

## Hard ticks (Acari: Ixodidae, Amblyommidae) – potential vectors of *Toxoplasma gondii*?

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Toxoplasmosis is a widespread zoonotic disease caused by the parasitic protozoan *Toxoplasma gondii*. Infections caused by *T. gondii* are prevalent in humans and animals throughout the world. So far, oral transmission by consumption of raw meat, food, and, rarely, water contaminated with infective oocysts is regarded as the only route of primary infection. However, some other modes of *T. gondii* transmission have recently been considered, including the possibility of transmission by blood-feeding arthropods, in particular, ticks.

The aim of our retrospective study was to investigate the prevalence of *T. gondii* in animal samples and in ticks collected from hosts, as well as in ticks collected from vegetation, and to estimate their potential role in transmission of the parasite.

Altogether, 1008 DNA templates were tested, including 15 blood and 42 tissue samples from a roe deer (*Capreolus capreolus*), and 402 *Ixodes ricinus* ticks feeding on these animals collected in Wielkopolska province in 2005; 265 questing adult *I. ricinus* and 284 adult *Dermacentor reticulatus* collected in Kampinos National Park in 2012. For specific *T. gondii* detection TaqMan Real-time PCR assay targeting *T. gondii* B1 gene was used. None of the samples tested for *T. gondii* was positive.

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