

Publication

Bartonella alsatica sp. nov. : a new Bartonella species isolated from the blood of wild rabbits

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Bartonella species are considered as emerging human pathogens, with at least six different species pathogenic or possibly pathogenic for humans. However, little is known about Bartonella distribution, species polymorphism and pathogenicity in mammalian species. The objective of this work was to determine the presence, the frequency and the distribution of Bartonella species in wild rabbits (Oryctolagus cuniculus) caught in warrens in Alsace, France. Humans may come into contact with wild rabbits when hunting, especially when they are picked up with bare hands and at time of evisceration. Of 30 blood samples collected and cultured from wild rabbits, nine (30%) were positive for organisms morphologically similar to Bartonella spp. The bacteria appeared as small, fastidious, aerobic, oxidase-negative, Gram-negative rods which could be localized within erythrocytes. Their biochemical properties were similar to those of the genus Bartonella. The sequence of the 16S rRNA gene obtained from the rabbit isolates was highly related to the sequences of the different Bartonella species (97.8-99.3% similarity). The high DNA hybridization rate (81-90% similarity) between the three strains isolated from rabbit blood confirmed that they belong to the same bacterial species. Hybridization values, obtained with the nuclease-TCA method, when testing type strains of recognized Bartonella species (9-14% similarity), support the creation of a new species for the rabbit isolates. The name Bartonella alsatica is proposed for these strains isolated from the blood of wild rabbits. The type strain is IBS 382T (= CIP 105477T).

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