

TITLE: MOLECULAR COMPARISON OF *SALMONELLA ENTERICA* SEROVAR HEIDELBERG ISOLATES FROM DIFFERENT SOURCES IN BRAZIL.

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Salmonella is generally transmitted via the food chain through foods of animal origin, such as eggs, chicken meat, pork or beef. The application of important intervention strategies ranging from feed control to vaccination has reduced human salmonellosis in many countries. Nevertheless, the role of wildlife is of increasing interest. Among the serovars *Salmonella enterica* serovar Heidelberg is one of the most commonly detected in poultry in Brazil, ranking among the top five serotypes associated with human salmonellosis. Although S. Heidelberg outbreaks have been linked with several foods of animal origin, livestock and poultry-derived foods serve as the major source of human infections. The purpose of this study was to evaluate the genotypic relatedness of S. Heidelberg recovered from captive wild animal, human, environment, food and poultry in Brazil. Were evaluate 95 S. Heidelberg isolated from different sources, 15 poultry, 3 wild animal, 16 environment, 52 food and 9 human source. Bacteria were phenotypically characterized using standard microbiological techniques. Genotypic relatedness of isolates was investigated by pulsed-field gel electrophoresis (PFGE) analysis according the CDC PulseNet protocol. A diversity of 20 PFGE patterns, relatedness in 88% similarity, amongst 95 isolates was shown; two PFGE patterns predominated, BRJF6X01.006 (N=27) and BRJF6X01.001 (N=21), and accounted for 50% of all isolates. Two wild animal isolates are included in BRJF6X01.001 partner together isolates from poultry (n=5), environment (n=4) and food (n=10).

A similarity, approximately, of 89% between *Salmonella* Heidelberg strains isolated from humans and wild animals suggest a probable common source for strains from humans and animals. The results from this study therefore lend support to the hypothesis S. Heidelberg flow between several sources and some cases could be infections carried by wild animals. As transmission of *Salmonella* from food producing animals to wildlife and to the environment is considered potential public health problem information on the survival and persistence of *Salmonella* in the environment and in potential reservoirs is of considerable importance.

Keywords: *Salmonella*, PFGE, epidemiology, wild animal

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