

# BOOK OF ABSTRACTS

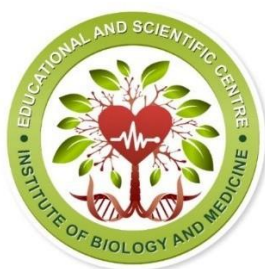
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## Arboviruses: an urgent problem in Ukraine

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Arboviruses are an ecological group of viruses that are maintained in nature among susceptible vertebrates through biological transmission by blood-sucking arthropods. More than 500 species of arboviruses are known in the world, and 150 of them can cause human diseases. At present, five arboviruses belonging to four families of RNA-containing viruses (*Flaviviridae*, *Nairoviridae*, *Phenuiviridae*, and *Togaviridae*) have the greatest clinical significance in Europe. West Nile (WNV), tick-borne encephalitis (TBEV) and Toscana (TOSV) viruses can cause febrile diseases with injuring the central nervous system, Crimean-Congo hemorrhagic fever virus (CCHFV) – hemorrhagic fever, and Sindbis virus (SINV) – fever with arthralgia. WNV and SINV are transmitted by mosquitoes, TBEV and CCHFV viruses – by ticks, and Toscana virus – by sandflies. The geographical distribution of arboviruses and the spring-autumn seasonality of diseases caused by them coincide with the range and period of activity of blood-sucking arthropod vectors. Dengue (DENV), Zika (ZIKV), and Chikungunya (CHIKV) viruses are exotic for Europe, but in recent years there has been an increase in cases of them being introduced during travel. Unlike arboviruses endemic to Europe, the main host of DENV, CHIKV and ZIKV is a human, and the vectors are tropical mosquitoes *Aedes aegypti* and *Ae. albopictus*. WNV, TBEV, and CCHFV are endemic for Ukraine that was confirmed by the detection of the pathogens in vertebrate reservoirs and blood-sucking arthropod vectors and registration of human diseases caused by the viruses. In recent years, sporadic imported cases of exotic dengue fever have been registered in Ukraine. Different factors influence the development of the epidemic process: biological, climate-geographic, socio-economic. Worsening the epidemic situation on arbovirus infections may be caused by emergence or introduction of pathogens with increased virulence, increasing arboviruses prevalence in vectors and reservoirs. Climatic changes, such as an increase in temperature and relative humidity, contribute to an increase in the number and expansion of the range of vectors of arboviruses. The risk of infection increases with an increase in the duration and frequency of people's stay in the territory of natural foci. In addition to the above listed factors, Russian military aggression which led to destruction of civil infrastructure and ecological systems on the large areas should be taken into account in Ukraine. Thus, the presented data indicate the arboviruses are an urgent problem in Ukraine and the deterioration of the epidemic situation with TBE, WNF, CCHF, as well as other arboviral diseases can be expected.