Session IV (Phage Therapy) – Poster 4

In vitro and *in vivo* evaluation of *Campylobacter* bacteriophages.

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Campylobacter is the cause of the majority of intestinal disease in humans. It is present in the gastro-intestinal tract of many poultry and it is therefore very difficult to prevent this pathogen from persisting on derived products. Recent restrictions on the use of antibiotics as growth promoters in animal production have added to this problem. Bacteriophage (phage) therapy is a promising alternative method of controlling this pathogen. In this study the *in vitro* and *in vivo* performance of 3 *Campylobacter* phages were tested. The phages were selected from a panel of 47 isolated from poultry intestines based on their wide lytic spectra and ability to lyse strains of *Campylobacter coli* and *Campylobacter jejuni*. The 3 phages were identified, by Transmission Electron Microscopy (TEM), as members of the family *Myoviridae* and their burst size and latent period were determined. *In vivo* tests in poultry infected with *Campylobacter coli* and *Campylobacter jejuni* showed that the phages reduced these pathogens by 1-2 $\log^{10}$ CFU/g. There was no significant difference in the performances of the 3 phages either individually or as a cocktail. Our findings are that these phages could be used to control *Campylobacter* in infected poultry.

Notes:

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