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Proof of trans-splicing

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It has been proposed that isoforms of *Drosophila mod(mdg4)* result from the trans-splicing of independent mRNA transcripts derived from both anti-parallel DNA strands. In the August 14 [Proceedings of the National Academy of Sciences](#), Rainer Dorn and researchers at the [Martin Luther University](#), Halle, Germany, provide proof for trans-splicing of *mod(mdg4)* transcripts in transgenic flies (*Proc Natl Acad Sci USA* 2001, **98**:9724-9729). They characterized 26 different classes of *mod(mdg4)* transcripts all containing a common 5' sequence (exons 1-4). Analysis of *mod(mdg4)* isoforms and the entire 28 kb *mod(mdg4)* locus provided further evidence for trans-splicing of mRNA from both strands. To prove the splicing phenomenon formally, Dorn *et al.* generated transgenic flies expressing tagged *mod(mdg4)* exons from different chromosomal loci. The presence of spliced transcripts was confirmed using RT-PCR analysis. They also found evidence for independent, isoform-specific promoters. This study provides an interesting animal system to investigate the mechanisms of trans-splicing *in vivo*.

References

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