Identification of DNA marker specific to medium-sized chromosome 4 of *Trypanosoma congolense*

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Abstract.

Genomic DNA from *T. congolense* clone IL1180 was purified and resolved by pulsed field gradient gel electrophoresis (PFGE) technique to separate the genome into chromosome-sized DNA molecules. PFGE conditions most ideal for separation of the four medium-sized chromosomes were optimized. The sizes of the four medium-sized chromosomes were determined as 340 Kb, 360 Kb, 400 Kb and 500 Kb (designated chromosomes 1-4). The separated chromosome bands were individually cut from agarose gel and DNA purified. Each chromosome DNA sample was PCR-amplified with short oligonucleotide primers (10 mer) of arbitrary nucleotide sequences. The fingerprints of DNA fragments generated with these primers were resolved by standard agarose gel electrophoresis. The majority of the random primers used generated reproducible fingerprints, some of which were polymorphic for the different chromosomes amplified. A DNA fragment, which hybridizes to only one of the four medium-sized chromosomes, was identified.

**Key words:** PFGE; trypanosome chromosome; PCR; DNA polymorphism