Pathways and Innovations to Tackle Antimicrobial Resistance

The AMR Global Health Academy Newsletter

MARCH 2025

The **AMR Global Health Academy** serves the global health professional and antimicrobial steward in low- and middle-income countries with a free online educational curriculum designed to advance AMR knowledge and best practices. Every month, via the Newsletter, we share important updates from the AMR field, especially as it relates to AMR testing, diagnostics, and surveillance. We feature news stories, articles, events, resources, and AMR champions battling the real-world AMR problems.

We would like to start off this newsletter by acknowledging the devasting effects that the current US government funding freeze is having on countries and their health programs. As AMR stewards, we know disruptions to health services contribute to the spread of antimicrobial resistance. Now more than ever we need to keep track of the spread of AMR through surveillance and monitoring.

News Story

Reconsidering national finances during a time of change

Health Policy Watch recently published an article entitled, ***The $40 Question: Can Africa Close the Health Financing Gap?*** Delegates at the 6th Africa Health Agenda International Conference (AHAIC) in Kigali were strategizing how Africa can redesign their health systems to provide the best healthcare services to their populations with what are dwindling and limited resources, particularly as funding cuts by the United States and many European countries becomes reality.

The article highlighted that African Health Ministers only have $40 per capita for health expenditure compared to $4,000 per capita in many high-income countries. However, nearly all (but two: South Africa and Cape Verde) African countries have failed to allocate 15% of their national budget to health (a commitment from the Abuja declaration). Further, only one country has allocated more than 5% of their GDP to health.

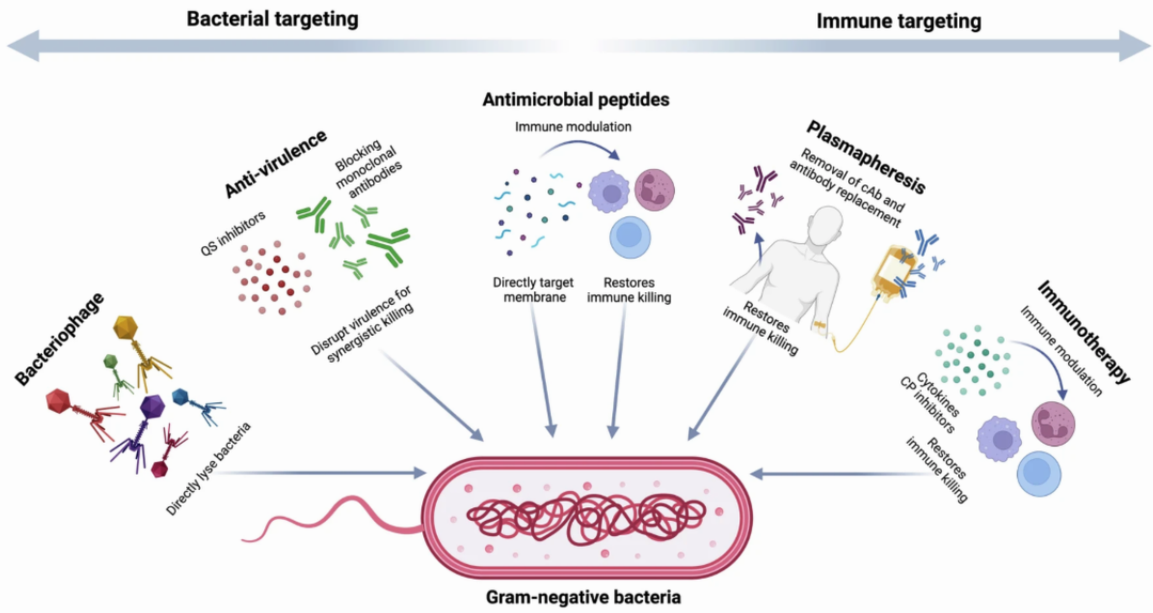
Delegates highlighted prevention, primary care, and community health as core pillars. As countries redefine their own health agendas, systems, and financing mechanisms, it will be critical that innovative and sustainable AMR tools and solutions are included.

Article Spotlight

Rethinking antimicrobial therapies to broaden and strengthen the arsenal against AMR

Fig. 1: Summary of alternative treatments for gram-negative infections currently trialed in humans.

From: Emerging antimicrobial therapies for Gram-negative infections in human clinical use



Source: Hickson, S.M., Ledger, E.L. & Wells, T.J. Emerging antimicrobial therapies for Gram-negative infections in human clinical use. *npj Antimicrob Resist* 3, 16 (2025). https://doi.org/10.1038/s44259-025-00087-2.

A recent review article entitled, ***Emerging antimicrobial therapies for Gram-negative infections in human clinical use***, was published in *npj antimicrobials and resistance*. In addition to acquiring drug resistance, Gram-negative bacteria can be particularly challenging to treat with antibiotics because the outer membrane acts as a physical barrier that prevents cell entry. Unfortunately, 9 of the 15 bacteria on the 2024 WHO bacterial priority pathogens list are Gram-negative. This article highlighted several potential novel therapies beyond antibiotic discovery that could support tackling the AMR crisis, including those that directly target the bacteria and those targeting the immune system:

- Bacteriophage therapy
- Antimicrobial peptides
- Plasmapheresis therapy
- Anti-virulence therapies
- Immunotherapy
- Monoclonal antibodies

Creating AMR awareness and strengthening knowledge

The **AMR Academy** has numerous courses and educational activities designed to empower AMR stewards, particularly global health professionals from LMICs.

To join the AMR Global Health Academy, enroll in the Global Health Continuing Professional Development (GHCPD) free online AMR courses **here**.

AMR GHCPD Faculty

Global Health Continuing Professional Development (GHCPD) faculty are global and regional experts in their field and drive the educational curriculum to ensure information is relevant, pertinent, and applicable to the needs of learners from low resource settings. Here we would like to profile some of our faculty members who generously continue to support the GHCPD educational platform.

Dr. Rosanna Peeling is Emeritus Professor of Diagnostics Research at the London School of Hygiene and Tropical Medicine, Professor at the University of Manitoba, Canada, and Founding Director of the International Diagnostics Centre (IDC) Network. Trained as a medical microbiologist, Dr Peeling was Chief of the Canadian National Laboratory for Sexually Transmitted Diseases, and Research Coordinator and Head of Diagnostics Research at the UNICEF/UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (WHO/TDR) in Geneva, Switzerland. Professor Peeling is the recipient of numerous awards, including a YM-YWCA Women of Distinction Award, a 5NR Award for Canadian Leaders of Sustainable Development, and is the first woman scientist to be awarded the Royal Society of Tropical Medicine's George MacDonald Medal in 2014 for outstanding contribution to tropical medicine. Her research was featured in a Discovery Channel documentary on Chlamydia Infection and Infertility, and in Fighting Syphilis, a documentary in the highly acclaimed BBC Kill or Cure series.

Dr. Peeling is a leading expert on and advocate for diagnostics. Her research focuses on defining unmet diagnostic needs and facilitating test development, evaluation and implementation in developing countries. She established the IDC to advocate the value of diagnostics, foster innovation, and accelerate access to quality-assured diagnostics to improve global health and to combat antimicrobial resistance (AMR). She contributed to WHO Testing Guidelines for HIV, Hepatitis, Dengue, COVID and sexually transmitted infections and served as a member of the WHO Strategic Advisory Group of Experts on In Vitro Diagnostics (SAGE IVD), the Global Validation Advisory Committee for the Elimination of Mother to Child Transmission of HIV and Syphilis, the Social Innovation in Health Initiative (SIHI), and the Global AMR Innovation Fund. She is a member of the Africa CDC Laboratory Working Group and has worked with the Africa CDC to set up a Biobanking Network for the evaluation of diagnostic tests for diseases of epidemic potential. She has a long-standing interest in education and professional development. In collaboration with the Merieux Foundation, she developed an Advanced Course on Diagnostics which has trained over 350 policy makers from more than 80 countries. In collaboration with the Global Health Impact Group, she has developed free online AMR courses which have reached learners from 162 countries.

In Case You Missed It

In January, Uganda hosted the Phase II AMR Surveillance Training, in collaboration with African Society for Laboratory Medicine (ASLM), as part of the UK Fleming Fund *Mapping Antimicrobial Resistance and Antimicrobial Use Partnership* (MAAP) project. See **here** for more.

WHO published *Guidance on wastewater and solid waste management for manufacturing of*

antibiotics in an effort to help tackle the rise in AMR. See **here** for more.

The 9th AMR Conference 2025 was held 25-26 February 2025 in Basel, Switzerland. The detailed program and poster abstracts can be found **here**.

The GARDP REVIVE webinar entitled *In vitro and in vivo correlations for prediction of human pharmacokinetics and dose of antimicrobials* was held on 27 Feb 2025. Click **here** to watch the recording.

Don't Miss

The next GARDP REVIVE webinar entitled *Charting new frontiers in artificial intelligence for antibiotic design* will be 3 April 2025. Click **here** for more and to register.

This **article** providing guidance on *How to verify and validate a clinical microbiology test before it can be used in routine diagnostics: a practical guide*.

The annual meeting of the European Society for Clinical Microbiology and Infectious Diseases is 11-15 April 2025 in Vienna, Austria. See **here** for details.

The Global AMR Innovators Conference (GAMRIC) – previously the ESCMID-ASM Joint Conference on Drug Development for AMR – will be held 30 Sep – 2 Oct 2025 in Washington, DC.

ICARe (Interdisciplinary Course on Antibiotics and Resistance) will be held 11-19 October 2025 in Annecy, France. See **here** for details. Applications will open in March.

IDWeek 2025, the annual meeting of the Infectious Diseases Society of America will be held 19-22 October 2025 in Georgia, USA. See **here** for details.

The journal *Antibiotics* is planning for a special issue entitled, "Antibiotics: Utilization, Resistance, and Infection Prevention". The editors are inviting submissions for this special issue that addresses various aspects of AMR, including its mechanisms, transmission dynamics, and global impact. Manuscript submissions are due 31 October 2025. Please see **here** for more information.

The 10th AMR Conference 2026 will be held 3-4 March 2026 in Basel, Switzerland.

What's Next

As the funding landscape evolves and the AMR crisis continues, countries and developers continue to devise novel and innovative strategies to tackle the challenges at hand. Turning political commitment and development efforts into action will be critical to secure healthy long-living communities and responsive, resilient health systems.

Support for this initiative has been provided through an unrestricted educational grant from bioMérieux.