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Official Symposium

West Nile virus

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West Nile virus (WNV) is a mosquito-borne Flavivirus belonging to the Japanese encephalitis antigenic complex in the family Flaviviridae. WNV is maintained in an enzootic cycle between birds and ornithophilic mosquitoes, mainly *Culex* species, while humans, horses, and other mammals are considered incidental or dead-end hosts. Infection in humans mainly occurs asymptotically or, in approximately 20% of cases, with a febrile illness, while, in less than 1% of infections, it occurs with a neuroinvasive disease, which is often severe or even lethal in elderly and immunocompromised individuals. First isolated in 1937 in the district of West Nile in Uganda, in the last 30 years the virus has been responsible for several human and equine outbreaks in Europe and in the Mediterranean basin. In recent years, epidemics caused by WNV in humans and horses have become more frequent in Southern European countries, such as Italy and Greece. The increasing number of WNV outbreaks is associated with the emergence of novel viral strains, which display higher virulence and greater epidemic potential for humans. In addition, both WNV lineage 1 and lineage 2 have been isolated in recent years in European countries. Recent research findings on WNV epidemiology, biology, vaccines and drugs under development will be presented.