

Abstract

Polyploid species are significantly represented among plants and some animals. Whole-genome duplication (WGD) is an unstable process with rapid changes in a genome and also changes in chromosomes. These changes includes chromosomal aberrations, such as translocations, duplications, insertion and inversions. Chromosomal aberrations and WGD are strongly represented in the evolution of organisms. Therefore the study of their mechanisms is important for an understanding of genomic development. At present, there are developments in cytogenetic technique helping study polyploid genomes and also helping add polyplodozation events to evolutionary contexts. These techniques includes banding as well as fluorescent *in situ* hybridization, which, thanks to the applicability of various probes, helps to detected chromosomal rearrangements.

Keywords: Chromosome rearrangements, polyploid, WGD, cytogenetic techniques, FISH