

ABSTRACTS

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[P07] FIRST DETECTION OF THE OXAZOLIDINONE RESISTANCE-ASSOCIATED GENES CFR AND OPTRA IN METHICILLIN- RESISTANT COAGULASE NEGATIVE STAPHYLOCOCCI (MRCONS) FROM HEALTHY PIGS IN ITALY

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In the last two decades, oxazolidinones' resistance genes *cfr* and *optrA* have been occasionally reported worldwide in *Staphylococcus* spp. of livestock origin. These genes can be chromosomal, but they are often transferable through mobile genetic elements. The objective of our study was investigating the presence of *cfr* and *optrA* genes in methicillin-resistant coagulase-negative staphylococci (MRCoNS) isolated from swine in a high farm-density area of northwestern Italy.

Nasal swabs were taken from healthy pigs. After isolating pure cultures, selected MRCoNS (n=28) were phenotypically tested through Kirby-Bauer disk diffusion method (EUCAST guidelines for linezolid disk). Linezolid resistance was recovered in six samples, which were subjected to PCR targeting *cfr* and *optrA* genes. *cfr* gene was detected in one *S. sciuri* from a piglet, while *optrA* was amplified from *S. sciuri*, *S. cohnii* and *S. pasteuri* (n=3 samples) collected in different productive stages (sows, post-weaning and finishing). The detection of both genes from the same sample did not occur.

In Italy, oxazolidinones' resistance genes were recently detected in enterococci of swine origin, but this is the first report in staphylococci of animal origin. Our results highlight the importance of monitoring oxazolidinones' resistance, even at farm level, to hinder the dissemination of these resistances to human community and hospitals, where oxazolidinones are used as last-resort antibiotics. In addition, they emphasize the need of surveillance of antibiotic usage in pigs, since both *cfr* and *optrA* genes mediate cross-resistance to other antibiotic classes, such as phenicols, that are routinely used in swine farming.