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Antimicrobial resistance genes in *Salmonella* isolates from poultry drinking water

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Salmonella species are among the most common causes of human bacterial gastroenteritis worldwide and food animals specially poultry are important reservoirs of this bacteria. In recent years, due to increase in the occurrence of antimicrobial resistance *spp*. of *Salmonella*, fatality rate for Salmonellosis is increasing significantly. In the context of exploring the emergence of antimicrobial resistant *Salmonella* species, present study was planned. *Salmonella* isolation was performed by collecting samples from poultry rearing and slaughtering areas with recovery rate about 29.3%. Bacterial colonies of red color with black center were appeared on the XLD agar plates and then confirmed by biochemical tests. Then multi-drug resistance of the isolates was examined by disk diffusion method. Resistant samples were further analyzed for the detection of various tet genes (*tetA, tetB, tetC, tetD, tetG*). PCR confirmed the presence of *tetA* in all the *Salmonella* positive samples while *tetB* was present in combination with *tetA* gene only in 16 samples. No amplification of *tetC, tetD* and *tetG* was examined. Our results illustrate that commonly used antibiotics, especially tetracycline is showing decline in efficacy due to increasing antimicrobial resistance in locally isolated *Salmonella* from poultry samples. These findings indicate that local population of *Salmonella* contains the *tetA* alone or in combination with *tetB* gene and are likely played an important role in transmission of antimicrobial resistance determinants among *Salmonella* strains.

Biography

Nadia Mukhtar is currently a PhD student in Department of Microbiology at University of Veterinary and Animal Sciences of Lahore. She is currently working as an Instructor Microbiology at Virtual University of Pakistan. She has published more than 10 papers in reputed journals. She has won a Scientific Exchange Award as the part of AAAS BMENA Scientific Exchange Program, supported by a grant from the U.S. Department of State, 2013. She got training on Metagenomic investigations of respiratory infections of Sheep at Harvil's Lab, Penn State University, USA, 2014.

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