William Shaw, Ph.D Director	11813 W. 77th Street, Lene	xa, KS 66214	(913) 341-8	8949	Fax (913) 341-6207
Requisition #:	775143	Physician Name:		NO PHYSICIAN	I
Patient Name:	Mohammed Banat	Date of Collection:		Feb 5, 2020	
Date of Birth:	Jan 27, 1978	Time of Collection:		06:00 AM	
Gender:	Μ	Print Date:		Feb 17, 2020	

#### **Mycotox Profile**

**Creatinine Value:** 

102.22 mg/dl

	Metabolite	Results (ng/g creatinine)	Normal Range *	Abnormal Range
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#### Aspergillus

Aflatoxin-M1	0.00	< 0.5	
			▲ 0.5
Ochratoxin A	39.45	< 7.5	
			▲ 7.5
Gliotoxin	19535.30	< 200	
			▲ 200

#### Penicillum

Sterigmatocystin	0.00	< 0.4		
			▲ 0.4	
Mycophenolic Acid	< 37.40	< 37.4		
			▲ 37.4	

#### Stachybotrys

Roridin E	0.00	< 0.2	
			▲ 0.2

#### \* The normal range was calculated using the median + 2 times the standard deviation

Testing performed by The Great Plains Laboratory, Inc., Lenexa, Kansas. The Great Plains Laboratory has developed and determined the performance characteristics of this test. The test has not been evaluated by the U.S. Food and Drug Administration. The FDA does not currently regulate such testing.

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Patient Name:	Mohammed Banat	Date of Collection:	F	eb 5, 2020
Date of Birth:	Jan 27, 1978	Time of Collection:	0	6:00 AM
Gender:	Μ	Print Date:	F	eb 17, 2020

#### **Mycotox Profile**

Metabolite	Results (ng/g creatinine)	Normal Range *	Abnormal Range
Verrucarin A	0.00	< 1.3	
			▲ 1.3

#### Fusarium

Enniatin B	0.00	< 0.3	
			<b>▲</b> 0.3
Zearalenone	0.00	< 3.2	

#### Chaetomium globosum

Chaetoglobosin A	0.00	< 10			
			▲ 10		

#### **Multiple Mold Species**

Citrinin (Dihydrocitrinone DHC)	0.00	< 25	
			25

\* The normal range was calculated using the median + 2 times the standard deviation

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Gender:	Μ	Print Date:	Feb 17, 20	20

Ochratoxin: Ochratoxin A (OTA) is a nephrotoxic, immunotoxic, and carcinogenic mycotoxin. This chemical is produced by molds in the Aspergillus and Penicillium families. Exposure is done primarily through water damaged buildings. Minimal exposure can occur through contaminated foods such as cereals, grape juices, dairy, spices, wine, dried vine fruit, and coffee. Exposure to OTA can also come from inhalation exposure in water-damaged buildings. OTA can lead to kidney disease and adverse neurological effects. Studies have shown that OTA can lead to significant oxidative damage to multiple brain regions and is highly nephrotoxic. Dopamine levels in the brain of mice have been shown to be decreased after exposure to OTA. Some studies have hypothesized that OTA may contribute to the development of neurodegenerative diseases such as Alzheimer's and Parkinson's. Treatment should be aimed at removing the source of exposure. Agents such as oral cholestyramine, charcoal, and phenylalanine can help prevent the absorption of these toxins from food. Antioxidants such as vitamins A, E, C, NAC, rosmarinic acid, and liposomal glutathione alone or in combination have been shown to mitigate the oxidative effects of the toxin. Bentonite or zeolite clay is reported to reduce the absorption of multiple mycotoxins found in food, including OTA. Studies have also shown that OTA is present in sweat, which supports the use of sauna as a treatment to increase the excretion of OTA. The use of binders is recommended, take 1-2 capsules of G.I. Detox™\*, 1-2x daily, 1 hour apart from food, supplements and medication as needed. To treat possible fungal infections caused by mold exposure patients can take pharmaceutical medications such as itraconazole or nystatin. Patients can also take 2 capsules of Candida Formula\* 2x daily with food for 3 months, 2 hours apart from probiotics. Retesting is recommended after 3-6 months of treatment.

(PMID 17195275, 16293235, 27521635, 22069626, 24792326, 22253638, 16140385, 2467220, 16844142, 19148691, 22069658, 16019795, 18286403, 15781206, 11439224, 17092826, 32710148)

**Gliotoxin:** Gliotoxin (GTX) is produced by the mold genus Aspergillus. Aspergillus spreads in the environment by releasing conidia which are capable of infiltrating the small alveolar airways of individuals. In order to evade the body's defenses Aspergillus releases Gliotoxin to inhibit the immune system. One of the targets of Gliotoxin is PtdIns (3,4,5) P3. This result in the downregulation of phagocytic immune defense, which can lead to the exacerbation of polymicrobial infections. Gliotoxin impairs the activation of T-cells and induces apoptosis in monocytes and in monocyte-derived dendritic cells. These impairments to dendritic cells can lead to multiple neurological syndromes. The use of binders is recommended, take 1-2 capsules of G.I. Detox<sup>™</sup>\*, 1-2x daily, 1 hour apart from food, supplements and medication as needed. To treat possible fungal infections caused by mold exposure patients can take pharmaceutical medications such as itraconazole or nystatin. Patients can also take 2 capsules of Candida Formula\* 2x daily with food for 3 months, 2 hours apart from probiotics. Retesting is recommended after 3-6 months of treatment.

(PMID: 16712786, 27048806, 21575912, 23278106).

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\*These products can be purchased through New Beginnings Nutritionals, www.nbnus.com, 913-754-0458.