

Antimicrobial resistance: environments, evolution and transmission

Networking workshops for researchers

Workshop series executive summary

Charles Darwin House, London, 25 June 2015

Discovery Centre for Translational and Interdisciplinary Research, University of Dundee, 3
July 2015

MediCity, Nottingham, 7 July 2015

Organised by the

Learned Society Partnership on Antimicrobial Resistance



The British Society for
Antimicrobial Chemotherapy



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Learned Society Partnership on Antimicrobial Resistance (LeSPAR) held three networking workshops, which were attended by 150 scientists from a range of disciplines, career stages, and sectors.

Structured networking and discussion highlighted the following **broad challenges** for those in our collective research community:

- A need for a better understanding of the role of regulatory agencies.
- Alternatives to antibiotics.
- Creation of links between basic, applied and clinical research.
- A need for mechanisms and incentives to promote engagement between academia and industry.
- Facilitating best practice, such as data sharing and standardisation of methodology.

Specific **scientific challenges** highlighted included:

- Fundamental research about reservoirs of resistance and selection factors in the environment.
- Use of media, laboratory strains and standardised models providing appropriate proxy for real life scenarios.
- Development of rapid diagnostics to enable precise prescribing of narrow-spectrum antibiotics as part of the agenda for good stewardship.
- New drugs and treatments – combination therapies, repurposing old drugs, developing natural products, and novel therapies including anti-virulence therapies; antimicrobial peptides; anti-resistance therapies; vaccines; immune modulation; probiotics; and restoring microbiome/microbiome transplant.
- Defining resistance i.e. we need to know whether we mean genetic or phenotypic characteristics; and is resistance of a strain characterised by the survival of a single cell or a whole population.

To address these challenges there needs to be support for **collaboration and knowledge exchange**;^{*} additional **funding**, including for sandpit events to provide guidance on competing for responsive mode funding; **skills** development for early career researchers, including in entrepreneurship and working in partnership with industry; events, such as these workshops to **link the diverse research community**; long-term plans for curation and sharing of AMR **data**; and **public engagement**.

^{*}84% of attendees who responded to our post-meeting survey said that they made new professional connections at their event; 65% connected with a potential research collaborator; 72% found ideas and information to develop their own research. We believe that networking events are valuable.

If you wish to contact LeSPAR about this report, please email policy@microbiologysociety.org.