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ANTIMICROBIAL RESISTANCE OF *Salmonella* spp. ISOLATED FROM A SLAUGHTERHOUSE

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Salmonella spp. are recognized as one of the most common causes of bacterial foodborne illness worldwide. These bacteria can cause severe infections that often require antimicrobial therapy. The last few decades have witnessed the emergence of highly virulent and antibiotic-resistant *Salmonella* strains, that represent a significant global concern and is a public health issue. In the European Union, 10 – 20% of human *Salmonella enterica* infections may be attributable to pig sources, as reported by EFSA. The aim of this study was to investigate the presence of multidrug resistant (MDR) *Salmonella* sp. in slaughtered swine carcasses. Fifty three isolates, taken from animal carcasses in five sampling times, were tested according to antimicrobial susceptibility by disk diffusion method, following CLSI Standards (2017). Fifteen antimicrobial agents were tested: amoxicillin- clavulanate (AMC), ampicillin (AMP), amikacin (AK), ceftazidime (CAZ), ceftioxone (CRO), ciprofloxacin (CIP), gentamicin (GEN), imipenem (IMP), kanamycin (K), meropenem (MEM), nalidixic acid (NA), nitrofurantoin (NFT), streptomycin (S), trimethoprim-sulfamethoxazole (SXT), tetracycline (TE). Inhibition zones were measured by SCAN500, version 8.3.1.0 v3.4 (Interscience®). Multidrug resistance (MDR) was considered when the isolates were resistant to three or more classes of antibiotics. High resistance frequencies were found to TE (n= 46/53 - 86.8%), AMP (n= 34/53 - 64.1%), S (n= 26/53 - 49.0%), SXT (n= 10/53 - 18.9%) and AMC (n= 6/53 - 11.3%). All (100%) strains were susceptible to CAZ, CRO, GEN, IPM, MEM. Most isolates (53.8%) presented MDR, among them two were resistant to four pharmaceutical classes (beta-lactamic, aminoglycoside, quinolone and sulfa). The results strengthen the increased prevalence of MDR *Salmonella* sp. which is emerging problem worldwide and a significant food safety hazard. Continued surveillance of antimicrobial resistance, implementation of strict sanitary standards in the food industry

are also needed to significantly reduce the overall burden of salmonellosis on human health. Keywords: Salmonellosis, MDR, Foodborne Pathogen, Antibiotic