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The specificity of synthetic siRNAs

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The remarkable selectivity of siRNAs (short interfering RNAs) offers the attractive possibility of using siRNA as therapeutic agents that specifically target mutated oncogenic isoforms. In the early Edition of the Proceedings of the National Academy of Sciences, Martinez *et al.* report a proof-of-principle applied to the tumor suppressor protein p53. They designed siRNAs specific for wild-type or cancer-associated mutants of p53 and demonstrated high selectivity. Reduction of mutant protein levels restored wild-type protein to normal levels and wild-type transcriptional activity. This approach might be exploited in a clinical setting by using synthetic siRNAs to target dominant oncogenic mutants or cancer-promoting mutations.

References

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