
Poster Session 2 – Workshop Rodent-Borne Diseases

71 Genetic diversity of *Bartonella* strains in small rodents

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Bartonella infections have been documented in a wide range of mammals and 15 *Bartonella* species have been detected in small rodents. Several rodent-associated *Bartonella* species have been related to human diseases. However, there is a lack of studies on the presence and diversity of *Bartonella* pathogens in small rodents in Baltic region. The objectives of this study were to investigate the prevalence and genetic diversity of *Bartonella* strains in different species of small rodents from Lithuania. We collected spleens from seven small rodent species captured in different parts of Lithuania during 2013-2016. The presence of *Bartonella* was examined by real-time PCR targeting the *ssrA* gene. Species identification and molecular characterization of bacteria strains were based on sequence analysis of two housekeeping genes (*rpoB*, *groEL*) and the intergenic species region. *Bartonella* DNA was detected with different prevalence in *Apodemus flavicollis*, *Micromys minutus*, *Myodes glareolus*, *Microtus oeconomus*, *Microtus agrestis* and *Microtus arvalis* rodents. Sequence analysis of *Bartonella* isolates showed that the *Bartonella* strains circulating among the investigated rodents are heterogenic and belonged to *Bartonella grahamii*, *Bartonella taylorii* and *Bartonella rochalimae* genogroup. Phylogenetic analysis based on each of the targets demonstrated the presence of different *Bartonella grahamii* and *Bartonella taylorii* strains associated with different species of rodents. This is the first report on molecular characterization of *Bartonella* strains in multiple rodent species from Baltic region. Our findings provide evidence of wide distribution of human pathogenic *Bartonella grahamii* in Lithuania.

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Jens Jacob, Jana Eccard (Editors)

6th International Conference of Rodent
Biology and Management
and
16th Rodens et Spatium

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