FDA researchers report first evidence of ESBL producing E. Coli in US retail meat

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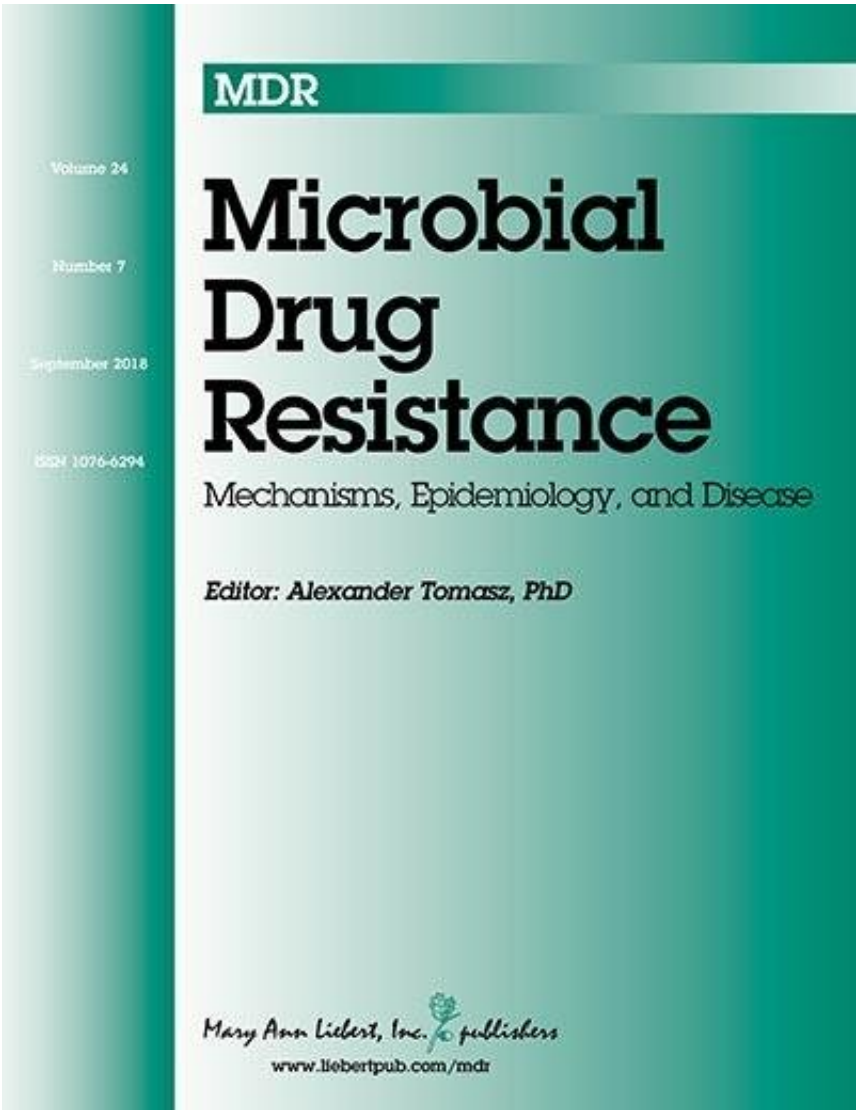

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A new study using antimicrobial susceptibility testing and whole genome sequencing to test extended spectrum beta lactamase (ESBL) producing *E. coli* isolated from cattle for food production and from various retail meat products has shown that all were resistant to at least three antimicrobial classes. They also carried various types of CTX-M type ESBL genes, which are increasingly common in clinical patients worldwide and whose presence in food-producing animals and retail meat supplies might contribute to a greater incidence of infections. These findings are reported in *Microbial Drug Resistance*.

Daniel Tadesse, U.S. Food and Drug Administration (FDA, Laurel, MD) and colleagues from the FDA, Texas Tech University (Lubbock, TX), and the U.S. Department of Agriculture (USDA, Clay Center, NE) coauthored the article entitled "Whole Genome Sequence Analysis of CTX-M Containing *Escherichia coli* Isolates from Retail Meats and Cattle in the United States." The ESBL *E. coli* isolates from meat samples, including chicken breast, ground turkey, ground beef, and pork chops, were collected by the National Antimicrobial Resistance Monitoring System (NARMS). Antimicrobial susceptibility testing was performed against a panel of 14 antimicrobials and 9 ß-lactam agents.

"This interesting and well-documented paper by Daniel Tadesse and colleagues provides convincing and alarming evidence of the 'arrival' to the dining room table of meat products contaminated by multidrug resistant *E. coli*, "says Editor-in-Chief Alexander Tomasz, Ph.D., The Rockefeller University, New York, NY. "This paper brings 'home' the seriousness of the issue of antimicrobial drug resistance."

More information: Daniel A. Tadesse et al, Whole-Genome Sequence Analysis of CTX-M Containing Escherichia coli Isolates from Retail Meats and Cattle in the United States, *Microbial Drug Resistance* (2018). DOI: 10.1089/mdr.2018.0206

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