbugs?” and will cover the context of AMR in the environment, environmental risk assessment and the SELECT method.

#### Update from our Creative Fellow

Simon Ryder, the Creative Fellow working with the AMR Network this academic year, has recently posted a working drawing entitled ‘It’ on his website. He describes this as ‘a mini-manifesto to the AMR network’. You can have a look at it/It’ [here](#).

#### Funding awards

*GW4*: Building a communicative pathway to reduce AMR; a study of cattle farmers’ perceptions of on-farm E.coli infections in the UK PI: Ray Chan (University of Exeter), Co-Is: Ross Booton (Bristol University), Jonathan Tyrrell (Bristol / Cardiff University), Sion Bayliss (Bath University), Lisa Morgans (Innovation for Agriculture).

*Cabot Institute Innovation Fund: Understanding agricultural azole use, impacts on local water bodies and AMR: building on interdisciplinary evidence base in Devon and Bristol.* PI: Susan Conlon (Bristol University), Co-Is: Dhara Malavia (University of Exeter), Andrew Jones (University of Exeter), Ray Chan (University of Exeter), Aimee Murray (University of Exeter), Nervo Verdezoto (Cardiff University).

### **Publications**

Congratulations to colleagues within the MRC Centre for Medical Mycology who have been involved in four recent publications:

Bruno, M., Kersten S., Bain, J.M., Jaeger, M., Kruppa, M.D., Lowman, D.W., Zuchaom M., Ning Jiao Y. , Chowdhary, A., Renieris, G., van de Veerdonk, F.L., Kullberg, B-J, Giamarellou-Bourboulis, E.J., Hoischen, A., Gow, N.A.R., Brown, A.J.P., Meis, J.F., Williams, D.L., Netea, M.G. (2020). [Host immune response against the emerging fungal pathogen \*Candida auris\*: transcriptional and functional insights](#). *Nature Microbiology*

Jenks, J.D. Gangneux, J-P., Schwartz, I.S. Ana Alastruey-Izquierdo, A., Lagrou, K., Thompson II, G.R. , Lass-Flörl, C., Hoenigl, M. ,and European Confederation of Medical Mycology (ECMM) Council Investigators [Z. Adamski, S. Arikani-Akdagli, V. Arsic-Arsenijevic, O.A. Cornely, N.Friberg, N. Gow, S. Hadina, P. Hamal, M. Juerna-Ellam, N. Klimko, L. Klingspor, F. Lamoth, M. Mares, T. Matos, V. Ozenci, T. Papp, E. Roilides, R. Sabino, E. Segal, A.F. Talento, A.M. Tortorano, P. Verweij.]. (2020). [Diagnosis of breakthrough fungal infections in the clinical mycology laboratory: an ECMM consensus Statement](#). *Journal of Fungi* 6, 216

Kumar, M., Singh, A., Kumari, S., Kumar, P., Wasi, M., Mondal, A.K., Rudramurthy, S.M., Chakrabarti, A., Naseem A. Gaur, N.A., Gow, N.A.R. & Prasad, R. (2021). [Sphingolipidomics of drug resistant \*Candida auris\* clinical isolates reveal 2 distinct sphingolipid species signatures](#). *Biochimica et Biophysica Acta (BBA) - Molecular and Cell Biology of Lipids*. 1866, Issue 1, 158815

Lenardon, M.D. Sood, P., Dorfmüller, H., Brown, A.P.J. & Gow, N.A.R. (2020). Scalar nanostructure of the *Candida albicans* cell wall; a molecular, cellular and ultrastructural analysis and interpretation. *The Cell Surface*. (in press, available on-line)

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

## **External news and events**

### **World Antibiotic Awareness Week (WAAW)**

World Antibiotic Awareness Week, organised by the World Health Organisation (WHO), has been running from 18-24 November 2020. For information and resources, please see the [website](#).

### **Other external events**

**Resistomap Webinar: [Antibiotic Resistance in the Environment](#)** 24 November 2020

The last event in Resistomap's current webinar series has been organised to coincide with the end of World Antibiotic Awareness Week. International contributors will be presenting on subjects including:

addressing the urban water cycle, wastewater and waste disposal. These will be followed by a roundtable discussion.

**Infection Learning Hub:** [COVID-19 and AMR: How to contain antimicrobial resistance during a pandemic](#) 25 November 2020

The Infection Learning Hub, in collaboration with the European Bank for Reconstruction and Development (EBRD), will host this webinar; speakers include Dame Sally Davies (UK Government Special Envoy on AMR), Kitty van Weezenbeek (WHO), Professor Dilip Nathwani (University of Dundee).

**GW4 AMR Symposium 2020:** [Multidisciplinary Approaches to AMR: Bench to Bedside and Beyond](#)  
30 November - 4 December 2020

This free online symposium is intended to enable networking between researchers with an interest in AMR working across disciplines. Organised by GW4 early career researchers, this week-long event aims to address a 'One Health' approach to AMR, and will comprise interactive webinars from invited speakers and selected abstracts, themed discussion forums, an online poster session and an images of research gallery. <https://gw4amr2020.wixsite.com/home>

#### **Pre-announcement of joint transnational research call**

JPIAMR has just released the pre-announcement of the 13th Joint Programme Initiative Antimicrobial Resistance (JPIAMR) call: One Health interventions to prevent or reduce the development and transmission of AMR. Twenty-one JPIAMR member countries are participating in this joint call together with the organisations: ICARS, IDRC and SIDA and the estimated call budget is 24.9m Euros. The call will support research projects that also have the potential for impact in areas where the risk and burden of AMR is greatest, such as in LMIC settings in Asia and Africa. The call opens early 2021 and more information is available [here](#).

#### **Recent publications**

Last week, the Wellcome Trust launched a report on [The Global Response to AMR: Momentum, success and critical gaps](#). The report seeks to provide a comprehensive update on the status quo, recent developments and remaining critical gaps in the AMR response globally.

Ogyu A., Chan O., Littmann J., Pang H.H., Lining X., Liu P., Matsunaga N., Ohmagari N., Fukuda K., Wernli D. [National action to combat AMR: a One-Health approach to assess policy priorities in action plans](#). *BMJ Global Health* 2020;5

## Spotlight on...

**Professor Elaine Bignell** is an internationally recognised leader in the field of human fungal pathogen research and a Co-Director (Research) for the MRC Centre for Medical Mycology at the University of Exeter. Her work addresses the mechanistic basis of lung diseases caused by the major mould pathogen of humans, *Aspergillus fumigatus*. A molecular geneticist by training, Elaine began her independent research career as an MRC New Investigator, and by securing a fast-track to Lectureship Award at Imperial College London. She later played a major role in establishing the Manchester Fungal Infection Group (MFIG) and in securing its success as a leading International Centre of Excellence for fungal diseases research, having served as a Director of this unit for 5 years (2015 – 2020). Elaine's research seeks a mechanistic understanding of fungal lung disease with a view to developing novel diagnostics and antifungal therapies. Her approach integrates infection models which transcend multiple experimental scales to address disease outcomes at the molecular, cellular, tissue, organ and whole animal levels. Most recently, via iterative MRC funding awards Elaine has applied a systems level approach to define pathogenicity in *Aspergillus fumigatus*, and is now developing inhibitors of fungal pH signalling as novel antifungal drugs, and studying secreted fungal proteins as novel vaccine candidates and diagnostic tools. Her full profile can be viewed [here](#).



**Professor Lora E Fleming** is a physician and epidemiologist based at the [European Centre for Environment and Human Health](#) (University of Exeter Medical School). Lora is involved in research, training and policy activities in the new transdisciplinary area within Planetary Health of Ocean and Human Health; this includes microbial pollution (and AMR) of coastal and marine waters. In the past she led interdisciplinary research around the exposure and effects of microbial pollution for recreational marine bathers in Miami including AMR. Currently, Lora is leading the H2020-funded Projects [BlueHealth](#) to explore the connections between blue environments and human health; and the Seas, Oceans and Public Health in Europe ([SOPHIE](#)) to establish a network and create a strategic research agenda for Ocean and Human Health in Europe and beyond. Her profile can be viewed [here](#) and her research and citations [here](#).



**Jamie McMurtrie** is a PhD student at the University of Exeter (Streatham), partnered with The World Fish Centre and Cefas. His main research interests are in microbial ecology and the spread of antimicrobial resistance in the aquaculture food production sector. As a recent graduate of the University of Bath, he investigated microbial interactions of urinary tract infections during antimicrobial treatments. Jamie has now moved to the University of Exeter to examine how antibiotic pollution in aquaculture systems is influencing the community and functional dynamics of fish associated microbiomes, additionally the impact this has on disease resilience of fish and spread of AMR. Ultimately this aims to improve sustainable aquaculture practices in low-middle income countries. More recently, he has been part of the GW4 early career symposia scheme, tasked with organising the online conference *Multidisciplinary approaches to AMR: Bench to Bedside and Beyond*. His full profile can be viewed [here](#).



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