



Detection of Toxoplasmosis in Rat (*Rattus rattus*) in Baghdad governorate/Iraq

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Abstract

The *Toxoplasma gondii* infects human beings and wild rats (*Rattus rattus*) worldwide. Wild rats are infected with *T. gondii* due to

ingestion of food or water contaminated with oocysts and may play a significant role in the transmission of *T. gondii* infection to the humans. The aim of the present study was to determine the seroprevalence of *T. gondii* among wild rats. Acute and chronic cases of toxoplasmosis in rats caught from old buildings and garbage in Baghdad city/Iraq were determined serologically. The percentage of positive rats for anti-*T. gondii* antibodies was 45%. Moreover, the higher infection rate observed in male rats. The percentages of acute and chronic infected rats were 10% and 35% respectively. The association between the presence of infection with the rat sex and age and their collection sites was insignificant ($p>0.05$). In conclusion, this study approved the presence of acute and chronic toxoplasmosis in wild rats in Baghdad city. However, the insignificant correlation between rat's sex and age and its collection sites also observed. The authors recommend another future study including large numbers of rats in extended geographical area in Baghdad governorate to determine the incidence of *Toxoplasma gondii* in wild rats that might have an impact on the public health.

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