



P 54 Diversity of *Babesia microti* strains in rodent and *Ixodes ricinus* populations from North-Eastern Poland

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Babesia microti (Apicomplexa, Piroplasmida), an etiological agent of human babesiosis, is maintained in the environment by complex zoonotic transmission cycles involving small mammals and *Ixodes ricinus*. Recently, in Germany, the first case of human infection with *B. microti* was confirmed, implicating the presence of zoonotic isolates in Europe. We have previously reported that *B. microti* isolates commonly encountered among rodents in Poland belong to a diverse species complex. The aim of this study was to evaluate the distribution/prevalence and genetic diversity of *B. microti* strains in rodent and tick populations in north-eastern Poland. *B. microti* infections were studied in 4 species of rodents (bank vole *Myodes glareolus* and yellow-necked mouse *Apodemus flavicollis* from woodland; common vole *Microtus arvalis* and root vole *Mi. oeconomus* from the fallows) and in questing *I. ricinus* ticks, in the years 2004–2007. The prevalence of *B. microti* in hosts from the fallows was much higher than in woodland rodents: 49% in *Mi. arvalis* and 39% in *Mi. oeconomus* versus 15% in *A. flavicollis* and 16% in *My. glareolus*. The overall prevalence of *B. microti* in *I. ricinus* was quite low, varying from 1.7% in nymphs to 7.4% in females. Sequence analysis of the 18S rRNA gene fragment demonstrated changes in prevalence of 2 *B. microti* strains (zoonotic Jena/Germany strain and enzootic Munich strain) in rodents and ticks. Additionally, one female and 2 nymphs of *I. ricinus* were found to be infected with *Babesia* sp. EU1 (*B. venatorum*), already recognized as an agent of human babesiosis in Poland.