



P 35 Tick-borne pathogen identification in the taiga tick *Ixodes persulcatus* collected from East-Kazakhstan

Mandy Kronefeld^{a,b}, Franziska Stürzl^{a,b}, Jens Amendt^{a,b}, Zhanna Shapiyeva^{a,c}, Ulrich Kuch^a, Peter Kraicy^{a,d}, Richard Zehner^{a,b}

^a Biodiversity and Climate Research Centre, Senckenberganlage 25, 60325 Frankfurt/Main, Germany

^b Institute of Forensic Medicine, University Hospital of Frankfurt/Main, Kennedyallee 104, 60596 Frankfurt/Main, Germany

^c Head Centre for Sanitary-Epidemiological Expertise and Monitoring, Dept. of Parasitology, #84 Auezov Street, 050008 Almaty, Kazakhstan

^d Institute of Medical Microbiology and Infection Control, University Hospital of Frankfurt am Main, Paul-Ehrlich-Str. 40, 60596 Frankfurt/Main, Germany

Lyme Borreliosis is the most common vector-borne disease in Europe as well as in the Far East. Its geographical distribution is closely related to the occurrence of the hard ticks *Ixodes persulcatus* and *I. ricinus* which are also the main vectors of tick-borne encephalitis virus. Almost everywhere, the rates of infection by TBE virus of adult *I. persulcatus* are relatively low and mostly do not exceed 3%. Only in small regions in the Far East, these rates can attain 10–15%. The prevalence of *Borrelia* spp. varies widely between different tick species and even from site to site. It appears that the taiga tick *I. persulcatus* is a much more efficient vector than *I. ricinus*, because there is a significant difference between the levels of infection in areas where both species show a sympatric occurrence. In the case of *I. persulcatus*, the prevalence of *Borrelia* spp. may reach 60% in some places. The most common spirochete species in the Far East are *Borrelia afzelii* and *B. garinii*.

Our study was conducted in the eastern part of Kazakhstan in 4 different districts. So far, we investigated over 600 *I. persulcatus* ticks from Kazakhstan for harboring *Borrelia* spp. and TBE. The first results show that *B. garinii* is more prevalent than *B. afzelii*. TBE virus was found in approximately 5% which indicates that residents take a significant risk of contracting TBE virus in East Kazakhstan.