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## Alternatives to in-feed antibiotics and their impact on the safety of animal products

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The discovery of penicillin and the recognition of its therapeutic properties has undeniably been one of the greatest advances in medicine. Unfortunately, the excessive use of antibiotics has led to the spreading of the resistance among bacteria. The need of the reduction in use of antibiotics led to the restriction in using of antibiotic growth promoters (AGP) within the European Union (Regulation no. 1831/2003/CE). The reduction in using of AGP can cause the increase of enteropathogenic bacteria occurrence in farm animals and consequently decrease microbial safety of animal products. The current situation therefore calls for new types of antibacterial compounds enabling to improve the food safety and animal health worldwide. Among the candidate replacements for AGP are prebiotics, probiotics, plant extracts, mannan-oligosaccharides, enzymes, organic acids, or metals. The use of antibacterials in animal production is desirable not only for lowering the risk of microbial contamination, but also for the improvement of animal performance. Over the past few decades, organic acids and their derivatives have been commonly used for their antibacterial properties in animal production as well as in the food industry. Among the organic acids, medium-chain fatty acids (MCFA) are considered to be a promising group of antimicrobials. Obtained results, as well as the results of other scientists worldwide, suggest the MCFA are potent antimicrobials not only in vitro, but their use can also decrease the bacterial shedding in farm animals, with a subsequent improvement of animal products safety.

## **Biography**

Eva Skrivanova has completed her PhD in 2005 from University of Veterinary and Pharmaceutical Sciences in Brno, Czech Republic. She received the Associate Professor title in 2011 and is currently working in the Institute of Animal Science and University of Life Sciences in Prague, Czech Republic. She published 20 IF publications, H-index 7 (WOS). Her professional experience is currently focused on research in the field of safety and quality of animal products.

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