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A mycotoxin is a highly toxic principle chemical produced by molds or fungi. One type, the aflatoxins, is a member of the tricothecene group produced by the fusarium fungus.
Mycotoxins represent an important class of xenobiotics (in terms of morbidity), which cause renal injury in humans and food animals.

- Flora
- Fauna
- Normal Flora
• Deterioration of the host’s defense mechanisms.
• Relocation of microorganisms, when an organism finds its way to another area of the body previously uninhabited by it.
• A disturbance of the “normal flora.”
Normal floras are commonly referred to as *amphibionts*, ranging from commensals to pathogens.
• blood, larynx, trachea, nasal sinuses, bronchi, esophagus, stomach, upper intestinal tract, upper urinary tract (including the posterior urethra), and posterior genital tract (passage above cervix included).
The Habitats for fungal growth are:

- Extremely high levels of both moisture and nutrients, as in the lower intestines and the mouth.
- A high level of moisture and a low level of nutrients, as with mucous membranes.
- A low level of moisture and a moderate level of nutrients, as on the skin.
Numbers of total aerobic and anaerobic bacteria in certain anatomical regions:

- **Lower intestine** – approximately 100 billion microorganisms per gram of fecal matter.
- **Mouth** – approximately 1 billion microorganisms per ml of saliva.
- **Nose** – approximately 20,000 microorganisms per ml of nasal washing.
- **Skin** – approximately 1 million microorganisms per cm²; this value is dependent upon the skin surface tested.
Development of the Indigenous Flora
Appreciable numbers of bacteria have been cultured from the mouths of infants within 6 to 10 hours of birth and in the feces within 10 to 20 hours.
• Indigenous fungi are primarily saprophytes of soil
WHAT ARE FUNGI?
once death overtakes the living, the fungi are the principle undertakers and managers:

• “from dust to dust.”
Mycotoxins

- Oosporein
- Aflatoxin
- Cyclosporin
Candida Albicans
Mycotoxins may be friends or foe.
1945 to present day

- drug, lovastatin, and the other “statins”, which have revolutionized the treatment of hyperlipidemia
ENVIRONMENT, FOOD CHAIN and STORED FOOD
indoor air quality

• in the 1990's, research has implicated many toxin-producing fungi, such as *Stachybotrys*, *Penicillim*, *Aspergillus* and *Fusarium* species, to indoor air quality problems and building related illnesses.
biofilms
In 1987 at Yale University, Karl Hager and Mike Plamann performed a very important study on benomyl, the mutant allele of his-3(1-234-723).
CORN
Acremonium siricium
Aspergillus flavus
Aspergillus niger
Aspergillus tamarill
Aspergillus wentii
Bipolaris maydis
Chaetomium globosum
Chaetomium funicola

PEANUTS
Aspergillus candir
Aspergillus flavus
Aspergillus niger
Aspergillus tamarill
Aspergillus wentii
Chaetomium globosum
Chaetomium funicola
Chaetomium spp.
Humans who eat these foods are ingesting both the toxicogenic fungi and their mycotoxins. These fungi are capable of surviving in the intestinal stream where they may continue to produce their toxins.
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<th>DISEASE</th>
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<td>Fowl</td>
<td>Moldy Corn</td>
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<td></td>
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VOLATILE FUNGAL METABOLITES

During exponential growth, many fungi release low molecular weight, volatile organic compounds (VOCs) as products of secondary metabolism.

- ketones
- aldehydes
- and alcohols as well as moderately to highly modified aromatics and aliphatics.
Marker compounds common to multiple species, such as 3-methylfuran, may be monitored as a proxy for the presence of a fungal amplifier.
INTEGRATIVE HEALTH CARE TREATMENT

• Many fungi, mycotoxins, and their VOC’s are at a level of detection within the human body that is very hard to determine at relatively low costs.
Anti-fungal Formulations
AIDS patient’s fungal infections

- Tissue biopsy
- Far infrared electromagnetic spectrum in micron and micrometers (nano level)
“resonant absorption.”

- at 3 to 50 microns
An MPS Capsule from MPS, Inc. Seoul, Korea

- special carbon fibers
- manufactured by Daiugin
- high gem graded jade balls
- far infrared proprietary technology
The use of activated charcoal has been recognized by the U.S. Environmental Protection Agency in their text, Recognition and Management of Pesticide Poisonings, 4th Edition, in absorbing volatile organic compounds (VOCs).
Research conducted at the Korean Atomic Institute have shown that Kuh Sung YLS-95 (Trade Marks Bio-Oaky & Oaky Smoky) a liquid yielding high plant infrared, which is made from oak wood charcoal vinegar is highly effective in significantly reducing carbon tetrachloride in rats and ethanol in humans within one hour after exposure.
handful of poison mushrooms, a species of fungus
The research conducted at Capital University of Integrative Medicine was sponsored by:

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THE END