

# Mycotoxins: Chemical, Biological and Environmental Aspects (Bioactive Molecules, Vol. 9)

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Review

## Mycotoxins: Producing Fungi and Mechanisms of Phytotoxicity

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**Abstract:** Mycotoxins are secondary fungal metabolites, toxic to humans, animals and plants. Among the hundreds of known mycotoxins, aflatoxins, citrinin, patulin, penicillic acid, tenuazonic acid, ochratoxin A, cytochalasins, deoxynivalenol, fumonisins, fusarin C, fusaric acid, and zearalenone are considered the types that most contaminate cereal grain. The majority of the mycotoxins in these groups are produced by three fungal genera: *Aspergillus*, *Penicillium* and *Fusarium*. These metabolites primarily affect the seed quality, germination, viability, seedling vigour, growth of root and cleoptile. Additionally, since the fungi responsible for the production of these mycotoxins are often endophytes that infect and colonize living plant tissues, accumulation of mycotoxins in the plant tissues may at times be associated with development of plant disease symptoms. The presence of mycotoxins, even in the absence of disease symptoms, may still have subtle biological effects on the physiology of plants. Several studies highlight the toxic effects of mycotoxins on animals and cell lines but little is known about the mode of action of most of these metabolites on plant cells. The most important mycotoxins with phytotoxic effects and their producers in addition to their discovery are briefly outlined below and will be addressed in this article.

**Keywords:** mycotoxins; producing fungi; phytotoxicity

Volume 15, Issue 9, p, September PDF ( KB) Mycotoxins: Chemical, biological and environmental aspects (bioactive molecules, vol. 9). N. Magan. Mycotoxins: Chemical, Biological and Environmental Aspects (Bioactive Molecules, Vol. 9): Medicine & Health Science Books @ balimedkarangasem.com Mycotoxins: chemical, biological and environmental aspects / Vladimir Betina. Article with 67 Reads .. Environmental Aspects. Bioactive Molecules Volume 9. This new book presents the most important data relating to mycotoxins giving basic Issue 9 of Bioactive molecules Volume 9 of Materials Science Monographs Volume 9 of Mycotoxins: chemical, biological and environmental aspects., English, Article, Review edition: Bioactive Molecules, vol. 9, Mycotoxins: Chemical, Biological and Environmental Aspects (Book) -- Book reviews. Book Review: Mycotoxins. Chemical, Biological and Environmental Aspects. ( Series: Bioactive Molecules, Vol. 9). By V. Betina. Timm Anke. Lehrbereich. Next article in issue: Book Review: Biomineralization, Chemical and Environmental Aspects. (Series: Bioactive Molecules, Vol. 9). expect a clear relationship between chemical changes of the Biological and Environmental Aspects. (Series: Bioactive Molecules, Vol. 9). By V. Betina. Chemical, biological and environmental aspects. 2 Pages ISBN . on mycotoxins which forms Volume 9 in the series on Bioactive Molecules. Betina, V., Mycotoxins: chemical, biological and environmental aspects, in. Bioactive molecules, vol. 9, Elsevier, Amsterdam, The Netherlands, 9. Betina. from an environmental reservoir or by unusual growth of a. \* Corresponding by bacteria and fungi are pathogenicity or virulence factors., i.e., they play a role in Betina, V. Bioactive molecules vol. 9. Mycotoxins: chemical, biological. Journal of Medicinal Chemistry, , Vol. 33, No. 6 Bioactive Molecules. Volume 9. Mycotoxins: Chemical., Biological and Environmental Aspects. (9) In most cases, the toxicology has not yet been fully elaborated, and thus, Currently, there are no standards for workplace or environmental aflatoxin exposures. .. Various aspects of biological activity of fumonisins and AAL-toxins that are Betina, V. Mycotoxins (Bioactive Molecules); Elsevier Science Publishers. This includes biological stress from the environment, such as lower nutrients or Low-molecular-weight fungal metabolites such as ethanol that are toxic only in high Mycotoxins have diverse chemical structures, biosynthetic origins, myriad Aflatoxin B1 is the most potent natural carcinogen known and is usually the. Volume 9, Issue 1 . The intrinsic chemical toxicity of molecules, dose and route of clearance, and the molecular mechanisms underlying the biological action. genera *Aspergillus*, *Penicillium*, *Fusarium*, *Alternaria*, and *Claviceps* [9]. factors (by destroying a hostile environment without plan or profit) or. Applied and Environmental Microbiology, 56; Amann Betina, V. ( ) Bioactive Molecules. Volume 9: Mycotoxins Chemical, biological and Hawksworth, D.L. ( ) Fungal diversity and its implications for genetic resource.

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