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Study of antibiotic resistances of strains of *Campylobacter jejuni* from farm and chicken meat

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Campylobacter jejuni is one of the main pathogens associated with food borne diseases in industrial countries. The infection with this pathogen is related to the consumption of chicken meat, particularly since the poultry intestine is the main niche of this bacterium. *C. jejuni* has a small genome size and recently a wide genetic diversity between strains has been described. This inter-strain genetic diversity correlates well with wide antibiotic resistance diversity. In our laboratory, we have analyzed poultry feces (n=40) and chicken meat from retail (n=30) and found that 22.5% and a 63.3%, respectively, were positive for the presences of *C. jejuni*, confirming the high frequency of this pathogen in chicken. In parallel, using these samples we were able to isolate different *C. jejuni* strains, which were analyzed by PCR for the identification and characterized by RAPD. Overall, we obtained 44 different strains: 15 from poultry feces and 29 from chicken meat. Subsequently, we evaluated their antibiotic resistances, finding a wide diversity in the population with 59% of strains being resistant to ciprofloxacin with a minimal inhibitory concentration (MIC) above to 16 ug/mL, 70% of strains resistant to erythromycin with a MIC above to 32 ug/mL and 38.6% of the strains resistant to tetracycline with a MIC above 32 ug/mL. Furthermore, 8 strains (18.2%) were resistant to all the antibiotics here evaluated, including chloramphenicol and ampiciline. On the other hand, 13.6% of the strains showed sensitive to all the antibiotics evaluated. These results indicate the need for public microbiological control measures and the impact of wide utilization of antibiotics primary production.

Biography

Veronica Garcia Mena has completed his PhD from Universidad de Chile and Postdoctoral studies from Universidad de Santiago de Chile. She has published more than 10 papers in reputed journals. Currently she is working in food borne pathogens using *Campylobacter jejuni* as study model in the Universidad de Santiago de Chile. She is working in different aspect like antibiotic resistances of native strains from meat and natural environment, study of molecular mechanisms of virulence of *C. jejuni* and biocontrol of *C. jejuni*.

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