CHARACTERIZATION OF CLASS 1 INTEGRONS WITH UNUSUAL 3' CONSERVED REGION FROM SALMONELLA ENTERICA ISOLATES

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Abstract. The unusual 3' conserved sequence region of class 1 integrons was characterized in seven Salmonella isolates from swine and poultry. Three types of gene cassette arrays, aadA2-cmlA1-aadA1, sat-psp-aadA2-cmlA1-aadA1 and drfA12-orf-aadA2-cmlA1-aadA1, were found to be linked to a genetic organization qacH-IS440-sul3. All class 1 integrons were located on a conjugative plasmid that could be transferred to Escherichia coli. The results support the notion that the use of an antibiotic can select for resistance not only to that specific agent, but also to other unrelated antimicrobials including those that are no longer approved for use in food animal production.

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