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## Antimicrobial resistance among Salmonella species from beef in African countries: A systematic review

Antimicrobial resistance among non-pathogenic and pathogenic bacteria including foodborne pathogens has been reported to be increasing worldwide. The surge in antimicrobial resistance makes it challenging to control and manage infections and may be life-threatening in some instances. Salmonellosis, which is caused by Salmonella species, is recognized as a public health challenge that has negative socio-economic consequences. Antimicrobial resistance in Salmonella isolates from both human beings and animals has been reported to be rising. The aim of this paper was to synthesize information from various studies on Salmonella species from beef samples in African countries with a view to determining the extent and profiles of antimicrobial resistance, the serotypes involved, methods used and antimicrobial resistance genes carried by the isolates. A concise bibliographic search was carried out using databases such as EBSCO host, Science Direct and Proquest. The period of analysis was 1998 to 2018 inclusive. The methods used for antimicrobial resistance testing (including resistance genes), the antimicrobials that were tested, the Salmonella serotypes, and the gaps in knowledge are discussed. The results of the synthesized information from the systematic review is pertinent for highlighting the extent of antimicrobial resistance, resistance genes and important Salmonella serotypes associated with beef in African countries. The findings can assist relevant stakeholders with targeted control and management of antimicrobial use during beef production to avoid infection of human beings with antimicrobial resistant zoonotic strains of Salmonella species.

## **Biography**

Evelyn Madoroba has completed her PhD in Microbiology from the University of Pretoria and graduated in 2009. She is an Associate Professor in the Department of Biochemistry and Microbiology at the University of Zululand. She has published more than 20 papers in journals. She has supervised and co-supervised postgraduate students.

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