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WNVcombat - Combatting WNV through an integrated One Health approach

Tuesday, October 6, 2026 2:04 PM (9 minutes)

West Nile virus (WNV) is an emerging mosquito-borne virus that can cause neuroinvasive infections and death in humans. WNV has emerged as a growing concern in Europe, with its spread and the intensity of outbreaks being exacerbated by climate change. WNV is transmitted by mosquitoes that are native to Europe and occur in high densities in urban environments. Numerous bird species can amplify the virus and infect mosquitoes during their blood-meal acquisition. Berlin, as one of the largest metropolitan areas in Europe, is of particular concern due to the establishment of WNV and due to the urban heat island effect, with increasing heat extremes and an increasing number of tropical nights, which enhance WNV amplification.

WNVcombat seeks to understand local maintenance and amplification of WNV at fine temporal and spatial scales. Objectives include analyzing how urban bird species assemblages affect WNV infection rates in mosquitoes with consequences for human infection risk under current and climate change scenarios, assessing human exposure, and developing a web-based tool featuring an epidemiological model as a warning platform. The project will produce high-resolution risk maps and test nature-based interventions, refining strategies in other WNV-endemic regions. WNVcombat is crucial for public health, veterinary services, and environmental agencies, providing guidelines for public health responses and a comprehensive communication strategy.

Keywords

Registration ID

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Professional Status of the Speaker

Professor

Junior Scientist Status

No, I am not a Junior Scientist.

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