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## Antimicrobial resistance of zoonotic foodborne pathogens: What we can do from now?

Antimicrobials have played an important role in maintaining the animal health and in producing the high quality food. The concern that the use of antimicrobials in food animal production can increase the risk of selection of antimicrobial resistant bacteria that may cause failure of treatment has led to international expert meeting and reports. Although the prevalence of zoonotic antimicrobial resistant bacteria in food animals is maintained still low, however, resistant genotypes similar to or identical with those of the human isolates were also found in non-human sources. Therefore, the risk management interventions should be urgently implemented. Furthermore, a one health approach to antimicrobial use and resistance is essential to minimize the antimicrobial resistance in humans and animals, because these are the responsibility of all three health communities: Human health; animal health and; environmental health-communities. Recent reports have documented MRSA (Methicillin Resistant Staphylococcus aureus) detection in animals, foods and animal workers. Now, it is considered as one of the most important zoonotic pathogens. Extended-spectrum β-lactamase (ESBL)-mediated resistance is of considerable importance in both human and veterinary medicine. In a study done in Korea, CTX-M producing E. coli and Salmonella were detected in animals, raw meat, farm environment and farm workers. These results suggest that a combination of clonal and horizontal transmission is spreading of CTX-M resistant NTS between animal and human sources. Surveillance of antimicrobial usage and resistance provides important data for the identification of resistance problems and contributing factors for the development and spread of resistance at a national and local level. Harmonization and standardization are needed to compare the situations at the national and international levels. Prevention and control of infections in food animals is essential in fighting antimicrobial resistance. It is essential that all parties work together to ensure safe use and to minimize the development of resistance.

### Biography

Yong Ho Park completed his DVM and MS at College of Veterinary Medicine, Seoul National University, Korea. In 1991, he completed his PhD in Veterinary Microbiology at Washington State University, US. He has worked at National Veterinary Research Institute from 1978 to 1995. He has been appointed as an Adjunct Professor at College of Veterinary Medicine, Washington State University since 1996 and has been also appointed as an Affiliate Professor at Mississippi State University since 2013. He has served as a President of Asian Association of Veterinary Schools (AAVS) and President of Korean Society of Food Hygiene and Safety. From 2011 to 2014, he has worked as a Commissioner at Animal, Plant, Fisheries, Quarantine and Inspection Agency, Korea. He has published more than 240 scientific papers at referred journals.

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