

APPENDIX B

Some Common Fungi, Mycotoxins and Health Effects from Ingestion, Dermal or Inhalation Exposure

Derived from Kendrick, 1992; Arafat and Musa, 1995; Osborne et al., 1996)

CAVEAT: The entries in this table provide examples of the toxins and health effects that have been associated with some fungi. The listed fungi may also produce other toxins, fungi other than those listed may produce some of these toxins, and health effects other than those listed may also be associated with these toxins.

Fungus	Mycotoxin	Possible Health Effect
Acremonium spp.	Cephalosporin	Antibiotic
Alternaria alternate, Phoma sorghina	Tenuazoic acid	Nephrotoxic, hepatotoxic, hemorrhagic
Aspergillus clavatus	Cytochalasin E Patulin	Affects cell division, inhibits protein synthesis, nephrotoxic, carcinogenic
Aspergillus flavus, Aspergillus parasiticus	Aflatoxins	Mutagenic, carcinogenic, hepatotoxic
Aspergillus fumigatus	Fumitremorgens Gliotoxin	Tremorgenic Cytotoxic
Aspergillus nidulans, Aspergillus versicolor, Cochliobolus sativus	Sterigmatocystin	Hepatotoxic, carcinogenic
Aspergillus ochraceus, Penicillium verrucosum, Penicillium viridicatum	Ochratoxin A	Nephrotoxic, hepatotoxic, carcinogenic
Cladosporium spp.	Epicladosporic acid	Immunosuppressive
Cladosporium cladosporioides	Cladosporin, Emodin	Antibiotics
Claviceps purpurea	Ergot alkaloids	Vasoactive (cause smooth muscles to constrict), hallucinogenic
Fusarium graminearum	Deoxynivalenol Zearalenone	Emetic Estrogenic

Fusarium moniliforme	Fumonisin	Neurotoxic, hepatotoxic, nephrotoxic, carcinogenic
Fusarium poae, Fusarium sporotrichoides	T-2 toxin	Hemorrhagic, immunosuppressive, causes nausea and vomiting
Penicillium chrysogenum	Penicillin	Antibiotic
Penicillium crustosum	Penitrem A, Roquefortine C	Tremorgenic Neurotoxic (tremorgenic)
Penicillium expansum	Citrinin, Patulin, Roquefortine C	Tremorgenic Neurotoxic (tremorgenic)
Penicillium griseofulvum, Penicillium viridicatum	Griseofulvin	Tumorigenic, teratogenic, hepatotoxic
Pithomyces chartarum	Sporidesmin Phylloerythrin	Hepatotoxic Causes photosensitization and eczema
Stachybotrys chartarum (atra)	Satratoxins, Verrucarins, Roridins Stachyocins	Inflammatory agents, immunosuppressive, cause dermatitis, hemotoxic, hemorrhagic
Tolypocladium inflatum	Cyclosporin	Immunosuppressive

Source: American Conference of Governmental Industrial Hygienists (ACGIH). 1999.
Bioaerosols: Assessment and Control.