



EDITORIAL

BACTERIAL DRUG RESISTANCE: ROLE OF LIVESTOCK IN RAMPING UP RESISTANCE TO ANTIMICROBIAL AGENTS

Livestock have been companions to humans since their domestication started between 11,000 and 9,000 BC. Animal health both on farms and in the wild is influenced a lot by bacteria, fungi, viruses, protozoa and 'metazoan' nematodes and trematode infection.

Transmission of these microbes and worms from animals to humans is common as happened in spread of SARS-Cov2, the COVID-19 viral causative agent that jumped from pangolins to humans in Wuhan, China late 2019.

Man, therefore, uses chemotherapy agents used in human health to treat infectious diseases in his livestock, pets and animals in the world. This leads to widespread distribution of these antimicrobials in the environment and their meats. It opens a route for selection of microbial strains, that have resistance to the antibiotics used which are then widely distributed in the environment and animal products in common.

Common Bacteria that are transmitted from animals to humans and vice versa include *E. coli* 0157, *Cryptosporidium parvum*, *Campylobacter* species and 'non-

typhi' *Salmonella* strains. The spread of these bacteria to humans may pose a challenge with primary resistance to antimicrobials commonly used in human health as clearly shown in one of the articles published in this issue.

The overuse of antibiotics in animals enhances the development and spread of drug resistant bacteria. While antibiotic use in meat animals and pets may represent a risk to human health, the degree and relative impact have not been well characterized. Therefore, there is an urgent need for monitoring of use of antibiotics used in animal health as well as in humans. This will help to protect and preserve viral chemotherapeutic drugs that are shared between animals and humans.



*African Journal Of
Health Sciences*

Dr. Hudson A. Lodenyo,
Consultant Physician & Gastroenterologist
Centre For Clinical Research

**KENYA MEDICAL RESEARCH
INSTITUTE (KEMRI)**