Safety concerns regarding the use of phages in animal food production

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Phages have been proposed as natural antimicrobial agents to be applied to living animals to ensure a safe meat product. This is supported by several scientific evidences that phages are able to control the loads of pathogens in animal food-stuff. However, there are important safety issues that should be taken into consideration when developing a phage product to be applied in living animals. For example it is of utmost importance to guarantee that phages are strictly lytic, do not encode bacterial toxins and do not mutate when amplified in different susceptible strains. The phage administration strategy and timing should also be adequate in order to reduce the development of phage-resistant mutants. The present work describes the main strategies used in the development of a safe phage product for veterinary application, based on the results obtained on the scope of the European Project Phagevet-P (Veterinary Phage Therapies as Alternatives to Antibiotics in Poultry Production FP6-2003-Food-2-A:007224).

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