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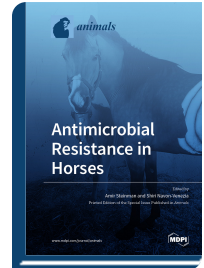
Antimicrobial Resistance in Horses

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Antimicrobial resistance (AMR) is a global problem with extremely complex epidemiology involving the direct and indirect transmission of antibiotic resistant pathogens and mobile genetic elements between humans, animals, and the environment. AMR is, therefore, recognized as a ‘One Health’ issue. Data that describe AMR prevalence and trends are required to enable the judicious and prudent use of antimicrobials in animals, which has implications both from veterinary and animal welfare aspects as well as from a zoonotic and public health perspective. Horses are a potential reservoir of AMR for humans due to close human–animal contact, as was demonstrated with shared human and horse methicillin-resistant *Staphylococcus aureus* (MRSA) strains causing outbreaks in equine hospitals. Extended-spectrum beta-lactamase-producing Enterobacteriaceae, considered as clinically and economically important to the AMR burden in human and veterinary medicine, has been reported in both community and clinic equine populations. Strains of Enterobacteriaceae pose a major worldwide threat due to the geographical expansion of ESBL-producing clones as well as the horizontal interspecies dissemination of ESBL-encoding plasmids and genes. In human medicine, ESBL-E infection is associated with increased morbidity, mortality, length of hospital stay, delay of targeted appropriate treatment, and higher costs. These issues also need to be addressed in horses. This Special Issue on AMR in horses encompasses several papers that describe the prevalence, risk factors, and molecular data on MDR bacteria in healthy horses in Canada, Japan, Spain, and Israel, in addition to papers that describe the clinical impact of MDR bacteria in diseased horses in Austria, USA, France and Israel.



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