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Presence of virulence genes in Escherichia coli isolates from sururu Mytella guyanensis (Lamarck, 1819) marketed

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ABSTRACT

Isolation of Escherichia coli from food is a major concern because pathogenic strains of this bacterium can cause everything from diarrhea to hemolytic uremic syndrome. Given the above, the objective of this work was to investigate virulence genes in Escherichia coli isolates from the sururuMytellaguyanensis commercialized in Cachoeira, Bahia, Brazil. The samples were obtained from four traders, two from markets and two at points of sale at the Cachoeira free market, packed in reusable ice isothermal boxes and transported to the laboratory for analysis. After microbiological analysis, Escherichia coli strains were isolated on Methylene Blue Eosin agar and preserved in Brian Heart Infusion broth and 15% glycerol and kept at -20 ° C. Identification of virulence genes in isolated strains was performed using specific primers by means of the Polymerase Chain Reaction. Twenty-four isolates of Escherichia coli were obtained, of which the prevalence of the elt gene, characteristic of enterotoxigenic Escherichia coli, was 75% of the isolates. There was no detection of stx and bfpA genes in isolates, which are prevalent in enterohemorrhagic Escherichia coli and enteropathogenic Escherichia coli strains, respectively. The presence of the Escherichia coli virulence-related elt gene in Mytellaguyanensis isolates reveals the need for improved processing, including good handling practices, adequate storage and pre-consumption cooking to ensure consumer health.

BIOGRAPHY

Ms. Carla Alves Barbosa holds a degree in Nutrition and a Master's Degree in Agricultural Microbiology from the Federal University of Recôncavo da Bahia (UFRB). In graduation he worked with technology and food microbiology. In the master's degree he worked with microbiology, phytochemistry and genetics. Research on virulence genes in Escherichia coli isolates from sururuMytellaguyanensis was one of the works developed during the master's degree.

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