Guzin Iplikcioglu Cil et al., J Food Microbiol Saf Hyg 2017, 2:4(Suppl)
DOI: 10.4172/2476-2059-C1-005



## Prevalence and antibiotic resistance of *Salmonella* spp. and *Salmonella typhimurium* in broiler carcasses, wings and liver

**Guzin Iplikcioglu Cil, Muammer Goncuoglu, F Seda Bilir Ormanci** and **Murat Uludag**
Ankara University, Turkey

**Statement of the Problem:** Food-borne diseases are an important public health problem in most countries and, among the reasons of these diseases *Salmonella* is still the most common one. Poultry and poultry products are the frequent vehicles of this bacteria. Recent studies showed that antibiotic resistance and particularly multiple resistance has increased dramatically in Salmonellae. Defining sources, serotypes and antibiotic resistance of *Salmonella* are necessary to accurately plan and apply prevention measures. The purpose of this study is to isolate and identify *Salmonella* spp. from packaged broiler carcasses, wings and liver samples. Also, to determine two important virulence genes and to evaluate antibiotic resistance profiles of the isolates.

**Methodology:** In the study conventional cultivation and immunomagnetic separation (IMS) based cultivation techniques were used for the isolation of *Salmonella* from 330 chicken samples. The isolates verified as *Salmonella* spp. by the detection of oriC gene and identified with using malic acid dehydrogenase and DT104 specific primers as *S. typhimurium* and *S. typhimurium* DT104, respectively by PCR. The antibiotic susceptibility test of *Salmonella* isolates was performed with the disc diffusion method with 20 different antibiotics.

**Findings:** Ninety-six (29.1 %) of the samples were detected as contaminated with *Salmonella* spp. According to the results 11 isolates (11.4%) were identified as *S. typhimurium*. None of these serotypes were determined as specific phage type DT104. InvA gene was detected from all the (100.0 %) *Salmonella* isolates and 14 isolates (14.6 %) were detected as positive for spvC gene. 83 isolates (86.4 %) were resistant to at least 5, 70 isolates (72.9 %) resistant to at least 7, 36 isolates (37.5 %) were resistant to at least 9 antibiotics.

**Conclusion & Significance:** In conclusion, continuous monitoring of *Salmonella* prevalence and resistance in the food supply is necessary because of the public health implications of a potential hazard.

### Biography

Guzin Iplikcioglu Cil has her expertise in Food Microbiology and she has been working in the Food Hygiene and Technology Department of Ankara University Faculty of Veterinary Medicine for ten years. Her thesis is about prevalence and molecular characterization of C. perfringens in chicken meat. She has studies about some important food-borne pathogens at molecular level, and her another work of interest is the antimicrobial resistance in food-borne bacteria. Also, she has publications about residue of antimicrobials and some important contaminants in foods.

iplikcioglu@veterinary.ankara.edu.tr