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Human knockouts?

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Mobile group II intron RNAs **insert** directly into DNA target sites before being reverse-transcribed by an intron-encoded protein. Target site recognition involves base-pairing between the RNA and DNA, and interactions between flanking DNA and the intron-encoded protein. In the 21 July *Science*, Guo *et al.* use an *Escherichia coli*-based selection procedure and randomized intron sequences to derive group II introns capable of inserting into alternative target sites (*Science* 2000, **89**:452-457). One of their test targets is the gene for the CCR5 chemokine receptor, inactivation of which is associated with HIV resistance. The targeting works in both bacterial and human cells transfected with a target plasmid, but experiments to test targeting to eukaryotic chromosomes are still in progress.

References

1. Efficient integration of an intron RNA into double-stranded DNA by reverse splicing.
2. Science magazine, [<http://www.sciencemag.org/>]