

## Squids' ability to edit their own RNA could lead to human disease treatments

For nearly every animal on Earth, any changes made to the DNA are transmitted from the cell nucleus by messenger RNA to the cytoplasm, the part of the cell that makes proteins.

But one animal species—a squid used as bait by fishermen, and as food by bigger sea creatures—has already figured out how to edit its genetic code in a way that may help scientists working on gene editing-based drugs and treatments.

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The fact that the squid does this editing with messenger RNA, rather than DNA, intrigues some researchers who are interested in human gene editing. Coding changes made to DNA—the kind medical researchers are working on with Crispr—are irreversible. But since unused messenger RNA degrades quickly, any errors introduced by a [therapy](#) would be washed out, rather than staying with a person forever.

[Researcher Joshua] Rosenthal believes that this ability to change faulty information in the cell without making permanent changes to the DNA in the nucleus might be a huge benefit for medical researchers.

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“RNA editing is a hell of a lot safer than DNA editing. If you make a mistake, the RNA just turns over and goes away,” said Rosenthal.

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