

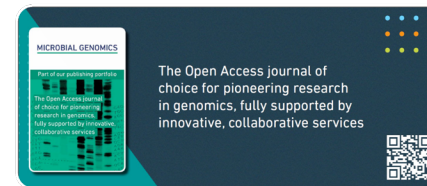
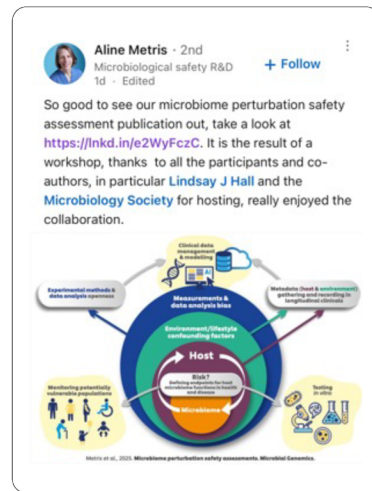


**MICROBIOLOGY**  
**SOCIETY**

**Focus:** bringing together academic and industry experts to explore the latest research on microbiome safety in relation to chemicals and probiotics.

**Format:** an invite-only workshop featuring expert presentations and interactive breakout sessions to foster dialogue and collaboration.

**Results:** led to the publication of a co-authored manuscript in the Microbiology Society's Journal of Microbial Genomics, showcasing collective insights and advancing the field of microbiology.





**Focus:** fostering collaboration between experts to accelerate progress through integrated networks and shared knowledge.

**Format:** a professionally produced YouTube video showing insights and collaborative approaches.

**Results:** generated 801 views between July 2024 - July 2025, reflecting strong engagement with the topic and its relevance to the community.



“[we] are working together in order to promote the importance of the antimicrobial resistance crisis, and also the opportunities to collaborate with industry within the Society.”

Dr Mark Wilkinson, co-founder and CSO

**Focus:** showcasing expert insights and diverse perspectives through thought-leadership content.

**Format:** initially published as a double page spread in our former digital magazine, this content now features on Micro Perspectives, our dedicated platform for expert commentary.

**Results:** the piece attracted 6.3k views and 218 downloads, demonstrating strong audience engagement.

## Unlocking the Value of Rapid Diagnostic Tests in Combating Antimicrobial Resistance

Magdalena Kartikowska

### Reimagining AMR strategy evolution: harnessing the power of rapid diagnostics

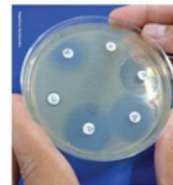
The journey towards improved infection management necessitates collaboration across health care professionals, diagnostic laboratories, researchers and technology developers. Furthermore, that collaboration must extend to clinicians in early development stages across diverse health care settings, aligning with clinical needs. However, the challenge extends beyond technology innovation; the funding and implementation of these diagnostic tools must be sustainable and transparent. Researchers and policy-makers must collaborate to quantify the costs of antibiotic resistance, providing a basis for necessary funding to generate antibiotics for future generations.

To fully capture the benefits of diagnostic strategies and assess the value of interventions against AMR, economic evaluations must go beyond traditional approaches. This should consider not only immediate impact, but also the future health outcomes of those treated by various pathways or receiving alternative treatments due to increased resistance. This broader perspective offers a better understanding of rapid diagnostic test value in preventing AMR and its impact on public health.

Furthermore, the selection of appropriate health outcome measures remains a challenging task. Economic evaluations of AMR management strategies require measures that offer valuable insights for public health decision-makers. Approaches such as the incremental health care cost and quality benefit analysis (ICHA) can help in this regard. ICHA captures the disease burden, whilst ICHQ offers a comprehensive assessment of individual's willingness to pay to avoid resistant infections or secure future treatment benefits. Adopting a broader societal perspective in economic evaluations is crucial, considering long-term consequences. This approach provides a comprehensive understanding of the economic impact of AMR management efforts.

Moreover, economic evaluations must extend beyond short-term direct health effects. They should factor both direct and indirect costs across adequate time horizons, acknowledging that the implementation of AMR surveillance over the long term will be essential for the successful management of AMR, considering how people value time differently for varying AMR scenarios. Improved time performance – saving time for the future, often focusing on the present – can significantly influence the value of the future. For example, some people choose to pay antibiotics to quickly to safeguard their effectiveness for the future, while others want to make their immediate, understanding these preferences helps create better solutions for antibiotic AMR.

Recent guidance from the National Institute for Care and Health Excellence (NICE) provides a thought-provoking introduction, introducing an innovative model to assess the value of anti-infectives. It highlights direct health benefits, it includes economic and resource use, and it considers the burden and burden. Applying this approach to rapid diagnostics has the potential to drive transformational benefits across the healthcare landscape.



Finally, rapid diagnostics can function as an insurance policy against inappropriate treatment by precisely identifying resistant infections. Additionally, rapid diagnostics respond to existing patient requirements, offering personalised treatment plans. Managing that risk effectively, from rapid diagnostic tests, means that quality patient care pathways, avoiding patient harm, by facilitating timely infection control measures, rapid diagnostics prevent the further transmission of infection agents. This reduces the spread of infection within healthcare settings and the opportunity that, obscuring the causal factor of disease. Lastly, the integration of rapid diagnostics provides health care professionals with real-time information, facilitating well-informed decisions. This rapid access to accurate results enables clinicians to promptly administer targeted treatments, enhancing patient outcomes and reducing reliance on broad-spectrum agents.

As AMR continues to pose global challenges, maximising the value of rapid diagnostics becomes not just a goal, but a necessity. Collaboration, innovative financing, comprehensive evaluation, and understanding where the technology will be the best fit are which effective solutions are both, ultimately safeguarding public health and economies.

### Further reading

- Centre for Tropical Medicine and Health, Global Research on Antimicrobial Resistance (GRAM) project. (2023) Rapid response to antimicrobial resistance. Retrieved 28 July 2023.
- Infection Learning Hub. (2023) Review: Review for those interested in the value of rapid diagnostics. Retrieved 28 July 2023.
- National Health Service. (2023) Improving the health care pathway: a review of the health care pathway to support better antibiotic stewardship and improved patient safety. Retrieved 28 July 2023.
- Reuter, S., Hesse, A., Schmitt, C., Grosse, S., Palmer, S., & Schmitt, S. (2023) The economic impact of AMR management efforts: a review of alternative financing approaches in NICE appraisal. (2023) Health Economics, Law and Policy. Retrieved 28 July 2023.
- Healthcare Innovation. (2023) Rapid diagnostics: the future of patient care. Retrieved 28 July 2023.

### Biography

As the CEO of Cytecom, a University of Warwick spin-off, Magdalena is leading the development of an innovative diagnostic test that shortens the time for targeted antibiotic therapy, supported from the National Institute for Health Research (NIHR) and the Department of Health and Social Care.

Magdalena Kartikowska is a senior research fellow at the University of Warwick, where she is also a senior research fellow at the Centre for Tropical Medicine and Health. She is a member of the NIHR Health Protection Research Unit (HPRU) in Antimicrobial Resistance and Infection Control (ARIC) and the NIHR HPRU in AMR. She is also a member of the NIHR HPRU in AMR and the NIHR HPRU in AMR.

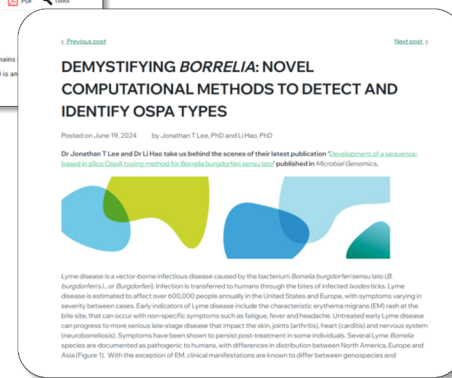
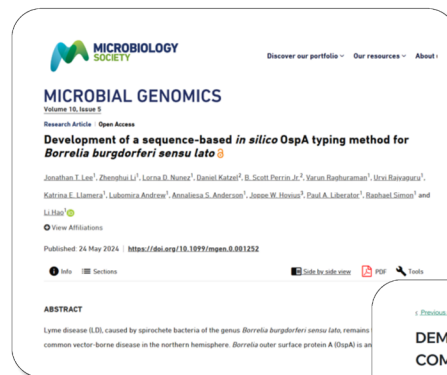




**Focus:** raising awareness of microbiology's role in addressing global challenges such as health and environmental sustainability,

**Format:** published in the Microbiology Society's Journal of Microbial Genomics and amplified through Micro Scopes and social media promotion.

**Results:** generated over 3,000 views on X and 68 blog visits, reflecting strong engagement and interest in the topic.





**Focus:** creating shared spaces where industry can strengthen their visibility to support commercial growth.

**Format:** creation of vibrant exhibition halls enabling direct engagement with budget holders.

**Results:** enabled exhibitors to connect with Professor McGrath leading to multiple sales of reagents including a piece of equipment valued at £10,000 and demonstrating return-on-investment for exhibitors.

“The Microbiology Society connects cutting-edge science with real-world impact. As someone leading both academic research and a commercial spin-out, I’ve found their events invaluable ...[for] staying ahead in the rapidly evolving microbiology sector”

Professor John McGrath, Professor of Environmental Microbiology at Queen’s University Belfast and Director of BioSeer Ltd.