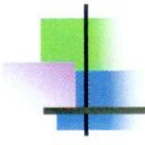

CONCLUSIONS

6. Conclusions

ITS

- ITS region is considered to be polymorphic but Indian primary isolates of *L. donovani* did not show any nucleotide change for this locus. ITS region seems to be conserved in Indian isolates.
- Passaging showed length and sequence variations in ITS region.
- This variation was independent of number of passages, even isolates with single passage resulted same change.
- Molecular basis for this finding is unknown but this finding can give a new dimension to species identification, strain differentiation and population genetics.

Microsatellites

- All microsatellites loci found to be monomorphic as they showed no variations for any Indian isolates and reference strains analyzed.
- Indian strains are very different from other reference strains in context to repeat numbers, eg. Loci MS-3, MS-4, MS-5 and MS-6.
- Multiplex PCR is possible for these loci, especially where amplicons size has noticeable difference on the gel, eg. multiplexing of MS-1 and MS-2.
- Multilocus microsatellites typing (MLMT) could be directly applied on clinical samples so high throughput analyses are possible.

ITS analysis and MLMT reveals genetic homogeneity of Leishmania donovani isolates from India. The presence of identical profile in the clinical isolates and reference strains at different time point (year of isolation) may reflect the existence of clonal propagation or existence of bottleneck which needs to be established.