RESEARCH NOTE

WIDESPREAD PRESENCE OF DFRA12 AND ITS ASSOCIATION WITH DFRA12-AADA2 CASSETTE IN SALMONELLA ENTERICA ISOLATES FROM SWINE

Pawin Padungtod¹, Chanwit Tribuddharat² and Rungtip Chuanchuen³

¹Department of Veterinary Public Health, Faculty of Veterinary Medicine, Chiang Mai University, Chiang Mai; ²Department of Microbiology, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok; ³Department of Veterinary Public Health, Faculty of Veterinary Science, Chulalongkorn University, Bangkok, Thailand

Abstract. One hundred and eighty-nine *Salmonella* isolates from swine were tested for susceptibility to nine antimicrobial agents, presence of *dfrA12* and class 1 integrons containing *dfrA12*-orfF-*aadA2* cassette. All isolates were multidrug resistant and exhibited highest resistance prevalence to trimethoprim (93%). Most isolates (89%) were *intl1*-positive and 107 isolates (57%) carried *dfrA12*, all of which were resistant to trimethoprim. Forty-eight *dfrA12*-harboring strains (45%) were *intl1*-positive together with *dfrA12-aadA2* gene cassette. Fifteen isolates contained *dfrA12* but not *intl1* and *dfrA12-aadA2* cassette. The results indicated a wide distribution of *dfrA12* and its role in dissemination of trimethoprim resistance among *Salmonella* isolates from fattening pigs.

Keywords: *Salmonella enterica, dfrA12, dfrA12-aadA2* cassette, swine

Correspondence: Dr Rungtip Chuanchuen, Faculty of Veterinary Science, Chulalongkorn University, Pathumwan, Bangkok 10300, Thailand.

Tel: 66 (0) 2218 9578; Fax: 66 (0) 2218 9577

E-mail:rchuanchuen@yahoo.com