

International Symposium of Mycotoxicology '99
(ISMYCO '99)

Mycotoxin Contamination:
Health Risk and Prevention Project

September 9 (Thu) - 10 (Fri), 1999

Convention Hall of Chiba University, Keyaki Kaikan, Chiba, Japan

Under the Auspices of

Research Center for Pathogenic Fungi and Microbial Toxicoses, Chiba University
Japanese Association of Mycotoxicology

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Contents and Proceedings

Fungi have been widely used for the production of fermented foods, whereas some species of fungi grow on cereals and feeds to contaminate them with toxic substances, named as mycotoxins. A rapid progress has been made in the biosynthetic studies for regulation of mycotoxin production, the methods to eliminate mycotoxins from cereals and foods, and the analytical methods of mycotoxins without using harmful organic solvents. International cooperations have been carried out to protect the health of humans and animals as well as the natural environment from hazardous chemicals, and a risk assessment of mycotoxin contamination has been made in cancer high risk areas in China. Recently, it has been reported on the news that endophytes, parasites on grasses, produce mycotoxins and have brought about toxicoses in cattle and other domestic animals. To advance communications on such recent progresses and events relevant to mycotoxicoses, an International Symposium entitled "Mycotoxin Contamination: Health Hazard and Prevention Project" was held in the Convention Hall of Chiba University, September 9 and 10, 1999. This symposium was planned by the Organizing Committee consisting of the staffs of the Japanese Association of Mycotoxicology as well as those of the Research Center for Fungi and Microbial Toxicoses, Chiba University. The Organizing Committee proposed topics of fundamental and practical importance in mycotoxicology to establish 5 sessions and select 5 to 6 speakers in each session. The titles and the contents were set up as follows.

The 1st Session: Regulation of Mycotoxin Production

New informations have been provided on the biosynthetic mechanisms of trichothecenes, sterigmatocystin, and aflatoxins. Presentations also have shown that some structures similar to the genes involved in aflatoxin biosynthesis are present in the genomes of nontoxigenic fungi, *Aspergillus oryzae* and *A. sojae*, which are widely used in Japan for production of fermented foods, and how these and other genes are similar to or different from those of toxigenic fungi.

The 2nd Session: Human and Animal Health Risk of Mycotoxins

New findings on *Fusarium* mycotoxins were presented. These are systematic and experimental assessment of cancer risk of fumonisins, new hemorrhage toxins, and mycotoxins as modifying agents on infectious diseases. A risk assessment of mycotoxins on humans in the high occurrence area of hepatic and esophageal cancers in China were reported.

The 3rd Session: Elimination of Mycotoxins from Foods

Efficient methods of reducing mycotoxin contamination have been developed. In this session were reported such methods as biocompetition in the field, elimination of contaminated pieces of cereals by sorting method, and removal of mycotoxins during food processing.

The 4th Session: Endophytes and Endophytic Toxins

Endophytes are parasites of grasses and some endophytes produce mycotoxins. It has been reported on the news that severe toxicoses have occurred in the Japanese farms in which domestic animals were fed imported grasses. In this session were reported the circumstances of endophytic toxicoses in the United States and New Zealand as well as in Japan. Chemistry and analytical method of endophytic toxins were also be presented.

The 5th Session: Safe and Clean Analysis of Mycotoxins

Recently, much attention has been made to the environmental pollution by hazardous substances, and the use of organic solvents such as benzene and chloroform has been refrained in viewpoint of hygiene and safety of workers. Accordingly, trials have been made in many research institutes and laboratories to improve current analytical methods and establish new methods without using hazardous organic solvents. In this session were presented the safe and clean methods for analysis of mycotoxins.

This Symposium was financially supported by the Japanese Government Ministry of Education, Science, Sports, and Culture, Chiba University, and Chiba Convention Bureau of Chiba Prefecture. Approximately 60 scientists came from abroad and attended this Symposium.

The Proceedings of International Symposium of Mycotoxicology '99 (ISMYCO) was published in 1999. The Proceedings is composed of two parts; one comprises a collection of the papers presented by the invited speakers at the Symposium, and the other comprises a collection of the papers presented by the other participants. The editorial board was

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