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Silencing splicing

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Many sequences found within mammalian introns closely resemble the specific 5' and 3' splice site consensus signals that regulate exon splicing. It is unclear how the real splice sites are selected from these frequent pseudosites. In the September Molecular and Cellular Biology, Fairbrother and Chasin identified intronic splicing silencers using a genetic screen (*Mol Cell Biol* 2000, **20**:6816-6825). They selected human genomic sequences that could disrupt splicing when inserted into the central exon of a three-exon minigene. About a third of the randomly generated human genomic restriction fragments (approximately 100 base pairs long) could inhibit splicing. In contrast, inhibitory elements in bacterial genomic fragments were over ten times less frequent. The sequences of inhibitory fragments were enriched for G triplets and quartets, which have previously been implicated in intron definition. The authors suggest that mRNA splicing occurs against a background of repression that ensures the silencing of inappropriate splice sites.

References

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- 2. Molecular and Cellular Biology, [http://intl-mcb.asm.org/]

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