

# WEST NILE VIRUS IN ITALY, FIVE YEARS OF EPIDEMIC

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## Summary

West Nile virus (WNV) first appeared in Italy in 1998. Although the infection caused severe disease and deaths in horses, no cases were reported in humans at that time. Since 2008, the Italian epidemiological scenario of WNV has been dramatically changing with neurological diseases being increasingly observed in both, humans and horses. In order to monitor and control the WNV circulation, the Italian government implemented both a national serological, entomological and virological surveillance program and a national plan for West Nile Neuroinvasive Disease. Within the framework of WNV surveillance activities, it was possible to detect and monitor the progression and evolution of different strains of WNV from their entry in the North Eastern part to their spread into the South and main Islands of Italy. In some areas co-circulation of WNV strains belonging to lineage 1 and 2 was also evidenced. The presentation will describe the main features observed during these last five years of outbreak.

**Keywords:** West Nile virus; Italy; evolution; epidemiology.

Sažetak

## Pet godina epidemije uzrokovane virusom Zapadnog Nila u Italiji

Virus Zapadnog Nila (VZN) prvi je put u Italiji bio dokazan 1998. godine. Premda je tada uzrokovao tešku bolest kod konja i njihovo ugibanje, bolest nije bila zabilježena kod ljudi. Epidemiologija infekcije virusom Zapadnog Nila u Italiji znatno se promijenila nakon 2008. godine. Otada se sve češće javlja s nervnim poremećajima u ljudi i konja. Radi promatranja kruženja i kontrole VZN-a, u Italiji je na državnoj razini donesen nacionalni plan za provođenje programa seroloških, entomoloških i viroloških istraživanja neuroinvazivne bolesti uzrokovane virusom Zapadnog Nila. U sklopu promatranja proširenosti infekcije VZN-om proučavana je evolucija različitih sojeva virusa od njihove pojave u sjevernim i istočnim područjima Italije do širenja na jug i glavne talijanske otoke. U nekim područjima

dokazana je istodobna aktivnost sojeva linije 1 i linije 2 VZN-a. U izlaganju su iznesena osnovna epidemiološka obilježja infekcije posljednjih pet godina.

**Ključne riječi:** virus Zapadnog Nila; Italija; evolucija; epidemiologija.

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