



In Search of Better Health

Press Invitation

To: News Editors

Event: Scientists Meet to Consider Introduction of New Technology to address AMR Resistance

Date: Monday, 21st, March, 2022 from 8.00am.

Venue: Ole Sereni Hotel, Mombasa Road.

Bacteriophages (phages) are game-changers for Anti-Microbial Resistance in human and livestock health and environmental and food safety

Leading Human and Animal Research scientists and other key stakeholders in the field of Anti-Microbial Resistance (AMR) are meeting this Monday, 21st, March 2022 to consider a new technology that is being touted as a game-changer in AMR in both human and livestock health, environmental and food safety.

The meeting organized by the Kenya Medical Research Institute (KEMRI) and the Institute of Primate Research (IPR) at Nairobi's Olesereni Hotel are exploring the role of Bacteriophages (phages) in complementing antibiotics in tackling bacterial antibiotic resistance.

Bacteriophages, which translates as "eaters of bacteria," commonly referred to as "phages," are tiny, virus-like organisms found abundantly in nature that are the natural enemies of bacteria.

Phages invade bacteria, replicate inside them and then lyse or kill the bacteria, going on to invade and kill other bacteria. Because each bacteriophage type targets a specific bacterial species, they do not destroy other "good" bacteria present on the body, unlike antibiotics.

Bacteriophages that target only the specific pathogenic or harmful bacteria can be selected from the environment and used to clear the targeted bacteria.

AMR is today the biggest public health facing humanity, with estimates of 50 million deaths by 2050 annually and in 2019 causing 27 deaths/100,000 in Sub-Saharan Africa. This is more than HIV and malaria combined. Superbugs resistant to all known antibiotics are increasing with few antibiotics in the pipeline to treat extensively-drug resistant bacteria.

Alternatively, several bacteriophages can be combined to target any number of harmful bacterial species on a surface or in an environment.

Bacteriophages have many applications. They have been used successfully to treat humans since 1919 in Europe, where they are still commercially available, but their use was overtaken by the discovery of antibiotics in 1923.

Since then, with the advent of AMR, several published cases of successful treatment of patients worldwide with life-threatening XDR infections of *P.aeruginosa*, *A. baumannii*, among others. They are also used to treat livestock and kill bacteria on food or in the environment because they leave no harmful residue and do not destroy the normal bacterial flora. Bacteriophages are the next frontier in the battle against MDR bacteria and give hope in an otherwise dire situation.

The day long workshop will highlight the advances in this new field globally and in Kenya and seek to define a path to make phage applications a reality for Kenyans, farmers, and the food industry, such as establishing phage repositories that can be used for all the different applications.

The symposium welcomes scientists from the US and different institutions in Kenya covering bacteriophage applications in One health. This symposium calls on the Government of Kenya and other partners to continue supporting phage research and applications for the benefit of the Kenyan people.

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