

O-23. Conserved chromosome synteny and the karyotype of the common ancestor inferred from comparative chromosome painting in the Murinae : Taro NAKAMURA¹, Kazumi MATSUBARA², Kimiyuki TSUCHIYA³ and Yoichi MATSUDA^{1,2} (¹Lab. Mol. Cell. Genet., Dept. Biol. Sci., Grad. Sch. Sci., Hokkaido Univ., ²Lab. Animal Cytogenet., Dept. Genome Dyn., Creative Res. Initiative “*Sousei*”, Hokkaido Univ., ³Lab. Wild Anim., Dept. Anim. Sci., Fac. Agri., Tokyo Univ. Agri.)

To delineate the conserved chromosome regions in the Murinae, comparative chromosome painting with chromosome-specific probes of laboratory mouse (*Mus musculus*) was performed for the soft-furred field rat (*Millardia melitaea*), Cairo spiny mouse (*Acomys cahirinus*), European-Asian harvest mouse (*Micromys minutus*) and Ryukyu spiny rat (*Tokudaia osimensis*). All probes successfully hybridized to the chromosomes of all the species, and homologous chromosome regions between mouse and the four Murinae species were identified. We compared our data of the four Murinae species with the published data of other four species of the Murinae and one species of the Cricetinae as a outgroup, and identified chromosome segments conserved in the Murinae. MMU 2, 3, 4, 8, 9, 18 and 7/19, 10/17, 12/17, 13/15 syntenic associations have been highly conserved in the nine species, and thus it was concluded that these chromosome regions had been most likely formed in the common muroid ancestor.

O-24. Detection of chromosomal differences between female and male Amami spiny rat, XO : Tsuyoshi KOBAYASHI¹, Fumio YAMADA², Takuma HASHIMOTO³, Kaori SATO³, Nobuo ISHII⁴, Shintaro ABE⁵, Akio SHINOHARA⁶, Chihiro KOSHIMOTO⁶, Yoichi MATSUDA^{1,7}, Asato KUROIWA^{1,7} (¹ Grad. Sch. Sci., Hokkaido Univ., ² Wildlife Ecol. Lab., FFPRI, ³ JWRC, ⁴ Coll. Art. Sci., TWCU, ⁵ Amami Wildlife Conser. Cen., Min. Envi., ⁶ Frontier Sci. Res. Cen., Miyazaki Univ., ⁷ CRIS, Hokkaido Univ.)

The sex chromosome of females and males are respectively XX and XY in mammals. The sex determination system depends on the presence of Y chromosome. However, Amami spiny rat (*Tokudaia osimensis*), which lives in Amami Oshima island and Tokunoshima island in Japan, has no Y chromosome and a single X chromosome in both sexes. The chromosome numbers of the animals from Amami Oshima and Tokunoshima are 2n=25 and 2n=45, respectively. To detect chromosomal differences between female and male Amami spiny rat, we compared the G-banded chromosomes of both sexes. And we searched sex specific regions by CGH (Comparative Genomic Hybridization) method. The major differences were not detected in the female and male chromosome in Amami spiny rat.