



233 Research paper

**PCR-Based Analysis of ColE1 Plasmids in Clinical Isolates and Metagenomic Samples Reveals Their Importance as Gene Capture**

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In **Significant Impact Groups:**

AMU reduction strategies \ Monitoring and surveillance

Species targeted: Pigs;Poultry;Sheep;Other;

Age: Young;Adult;

**Summary:**

Genes transferred by ColE1 plasmids are important vehicles for the spread of antibiotic resistance in two families of bacteria, Enterobacteriaceae and Pasteurellaceae. Their monitoring is essential, as they harbor important resistance elements that can lead to resistance to antimicrobials in bacteria found in humans, animals and the environment. Understanding how these genetic elements work can lead to better understanding of how resistance to antimicrobials is being spread. In this work we present a useful genetic tool for the detection and analysis of ColE1 plasmids, and confirm their important role in the dissemination of antibiotic resistance, especially in the Pasteurellaceae family of bacteria.

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**Where to find the original material:**

[https://www.frontiersin.org/articles/10.3389/fmicb.2018.00469/full?report=reader;](https://www.frontiersin.org/articles/10.3389/fmicb.2018.00469/full?report=reader)

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