

Sharpening CRISPR gene-editing accuracy with ‘molecular glue’

[A]lthough [CRISPR] technology reliably finds and cuts the targeted stretch of DNA sequence, fixing that cut as desired has been something of a hit-or-miss process. Error rates as high as 50 percent are a particular problem when the goal is to correct typos in the DNA that cause genetic disease.

Now, a team of researchers led by Krishanu Saha, a professor of biomedical engineering at the University of Wisconsin–Madison, has made the fix less error-prone and published its approach [November 23] in the journal [Nature Communications](#).

Compared to standard CRISPR technology, the new method improves the likelihood of rewriting the DNA sequence exactly as desired by a factor of 10. The researchers achieved this much greater precision by taking advantage of a molecular glue, called an RNA aptamer, to assemble and deliver a complete CRISPR repair kit to the site of the DNA cut.

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The new method has several other advantages over current technology. First, the off-the-shelf kit contains only non-viral reagents, which simplifies the manufacturing process and reduces safety concerns for clinical applications of genetic surgery in the future. Second, attaching an RNA aptamer to the kit is much easier than modifying the Cas9 protein and provides greater flexibility.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [All-in-one repair kit makes CRISPR gene editing more precise](#)