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## Book of Abstracts

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predators and competitors of mosquitoes larvae. This use to be normal in south Mediterranean, but in these area we have very few or no rain during summer, so many little freshwater habitats (typical of mosquitoes) dry out.

In more temperate climate we (luckily) still have precipitation in summer that maintain some water for mosquitoes or, even worse, the alternation of drought and short extreme precipitation create many ephemeral and hot water bodies that are just ideal for mosquitoes. Mainly for new alien/tropical mosquitoes now in Europe such as the Tiger Mosquito.

This big amount of mosquitoes creates of course problems for life quality of the people that reacts increasing the number of pesticides sprayed in nature. This brings results at short terms but, at distances, produces: 1) a biodiversity loss, with an ulterior decrease of mosquitoes predator and competitors; 2) and adaptation of mosquitoes to pesticides.

Both factors, in a sort of chain reaction, increases mosquitoes number and health risk for population, by the possible diseases the mosquitoes can bring and by the exposure to pesticides.

ORAL

## **Zoonoses in a global changes context: the case of Tick-borne encephalitis (TBE) virus in the Autonomous Province of Trento**

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Changes in climate, land use and biodiversity are considered among the most important anthropogenic factors affecting parasites-host interaction and wildlife zoonotic diseases emergence. Transmission of vector borne pathogens are particularly sensitive to these changes due to the complexity of their cycle.

In general, reported cases of vector-borne infections have increased during the last 30 years in the northern hemisphere (Semenza and Suk, 2018) and in Europe, the most challenging infections include tick-borne transmitted diseases such as Lyme borreliosis (LB) and Tick-borne encephalitis (TBE) with an average number of 85.000 and 16.000 cases reported annually, respectively.

Tick-borne Encephalitis (TBE) is a zoonosis of public health relevance in many European countries. It is a neurological zoonotic infection with various degrees of severity, which is transmitted by a tick directly with a bite or indirectly by consuming raw milk from infected hosts.

In Italy, the incidence of TBE is relatively low and the occurrence of human cases is geographically restricted to the pre-alpine and alpine regions in the north-eastern part of the country. More studies are necessary to understand the complex factors that are involved in the maintenance and circulation of TBE. We present the current situation in the Province of Trento where the number of human cases increased and the endemic focus moved northward under the light of global changes.