

# Prevalence of Extended-Spectrum $\beta$ -Lactamase Producing Enterobacteriaceae Among Clinical Isolates From Dogs Admitted to a Veterinary Hospital in Vienna

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Extended-Spectrum  $\beta$ -Lactamase (ESBL)-producing carbapenem-resistant Enterobacteriaceae are classified by the World Health Organisation (WHO) as pathogens of critical priority for development of new antibiotics because of their clinical importance. Companion animals may act as reservoirs of ESBL; however, data on prevalence is still scarce. To assess the situation in Vienna, 89 fecal samples from dogs visiting the small animal hospital at the University of Veterinary Medicine, including 3 samples from healthy dogs living at the University, were collected. The samples were streaked on selective media containing 2  $\mu$ g/ml cefotaxime. Species identification was carried out using MALDI-ToF. The isolates were tested for phenotypic resistance using a combination disc test by EUCAST standards. An antibiotic disc containing meropenem was added to screen for additional resistance to carbapenems. Among the 89 samples, 14 isolates of Enterobacteriaceae were ESBL, of which 12 were E.coli, one Klebsiella pneumoniae and one Enterobacter cloacae, reaching a prevalence of 15.7%. None of the isolates were resistant to meropenem. This study confirmed that there is a substantial percentage of dogs carrying ESBL in Vienna, which may pose a risk to public health.

## Keywords

Antimicrobial Resistance, Companion Animals, Extended-Spectrum  $\beta$ -Lactamase, One Health

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## Professional Status of the Speaker

Graduate Student

## Junior Scientist Status

No, I am not a Junior Scientist.

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