

The image features a stylized illustration of a human silhouette filled with various colorful microorganisms, including green spheres, yellow rods, and pink branching structures. The background is a mix of purple and blue. A large green triangle on the right side contains the text.

Microbes and Society network news spring 2023



Welcome to the spring 2023 newsletter for the Microbes and Society network!

This issue is full of news from across our network - from visits to the Houses of Parliament to BBSRC Discovery Fellowship announcements, to the success of the Superbugs event in February. There are also some exciting funding opportunities coming up which you can find in the Funding section, and a number of events worth attending!

It has been a busy start to 2023 for the Microbes & Society network planning for our annual symposium, developing our network website, and collecting your research interests. **Please do send us your research interests** if you haven't already done so - this will aid with our planning and this info will also be included on the network website, to help us network more closely. [You can fill in the brief form here.](#)

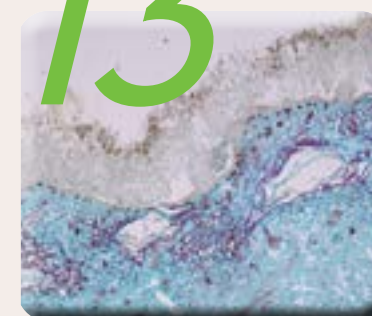
If you have any questions related to the network, please email microbes-society@exeter.ac.uk.

Steve, Edze, Jane and Will
Microbes & Society Network Co-Leads



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AMR news



Professor Stefano Pagliara wins £1.76m award from European Research Council to make antibiotics more effective

Professor Stefano Pagliara has received the award to advance his work on controlling the processes and biological mechanisms that cause antibiotics to fail. His project is entitled DYNamics of antiBIOTICS transport in individual bacteria (DYNBIOTICS). It will be a stepping stone towards the development of more effective antibiotic therapies by discovering new strategies to make drugs accumulate at lethal levels in all individuals within bacterial populations and cure infections.



PhD student Emily Stevenson updates on BSAC intern experience



Emily has blogged about her experience working as a parliamentary intern with Baroness Natalie Bennett following a recent trip to the Houses of Parliament. She writes, *“To hear our exact statements uttered within the halls of the House of Lords is indeed a surreal experience that means a*

lot to us – early career researchers whose voices are usually drowned by ‘knowledge tsunamis’ we usually experience in academia”. [Read her full update here](#).

AMR Network members consult on new parliamentary bill



Aimee Murray. Photo credit Dr Kelly Thornber

Dr Aimee Murray, Dr Kelly Thornber, and Emily Stevenson (as senior BSAC intern) were involved in an expert consultation on a new bill (nicknamed the Green Pills Bill) that aims to reduce pharmaceutical pollution in the environment. Aimee spoke on pharmaceutical pollution in England and Wales, drawing from a recent paper from the AMR group ([Hayes & Murray et al., 2022](#)) where wastewater in England and Wales was shown to routinely contain concentrations of the antibiotic ciprofloxacin at levels that risk selection for resistance.

Thank you for your input!

Thanks to all network members who contributed their thoughts to the UK Government’s upcoming AMR action plan. All comments were fed into our institutional response.

Hear Professor Neil Gow speak on the Microbiology Society's podcast

Professor Neil Gow was a special guest on the podcast's November issue, discussing the recent World Health Organization report on the serious threat that fungi pose to humans. [Listen here](#)



Professor Elaine Bignell elected as Fellow of the American Academy of Microbiology



Professor Elaine Bignell was elected to the honorific leadership group and think tank within the American Society for Microbiology after a highly selective, peer-review process. Fellowships are awarded based on records of scientific achievement and original contributions that have advanced microbiology.

[The American Society for Microbiology](#) is one of the largest professional societies dedicated to the life sciences and is composed of 30,000 scientists and health practitioners. The Academy received 148 nominations this year, electing 65 into the 2023 Fellowship Class. [Read more](#)

Superbugs a great success!

Superbugs, a pop-up science exhibition aimed at raising awareness of the health threat of antimicrobial resistance, engaged the community of Exeter on 18 and 19 February with an array of activities, including discussions around antimicrobial resistance and tasks such as 'say hello to microbes' and 'growing your own microbe' amongst others. In these activities, visitors were invited to swab themselves and test to see the microbes living on their body.

Supported by the University, Wellcome, and the Microbes & Society network, Superbugs saw almost 1,000 people visit the exhibition. **Catrin Williams** (MRes Medical Mycology and Immunology, right) volunteered for the event:

Having completed my degree and now being a master's student, the opportunity to volunteer at a Superbugs event in Exeter excited me. I was keen to play a part in giving others the inspiring experience that I enjoyed.

It was great to see how all ages interacted with microbiology, especially how children post-pandemic related their experiences to the activities at the event. The children grasped core concepts of microbiology and antimicrobial resistance with amazing speed, questioning how their learning at other stands related to different fungal and bacterial pathogens. I found the event hugely enjoyable and rewarding. I highly recommend getting involved if given the chance!



CMM news

From the MRC Centre for Medical Mycology

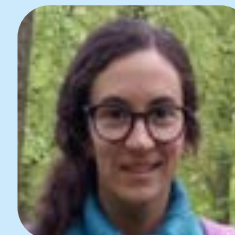
Microbiology news



BBSRC Discovery Fellowships announced!

We're excited to announce that **three of Exeter's microbiologists are recipients of the 2023 BBSRC Discovery Fellowship Scheme.**

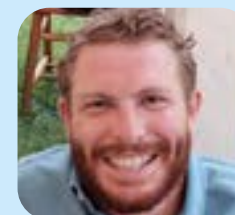
Bridget Watson's fellowship will isolate and characterise soil bacteria that associate with plant roots and promote plant growth. In the bigger picture, her work will lead to farmers applying these beneficial bacteria to their wheat crops as a sustainable agriculture tool.



Dirk Sander's fellowship will use a highly novel and experimental approach to investigate the long-term impact of antibiotic exposure on plasmids and their bacterial hosts. This, in combination with modelling approaches, will help to predict the long-term impact of antibiotic pressure on the spread of antibiotic resistance across microbial communities and to pathogens.



Sean Meaden's fellowship will focus on the factors that drive the evolution of viral lifestyles across UK soils. His project will use a combination of metagenomic sequencing and targeted experiments (HiC and Nanopore sequencing) to measure virulent and latent infections in soil microbial communities.



BBSRC sLoLa project kicks off

This prestigious project, led by **Professor Edze Westra**, kicked off in February. Its initial meet had 12 PIs from across the UK, along with a number of affiliated postdoc fellows and PhD students, discussing research ideas and progress, as well as consortium management including ECR training and mentoring, environmental sustainability in research, EDI, outreach, and impact.

Gut Health study - volunteers needed!



Dr Luciana Torquati has been awarded the Whitney-Wood Scholarship (Royal College of Physicians) to investigate the potential of prebiotic fibre to improve markers of gut mucosal immunity and its effects on gut bacteria and fungi.

The study is a randomised cross-over controlled trial, comparing the effects of 12g inulin/day or placebo for 2 weeks, with 2 week washout. Faecal, saliva and blood samples will be taken before and after each supplementation period.

If you are Exeter-based and are interested in taking part, please [click here](#)

New British Academy £1.5m grant for large Global Convening Network on Just Transitions and AMR



Professor Steve Hinchliffe is one of 20 global members of

the 'Just Transitions for AMR' programme recently awarded £1.5m by the British Academy. The project will reframe AMR in social terms, transforming how governments and societies collectively respond to this global problem. Alongside its core team of researchers, key stakeholders (policy makers, civil society groups, intergovernmental organisations, local community leaders, industry) will also be actively engaged and involved in the co-creation of knowledge, that will then be fed directly into global AMR policy discourse. Six global meetings will be convened at the British Academy over the three-year project period with regional dialogues in Asia, Africa and Latin America. A programme of events will follow, and Exeter will receive some funds for network building and knowledge transfer.

Open call: Behavioural and Cultural Insights Exhibition

The WCCEH is calling for submissions by artists which explore the theme of how behaviour and culture impact upon health.



They are calling for visual artists working in any 2D media (painting, print-making, illustration, drawing, photography). This can be artwork that was created alongside research through a process of information exchange, or artwork that speaks to this theme.

The selected artworks will be exhibited at the 'Behaviour, Culture and Health' exhibition, taking place across multiple localities in 2023. This could include a travelling exhibition to Copenhagen, where the WHO's Regional Office for Europe is based. For more information, [click here](#)

Call for papers: Connecting 3 Worlds Conference - Socialism, Medicine and Global Health since WW1



This C3Worlds conference, to be held in Berlin and funded by the Wellcome Trust, stems from the project's aim to push the boundaries of the history of global health by identifying the particular health cultures produced by socialism.

The theme of this conference is **Health and Socialism in the Cold War**. For more information on the call, [click here](#)



Coming up

9 March 2023

MycoClinics: Endemic cutaneous mycoses.

Darius Armstrong-James: Emerging Sporotrichosis in the UK and Tihana Bicanic: A Case of Chromoblastomycosis. 4.00-5.00. [Register here](#)



13 March 2023

Health and Wellbeing in Coastal Communities.

ESI/Teams, 12.30-15.45. [More details](#)

13 March 2023

Microbiology Seminar Series 2.00-3.00

Penryn campus Exchange Green / Teams – all welcome! Email D.Walker-Sunderhauf@exeter.ac.uk for Teams link

14 March 2023

Wellcome's Discovery Research Regional Event.

Apex Hotel, Bath, 10.30-4.00.

Discover how Wellcome's Discovery Research funding can support you and your ideas. [Register here](#)



15 March 2023

WCCEH annual showcase. Events throughout day, [register on Eventbrite](#)

22 & 23 March 2023

Innovate UK Microbiome One Health Conference

University of Strathclyde, Glasgow, 09.15-17.00. [Register here](#)



23 March 2023 **Mycotalks:** Julie Segre and John Perfect. 4.00-5.00. [Register here](#)

27 March 2023

ESI State of the Art talk: Dr Michiel Vos – Bacteria: Sex and Death. 1.00-2.00, ESI/Teams. [Register here](#)



27 March 2023

Microbiology Seminar Series – 2.00-3.00 Penryn campus Exchange Green / Teams – all welcome! Email D.Walker-Sunderhauf@exeter.ac.uk for Teams link

29 March 2023

Bacteria-phage interactions, ecology and evolution in complex communities: methods and techniques. Streatham Court, room 0.28, 10.30am - 4.30pm. [Register here](#)

17-20 April 2023

Microbiology Society Annual Conference Birmingham International Convention Centre. Scientific symposia, workshops, fora, professional development sessions, Prize Lectures, Hot Topics, etc. [Register here](#)



24 April 2023

Microbiology Seminar Series. 2.00-3.00 Penryn campus Exchange Green / Teams – all welcome! Email D.Walker-Sunderhauf@exeter.ac.uk for Teams link.

27 April 2023

Mycotalks: Yen-Ping Hsueh and June Kwon-Chung. 4.00-5.00 [Register here](#)



Further ahead

18 May 2023

BSAC Spring Conference and AGM

QEII Conference Centre London and online. [Register here](#)



13-14 June

Ecological and Evolutionary drivers of pathogen emergence

Organised by the ESI and with CEC, this two-day symposium will showcase the work being done by researchers from the University of Exeter and beyond providing an opportunity to discuss the cutting edge research with national and international colleagues. [More info](#)



20 June 2023, evening

WCCEH talk: Hannah Landecker. More info soon!



Funding calls

Large funding opportunities

UKRI pre-announcement - resilient UK coastal communities and seas. Funding to enhance the resilience, health and wellbeing of UK coastal communities and seas. Award range £2.5-£3m. [More info](#)

UKRI Policy Fellowships 2023 - funding to collaborate with a UK or devolved government host or What Works Network centre on research activity to address pressing national and global challenges. Closing date 20 April. [More info](#)

MRC pre-announcement - applied global health partnership. Funding to support partnerships to enable research that will address global health challenges and inequities. Max award £1m. [More info](#)

JPIAMR - DISTOMOS AMR diagnostics and surveillance. Develop collaborative research in partnership with organisations participating in the JPIAMR Development of innovative strategies, tools, technologies and methods for diagnostics and surveillance of AMR opportunity. £1m available. Closing date 7 March. [More info](#)

Royal Society Newton International Fellowships. For non-UK scientists who are at an early stage of their research career and wish to conduct research in the UK. Up to £350k available. Closing date 28 March. [More info](#)

UKRI pre-announcement - cross-research-council responsive mode pilot scheme. Funding for interdisciplinary ideas that transcend, combine or significantly span disciplines. Award range £20k-£1.2m. [More info](#)

Rosetrees Trust - Interdisciplinary Award: £300k to fund research that will study the complex interactions between the human host and infectious agents, ranging from the microbiome to pathogens that include viruses, bacteria and fungi. Closing date 28 April. Contact hls-researchcluster@exeter.ac.uk for more info.

NERC - Environmental sciences: global partnerships seedcorn fund 2023. For investigators looking to create new global partnerships across any environmental science areas in NERC's remit. Up to £100k available. Closing date 30 March. [More info](#)

Leverhulme Trust - Research Project Grants. Max £500k available. Closing date 21 March. [More info](#)

Smaller funding opportunities

NERC - Growing roots: environmental science public engagement 2023-24. Funding to explore and trial approaches for engaging the public with environmental science. Projects can range between £3,000 and £10,000. Closing date 27 March. [More info](#)

British Mycological Society - Small Grants. These promote mycology research by supporting members of the society to travel to meetings, perform fieldwork or research projects, buy books or scientific equipment, and hire meeting rooms or attend forays. Closing date 20 March. £500 available. [More info](#)

British Mycological Society - Research Grant. For fungal biology research-related activities at different levels. £10k available. Closing date 31 March. [More info](#)

European Development Days - Young Leaders Programme. This enables young people to participate in the European Development Days. Closing date 25 March. [More info](#)

Wellcome Trust - course bursaries available for a number of Wellcome Trust training courses. Up to 50% of course fee covered. [More info](#)

Microbiology Society - Conference grants: Europic and cell-cell communication in bacteria. Up to £380 available to support attendance. Closing date 20 March. [More info](#)

***Research Professional**

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Publications

Pons, B. J., Westra, E. R., van Houte, S. [Determination of Acr-mediated immunosuppression in *Pseudomonas aeruginosa*](#). *MethodsX*

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Pons, B. J., van Houte, S., Westra, E. R., Chevallereau, A. [Ecology and Evolution of Phages Encoding Anti-Crispr Proteins](#). *Journal of Molecular Biology*

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Wacker, T., Helmstetter, N., Wilson, D., Fisher, M. C., Studholme, D. J., Farrer, R. A. [Two-speed genome evolution drives pathogenicity in fungal pathogens of animals](#). *PNAS*

José de Assis, L., Bain, J. M., Liddle, C., Leaves, I., Hacker, C., Peres da Silva, R., Yucel, R., Bebes, A., Stead, D., Childers, D. S., Pradhan, A., Mackenzie, K., Lagree, K., Larcombe, D. E., Ma, Q., Avelar, G. M., Netea, M. G., Erwig, L. P., Mitchell, A. P., Brown, G. D., Gow, N. A. R., Brown, A. J. P. [Nature of \$\beta\$ -1,3-Glucan-Exposing Features on *Candida albicans* Cell Wall and Their Modulation](#). *mBio*

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Murray, A. K., Zhang, L., Snape, J., Gaze, W.H. [Functional metagenomic libraries generated from anthropogenically impacted environments reveal importance of metabolic genes in biocide and antibiotic resistance](#). *Current Research in Microbial Sciences*.

Lear, L., Hesse, E., Buckling, A., Vos, M. [Copper selects for siderophore-mediated virulence in *Pseudomonas aeruginosa*](#). *BMC Microbiol.*

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Dupre, J. [A Gentle Defense of Philosophical Traditions](#). *Journal of Dialectics of Nature*

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