

## **Preliminary study on the prevalence of tick-borne pathogens in host-seeking *Dermacentor reticulatus* (Acari: Amblyommidae) ticks from the urban area of the city of Olsztyn – *Borrelia burgdorferi* sensu lato complex**

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*Dermacentor reticulatus* ticks are the second most important vectors of many agents that are pathogenic to humans and animals in Poland. Among the tick-borne pathogens, spirochetes of the genus *Borrelia* are the most widely spread and studied.

The aim of the study was to determine the prevalence of bacteria from *Borrelia burgdorferi* sensu lato complex in adult *D. reticulatus* ticks from areas in Olsztyn city using the PCR method.

A total of 93 questing *D. reticulatus* ticks (51 females, 42 males) collected between March-April and September-October in 2015 were individually examined by the nested PCR-restriction fragment length polymorphism (RFLP) method (Wodecka et al. 2010, Wodecka 2011). Nested PCR primers specific to the flagellin gene (132f/905r and 2020f/832r) were used. Restriction fragments of a 604 bp PCR product were obtained by using the enzyme *HpyF3I* (Thermo Scientific).

The overall infection rate of *D. reticulatus* with *Borrelia* spirochetes was 3.2% (3/93). Based on the restriction patterns, only *B. afzelii* was detected. No co-infections were found. Among infected *D. reticulatus* ticks, two specimens were females. All infected ticks were collected during springtime activity.

Our study confirmed the occurrence of *B. burgdorferi* s.l infection in *D. reticulatus* and suggests their participation in the transmission of this group of pathogens to human and animals.