

PLASMID REPLICON TYPING OF MULTIDRUG-RESISTANT *SALMONELLA ENTERICA* SEROVAR AGONA ISOLATED FROM TURKEYS

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Non-typhoidal *Salmonella* infections are common cause of food-borne infections. Emergence and dissemination of multidrug resistance in this pathogen is often reported worldwide and is a public health concern. Plasmids play a crucial role on spread and evolution of antibiotic resistance. This study aimed to investigate plasmid types in *Salmonella* Agona isolated from feces of commercial turkeys in Brazil. Fifteen isolates of *Salmonella* previous serotyped as Agona was subjected to PCR for presence of resistance genes of several classes of antibiotics (*qnrABCDS*, *oqxAB*, *aac(6)'Ib-cr*, *qepA*, *dfp* variants, *aadA*, *aphA1*, *strAB*, *sul1*, *sul2*, *sul3*, *tetAB*, *floR*, *cmIA*, *cat*, *blaTEM*, *bla_{CMY-2}*, *bla_{SHV}*, *bla_{OXA}*), integrons (class 1 and 2) and insertion sequences related to mobilization of resistance genes (ISCR1, ISE_{cp1}, and IS26). Plasmids were typed by PBRT (PCR-based on Replicon Typing) included 22 incompatibility groups (IncA/C, IncB/O, IncF, IncFII, IncFIA, IncFIB, IncFIC, IncI1, IncK, IncHI1, IncHI2, IncL/M, IncN, IncP, IncR, IncT, IncU, IncX, IncY, IncW, ColE, ColE_{TP}). All strains were positive for genes conferring resistance to 4 or 5 classes of antibiotics and were positive to class 1 integron. Four isolates possess a combination of class 1 and 2 integrons. Six strains were positive to plasmid mediated-quinolone resistance gene *qnrB19*, which was inserted into small ColE-like plasmids with sizes 2.5kb. All strains (100%) possess a ColE-type plasmid, twelve strains (80%) harbor IncI1 plasmids and nine strains (60%) were positive for FIB replicon. Others replicons detected were IncN (3/15) and IncHI2 (1/15). Mobilizing insertion sequences IS26 and ISCR1 were found in 6/15 and 4/15 isolates. All replicons found in our study (I1, FIB, HI2, N, and ColE) were related to plasmids carrying resistance-linked determinants. This report a co-existence of the multidrug plasmid families in *Salmonella enterica* serovar Agona, which contributing to the spread of antimicrobial resistance in turkey flocks in Brazil.

Keywords: Plasmids, Turkeys, *Salmonella*

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