

Research project IZS VE 10/12

Host preference of *Culex pipiens* captured in sites with and without evidence of West Nile virus circulation in Veneto region, north-eastern Italy

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In north-eastern Italy an outbreak of West Nile virus (WNV) infection is ongoing from 2008 involving wild birds, domestic animals and humans. Subsequently, active and passive surveillance on humans, equines, wild birds and mosquitoes was strengthened in the affected areas.

The main objective of this proposal is to improve the surveillance of West Nile virus through the enhancement of the knowledge of the local natural cycle, still not clear under many aspects. The study will estimate the mosquito feeding patterns and the abundance of all avian and mammalian hosts in selected sites of Veneto region characterized or not by viral circulation; the data collected will be incorporated in multi-hosts transmission models.

The specific goals are:

- to determine the feeding behavior of *Culex pipiens* in sites where the WNV circulation has been previously proved/excluded;
- to characterize the species and abundance of different vertebrate hosts in the selected sites;
- to provide a WNV risk map for the area integrating the already available data with the new ones.