

**COMPARISON OF PHENOTYPIC AND GENOTYPIC  
ANTIMICROBIAL RESISTANCE PROFILES OF *SALMONELLA*  
ISOLATES FROM FARM/FIELD TO FORK IN TURKEY**

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Antimicrobial resistance (AMR) is resistance of a microorganism to an antimicrobial drug to which it was previously effective. Foodborne pathogens, including *Salmonella*, and pathogenic *E. coli*, have gained AMR last decades that causing a big treat for human society. *Salmonella* is one of the most identified and widely known foodborne pathogen, causing salmonellosis. Treatment is symptomatic, electrolyte replacement and rehydration. But in severe cases such as for immunocompromised patients, antimicrobial therapy is necessary. Multidrug-resistant (MDR) *Salmonella* is a great concern to human health in severe salmonellosis cases when this multidrug resistance interferes with treatment. In addition antimicrobial resistance genes might be shared with closely related human pathogens. Therefore, antimicrobial susceptibility monitoring of *Salmonella* isolates from farm/field to fork is very critical. In this study, the objective is to compare the genotypic and phenotypic variations of the antimicrobial resistance profile among *Salmonella* isolates from farm/field to fork collected in Turkey, 2012. Isolates are obtained from southeast and median Anatolian region of Turkey by using ISO6579 procedure. Confirmation is done by *invA* gene. Phenotypic characterization is performed by using disk diffusion method with 19 different antimicrobial agents. And 21 antimicrobial resistance genes are searched in *Salmonella* isolates by PCR. The antimicrobial resistance profiles of different source groups (i.e. food, animal and human) have shown various characteristics. This study shows the differences between phenotypic and antimicrobial resistance gene characteristics of *Salmonella* isolates and determines the responsible gene factor causing antimicrobial resistance in *Salmonella* isolated from three different source groups.

Keywords: Antimicrobial resistance, disk diffusion, *Salmonella*, molecular detection.

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