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On the chromosome inherited from the mother, the mammalian *H19* gene is active even as the upstream *Igf2* gene is silenced. The reverse pattern of expression occurs on the paternal chromosome. Paternal *H19* expression is silenced by promoter methylation, whereas paternal *Igf2* expression relies on an enhancer located downstream of *H19*. In the 25 May *Nature* Bell and Felsenfeld, and Hark *et al.*, find that, on the maternal chromosome, the enhancer's access to the *Igf2* promoter is blocked by an intervening insulator (*Nature* 2000, **405**:482-485; 486-489). This block is effected by the binding of the zinc-finger protein CTCF to the hypomethylated maternal insulator. The paternal insulator, however, is methylated and therefore does not bind CTCF or block interactions between the enhancer and the *Igf2* promoter.

References

1. Deletion of the H19 differentially methylated domain results in loss of imprinted expression of H19 and Igf2.
2. Nature magazine homepage, [<http://www.nature.com/nature/>]