

2nd Meeting of the Associate Laboratory for Animal and Veterinary Sciences

Book of abstracts

12th and 13th May 2023

UTAD, Auditorium Geociências

Vila Real



Seroprevalence of hepatitis E virus in wild boar (*Sus scrofa*) and in red deer (*Cervus elaphus*) in Portugal

Pires H¹, Cardoso L², Lopes AP², Fontes MC², Matos M³, Pintado C^{1,4,5}, Figueira L^{1,4,5}, Matos AC^{1,4,5}, Mesquita JR^{6,7,8}, Coelho AC^{2*},

¹Polytechnic Institute of Castelo Branco (IPCB), Castelo Branco, Portugal

²Animal and Veterinary Research Centre (CECAV), University of Trás-os-Montes e Alto Douro (UTAD), Vila Real, Portugal; Associate Laboratory for Animal and Veterinary Sciences (AL4Animals), Portugal

³Centre for the Research and Technology of Agro-Environmental and Biological Sciences (CITAB), UTAD, Vila Real, Portugal

⁴Centre Research for Natural Resources, Environment and Society (CERNAS-IPCB), Castelo Branco, Portugal

⁵Researcher at Q-RURAL – Quality of Life in the Rural World, IPCB, Castelo Branco, Portugal

⁶ICBAS—School of Medicine and Biomedical Sciences, Porto University, Porto, Portugal

⁷Epidemiology Research Unit (EPIUnit), Instituto de Saúde Pública da Universidade do Porto, Porto, Portugal

⁸Laboratório para a Investigação Integrativa e Translacional em Saúde Populacional (ITR), Porto, Portugal

*Corresponding author: accoelho@utad.pt

Keywords: ELISA, Hepatitis E virus, wild boar, red deer, seroprevalence

Hepatitis E virus (HEV) is recognized as a zoonotic agent causing an emerging human viral disease in industrialized nations. HEV is primarily found in domestic pigs and wild boars, which serve as the primary animal hosts for the virus globally, but also camels and deer, which serve as reservoirs. In order to investigate the importance of the wild red deer (*Cervus elaphus*) and wild boar (*Sus scrofa*) in the epidemiology of HEV infection, a serological survey was performed on samples from 648 wild ungulates (297 wild red deer and 351 wild boar) from the Centre region of Portugal. Specific antibodies to HEV were detected with a commercial enzyme-linked immunosorbent assay (ELISA) (IDVet®, Montpellier, France). HEV-specific antibodies were detected in sera from 4.9% wild ungulates (95% confidence interval [CI]: 3.4-6.9%). In this study, 9.1% of the samples from red deer (95% CI: 6.3-12.9%) and 1.4% wild boar (95% CI: 0.6-3.3%) were positive. Red deer and wild boar from the Centre of Portugal are exposed to HEV. The study demonstrates that red deer and wild boar could be reservoirs of infection for both livestock and humans.

Acknowledgments: This work was supported by the projects UIDP/00772/2020, UIDB/00772/2020 and LA/P/0059/2020 funded by the Portuguese Foundation for Science and Technology (FCT).