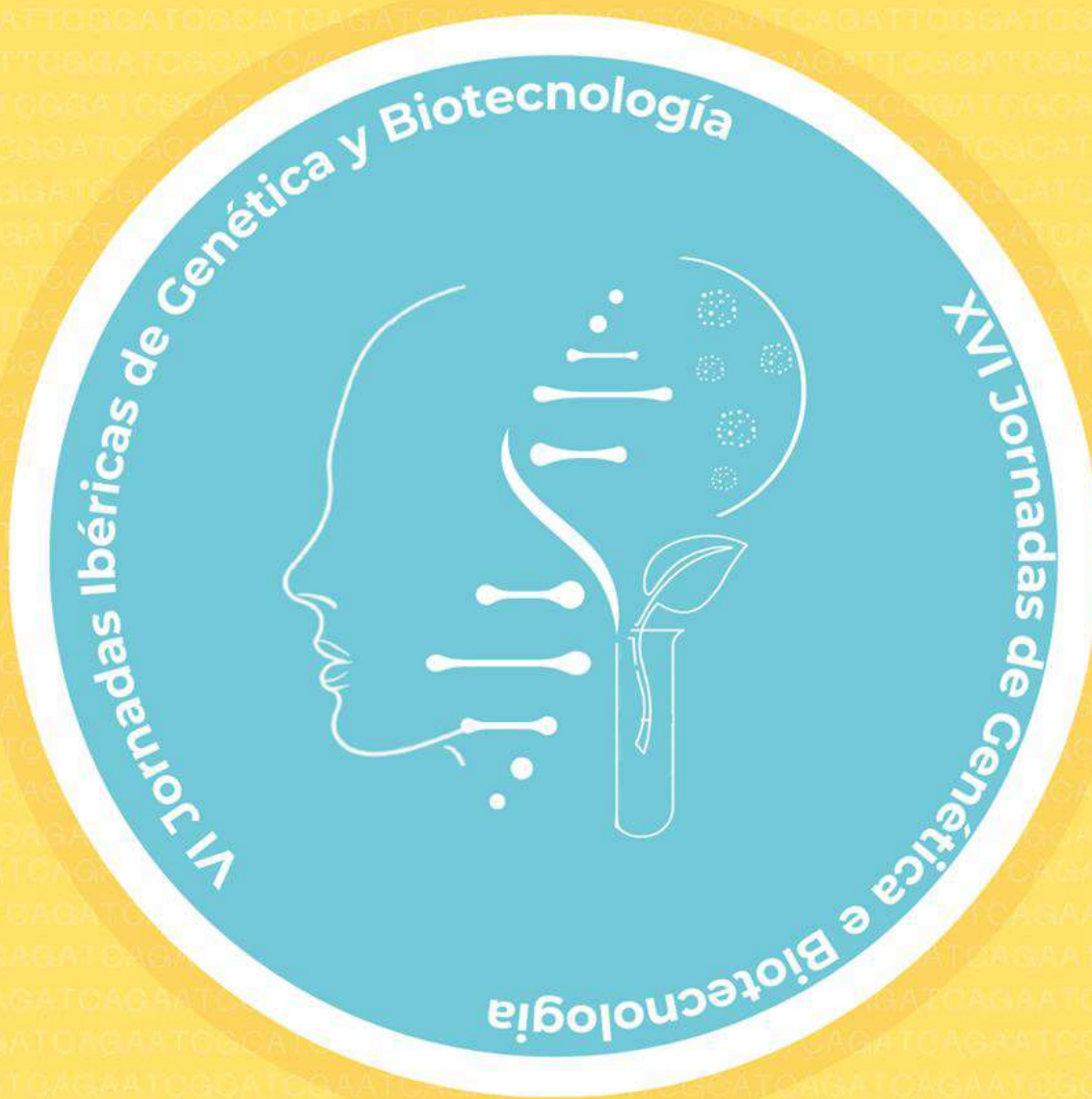


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Serological evidence of West Nile virus in wild birds in Portugal

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West Nile virus (WNV) has a zoonotic transmission cycle. Avian species are considered the definitive hosts, and mosquitoes and other arthropods are the main vectors. Humans are considered accidental and dead-end hosts, since mammals are unable to efficiently amplify the virus. We aimed at studying serological prevalence of WNV circulation in wild birds in Portugal. Three hundred and six individuals belonging to 34 different species and 11 orders were sampled, and tested with a commercial ELISA kit for antibodies to WNV. Results were positive for 64 samples (20.9%; 95% confidence interval [CI]: 16.5-25.9%) as follows: Accipitriformes (n=44; 23%; 95% CI: 17.3-29.7%), Ciconiiformes (n=4; 9.3%, 95% CI: 2.6-22.1%), Columbiformes (n=1; 16.7%, 95% CI: 0.4-64.1%), Otidiformes (n=1; 2.5%; 95% CI: 0.0-97.5), and Strigiformes (n=14; 31.1%, 95% CI: 18.2-46.7%). So far, serological and molecular evidence of WNV circulation was mostly restricted to the southern part of the country, and our preliminary results found antibodies to WNV in samples collected from birds in the North of Portugal. Climate has been recognized as one of the main factors influencing WNV activity and dispersal. With the changes that have taken place in recent years at a global level, new studies are needed to assess the real epidemic situation of the virus in Portugal.

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