P016 Activities of antimicrobial peptides against *E. coli* O157: H7 – help or hindrance?

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Although enterohaemorrhagic *E. coli* (EHEC), particularly *E. coli* O157:H7, are an important group of zoonotic pathogens, few investigations have examined interplay between these bacteria and mammalian antimicrobial peptides of either reservoir (cattle) or human host origin. Expression of several antimicrobial peptides (including defensins and cathelicidins) by epithelial cells challenged with *E. coli* O157:H7 has been determined by RT-PCR. The sensitivity of *E. coli* O157:H7, commensal *E. coli* strains and a reference strain (BUE55) to several natural and synthetic peptides has been assessed. Finally, since verotoxin (VT, key pathogenicity determinants during infection of both human and bovine hosts) expression can be induced by various stressors (including several antibiotics), the influence of peptides on VT release from EHEC is being examined. This understanding could contribute towards development of novel approaches to limit disease caused by *E. coli* O157:H7.