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Mitochondrial inheritance

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In the September 6 [Nature](#), Berlin and Ellegren from [Uppsala University](#), Sweden, examine the controversial [clonal inheritance](#) theory for vertebrate mitochondrial DNA (mtDNA) by following co-inheritance of a female-specific nuclear DNA marker (*Nature* 2001, **413**:37-38). They examined the avian [W chromosome](#), most of which is non-recombining and therefore clonally transmitted by females. A polymorphic (CA)_n repeat, *NVHfp49*, on the W chromosome of 53 female peregrine falcons (*Falco peregrinus*) and 1,625 bp of mtDNA sequence were followed. The patterns of divergence of mtDNA and W-chromosome sequences were completely concordant. These data support the hypothesis of clonal inheritance of mtDNA from mothers to daughters without recombination.

References

1. Nature, [<http://www.nature.com>]
2. Uppsala University, [<http://www.uu.se>]
3. Linkage disequilibrium and recombination in hominid mitochondrial DNA
4. Evolution of the avian sex chromosomes and their role in sex determination.