GENOME RESEARCH
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Perspective

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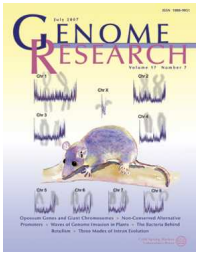
Methods and Resources

[OA]Open Access paper.



Cover The Gray Short-tailed Opossum, *Monodelphis domestica*, is the first marsupial genome to be sequenced. Like most other marsupials, its karyotype comprises relatively few ($2n = 18$) giant autosomes, while its X chromosome is much smaller than that found in eutherian mammals. Recombination in female opossums is concentrated near the telomeric ends of chromosomes away from centromeres and along the X chromosome. High recombination in these genomic regions is associated with increases in both G+C composition and the efficiency of natural selection. The G+C content measured at four-fold degenerate sites in protein coding genes is displayed overlaid on the karyotypes for each acrocentric or metacentric chromosome. (Cover illustration by Leo Goodstadt. The watercolor of the opossum was painted by Monica Mate Arnall, Oxford, UK. [For details, see Goodstadt et al., pp. 969–981.])