

X chromosome patchwork in the rodents *Cricetus cricetus*, *Peromyscus eremicus* (Cricetidae) and *Praomys tulbergi* (Muridae)

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During placental mammalian genome evolution autosomes and sex chromosomes have evolved at different rates and modes. And in general, on this group, among all chromosomes the X chromosome is the more conserved between species. Compared to humans and other mammals, rodent genomes underwent an intense chromosome evolution, in which many translocations and complex structural rearrangements occurred, and seems that the X sex chromosome is not an exception, in striking contrast with what can be observed on the studied placental mammalian genomes. In order to gain insight into the mechanisms of X chromosome evolution in rodents, we performed a high resolution comparative chromosomal analysis of this chromosome among three rodent species belonging to three genera and two families. For this, we generated partial chromosome painting probes of the X chromosomes from *Cricetus cricetus*, *Peromyscus eremicus* (Rodentia, Cricetidae) and *Praomys tulbergi* (Rodentia, Muridae). The probes were obtained by laser microdissection, followed by DOP-PCR amplification and labelling. Then, each probe was in situ hybridized in each one of the species. The paintings hybridization allowed a straightforward visualization of the three different X chromosomes architectures, and the integrated data permitted to reconstruct the evolutionary events underwent by these chromosomes. These experiments are now being extended to other species of Muroidea, as well as higher resolution X chromosome probes will be constructed in order to increase this chromosome

segmentation and bring new insights about the X chromosome evolution in Rodentia. This will certainly allow the drawing of the ancestral Muroidea X chromosome.