



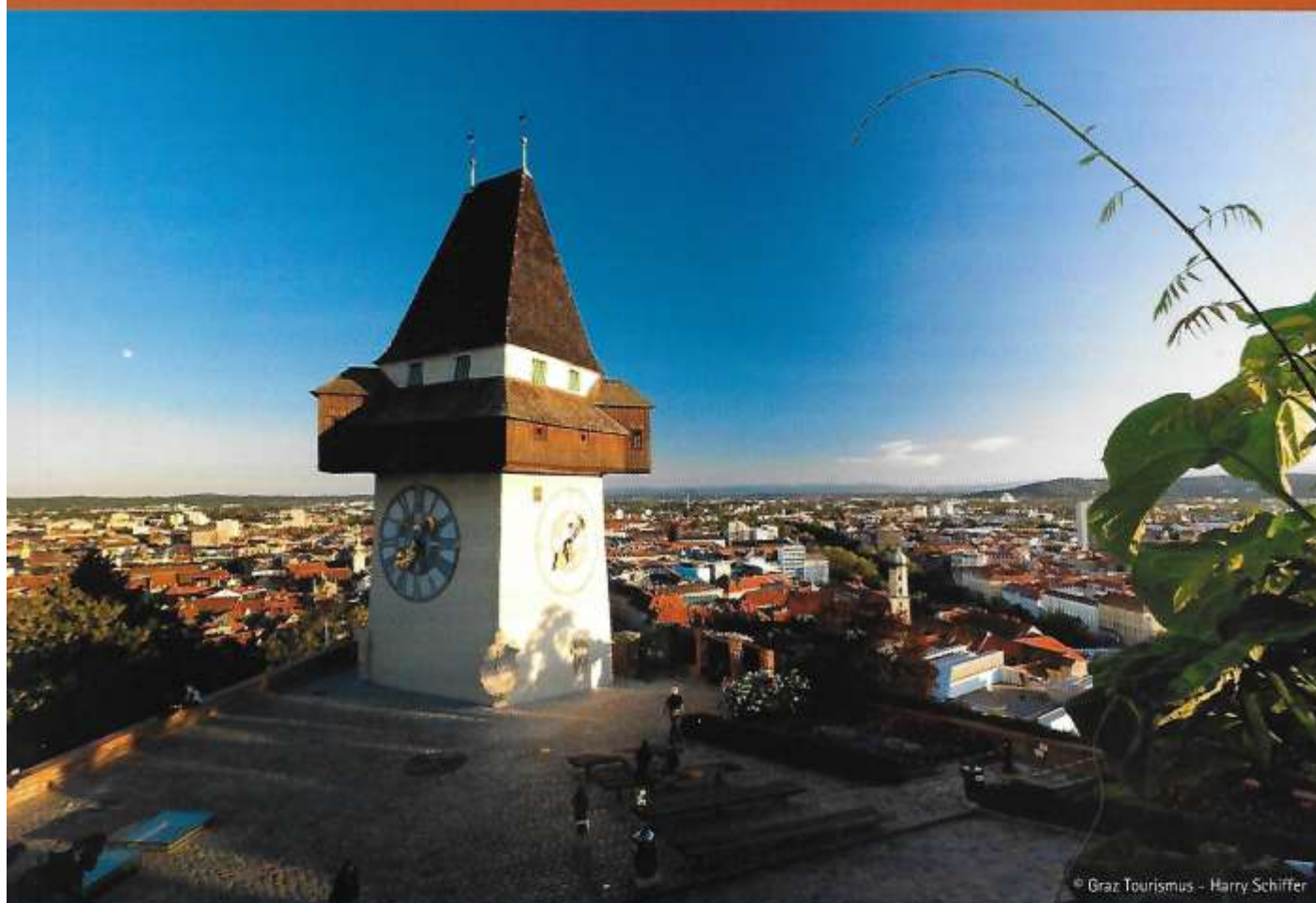
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ABSTRACTS

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In last two decades, the number of emerging and re-emerging mosquito-borne arboviral infections has increased. In Croatia, dengue (DENV), West Nile (WNV) and Usutu virus (USUV) infections have been detected. Autochthonous dengue was reported in 2010 on the Pelješac peninsula (south Adriatic coast). Seroepidemiological study performed during 2011-2012 showed seropositivity to DENV of 0.59%. First clinical cases of human neuroinvasive WNV infection were reported in 2012 with 38 cases notified until 2018 in eastern and north-western counties. Phylogenetic analysis of four strains detected during the 2017 outbreak showed circulation of WNV lineage 2. USUV antibodies were first detected in two asymptomatic horses (2011) and one human (2012), while neuroinvasive USUV infection was confirmed in 2013 in three patients from Zagreb and its surroundings. Autochthonous chikungunya (CHIKV) and Zika (ZIKV) infections were not detected so far. A seroepidemiological study conducted during 2011-2012 showed CHIKV IgG antibodies in 0.7% of inhabitants of the Croatian littoral. Clinically manifest imported chikungunya and Zika infections were reported in six returning travelers during 2016 and 2017. The recent emergence of several arboviral diseases in Croatia highlighted the role of mosquitoes as vectors of emerging arboviruses. In Croatia, 52 mosquito species have been detected. Medically most important species are *Culex pipiens* complex, the primary vector of WNV and USUV, and Asian tiger mosquito, *Aedes albopictus*, a vector of DENV, CHIKV and ZIKV. *Aedes albopictus* is an invasive mosquito species detected for the first time in 2004 in Zagreb with rapid spread in the subsequent years. *Aedes japonicus* is another invasive mosquito species detected in 2013. Recent molecular investigation showed that one pool of *Ae. albopictus* (2016) and *Cx. pipiens* complex (2017) were positive for USUV RNA. Detection of arboviruses in humans, sentinel animals and mosquitoes emphasize the importance of continuous multidisciplinary ("One health") arbovirus surveillance in Croatia.