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Enzymes which detoxify ochratoxin A

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Mycotoxins are fungal secondary metabolites found in some agricultural commodities which are toxic for humans and animals in small amounts. Mycotoxins are a global problem which can be partially controlled through prevention strategies that can be applied along the food and feed chain production. However, when mycotoxin formation can not be avoided and they come to be present in commodities some remediation strategies can also be used to reduce its levels on products, its bioavailability or its toxic effects. Among these remediation strategies, the biological methods are recently holding a relevant position, being widely studied in the last years. As a result, a great number of microorganisms that can degrade or detoxify several mycotoxins and the application of some of them were reported. Moreover, several enzymes which mediate these biological processes were identified, being by themselves studied in order to develop new biotechnological approaches to control the mycotoxin problem on commodities. The main enzymes known to detoxify ochratoxin A, their action and their present application in order to counteract the referred problem are reviewed and critically assessed.

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