

Detection of antibodies against influenza virus in Benin livestock

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Since the first outbreak in March 2024, the Highly Pathogenic Avian Influenza Virus (HPAIV) H5N1, clade 2.3.4.4b, has infected both poultry and dairy farms in multiple states of the United States (US). Norway and United Kingdom have also reported H5 virus in small ruminants having found seropositive sheep in 2023 and 2025, respectively. The Netherlands reported one seropositive cow in a farm in January, 2026. Clade The virus has recently been detected for the first time in Australian wild birds. Very limited surveillance for animal influenza is carried out in Africa despite the fact that clade 2.3.4.4b viruses have been repeatedly detected in wild and domestic birds in the last few years. Our study aimed to assess whether livestock in the vicinity of HPAIV H5N1 outbreaks in poultry in Benin (West Africa) have been exposed to influenza virus. Ten cattle, 1 donkey and 2 swine sera were positive for anti-AIV NP antibodies (IDVet multispecies ELISA kit). However, seroneutralisation assays against A/mallard duck/France/24-1065_pp37/2024(H5N1) (European DI genotype) were negative, suggesting absence of anti-H5 neutralizing antibodies. Hemagglutination inhibition assays are ongoing to identify the HA subtype specificity of the identified antibodies. The seropositivity in ELISA tests highlights the importance of surveying livestock susceptibility to AIV in regions outside of the US. More work is warranted to understand the putative role of these hosts in virus evolution and spread.

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Professional status of the speaker

PhD student

Junior scientist status

Yes, I am a junior scientist.

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