

CRISPR editing of multiple plant genes results in almost no off target effects

A team that includes a Virginia Tech plant scientist recently used life sciences technology to edit 14 target sites encompassing eight plant genes at a time, without making unintended changes elsewhere in the genome.

The technology, a genome-editing tool called CRISPR-Cas9, revolutionized the life sciences when it appeared on the market in 2012. It is proving useful in the plant science community as a powerful tool for the improvement of agricultural crops.

...However, a challenge of this technology has been identifying the impact of editing on genomic regions that were not targeted.

David Haak, an assistant professor of plant pathology, physiology, and weed science..., developed a bioinformatics program using deep sequencing data to test whether the team's editing of the genome of the Arabidopsis plant was both efficient and specific in its targeting.

The team's finding that CRISPR-Cas9 is a reliable method for multi-gene editing of this particular plant species was published in PLOS ONE.

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"...Our data expands on previous work to suggest that, at least in Arabidopsis, off-target events are going to be extremely rare with Cas9," [said co-author Zachary Nimchuk, an assistant professor of biology at the University of North Carolina]

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: [Improving Crop Efficiency with CRISPR](#)