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## Antibiotic and disinfectant resistance of *Salmonella* from retail meats in China

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*Salmonella* is a leading cause of food borne illnesses and deaths worldwide. The frequent use of antibiotic and disinfectant in food production and processing may have imposed a selective pressure and contributed to the emergence of resistant microbes. However, little information is available regarding the antibiotic and disinfectant resistance of *Salmonella* isolates from retail meats in China. *Salmonella* isolates were recovered from chicken, beef and pork purchased from selected supermarket. Antibiotic susceptibility was tested according to the standard disk diffusion method. The MICs of disinfectants were determined using the agar dilution method. All isolates were screened for the presence of disinfectant resistance genes and further analyzed for genetic relatedness by PFGE. The predominant serotype was *Salmonella* Derby (34.8%) followed by *S. Enteritidis* (12.3%) and *S. Rissen* (9.0%). Overall, 82.8% isolates were resistant to OTC, 66.3% to TMP, 28.8% to AMX, 23.9% to AMP, 20.3% to LEV, 11.7% to GEN, 11.7% to EFT, 15.3% to CIP and 3.7% to AMC respectively. The MICs of the disinfectants cetyltrimethylammonium bromide and cetylpyridinium chloride were 8-128 mg/L and 8-256 mg/L. The *qac* and *sugE(p)* gene was found less prevalent (0.0% to 14.7%). Up to 71 distinct PFGE types were identified among the 163 *Salmonella* isolates. PFGE revealed that the resistant isolates were associated with the sampling supermarkets or groceries. *Salmonella* can serve as a critical vector in spreading disinfectant and antibiotic resistance. The use of disinfectant in food processing environments may have played a role in the emergence of antibiotic and disinfectant resistant bacteria.

### Biography

Likou Zou has completed his PhD at the age of 28 years from Sichuan Agricultural University and Postdoctoral studies from Sichuan University School of Life Science. He is the Director of Lab of Microbiology, Dujiangyan Campus of Sichuan Agricultural University. He has published more than 20 papers in reputed journals and has been serving as an Editorial Board Member of *Journal of Sichuan Agricultural University*.

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