

TITLE: PRESENCE OF ANTIMICROBIAL RESISTANCE GENES IN *SALMONELLA* SPP. ISOLATED FROM CHICKEN MEAT

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ABSTRACT: Brazil is the main exporter of chicken meat in the world and one of the main producers, ranking 2019 in third place in production. Since the country is so important in poultry farming, it is necessary to have a strict quality control of this product. Despite this, chickens are associated with bacterial infections caused by *Salmonella*, one of the bacteria that most causes foodborne diseases in the world. Another growing concern is the increase in strains of this bacterium resistant to antibiotics. This resistance to antibiotics can occur through mutation of the genetic material or acquisition of resistance genes, and can be transferred between different species. Therefore, the aim of this work was to identify genes related to antimicrobial resistance in strains of *Salmonella* spp. isolated from samples of chicken meat sold in the Federal District. Microbiological and biochemical tests were performed to screen for *Salmonella* spp. in chicken meat samples, and isolated strains were identified by PCR through the presence of the *invA* gene. The strains were tested for the presence of three antimicrobial resistance genes: *sul2*, *blaCTX* and *tetB*. Of the 20 samples of chicken meat analyzed, 50% showed contamination by *Salmonella* and 14 strains of 15 (93.3%) had at least one of the antibiotic resistance genes studied and 5 strains (33.3%) had the three genes simultaneously: *sul2* which confers resistance to sulfonamide, *blaCTX* which confers resistance to antibiotics beta-lactam and *tetB* which confers resistance to tetracycline. This result is alarming, since there is a high percentage of contamination by *Salmonella* in chicken meat, a product widely consumed in Brazil. In addition, resistance genes found in strains of food-borne bacteria represent a high risk, due to the possibility of transmission of these genes to other bacteria that may cause failures in human antimicrobial therapy.

Keywords: resistance genes, *Salmonella*, chicken meat.

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