

# **AMR Network**



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# Internal news and events

AMR Network Events Calendar 2021/22

Wednesday 9 February 2022, 12.15pm -1.15pm

<u>Professor John Dupré</u>, Professor in Philosophy of Science and Director of <u>Egenis</u>, will be speaking on the subject of the ecology of human/microbe relations and implications for broad spectrum antimicrobials and directions of research.

A calendar invite has been sent to all members of the AMR Network. If you would ilke it forwarded to you again, please contact us at <a href="mailto:AMR-Network@exeter.ac.uk">AMR-Network@exeter.ac.uk</a>. Alternatively, the link to the meeting is <a href="mailto:here">here</a>.

All are welcome.

Researching Resistance - now live in the Creative Space, Environment and Sustainability Institute (ESI), Penryn Campus, until April 2022

The Researching Resistance exhibition has now travelled to Cornwall to continue its celebration of the antimicrobial resistance (AMR) research and researchers at the University of Exeter. The exhibition opened in the Environment and Sustainability Institute on the Penryn Campus on the 14 January and will remain in place until April.

The exhibition is a collaboration between investigative artist <u>Simon Ryder</u> and the <u>AMR Network</u>. It features portraits of fifteen members of the Network, representing a range of different research areas and career stages, illustrating that antimicrobial resistance requires the collaboration of people working across the full range of



subjects. We are particularly grateful to have the opportunity for the works to be displayed in the ESI, which is itself a hub of interdisciplinary research and includes a number of members of the AMR Network.

The exhibition can be viewed between 9am and 5pm, Monday to Friday (ESI opening hours) and is also available to view <u>digitally</u>. (<u>ESI Cafe</u> usually open 10am-4pm.)

Many thanks to all who have supported this project, either through participation or funding. We would particularly like to thank <u>Professor Caitlin DeSilvey</u> and <u>Kate Pennington Wilson</u> for including the exhibition in the ESI's <u>Creative Exchange Programme</u> and all of their support in the installation.



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A short film about the development of *Babel Mind*, the Creative Fellowship which the AMR Network hosted in 2020/21 and which informed the *Researching Resistance* exhibtion, is now available to watch on the Arts and Culture website. A link to the page is <u>here</u>.

Congratulations to...

<u>Al Brown</u> and <u>Neil Gow</u> of the <u>MRC Centre for Medical</u> <u>Mycology</u> who have been awarded a Wellcome Investigator Award for their project 'From "molecular pattern" to ligand structure and function – the origins of antifungal immunity'.

The award is worth £1,659,685 over 48 months.

<u>Stineke Van Houte</u>, who has been awarded a ERC Starting grant for "MUSIC", a project examining MGE update and spread in microbial communities.

The €1.5M award is for five years, and includes almost €1M for the purchase of a fluoresence-activated cell sorter (FACS) machine.

<u>Jane Usher</u>, who has been awarded a BBSRC Discovery Fellowship.

Jane will be based in the MRC Centre for Medical Mycology and the project on which she will be working is 'Combatting resistance to combinatorial stress and macrophage killing in *Candida glabrata*'.

#### Other news

### Industry Research Fellow kicks off AMR lecture series

Industry Research Fellow and AMR Network member <u>Jehangir Cama</u> gave the first lecture of the <u>Future Leaders Against AMR</u> open lecture series. Supported by the PAR Foundation, this 10-week lecture series features a range of experts discussing AMR from a wide range of angles. For more information, click <u>here</u>.











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 <a href="mailto:AMR-Network@exeter.ac.uk">AMR-Network@exeter.ac.uk</a>

#### **Publications**

Publication: da Silva Dantas, A., Filomena Nogueira, F., Lee, K.K., Walker, L.A., Edmondson, M, Brand, A.C., Lenardon, M.D. & Gow, N.A.R. Crosstalk between calcineurin and the cell wall integrity pathways prevents chitin overexpression in Candida albicans. (Journal of Cell Science)

**Publication: Dimitriu, T.**, Kurilovich, E., Łapińska, U., Severinov, K., **Pagliara, S.**, Szczelkun, M. D., & Westra, E. R. <u>Bacteriostatic antibiotics promote CRISPR-Cas adaptive immunity by enabling increased spacer acquisition</u>. (*Cell host & microbe*)

This is also covered in a University press release which can be read here.

Don't forget to use #ExeterAMR



# Vacancy: Senior Research Administrator (GW4 Antimicrobial Resistance Alliance)

This role, based within Research Services at the University of Exeter, is available as a 0.4FTE post (working pattern to be agreed) on a fixed-term basis from 14 February to 31 December 2022.

It includes the co-ordination of the University of Exeter AMR Network as well as working closely with the GW4 AMR Alliance and GW4 central staff to ensure the successful delivery of the newly-launched cross-institutional and interdisciplinary research alliance.

Job reference: R74097

Closing date: 30 January 2022

**Location:** Exeter or Cornwall, with the opportunity for hybrid working (home/campus)

More information, including a job description and application details, is available here.



# Spotlight on...

**Dr Emily Brown** is an academic GP trainee. She spends half her week working clinically in general practice and the other half working as an Academic Clinical Fellow at the University.

She has an interest in antimicrobial resistance, particularly in relation to the primary care setting, in both a UK and global context.

Emily is currently completing a master's degree in epidemiology and her master's project considers the burden from antimicrobial resistant infections in Malawi. She also have an interest in point of care testing in relation to antibiotic prescribing practices in primary care. Her full profile is <a href="https://example.com/heres/burden/">here</a>.





# **GW4 AMR Alliance**



#### **GW4 AMR Alliance**

The <u>GW4 AMR Alliance</u> continues to welcome new members from all disciplines and working at any level.

In January 2022, the AMR Alliance held an online collaborative bid-writing event, and plans are in development for a follow-up event in April. You can find out more about the aims and focus of the event here.

Other recent developments include a newly-established network for Early Career Researchers (ECRs) and Postgraduate students.

### How to join

Please sign up <u>here</u> to complete a short online registration form (this link can also be found on the <u>website</u> 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

### **GW4 Building Communities Programme / Generator Funding Award 2022**

The GW4 Building Communities Programme is designed to build research communities of scale and capability with the aim to deliver a step change in world-class research which could only be achieved through collaborative working across the institutions.

The Building Communities Generator Fund supports both the creation of new GW4 communities and the development of the strongest ideas emerging from our existing communities. Generator funding (up to £20K) can be used as a stand-alone award or, in conjunction with other sources of funding. GW4's hope is for most communities to use the Generator Fund as a step towards applying for external funding.

### The GW4 Generator Funding Award 2022 is now open.

For more information, view the <u>guidance</u> and application forms (available to downlad <u>here</u>), or contact the GW4 Building Communities Manager by emailing <u>communities@gw4.ac.uk</u>.

The deadline for applications is **7 February 2022**.

#### **GW4 AMR Alliance ECR and PGR Network**

The GW4 AMR Alliance ECR and PGR Network is working to develop its community through the Slack platform and is currently putting together an events programme to support networking across disciplines and all four university partners.

You can find out more about the ECR and PGR network, including key contacts at each of the four partner universities and information on the developing events programme, on the dedicated webpage here. There is also a link to join the network on the same page.

The first planned event will be on **Monday 28 Februray**, **3.00pm-4.00pm**, and will take the form of "lightning talks". This will provide an opportunity to participate in/hear 3-minute thesis talks from a range of disciplines and to network in breakout rooms hosted by each speaker. Details and a registration form will be available on <u>the dedicated site</u>.

## Cardiff University AMR ArtLab competition

As part of a public engagement initiative, Cardiff University, one of the four GW4 partners, is inviting adults and children to help them promote awareness of antimicrobial resistance and antimicrobial stewardship.

There are separate competitions for children and adults, with the children's competition broken down into four age groups:

4-7 years

7-11 years

11-14 years

14-16 years

Artwork can be a drawing, painting, collage, photograph, video/animation, sculpture or fabric creation - or anything else you can use to be creative.

The categories in the adults' competition, which is open to anyone aged 17 and over, are:

Scientific images/Images of research

2D art

3D art

Photography, video and animation

Both the adults' and children's competitions have prizes for 1st, 2nd and 3rd place in each category.

You can find out more about the competition <a href="here">here</a>, and there are further information pages for both the <a href="children's">children's</a> and <a href="adults">adults</a> categories.

Please note: the deadline for entries has been extended to 5.00pm on Monday 31 January 2022.







# External news and events

Call now open: JPIAMR 14th Call Disrupting Drug Resistance Using Innovative Design

### International collaboration to address antimicrobial resistance

Deadlines: 8th March 11:00 UK time (pre-proposals), 5th July 13:00 UK time (full proposals) Funding: £250k max per award (£1.5M total funding available) – for UK elements only

Duration: Maximum three years

Eligibility: Standard UKRI rules apply. Minimum three eligible partners from three different countries

Link: Full details are available on the JPIAMR website here

**Note**: there will be a call webinar on **25th January**, **15:00-16:30 UK time**, to present the opportunity in more detail and explain the partner search tool. More details and registration <a href="here">here</a>.

The call is for funding to develop or improve drugs or plant production agents to help:

- treat bacterial or fungal infections
- reduce the spread of resistance to drugs

Projects should involve either licensed antibiotics or antifungals, or agents in pre-clinical or early clinical development. Projects could aim to:

- improve efficacy of specificity
- repurpose existing interventions
- optimise combinations of drugs or plant protection agents

- design and implement new strategies, or inventive tools, including novel chemistry and new materials

Proposals can focus on one or more of the 'one health' settings, namely humans health, animal health, or plants (including trees and crops).

### **Funding opportunity**

The UKRI has launched a new funding opportunity, 'Molecules to landscapes: building interdisciplinary capabilities'. Awards range from £100,000 - £200,000. Closing date **24 March 2022**.

For more information, including details of an upcoming webinar in February (date tbc), click here.

#### Sector news

**The Lancet**: Latest predictive analysis indicates that **nearly 5 million deaths** were directly caused by or attributable to bacterial AMR in 2019. Read the full paper here. (19 January 2022)

There has been a number of reports in the media on research that has found a type of MRSA evolved in hedgehogs around 200 years before the first antibiotics were developed - you can read the **New Scientist**'s take on it <u>here</u>. (5 January 2022)

**The Guardian:** Chemical pollution has passed safe limit for humanity, say scientists. (18 January 2022)

Researchers at the **University of Melbourne** have discovered a new approach to breaking bacterial antibiotic resistance and rescue frontline drug treatments. Read the paper here (12 January 2022)

The **WHO** is working to scale up support to LMICs to address AMR with help of Saudi Arabia. Read more here.

#### **Sector events**

JPIAMR conference: Towards a European One Health AMR Partnership

**3 February 2022**, 12:00-15:15 UK time. Comprising plenary and breakout sessions across the themes: Engaging in Global Health (funders supporting LMICs); Creating Innovation (innovation funders; Addressing the One Health Approach (environment and agriculture funders); and Infection control (public health agencies and health funders).

To find out more and register, please visit the event page.

LSHTM webinar series event

**8 February 2022**, 13:00-14:00 UK time. Dr Benn Sartorius (Nuffield Department of Medicine, Oxford) will be speaking on 'Global space-time modelling of antimicrobial-resistance prevalence among priority bacterial pathogens, 2000-2019'.

To find out more, click here.

#### **Publications of interest**

Larsen, J., Raisen, C.L., Ba, X., et al, <u>Emergence of methicillin resistance predates the clinical use of antibiotics.</u> (Nature)

Wissel E.F., Talbot B.M., Johnson B.A., Petit III R.A., Hertzberg V., Dunlop A., Read, T.D. Benchmarking software to predict antibiotic resistance phenotypes in shotgun metagenomes using simulated data. (BioRxiv)

Eskenazi A., Lood C., Wubbolts J., Hites M., Balarjishvili N., Leshkasheli L., Askilashvili L., Kvachadze L., van Noort V., Wagemans J., Jayankura M., Chanishvili N., de Boer M., Nibbering P., Kutateladze M., Lavigne R., Merabishvili M. & Pirnay, J-P. Combination of pre-adapted bacteriophage therapy and antibiotics for treatment of fracture-related infection due to pandrug-resistant Klebsiella pneumoniae. (Nature Communications)

Weis C., Cuénod A., Rieck B., Dubuis O., Graf S., Lang C., Oberle M., Brackmann M., Søgaard K.K., Osthoff M., Borgwardt K. & Egli A. <u>Direct antimicrobial resistance prediction from clinical MALDI-TOF mass spectra using machine learning</u>. (*Nature Medicine*)

Nikiforov, A., Chuanlong M., Choukourov A., & Palumbo F. <u>Plasma technology in antimicrobial surface engineering</u>. (*Journal of Applied Physics*)





# AMR-Network@exeter.ac.uk (but we'll miss you...)

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