



International Alliance for
Biological Standardization

Avoiding Antimicrobial Resistance: Veterinary Use of Phages for Prevention, Therapy and Control of Bacterial Infections

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Virtual Meeting

Phage therapy for veterinary applications from the perspective of a manufacturer

Vesale Bioscience is a Biotech Pharmaceutical company dedicated to the development of phage therapy products for human medicinal applications. The company developed a scalable model for a personalized approach of phage therapy. The success of a phage therapy intervention highly depends on the correct choice of the phages to apply. To perform this determination correctly we developed an automated susceptibility test which can be performed in each hospital laboratory. This automatic phagogram can detect the activity of upon 38 phages simultaneously in less than 4 hours and is the cornerstone of the therapeutic model. Once the right phages detected, a personalized cocktail can be formulated by the hospital pharmacist.

We applied this method in a pilot project on cow mastitis where the individualization of the therapy is done on a farm level. The automated phagogram is first used to develop the phage cocktail on basis of a single case of mastitis, postulating that future cases in the same pharm will have the same pathogen as origin.

By developing this project, several considerations and specific hurdles to overcome, typical for the veterinary approach of phage therapy, came up. These are as well of technical, regulatory as commercial nature and are prone to the nature and specific character of phages and phage therapy.

As a conclusion: we have a clear picture and pathway to develop human phage therapy products, but the models we developed and are successful in human therapy cannot be transposed directly to a veterinary situation. Questions like individualization of the therapy, concomitant use of antibiotics or not and others will need to be answered before phage therapy can be supplied with success on difficult-to-treat infections in veterinary.