

リボソームRNA遺伝子の制限酵素切断断片多型 (RFLP)によるライム病ボレリアの分析

福長将仁, 惣中雅子, 柳原保武*

J.Gen.Microbiol. **139**, 1141-1146, 1993.

Analysis of *Borrelia* species associated with Lyme disease by rRNA gene restriction fragment length polymorphism.

M.Fukunaga, M.Sohnaka and Y.Yanagihara*

ABSTRACT We investigated the usefulness of rRNA gene restriction fragment length polymorphism (RFLP) for grouping of the *Borrelia* isolates associated with Lyme disease or from ixodid ticks. Genomic DNA was digested with a restriction enzyme, blotted and hybridized with an *rml* (23S rRNA) gene probe. The sizes of the restriction bands showed a good correlation with the genotypes recently proposed, and *Borrelia* isolates of diverse geographic origin formed four distinct DNA groups. Group I included all of the USA isolates and some European isolates; group II contained European isolates and Asian isolates; group III comprised European and Asian isolates; group IV included Japanese isolates and an eastern Russian isolate. Group I, II and III corresponded to *Borrelia burgdorferi*, *B. garinii* and group VS461, respectively. The RFLPs of Japanese isolates were rather divergent and some of the isolates were quite distinct from the USA and European isolates. RFLP analysis of the rRNA genes and flanking regions, using *rml* gene probes as we reported here, may be useful in the taxonomic study of *Borrelia*.

抄録 ライム病ボレリアは23SリボソームRNA遺伝子をプローブとして用いたRFLP分析によりI群～IV群に分類され、遺伝的に多様であり、日本分離株は欧米のものとは異なっていることを報告した。

* 静岡県立大学薬学部微生物学教室