

Characterization of Polymorphic Microsatellites Isolated in Different Chromosomal bands from *Trypanosoma cruzi* Genome

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INTRODUCTION: Since its discovery in the *Trypanosoma cruzi* genome, the microsatellite markers proved to be extremely useful in analyzes of genetic variability, population structure and phylogeny for this parasite. Previous studies allowed the isolation of microsatellite loci composed by di, tri and tetranucleotide motifs in the *T. cruzi* genome. However, these loci present some limitations, such as, short flanking regions to the repeats and microsatellite loci restricted to chromosome 3. Additionally, there are few loci that present high level of polymorphism and high sensitivity in PCR assays. **OBJECTIVES:** To isolate and to characterize new microsatellite loci in different chromosomal bands from *T. cruzi* genome. **MATERIALS AND METHODS:** Using Tandem Repeats Finder program were identified 10 new microsatellite loci located on chromosomes from 1 to 11 except chromosome 3. The specific primers for each microsatellite loci were designed and PCR assays were standardized. To evaluate the polymorphism of these microsatellite loci 23 *T. cruzi* strains belonging to different phylogenetic lineages of the parasite were used. The allele size determination was performed using the DNA Sequencer. **RESULTS AND DISCUSSION:** Up to now the microsatellite loci analyzed proved to be polymorphic between different strains of the parasite. Furthermore, profiles of homozygous and heterozygous monoclonal strains were obtained, as well as of multiclonal strains. **CONCLUSION:** These results indicate that the new isolated microsatellite loci can be used as molecular markers in genetic variability studies of *T. cruzi*.

Key words: Genetic variability, microsatellite polymorphism, *Trypanosoma cruzi*.

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