

‘Rice 2.0’: GMO grain could neutralize HIV virus before it does any harm

An international team of researchers plans to fight HIV using only cereal; namely, rice. In a new paper, they describe how they developed a strain of the plant that produces HIV-neutralizing proteins, and how the resulting rice can be used to prevent the spread of this disease.

[O]ral medication has been developed that can keep an infection at bay for a limited amount of time. However, such treatments are still expensive — prohibitively so for the many areas in third world countries that are struggling under high rates of [HIV](#) infection. Compounding the problem is that production of such drugs is technologically-intensive and time-consuming

Here’s where the rice comes in. The strain engineered by the team synthesizes the same HIV-neutralizing compounds used in oral medication. Once the crop is fully grown, farmers can process the grains to make a topical cream and apply it to their skin — allowing these active compounds to enter the body. The rice plants produce one type of antibody and two kinds of proteins that bind directly to the HIV virus preventing [it] from interacting with human cells.

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[T]here’s still work to be done The team wants to run an exhaustive battery of tests to ensure that their genetic machinations didn’t introduce genes for unknown chemicals in the plants.

The paper has been [published](#) in the journal *Proceedings of the National Academy of Sciences*.

Read full, original article: [GMO rice may hold the key to fighting HIV on the cheap](#)