CLONING OF Babesia bigemina AND B. bovis REPETITIVE DNA FOR SPECIES-SPECIFIC IDENTIFICATION OF THE PARASITES

PZ-53

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Genomic libraries of Babesia bigemina and B. bovis were constructed with the Escherichia coli EMBL₄ phage. ³²P-labelled parasite genomic DNAs were used as probes to screen the libraries, in high stringency and short time hybridization conditions. Several recombinant clones gave strong signals with the probes. Six B. bigemina clones, giving the strongest signals, were selected and upon back-hybridization all showed to have homologous repetitive DNA sequences. The same procedures was performed with B. bovis clones, with similar results. The cloned sequences do not cross-hybridize with host DNA and are species-specific. The probes can be used as alternative or complementary tools for the identification of two species of bovine Babesia.

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DISCOVERY OF A PUTATIVE 5.5 KBP DOUBLE-STRANDED RNA VIRUS PRESENT IN Babesia bovis

PZ-54

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Babesia bovis is an intracrythrocytic protozoa that causes a severe bovine disease. Nucleic acids from two B. bovis isolates presented in agarose gel electrophoresis, besides genomic DNA, a molecule of approximately 5.5 kbp characterized as double-stranded RNA. Sonicated B. bovis cells were centrifuged in a CsCl buoyant-density gradient and a fraction containing the double-stranded RNA was examined by electron microscopy. Virus-like particles were observed, which might be related to the 5.5 kbp RNA.

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