

北海道においてシュルツェマダニより分離された ボレリアの遺伝学的研究

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Antigenic and genetic characterization of *Borrelia* species isolated from *Ixodes persulcatus* in Hokkaido, Japan.

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ABSTRACT Ten characteristic strains of spirochetes (HT2, HT7, HT10, HT15, HT17, HT19, HT20, HT22, HT32, and HT59) isolated from *Ixodes persulcatus* adult ticks in Hokkaido, Japan, were selected and analyzed by polyacrylamide gel electrophoresis, with monoclonal and polyclonal antibodies, and by pulsed-field gel electrophoresis. The protein profiles of the borrelial isolates were variable and markedly different from that of the type strain *Borrelia burgdorferi* B31. The 41-kDa flagellin protein was present in all isolates, but the outer surface protein A (OspA) was absent in four isolates (HT15, HT2, HT20, and HT32). The molecular weights of the OspA proteins in six isolates were found to differ from one isolate to another. No two isolates examined had the same plasmid profile. These findings show the antigenic and genetic heterogeneity of the Japanese isolates, and some isolates are strikingly different from North American, European, and Asian strains.

抄録 北海道においてシュルツェマダニから分離されたボレリアの抗原性および遺伝学的性質はライム病ボレリア典型株B31とは極めて異なっていることを報告した。

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