



P3.035



Contribution of climate change to the emergence of West Nile virus in Europe

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Abstract

Background & aims of study

West Nile virus (WNV) is an important mosquito-borne pathogen in Europe and although the causal relationship between climate change and its emergence on the continent has been reported, it has not been formally evaluated. Here, we examine whether WNV establishment in Europe can be attributed to climate change.

Methods & results

For this purpose, we train and project ecological niche models for WNV considering historical, future, and counterfactual climate data, the latter corresponding to a hypothetical climate in a world without climate change. We show an increase in the ecologically suitable area for WNV under the historical climate evolution, whereas this area remains largely unchanged throughout the last century in a no-climate-change counterfactual.

Implications



counterfactual.

Implications

Our analyses therefore point towards climate change as one of the major drivers of the increased risk of WNV circulation in Europe, and further allows discussing potential scenarios for the future evolution of the areas at risk.

Keywords

West Nile virus

Europe

ecological niche modelling

climate change

SESSION DETAILS

Poster Session 3, with Refreshment Break & Meet the Editor Session

📍 Europa Foyer & Italia Foyer
15:40-17:10
Thursday, 30 November, 2023

IN THIS SESSION

Can carrier animals support FMD persistence in endemic regions? A model exploration of explanations of FMD persistence

How effective are control methods for endemic FMD? A simulation study in the Republic of Turkey

Collateral impacts of pandemic COVID-19 drive the nosocomial spread of antibiotic resistance: a modelling study

Active learning sampling design (A-LSD): A new adaptive survey design paradigm to improve representativeness of subpopulations

Number of COVID-19 importations averted by travel restrictions in Japan

Impact of risk heterogeneity on the feasibility of Hepatitis C elimination among people who inject drugs

Social contact patterns following the COVID-19 pandemic: A snapshot of post-pandemic behaviour from the CoMix study

Data assimilation for estimating change points of time-varying reproduction numbers

Monitoring contacts to efficiently control pathogen spread in hospital settings