Abstract

Nowadays, rDNA clusters displayed by fluorescence *in situ* hybridization (FISH) are one of the standard cytogenetic markers used to identify chromosome homology, allowing the determination of mechanisms and possible rate of rearrangements during karyotypic evolution of the studied groups. This bachelor thesis presents a review of the variability of rDNA clusters in arthropods with holocentric chromosomes. Most of the groups studied so far (Odonata, Psocoptera, Hemiptera, Lepidoptera, Buthidae and the genus *Rhipicephalus*) show a conservative number and position of rDNA clusters. However, this fact may be due to the limited amount of data available. Nowadays, best studied is order Lepidoptera, in which a relatively large variability in the number and position of rDNA clusters has been found. This is probably due to chromosome fusion/cleavage, chromosome rearrangements, or transposition of rDNA clusters.

Key words:

rDNA clusters, holocentric chromosomes, fluorescence *in situ* hybridization, arthropods, evolutionary dynamics, NOR