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## Painting the fourth

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Chromosome 4 of *Drosophila melanogaster* is an atypical autosome, exhibiting several features characteristic of the X chromosome. In the May 22 [Proceedings of the National Academy of Sciences](#), Larsson *et al.* report the molecular cloning of *Painting of fourth (Pof)*, which encodes a protein that specifically paints chromosome 4 (*Proc Natl Acad Sci USA* 2001, **98**:6273-6278). The POF protein sequence contains a putative RNA-binding domain. POF protein decorates chromosome 4 by spreading out from an initiation site in the proximal region of the chromosome. In the related fruitfly species *Drosophila busckii*, POF paints the whole X chromosome, exclusively in males. This study supports the idea that there are similarities between the chromosome 4 autosome and the X chromosome. POF complexes may function like the Male Lethal Specific proteins, which regulate dosage-compensation of the X chromosome.

## References

1. The *Drosophila* chromosome 4 site, [[http://www.biology.ualberta.ca/dros4.hp/4th\\_main.htm](http://www.biology.ualberta.ca/dros4.hp/4th_main.htm)]
2. *Proceedings of the National Academy of Sciences*, [<http://www.pnas.org>]