

GROUP NAME: ZOOSES AND EMERGING DISEASES OF INTEREST TO PUBLIC HEALTH

CODE A16_23R



Within the “One Health” perspective, this research group studies parasite diseases and infectious diseases that animals can transmit to humans.

Our objectives include **diagnosis and epidemiology** of diseases such as those caused by *Mycobacterium* in wild fowl, along with severe virus infections and intestinal protozooses; the **detection of resistance to antimicrobials** and the risk such resistances present to human health: for instance, the presence of *E. coli* in the Ebro River Waters, and the examination of natural alternatives to antibiotics in animal production. Moreover, within the current climate change situation, **we study vectors** (such as ticks) that transmit such diseases. This is an essential aspect of our group’s studies, which have proposed predictive models of the evolution and dispersion of such vectors, often basing ourselves on the use of artificial satellite data

RESEARCH LINES

- **1. Activities in the field of detection of resistance to antimicrobials**
 - *E.coli* detected in the Ebro river
 - Resistance in domestic animals: cattle and post-weaning diarrhea in swine. Microbiota and resistance to antibiotics
 - Resistance to antibiotics in wild animals
- **2. Infectious diseases with zoonotic potential stemming from wild and domestic fauna, including the detection of bacteria of the *Mycobacterium tuberculosis* complex (CMTB) in carnivorous birds and in storks.**
- **3. Infectious diseases with zoonotic potential stemming from wild fauna, with particular focus on those transmitted by vectors that increase with climate change.**
 - Monitoring tick populations in Aragon
 - Identifying pathogenic microbial species transmitted by vectors
 - Predictive models of the modification of the habitat extension of disease vectors

NOTABLE PROJECTS

- “Morphological and molecular characterization, ecology and pathogens transmitted by *Rhipicephalus sanguineus s.l.* ticks in the middle Ebro valley”. Subsidies for the development of multidisciplinary R&D&I projects along priority lines, Gobierno de Aragón. (2021-2023).
- “Bats in urban environments: What is the true cost of living in the city?”. Proyecto UZ2021-BIO-03: Programa Propio de Investigación del Vicerrectorado de Política Científica de la Universidad de Zaragoza.
- “Knowledge [insect] bites”. Proyecto FCT-20-15766. FECYT de ayudas para el fomento de la cultura científica, tecnológica y de la Innovación. (2021-2022).
- “CHEMICAL CONTROL GUIDELINES AND VACCINATION GUIDELINES OF BOVINE TICKS IN LATIN AMERICA”: CYTED 2019118RT0542. CYTED 2017. (2018 -2021).
- “Dynamics of distribution of the red fox in the Patagonian steppe and impact on agricultural transformation”. INCGLO0028: LincGlobal CSIC. (2021-2023).

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