

Off-target RNA mutations: Why this ‘more precise genome-editing’ technique needs improvement

Base editors designed to convert one DNA nucleotide to another may also perform large numbers of unwanted edits to RNA, according to a study published [April 17] in [Nature](#). Although base editing was touted as a more precise genome-editing approach than more traditional methods, researchers in the US found that the technique appears to cause widespread changes to the transcriptome of human cells, suggesting that the technology needs more work before it can be used reliably in research and therapeutics.

“Most investigation of off-target base editing has focused on DNA, but we have found that this technology can induce large numbers of RNA alterations as well,” study coauthor J. Keith Joung of Massachusetts General Hospital and Harvard Medical School says in a [statement](#).

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The most widely used form of base editing was developed by Harvard University’s David Liu, and relies on a modified form of CRISPR-Cas9 technology. Unlike standard CRISPR-guided genome editing, which results in a double-strand break in DNA, base editing allows researchers to precisely swap one DNA nucleotide for another.

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“Base editors are still incredibly powerful tools,” Joung tells Science. “This is just another parameter we need to understand.”

Read full, original post: [Base Editors Cause Off-Target Mutations in RNA](#)