PREVALENCE OF *TOXOPLASMA GONDII* AMONG WILD MURID RODENTS IN TATARSTAN, RUSSIA

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ABSTRACT

Toxoplasma gondii is a parasite with a wide range of hosts. *T. gondii* can severely affect the wild environment. Our previous studies in Tatarstan, Russia confirmed high prevalence of *T. gondii* infected cats from households, human and farm animals, which suggested an infection in wild animals. Therefore, in this study we examined wild rodents. Our aim was to find which factor contributes to *T. gondii* infection among wild murid rodents in the local human living areas. Our aim was to find which factor contributes to *T. gondii* infection among wild murid rodents in the local wild environments. We captured a total of 474 murid rodents at 26 trapping places in the territory of Tatarstan (Russia). *T. gondii* B1 gene was detected in brain DNA by nested PCR. Overall *T. gondii* prevalence of the murid rodents was 8.44 %. Multivariate logistical regression analysis showed that trapping area (rural/urban) significantly contributed to *T. gondii* prevalence among murid rodents. *T. gondii* infection among wild murid rodents in the rural area was significantly higher than in urban area regardless of longer distance from human activity zone. Further research will clarify the source and transmission route to wild animals. This study was funded by the Russian Foundation for Basic Research (RFBR), project number 19-34-90024.

Keywords: *Toxoplasma gondii*, wild murid rodents, *T. gondii* prevalence, Russia, multivariate logistical regression analysis