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BRIEF EXPLANATION ON MYCOTOXIN PANEL

For any further question on the test report please schedule a consult with our medical staff at www.realtimelab.com

	Mycotoxin	Cellular activity of Mycotoxin	Symptoms/Others	Association with a "Disease State"
AFLATOXIN FAMILY-Organisms: *Aspergillus flavus*, *Aspergillus oryzae*, Aspergillus *fumigatus*, *Aspergillus parasiticus* Aflatoxins have been linked to liver cancer, hepatitis, cirrhosis, and other health issues				
1	**B1**	Binds DNA and proteins	Shortness of breath, weight loss, most potent and highly carcinogenic.	Primarily attacks the liver, other organs include kidneys and lungs.
2	**B2**	Inhibits DNA, RNA, and protein metabolism	Enters the body through the lungs, mucous membranes (nose and mouth), or the skin.	Affects the liver and kidneys. Less potent than B1. The order of toxicity is B1 greater than G1, greater than G2, greater than B2.
3	**G1**	Adversely affects the immune system	A. flavus second leading cause of invasive aspergillosis in immunocompromised patients.	Cancer, chronic hepatitis, and jaundice. Reye's Syndrome.
4	**G2**	Immunosuppression	Mitochondrial damage. Aflatoxicosis in Humans and Animals.	Hepatitis, malnutrition, lung cancer.
OCHRATOXIN A -Organisms: *Aspergillus ochraceus*, *Aspergillus niger*, and *Penicillium* species				
5	**Ochratoxin A**	Interferes with cellular physiology, inhibits mitochondrial ATP production, and stimulates lipid peroxidation	A potent teratogen and immune-suppressant. 30-day ½ life in blood; indefinite existence intra-cellular.	Kidney disease, cancer, infection of bladder, Nephrotoxic, Hepatotoxic, and Carcinogenic.
TRICHOTHECENE FAMILY (MACROCYCLIC) -Group D Organism: *Stachybotrys chartarum*				
6	**Satratoxin G**	DNA, RNA and protein synthesis, intracellular	Bleeding disorders, central nervous and peripheral nerve disorders. Most potent inhibitors of protein synthesis.	Wide range of GI problems, skin inflammation, vomiting and damage to blood producing cells. Highly toxigenic.
7	**Satratoxin H**	Inhibits protein synthesis	Found in damp or water-damaged environment.	Vision problems, GI problems, breathing issues.
8	**Isosatratoxin F**	Immunosuppression	Causes of health problems due to poor air quality.	Contributor to "sick building syndrome"
9	**Roridin A**	Nasal inflammation, excess mucus secretion, and damage to the olfactory system	Acute and chronic respiratory tract health problems.	Acute and chronic lung and nasal problems.
10	**Roridin E**	Disrupt the synthesis of DNA, RNA, and protein	Roridin E grows in moist indoor environments.	Can impact every cell in the body.
11	**Roridin H**	Inhibits protein synthesis	Grows well on many building materials subject to damp conditions.	Lymphoid necrosis and dysregulation of IgA production.
12	**Roridin L-2**	Immunosuppression	Grows on wood-fiber, boards, ceiling tiles, water-damaged gypsum board, and HVAC ducts.	Easily airborne and inhaled by occupants of an infected building.
13	**Verrucarin A**	Immunosupression, nausea, vomiting, weight loss	Found mostly in damp environments.	One of the most toxic trichothecenes.
14	**Verrucarin J**	Can easily cross cell membranes	Absorbed through the mouth and the skin.	Small enough to be airborne and easily inhaled.
GLIOTOXIN DERIVATIVE-Organisms: *Aspergillus fumigatus*, *Aspergillus terreus*, *Aspergillus niger*, *Aspergillus flavus*				
15	**Gliotoxin**	Attacks intracellular function in immune system	Lung disorders, brain dysfunction, bone marrow dysfunction.	Immune dysfunction disorders. Aspergillosis, association with tumors of brain, lung.

References : https://realtimelab.com/gliotoxin/; https://realtimelab.com/aflatoxins/; https://realtimelab.com/trichothecenes/; https://realtimelab.com/ochratoxins/ ; https://realtimelab.com/molds/

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