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**Presence of virulence and antibiotic resistance genes of *Escherichia coli* from swine farms in Ben Tre province, Vietnam**

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**Abstract:**

**Background/Objective:** The study was conducted from August 2023 to March 2024. A total of 96 fecal samples were collected at 4 swine farms, each facility collected fecal samples from 3 subjects including 32 sow feces, 32 piglet feces, 32 fattening pigs. Determine the presence and relationship between virulence and antibiotic resistance genes in research samples.

**Methods:**

*Sample collection method:* Laboratory samples were collected according to a cross-sectional descriptive study, Stool samples were collected directly from the rectum by inserting a sterile cotton swab, then placing the swab with the stool sample in Cary-Blair transport medium.

*Methods to identify virulence and antibiotic resistance genes:* Virulence and antibiotic resistance genes were determined by PCR method. DNA of E. coli bacteria was performed using the heat shock method according to the procedure of Costa et al. (2010). The steps of the PCR reaction were performed according to Joshi and Deshpande (2010)

**Results:**

90/96 pig feces samples were positive for *E. coli*. It was tested for the presence of virulence genes, resulting in the presence of 8/8 tested genes *Stx1, Stx2, eae, Lt, Sta, Stb, bfpa* and *agg* with a combined rate of 41.67%, 59.38%, 20.83%, 13.54%, 39.58%, 40.63%, 10.42% and 3.13%*.* At the same time, surveying the presence of antibiotic resistance genes *blaTEM, blaampC, bla CTX-M, tetA, qnrA, Sulii, cat1 and StrA* with proportions of50.00%, 73.96%, 46.88%, 76.04%, 51.04%, 69.79%, 36.46% and 79.17%, respectively*.*

A total of 84/90 *E. coli* strains tested had the presence of both virulence genes and antibiotic resistance genes

**Conclusion:**

The *E. coli* strains surveyed had all the research genes detected, a large proportion of strains carried both virulence genes and antibiotic resistance genes

**Keywords:** virulence, resistance, *E. coli*, pig, Ben Tre, Vietnam.