

## عنوان مقاله:

Biological detoxification of mycotoxins by binding them with certain microorganisms: A review

## محل انتشار:

نشریه تحقیقات پیشرفته در متابولیت های میکروبی و تکنولوژی، دوره 5، شماره 1 (سال: 1402)

تعداد صفحات اصل مقاله: 16

## نویسندگان:

Farzaneh Ansari - *Research Department of Food Technology and Agricultural Products, Standard Research Institute, Karaj, Iran*

Karamatollah Rezaei - *Department of Food Science, Engineering and Technology, University of Tehran, Karaj, Iran*

## خلاصه مقاله:

Mycotoxins are harmful toxic metabolites of fungi that are present as contaminants in many foods, dairy, and agricultural products and constitute a potential health hazard. Therefore, novel decontamination approaches for decreasing its bioavailability are of huge interest to improve human safety. In recent years, biological methods have been developed to control mycotoxin contamination. The degradation of mycotoxins (especially aflatoxins (AFs), which are created by the genus *Aspergilla* species, mainly *A. parasiticus*, *A. flavus*, and *A. nomius*) using microorganisms is an important bio-based method to reduce mycotoxin levels in foodstuffs without the production of harmful intermediates and by-products. Many studies have reported that detoxification occurs by binding the mycotoxin to the cell wall structure of microorganisms. Several factors, including the microorganism strain, the type of toxin, microorganism concentration, the viability of the microorganism, and the contact period, are involved in the detoxification processes. This review discusses the available literature on the biological decontamination of mycotoxins by probiotic microorganisms (mainly), describes the detoxification mechanisms involved in such processes, and the factors influencing the stability of interactions. Future perspectives on this area are also reported. Based on the current data, one should be able to select the most efficient microorganisms to degrade mycotoxins over a wide range of concentrations.

## کلمات کلیدی:

Aflatoxin, Decontamination, Detoxification, Microorganism, Mycotoxin

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1662845>

