

Antagonistic effects of intestinal *Lactobacillus* isolates on pathogens of chicken

ABSTRACT

Twelve *Lactobacillus* strains isolated from chicken intestine, which demonstrated a strong and moderate capacity to adhere to the ileal epithelial cells in vitro, were used to investigate their inhibitory ability against five strains of salmonella, i.e. *Salmonella enteritidis* 935/79, *Salm. pullorum*, *Salm. typhimurium*, *Salm. blockley* and *Salm. enteritidis* 94/448, and three serotypes of *Escherichia coli*, viz. *E. coli* O1: K1, O2: K1 and O78: K80. The results showed that all the 12 *Lactobacillus* isolates were able to inhibit the growth of the five strains of salmonella, and the three strains of *E. coli* in varying degrees. Generally, they were more effective in inhibiting the growth of salmonella than *E. coli*. Inhibition of the pathogenic bacteria was probably due to the production of organic acids by the *Lactobacillus* isolates.

Keyword: *Lactobacillus*; Chicken intestine; *Salmonella*; Inhibitory ability