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Internal news and events

AMR Network Events Calendar 2021/22

We are currently working on the AMR Network events calendar for this academic year. If you have not yet completed the short survey to inform our planning, you can still do so by following [this link](#). According to the stats so far, the average completion time for the survey is just over a minute. It will remain open until **Friday 17 September**.

Internal event

Dr Laura Newsome, a lecturer in geomicrobiology and a member of the AMR Network, is the ESI Featured Academic of the Month for September. She will be giving the ESI State of the Art talk on "**Small but Mighty: how Microbes change the Earth**".

"Although microbes are very small, their metabolism changes the world, both in the present day and the geological past. This talk will introduce the field of geomicrobiology and show how we can use cutting edge microscopy and spectroscopy to elucidate the ways in which microbes interact with minerals and can clean up pollution. I will also highlight some of my ongoing research into exciting and unusual environments where I have found microbes in Cornwall."

Details: Monday 27 September, 1pm-2pm, on [Teams](#)

You can find out more about Laura and previous ESI Featured Academics of the Month [here](#).

FEATURED ESI ACADEMIC OF THE MONTH



#esiStateOfTheArt

Internal news

Recent awards: Congratulations to...

Dr Stineke Van Houte who is one of the six outstanding researchers to be awarded the 2021 Lister Prize in recognition of their excellence as early career biomedical scientists and the future potential of their cutting-edge work. Stineke is an Associate Professor and BBSRC Future Leader Fellow. Her work explores the interactions between bacteriophages and plasmids and their bacterial hosts. She is interested in developing new tools to tackle antibiotic resistance using the highly versatile CRISPR-Cas9 enzyme to remove antimicrobial resistance genes. You can read more about her award in the University press release [here](#).



Jack Common who has been awarded a [Stearn's Graduate Student Prize](#) for best graduate paper published in the Journal of Evolutionary Biology (JEB). Jack will be invited to present their work at the European Society for Evolutionary Biology (ESEB) conference in Prague next year.



Internal funding opportunity

In partnership with the Medicines Discovery Catapult, the University of Exeter is inviting applications for industrial seed corn funding to develop a “Translational Roadmap”. The aim of the award is to accelerate the translation of promising medicines discovery research and has been proposed as part of a new strategic partnership between the two institutions.

Any UoE researchers and/or UoE associated spin-out companies with projects related to drug discovery are encouraged to apply. You can find out more about the awards and the application process [here](#).

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

A. Chevallereau, B.J. Pons, S. van Houte, & E.R. Westra. [Interactions between bacterial and phage communities in natural environments](#) (*Nature Reviews Microbiology*)

T. Dimitriu, E. Kurilovich, U. Lapinska, K. Severinov, S. Pagliara, M.D. Szczelkun, & E.R. Westra. [Bacteriostatic antibiotics promote the evolution of CRISPR-Cas immunity](#) (*bioRxiv*)

O. Goode, A. Smith, A. Zarkan, J. Cama, B.M. Invergo, D. Belgami, S. Cano-Muniz, J. Metz, P. O'Neill, A. Jeffries, H. Norville, J. David, D. Summers, & S. Pagliara. [Persister Escherichia coli cells have a lower Intracellular pH than susceptible cells but maintain their pH in response to antibiotic treatment](#) (*mBio*)

S. Meaden, A. Biswas, K. Arkhipova, S.E. Morales, B.E. Dutilh, E.R. Westra, & P.C. Fineran. [High viral abundance and low diversity are associated with increased CRISPR-Cas prevalence across microbial ecosystems](#) (*bioRxiv*)

S. Meaden, L. Capria, E.O. Alseth, S. Gandon, A. Biswas, L. Lenzi, S. van Houte & E.R. Westra. [Phage gene expression and host responses lead to infection-dependent costs of CRISPR immunity](#) (*The ISME Journal*)

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*)

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

Spotlight on...

Dr Vicki Gold is a Senior Lecturer in the Living Systems Institute at the University of Exeter. She is a biochemist and structural biologist, and uses the technique of cryo-electron microscopy (cryoEM) to investigate cellular architecture and the structure of proteins at atomic-level detail. Vicki moved to Exeter in 2017 to develop her own research themes, focussed on mechanisms of microbial motility and genetic adaptation. Current research focusses on the bacterial type IV pilus machinery and developing ways to sensitise bacteria to antibiotics using phage therapy. She also collaborates with [SSIS/Q-step](#) to investigate the attributes of phage therapy that show the greatest levels of public support, and with the [IDSAI](#) to develop new software for cryoEM data processing. Her profile can be viewed [here](#) and the group website [here](#).



GW4 AMR Alliance



**ANTIMICROBIAL
RESISTANCE
ALLIANCE**

External launch of the GW4 AMR Alliance - recording available

If you missed the external launch event of the GW4 AMR Alliance, or would like to re-visit any part of it, the recording of the event is now available on the main GW4 website and can be accessed [here](#) along with the presentations given by each speaker. This events page also details the timing of each speaker on the recording.

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



Image credit: [Professor Steve Hinchliffe](#)

External news and events

Sector news

World Health Organisation: [World leaders and experts call for significant reduction in the use of antimicrobial drugs in global food systems](#)

European Public Health Alliance/Health and Climate Network: [briefing on Diet and Food Systems for Health, Climate and Planet](#)

Sector events

Upcoming event: LHSTM's Antimicrobial Resistance Centre are holding a webinar on 14 September 2021, titled '**A global analysis of community WASH access and antibiotic resistance in the human gut**'. To attend, [click here](#).

Upcoming event: on 21 September 2021, the CDDEP are holding a webinar on **Antimicrobial Resistance Surveillance in Africa - Challenges and Perspectives**. To register to attend, [click here](#).

Events to re-visit: the World Health Organization ran a series of webinars earlier this month to support implementation of National Action Plans on Antimicrobial Resistance. If you missed them, they are now available on the WHO website [here](#).

Publications of interest

Report by VividEconomics for the World Economic Forum: [The costs and risks of AMR water pollution](#)

Report from the Global AMR Research and Development Hub: [Estimating Global Patient Needs and Market Potential for Priority Health Technologies Addressing Antimicrobial Resistance](#)

M. Miethke et al. [Towards the sustainable discovery and development of new antibiotics](#) (*nature reviews: chemistry*)

A. Leger, I.Lambraki, T. Graells, M. Cousins, P.J.G. Henriksson, S. Harbarth, C.A.Carson, S.E.Majowicz, M. Troell, E.J.Parmley, P.S.Jørgensen, D. Wernli: [Characterizing social-ecological context and success factors of antimicrobial resistance interventions across the One Health spectrum: analysis of 42 interventions targeting *E.coli*](#) (*BMC Infectious Diseases*)

S. Tomczyk, A. Taylor, A. Brown, M. E. A. de Kraker, A. El-Saed, M. Alshamrani, R. S. Hendriksen, M. Jacob, S. Löfmark, O. Perovic, N. Shetty, D. Sievert, R. Smith, J. Stelling, S. Thakur, A. C. Vietor, T. Eckmanns. [Impact of the COVID-19 pandemic on the surveillance, prevention and control of antimicrobial resistance: a global survey](#) (*Journal of Antimicrobial Chemotherapy*)

M. A. Chattaway, A. Gentle, S. Nair, L.Tingley, M. Day, I. Mohamed, C. Jenkins, G. Godbole. [Phylogenomics and antimicrobial resistance of *Salmonella Typhi* and *Paratyphi A, B and C* in England, 2016–2019](#). (*Microbial Genomics*)

S. Isralls, K. Baisley, E. Ngam, A. D. Grant, J. Millard. [QT Interval Prolongation in People Treated With Bedaquiline for Drug-Resistant Tuberculosis Under Programmatic Conditions: A Retrospective Cohort Study](#) (*Open Forum Infectious Diseases*)



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