

**Applied  
Microbiology  
International**

**Policy in Practice: Exploring  
Perceptions of Bacteriophage  
Use in the UK Across the One  
Health Spectrum:  
A Roundtable Discussion**

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EXECUTIVE SUMMARY



# Introduction

The impact of antimicrobial resistance, otherwise known as AMR – when microorganisms such as bacteria, viruses, fungi and parasites no longer respond to antimicrobial medicines, resulting in more difficult and sometimes impossible to treat infections – affects all sectors across the One Health spectrum. This includes human health, animal health, food and the environment, compromising the achievement of several of the UN Sustainable Development Goals (UN SDGs). As such, it is imperative that the UK Government continues exploring alternatives to traditional antimicrobials.

In 2022, the UK Government launched the My Science Inquiry, an open call for potential topics of inquiry within science and technology. Applied Microbiology International (AMI) recommended bacteriophage as an alternative to antimicrobials due to the increasingly serious threat of AMR, and successfully won the pitch, resulting in an inquiry and report on this topic by the House of Commons Science, Innovation & Technology Committee, for which the government published a response in March 2024.

In July 2024 AMI hosted a closed roundtable event, bringing together a panel of invited participants from across academia, industry, regulatory bodies, as well as potential phage end-users to discuss some of the key questions pertaining to phage therapy implementation within the UK.

The paper summarises the key take-home messages that emerged following the One Health panel's roundtable discussions. The aim of providing this collaborative response from all stages of the phage development pipeline will serve to highlight to the UK Government that – with support – phage therapy offers a feasible, achievable and vital means of addressing the serious global threat posed by AMR.



The Commons Science and Technology Committee launched the My Science Inquiry, an open call for potential topics of inquiry in the areas of science and technology. The 'My Science Inquiry' invited proposals on what the Committee should investigate next and why, including what action is needed from the Government.

A formal inquiry and call for evidence on bacteriophage was launched during UK Parliament Week, which began the week commencing 14 November 2022.



The House of Commons Science, Innovation & Technology Committee published the final report that collated the findings of the inquiry.



AMI held a closed roundtable discussion, inviting bacteriophage experts across the One Health spectrum.



The Committee received over 90 ideas for new inquiries and selected six ideas to hear more about in person at a livestreamed session of the Committee on 19 October.



The UK Government published a response to that report in March 2024.



## Conclusions

Overall, the lack of investment, national infrastructure and public awareness regarding phage therapy, its development and its potential, were agreed upon as the key barriers that need to be overcome to more widely implement phage therapy across the UK. Continuation of the Phage Innovation Network (PIN) was repeatedly recognised as an essential requisite for overcoming these barriers and for ensuring the progress of phage innovation. The aim of the paper is to provide a progressive step for phage therapy, continuing momentum to facilitate their widespread implementation nationally.

It is hoped that the recommendations made can help to build momentum and be used to inform decision-making within the UK Government, thereby progressing several of the UN SDGs. These include:



UN SDG 2  
ZERO HUNGER



UN SDG 3  
GOOD HEALTH  
AND WELL-BEING



UN SDG 6  
CLEAN WATER  
AND SANITATION



UN SDG 13  
CLIMATE ACTION



UN SDG 14  
LIFE BELOW WATER



UN SDG 15  
LIFE ON LAND



To find out the experts responses to these questions, please scan the QR code.

## Questions covered in the roundtable

01

Does the lack of a Good Manufacturing Practices (GMP) facility (or commitment to build one) present the biggest barrier to the implementation of phage therapy on a wider scale in the UK? If so, how can it be overcome?

02

The antimicrobial subscription model developed by NHS England has been recognised as a potentially relevant model for phage therapies, do you think that this model could be appropriate in the future?

03

What do you think are the main challenges from an industry perspective in terms of commercialisation?

04

The government has recommended that the Department of Health and Social Care (DHSC), Medicines and Healthcare products Regulatory Agency (MHRA), National Institute for Health and Care Excellence (NICE) and National Institute for Health and Care Research (NIHR) should engage with phage researchers to see what evidence is needed to determine the safety and efficacy of phage use within clinical settings. Do you think enough is being done to establish this dialogue and if not, what should be done to promote engagement?

05

The House of Commons (HoC) Science, Innovation and Technology Committees' report suggested the government should undertake a review into what assistance phage translational research requires to increase the success of funding bids, and whether specific funding is appropriate where it can deliver AMR priorities. The government response indicates that whilst they will not ringfence funding for phage research, they will continue to support the clinical trial pipeline for antimicrobials & alternative therapies. In the absence of ringfenced phage funding, what specific assistance do you think should be given to most effectively bridge the translational phage research 'gap' to break the funding impasse which has existed in the UK?

06

Since phage have the potential to be deployed across the One Health spectrum including in the human, animal, food and environmental sectors, does this present the opportunity to have an integrated, joined-up approach to phage development? If so, what is needed for this to be done?

07

Could the One Health approach to tackling AMR help promote the utility and potential of phage to the public? If so, how can careful and transparent promotion of phage be ensured across different sectors to the public and avoid sending mixed messages which can confuse, or worse, scare?

08

The government finishes their response to the HoC report by saying it will not produce a further statement on its assessment of phage at this time or publish a roadmap that depicts how phage manufacture and regulation will be embedded in the UK. What is the main reason thought to be causing hesitancy and how can it be overcome?

09

With the recent general election, how can positive momentum around the development of phage be kept from being lost and how can the phage community ensure that the gaze of new Government remains firmly fixed on phage?