Special Issue

New Insight into *Fusarium* Toxins and Aflatoxins

Message from the Guest Editor

Besides the direct plant yield losses due to *Fusarium* infection, the concern of grain contamination by *Fusarium* toxins arises from their frequent occurrence at toxicologically relevant levels. The main toxins produced by *Fusarium* species are fumonisins produced mainly by *F. verticillioides* and trichothecenes. (e.g. DON and T-2-toxin). *F. graminearum* is the most important DON producer, while *F. langsethiae* is the most important T-2-toxin producer. Interactions between these and other *Fusarium* toxins should also be taken into consideration. Aflatoxins, which are produced by *Aspergillus* species, are a group of polyketide-derived furanocoumarins and the most carcinogenic compounds among the known mycotoxins. The pathway genes involved in aflatoxin production are clustered in fungi, which enables coordination of their transcriptional activation and regulation. The aflatoxin gene cluster presents at least one specific regulatory gene—*aflR* encoding a protein—an AflR. The molecular study of biosynthetic pathways can help elucidate the mechanisms underlying fungal toxin production and enables the development of new effective approaches to control fungal toxicity.

Guest Editor

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Toxinology is an incredibly diverse area of study, ranging from field surveys of environmental toxins to the study of toxin action at the molecular level. The editorial board and staff of *Toxins* are dedicated to providing a timely, peer-reviewed outlet for exciting, innovative primary research articles and concise, informative reviews from investigators in the myriad of disciplines contributing to our knowledge on toxins. We are committed to meeting the needs of the toxin research community by offering useful and timely reviews of all manuscripts submitted. Please consider *Toxins* when submitting your work for publication.

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