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This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Genome editing with dimeric, RNA-guided FokI-Cas9 nucleases	*In vitro* studies suggest dimerization-dependent nucleases could improve the specificity of clustered, regularly interspaced short palindromic repeats (CRISPR)-based genome editing for research and therapeutic applications. FokI nuclease, which requires dimerization for DNA cleavage, was fused to a catalytically inactive version of Cas9. In cultured human cells, expression of the dimeric editing tool and guide RNAs cleaved the enhanced GFP reporter target and 11 of 12 target genes without affecting any of 5 previously identified off-target sites for wild-type Cas9. Also in cultured cells, expression of a distinct FokI-Cas9 dimeric nuclease with guide RNAs allowed targeting of 14 genomic sites with lower efficiency but higher specificity than wild-type Cas9 or monomeric Cas9 nickases. Next steps include modifications to other aspects of CRISPR-based technology including delivery and toxicity. *SciBX* 7(21); doi:10.1038/scibx.2014.626 Published online May 29, 2014	Patent and licensing status unavailable for findings from first study For findings from second study, patent application filed by Harvard University, which is in negotiations with Editas Medicine for licensing a variety of CRISPR-related IP	Tsai, S.Q. *et al. Nat. Biotechnol.*; published online April 25, 2014; doi:10.1038/nbt.2908 **Contact:** J. Keith Joung, Massachusetts General Hospital, Boston, Mass. e-mail: jjoung@mgh.harvard.edu Guilinger, J.P. *et al. Nat. Biotechnol.*; published online April 25, 2014; doi:10.1038/nbt.2909 **Contact:** David R. Liu, Harvard University, Cambridge, Mass. e-mail: drliu@fas.harvard.edu