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Plasmid-mediated antimicrobial resistances of *V. parahaemolyticus* from pacific white shrimp and *E. coli* from diarrheal swine

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Vibrio parahaemolyticus isolated from the Pacific white shrimp (*Litopenaeus vannamei*) and *Escherichia coli* isolated from intestinal organs of diarrhea swine were tested antimicrobial sensitivity and studied on plasmid-mediated antimicrobial resistance genes. The antimicrobial resistant (AMR) rates of *V. parahaemolyticus* were 98.48% ampicillin, 3.03% doxycycline, 4.55% oxytetracycline, 6.06% erythromycin, 1.52% florfenicol, and 1.52% sulphamethoxazole-trimetroprime. *V. parahaemolyticus* were not resistant to tested quinolone agents (ciprofloxacin, enrofloxacin, norfloxacin and ofloxacin), but some isolates presented intermediate susceptibility of the agents. Plasmid-mediated quinolone resistance (PMQR) gene, *qnrVC* was found in only one isolate. DNA amplification of pirAB-like genes, which caused acute hepatopancreatic necrosis disease (AHPND) in shrimp, showed that 39.39% of *V. parahaemolyticus* carried this virulent gene. However acquisition of *pirA*B-like gene virulent factor in *V. parahaemolyticus* was not related to their AMR. While the AMR rates of *E. coli* were relatively high at 98.41% amoxicillin, 98.41% ampicillin, 96.83% cephalexin, 69.84% ciprofloxacin, 69.84% enrofloxacin, 57.14% fosfomycin, 77.78% colistin, 84.13% gentamicin, and 90.48% oxytetracycline. The rates of *E. coli* carried PMQR genes were 61% of qnrS and 9.5% of *oqxA*. Colistin resistant gene *mcr-1* that located on plasmid was also amplified and found that 25.40% of the isolates carried *mcr-1* gene and they had colistin MIC 2 μg/mL.

Biography

Patamabhorn Amavisit is an associate professor who is working for the Faculty of Veterinary Medicine, Kasetsart University, Thailand. Her researches focus on veterinary microbiology including foodborne bacteria isolated from animal sources and antimicrobial resistant (AMR) bacteria. Since the launch of WHO global action plan on AMR, the researches have been performed for a part of policy decision in the country level using One Health aspects involving the surveillance of AMR contamination in particular bacteria contaminated in animals and environment.

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