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A classy RNA switch

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In the 12 May *Science*, Tracy *et al.* find that an RNA-DNA hybrid is essential for **switching** from one antibody class to another (for example, IgM to IgG; *Science* 2000, **288**: 1058-1061). The RNA portion of the hybrid is produced from intronic promoters located upstream of each alternative heavy chain constant region. Cytokines determine which intronic promoter is activated. Tracy *et al.* detect the RNA that remains associated with the transcribed DNA and show, using mice transgenic for RNase H, that the hybrid is necessary for class switching. Their proposed model invokes the RNA as a marker enabling a double-stranded cut at each of two sites, with end-joining finishing off the process.

References

1. Science magazine, [<http://www.sciencemag.org/>]
2. Immunoglobulin class switching.