

A promising new way to detoxify fruits and fruit products from patulin, a common fungal toxin

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One of the toxins commonly found in fruit like apples, pears, grapes, kiwifruit, blueberries and peaches and their products, is called patulin.

Now, researchers have reported one of the first enzymes that can degrade up to 95% of patulin from apple juice with added patulin within 24 hours.

Toxins produced by molds and [fungi](#) are difficult to remove and therefore cause loss of crop and significant economic losses to farmers and producers. The most promising way to degrade these types of toxins from food and feed is enzymatic treatment. A research group from the Chinese Academy of Agricultural Sciences, Beijing, led by Professor Xiaoyun Su have actively sought and characterized new enzymes for detoxification of fungal toxins, and found a group of enzymes that are especially promising for this purpose.

Researchers Nina Hakulinen and Leena Penttinen from the University of Eastern Finland are collaborating with the Chinese research group, and more detailed structural characterization of toxin-degrading enzymes are planned for developing a commercial patulin detoxification treatment for fruits. The current study is published in *Toxins*.

More information: Shuai Wang et al, Patulin Detoxification by Recombinant Manganese Peroxidase from *Moniliophthora roreri* Expressed by *Pichia pastoris*, *Toxins* (2022). [DOI: 10.3390/toxins14070440](#)

Provided by University of Eastern Finland

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