Antibiotic-Resistant in Scavenger birds: a One Health Problem

Andreia Garcês[1,2,*]

[1]Wildlife Rehabilitation Center (CRAS) University of Trás-os-Montes e Alto Douro,

Vila Real, Portugal

[2]Centre for the Research and Technology of Agro-Environmental and Biological Sciences (CITAB), University of Trás-os-Montes e Alto Douro, Vila Real, Portugal

Vultures play a key role in the ecosystem. They help to remove the decaying organic material from the environment and therefore help to reduce the spread of pathogenic microorganisms in the ecosystem. Vultures can be contaminated by different bacteria, viruses and fungi (some zoonotic) when they feed, which can in turn contaminate other animal species and even humans. Vultures can be actively exposed to multidrug-resistant bacteria when they consume contaminated carcasses. A total of 20 works were analysed between the years 2011 to 2021. The studies were performed on *Cathartes aura* (n=1), *Gyps Bengalensis* (n=1) *Neophron percnopterus majorensis* (n=3), *Neophron percnopterus percnopterus* (n=3), *Gyps fulvus* (n=5), *Aegypius monachus* (n=4). Most studies were performed on faecal samples, and the isolated bacteria were mostly microbiota faecal flora microbiota, with *Escherichia coli* as one of the most studied microorganisms (n=12). Extended Spectrum Beta-Lactamase was detected in 5 different studies. The main resistance present in *E.coli* were ampicillin, tetracycline and sulfamethoxazole-trimethoprim.

From a One Health perspective, it helps to understand how these animals can be excellent environment sentinels and a tool for measuring the ecosystem's health and humans with whom they share their habitat.