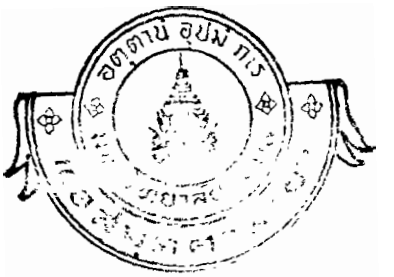

CLONING OF MALARIA PARASITE DNA

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ABSTRACT

Genomic DNA of rodent (*Plasmodium berghei*) and human (*P. falciparum*, isolate K 1), malaria parasites were cloned in *E. coli* using plasmid pBR - 322 as vector at the Pst I - EcoR I sites. Transformation efficiency were 257 - 330 and 30 - 60 colonies/μg DNA for pBRPb (73 clones) and pBRK 1 (75 clones), respectively. Transformants that were ampicillin - sensitive and tetracycline - resistant were selected, obtaining recombinants representing 0.3% of the total Plasmodial genomic DNA. The sizes of DNA inserts ranged from less than 2 kb to a maximum of about 7 kb, with the smallest insert having the highest transforming frequency. Using ^{32}P - labeled genomic DNA as probes in Southern hybridization, 18% of the recombinant pBRPb and 7% of the recombinant pBRK 1 plasmids were shown to contain repetitive DNA sequences. A recombinant plasmid, pBRPb - 23, gave different hybridization patterns with endonuclease restricted DNA from various species of rodent malaria parasite. Another recombinant plasmid, pBRK 1 - 14 could differentiate between strains of Plasmodium.