

## Increasing yields without genetic modification? A bio-spray that silences plant genes is in the works

The use of bioactive molecules has shown the capability to infiltrate into plant leaves and into the cells themselves with genetic components like small interfering RNAs (siRNAs) being used to interfere with the expression of selected genes.

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This is done by using cell-penetrating peptides (CPPs) that can passively ferry the biomolecules through the cell wall and, combined with organelle-targeting peptides, can further take the biomolecules to the genomic material that is being targeted.

The research team in [today's study](#) wanted to broaden this capability and create a platform that would allow for nanocarrier genetic silencing to be done to multiple plants all at once in the form of a leaf spray. This would allow for both natural and synthesized CPPs to be used on particular plants on a larger scale.

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Hopefully in the future, this method of altering plants can be integrated into all the systems we use and can assist in short term, immediate gene silencing changes that are required for responses to sudden environmental changes going on at the same time. It certainly seems like dealing with the uncertain future of climate change impacts would be benefited by having such a rapid response tool at hand.

**[This is an excerpt. Read the original post here.](#)**