

# List of References on Mold Illnesses – Volume I

## Compiled by Jack Dwayne Thrasher, Ph.D. and Irene H. Grant, M.D.

Last Updated: September 6, 2015

### Section I. Fungal Mycotoxins and Bacterial Toxins in Water-Damaged Indoor Environments

Craner J (2008). **A critique of the ACOEM statement on mold: Undisclosed conflicts of interest in the creation of an “Evidence-based” Statement.** *Int J Occup Environ Health* 24:283-98.

Tuomi T, Reijula K, Johnsson T, Hemminki K, Hintikka EL, Lindroos O, Kalso S, Koukila-Kähkölä P, Mussalo-Rauhamaa H, Haahtela T. **Mycotoxins in crude building materials from water-damaged buildings.** *Appl Environ Microbiol.* 2000 May; 66(5):1899-904.

Thrasher JD, Gray MR, Kilburn KH, Dennis DP, Yu A. **A water-damaged home and health of occupants: A case study.** *J Environmental Public Health* 2012:2012.312836.

Taubel M, Sulyok M, Vishwanath V, Bloom E, et al. **Co-occurrence of toxic bacterial and fungal secondary metabolites in moisture-damaged indoor environments.** *Indoor Air* 2011 Oct;21(5):368-75. doi: 10.1111/j.1600-0668.2011.00721.x. Epub 2011 May 18.

Polizzi V, Delmulle B, Adams A, Moretti A, Susca A, et al. **JEM spotlight: Fungi, mycotoxins and microbial volatile organic compounds in mouldy interiors from water-damaged buildings.** *J Environ Monitoring* 2009 Oct;11(10):1849-58. doi: 10.1039/b906856b. Epub 2009 Jul 20.

Pestka JJ, Yike I, Dearborn DG, Ward MD, Harkema. ***Stachybotrys chartarum*, trichothecene mycotoxins, and damp building-related illness: new insights into a public health enigma.** *Toxicol Sci.* 2008 Jul 104(1):4-26.

Polizzi V, Adams A, Malysheva SV, De Saeger S, Van Peteghen C, et al. **Identification of volatile markers of indoor fungal growth and chemotaxonomic classification of *Aspergillus* species.** *Fungal Biology* 2012 116:941-53.

Smoragiewicz W, Cossette B, Boutard A, Krzystyniak K. **Trichothecene mycotoxins in the dust of ventilation systems in office buildings.** *Int Arch Occup Environ Health* 1991 65:113-7.

Nikulin M, Pasanen AL, Berg S, Hintikka EL. ***Stachybotrys atra* Growth and Toxin Production in Some Building Materials and Fodder under Different Relative Humidities.** *Appl Environ Microbiol* 1994 Sep;60(9):3421-3424.

Straus DC, Wilson SC. **Respirable trichothecene mycotoxins can be demonstrated in the air of *Stachybotrys chartarum*-contaminated buildings.** *J Allergy Clin Immunol* 2006; 118:760.

Straus D. **Molds. Mycotoxins and sick building syndrome.** *Toxicology and Industrial Health* 2009.25(9-10), 617-635.

Brasel TL, Martin JM, Carriker CG, Wilson SC, Straus DC. **Detection of airborne *Stachybotrys chartarum* macrocyclic trichothecene mycotoxins in the indoor environments.** *Appl Environ Microbiol.* 2005 Nov; 71(11):7376-88.

Brasel TL, Campbell AW, Demers RE, Ferguson BS, Fink J, et al. **Detection of trichothecene mycotoxins in sera from individuals exposed to *Stachybotrys chartarum* in indoor environments.** *Arch Environ Health* 2004 59:317-23.

Panaccione DG, Coyle CM. **Abundant respirable ergot alkaloids from the common airborne fungus *Aspergillus fumigatus*.** *Appl Environ Microbiol.* 2005 Jun;71(6):3106-11.

Gottschalk C, Bauer J, Meyer K. **Detection of satratoxin G and H in indoor air from a water-damaged building.** Mycopathologia. 2008 Aug;166(2):103-7. 2.

Gottschalk C, Bauer J, Meyer K. **Determination of macrocyclic trichothecenes in mouldy indoor materials by LC-MS/MS.** Mycotoxin Research 3:189-92.

Fog Nielsen K. Fungal Genet Biol. 2003 Jul;39(2):103-17. **Mycotoxin production by indoor molds.** The Mycology Group, Bio Centrum-DTU, Building 221, Technical University of Denmark, DK-2800, Kgs Lyngby, Denmark. kfn@biocentrum.dtu.dk.

Engelhart S, Looek A, Skutlarek D, Sagunski H, et al. **Occurrence of toxigenic *Aspergillus versicolor* isolated and sterigmatocystin in carpet dust from damp indoor environments.** Applied Environ Microbiol 2002 68:3886-90.

Charpin-Kadouch C, Maurel G, Felipe R, Queralt J, Ramadour M, Dumon H, Garans M, Botta A, Charpin D. **Mycotoxin identification in moldy dwellings.** J Appl Toxicol 2007 Mar-Apr;27(2):19.

Bloom E, Grimsley LF, Pehrson C, Lewis J, Larsson L. **Molds and mycotoxins in dust from water-damaged homes in New Orleans after hurricane Katrina.** Indoor Air. 2009 Jan 28.

Bloom E, Nyman E, Must A, Pehrson X, Larsson L. **Molds and mycotoxins in indoor environments – A survey in water-damaged buildings.** J Occupational Environ Hygiene 2009 6:671-78.

Vishwanath V, Sulyok M, Labuda R, Bicker W, Krska R. **Simultaneous determination of 186 fungal and bacterial metabolites in indoor matrices by liquid chromatography/tandem mass spectrometry.** Anal Bioanal Chem 395:155072, 2009.

## **Section II. Sarcoidosis, Molds and 1, 3-Beta-D-Glucans, and Inflammation**

Rylander R. **Investigations of the relationship between disease and airborne (1-3)- $\beta$ -D-glucan in buildings.** Mediators Inflammation 1997 6:275-77.

Fogelmark B, Thorn J, Rylander R. **Inhalation of (1-3)- $\beta$ -D-glucan causes airway eosinophilia.** Mediators Inflammation 2—2 10:13-19.

Thorn J, Beijer L, Rylander R. **Effects of inhalation of (1-3)- $\beta$ -D-glucan in healthy humans.** Mediators Inflammation 2001 10:173-78.

Beijer L, Thorn J, Rylander R. **Mould exposure at home relates to inflammatory markers in blood.** Eur Respir J 2003 21:317-22.

Thorn J, Rylander R. **Airways inflammation and glucan in a rowhouse area.** Amer J Respir Crit Care Med 1998 157:1798-1893.

Miller JD, Sun M, Bilyan A, Roy J, Rand TG. **Inflammation-associated gene transcription and expression in mouse lungs induced by low molecular weight compounds from fungi from the built environment.** Chemic-Biological Interactions 2010 183:113-24.

Gringhuis SI, Wevers BA, Kaptein T, van Capel TMM, et al. **Selective C-Rel activation via Malt 1 controls anti-fungal TH-17 immunity by Dectin-1 and Dectin-2.** PLoS Pathogens 2011 &:e1001259.

Tercelj M, Rylander R. **Sarcoidosis and Fungi: The case for relation.** In: M. D. Connor, et al., eds. Sarcoidosis. Nova Science Publisher, 2012, Chapter 7, pp 133-43.

Laney AS, Cragin LA, Blevins LZ, Summer AD, Cox-Ganser JM, et al. **Sarcoidosis, asthma and asthma-like symptoms among occupants of a historically water-damaged office building.** Indoor Air 2009 19:83-90.

Mukhopadhyay S, Farver CF, Vaszar LG, Dempsey OJ, et al. **Causes of pulmonary granulomas: a retrospective study of 500 case from seven countries.** J. Clin Pathol 2012 65:517.

- Pena TA, Soubani AO, Samavati L. **Aspergillus lung disease in patients with sarcoidosis: A case series and review of the literature.** Lung 2011 189:157-72. 3.
- Tercelj M, Stopinsek S, Ihan A, Salobir B, Simcic S, Wraber A, Rylander R. **In vitro and in vivo reactivity to fungal cell wall agents.** Clin Exper Immunol 2011 166:87-93.
- Tercelj M, Salobir B, Zupancic M, Rylander R. **Antifungal medication is efficient in the treatment of sarcoidosis.** Therap Advances Respiratory Disease. 2011 5:157-62.
- Tercelj M, Rott T, Rylander R. **Antifungal treatment in sarcoidosis--a pilot intervention trial.** Respir Med. 2007 Apr; 101(4):774-8.
- Seo S-C, Reponen T, Levin L, Borchdelt T, Grinshpun SA. **Aerosolization of particulate (1-3)- $\beta$ -glucan from moldy materials.** Appl Environ Microbiol 2008 74:585-93.
- Tercelj M, Salobir B, Rylander R. **Microbial antigen treatment in sarcoidosis – A new paradigm?** Medical Hypotheses 2008;70(4):831-4.
- Ferwerda B, Ferwerda G, Plantinga TS, Willment JA, et al. **Human Dectin-1 deficiency and mucocutaneous fungal infections.** New Eng J Med 2009 361:1760-67.
- Tercelj M, Salobir B, Harlander M, Rylander R. **Fungal exposure in homes of patients with sarcoidosis – an environmental exposure study.** Environmental Health 2011 10:8.
- Tercelj M, Salobir B, Zupancic M, Wraber B, Rylander R. **Inflammatory markers and pulmonary granuloma infiltration in sarcoidosis.** Respirology 2014 19:225-30.
- Werner JL, Metz AF, Horn D, Shoeb TR, et al. **Requisite role for the Dect-1  $\beta$  glucan receptor in pulmonary defense against *Aspergillus fumigatus*.** J Immunol 2009 182:4938-46.
- Wang L, Li Y. **Longitudinal ultra-extensive transverse myelitis as a manifestation of neuro Sarcoidosis.** J. Neurosci 2015 May 22 doi: 10.1016/j.ns.2015.05.017 (Epub ahead of print).
- Imram RT, Nizami S, Eyzner I, Mirani N, et al. **Vertigo as a predominant manifestation of neurosarcoidosis.** Case Reports in Medicine 2015, Article ID 397046, 4 pages.
- Mercan M, Akyol A, Karaman Y, Bolay H. **A case of sarcoidosis of the central nervous system and orbita.** Case Reports in Medicine 2015, Article ID 403459, 3 pages (online).
- Rose O, Ahmed Z, Snow B. **Multiple cranial nerve palsies as the first presentation of sarcoidosis.** Case Reports in Otolaryngology 2014 Article ID 592510, 3 pages.
- Langrand C, Bihan H, Raverot G, Varron L, Androdias G, et al. **Hypothalamo-pituitary sarcoidosis: a multicenter study of 24 patients.** QJ Med 2012 105:981-995.
- Mijajlovic M, Mirko M, Mihailovic-Vucinic, V, Aleksic V, Covickovic-Sternic N. **Neurosarcoidosis: two case reports with multiple cranial nerve involvement and review of the literature.** 2014 Biomed Pap Med Fac Univ Palacky Olomouc Czech Repub 2014 Dec; 158:662-67.
- Hoyle JC, Jablonski C, Newton HB. **Neurosarcoidosis: Clinical review of a disorder with challenging inpatient presentations and diagnostic considerations.** The Neurohospitalist 2014 4:94-101.
- Kaslwai M, Harbhajanka A, Nag S, O'Toole JE. **Isolated spinal Neurosarcoidosis: An enigmatic intramedullary spinal cord pathology-case report and review of the literature.** J Craniovertebr Junction Spine 2013 4:76-81.
- Seo S-C, Reponen T, Levin L, Grishpun SA. **Size-fractionated (1-3)- $\beta$ -D-glucan concentrations aerosolized from different moldy building materials.** Sci Total Environ 2009 407:805-24.
- Adhikari A, Reponen T, Rylander R. **Airborne fungal fragments in homes in relation to total fungal biomass.** Indoor Air 2013 23:142-47.

Gorny L, Reponen T, Willeke K, Schmechel D, Robine E, et al. **Fungal fragments as indoor air biocontaminants.** Appl Environ Microbiol 2002 68:3522-31.

Gorny L, Lawniczek-Walczk Z. **Effect of two Aerosolization methods on the release of fungal propagules from contaminated agar surface.** Annals Agriculture Environ Med 2012 19:279-84.

Seo S-H, Seo S-C, Schmechel D, Sergey A, Grishpun SA, Reponen T. **Aerodynamic characteristics and respiratory deposition of fungal fragments.** Atmospheric Environ 2005 39:5454-65.

Reponen T, Seo S-C, Grimsley F, Lee T, Crawford C, Grinshpun SA. **Fungal fragments in moldy houses: A field study in homes in New Orleans and Southern Ohio.** Atmospheric Environ 41:8140-49.

Seo S-C, Choung JT, Chen BT, Lindsley WG, Kim K. **The level of submicron fungal fragments in homes with asthmatic children.** Environ Res 2014 131:71-6.

Lichtenstein JH, Hsu Y-H, Conaghey TC, Molina M, et al. **Environmental mold and mycotoxin exposures elicit specific cytokine and chemokine responses.** PLoS ONE 10:e0126926, 215 (online).

Tercelj M, Salobir B, Zupancic M, Rylander R. **Sarcoidosis treatment with antifungal medication: A follow-up study.** Pulmonary Med 2014, ID 739673, 4 pages (online).

### **Section III. Toxic Mold Exposure and Brain Dysfunction**

Valdes JJ, Cameron JE, Cole RJ. **Aflatrem: a tremorgenic mycotoxin with acute neurotoxic effects.** Environ Health Perspec 1985 62:459-63.

Anyanwu EC. **The validity of the environmental neurotoxic effects of toxigenic molds and mycotoxins.** The Internet J of Toxicology. 2008;5(2) DOI:10.5580/2099b.

Anyanwu E, Campbell AW, Jones J, Ehiri JE, Akpan AI. **The neurological significance of abnormal natural killer cell activity in chronic toxigenic mold exposures.**

Anyanwu EC, Campbell AW, Vojdani A. **Neurophysiological effects of chronic indoor environmental toxic mold exposure on children.** The Scientific World 2003 3:281-90.

Anyanwu E, Ehiri J, Akpan AI. **Application, effectiveness, and limitations of the electrophysiological diagnosis of neurotoxic effects of chronic environmental mycotoxins in humans.** Int J Adolesc Med Health. 2004 Apr-Jun;16(2):107-18. Neurosciences Research, Cahers Inc., Houston, Texas 77385, USA. ebereanyanwu@msn.com.

Anyanwu EC, Morad M, Campbell AW. **Metabolism of mycotoxins, intracellular functions of vitamin B12, and neurological manifestations in patients with chronic toxigenic mold exposures. A review. 2:** Scientific World Journal. 2004 Aug 26;4:736-45. Neurosciences Research, Cahers Inc., 8787 Shenandoah Park Drive, Suite 122, Conroe, Houston, 77385 TX, USA. ebereanyanwu@msn.

Campbell AW, Anyanwu EC, Vojdani A. **Combination of high-dose intravenous immunoglobulins and Itraconazole in treating chronic mycotic demyelinating optic neuritis.** Scientific World Journal, 2003 Aug 2; 3:640-646.

**Campbell AW, Thrasher JD, Gray MR, Vojdani A. Mold and mycotoxins: effects on the neurological and immune systems in humans.** Advances in applied microbiology, 2004. 55:375-406.

Campbell AW, Thrasher JD, Madison RA, Vojdani A, Gray MR, Johnson A. **Neural autoantibodies and neurophysiologic abnormalities in patients exposed to molds in water-damaged buildings.** Arch Environ Health. 2003 Aug 58(8):464-74.

Doi K, Uetsuka K. **Mechanisms of mycotoxin-induced neurotoxicity through oxidative stress-associated pathways.** Int. J. Mol. Sci. 2011, 12, 5213-5237.

- Gordon KE, Masotti RE, Waddell WR. **Tremorgenic encephalopathy: a role of mycotoxins in the production of CNS disease in humans?** Can J Neurol Sci. 1993 Aug;20(3):237-9. Department of Pediatrics, Dalhousie University, Halifax, Nova Scotia, Canada.
- Gordon WA, Cantor JB. **The diagnosis of cognitive impairment associated with exposure to mold.** Advances in Applied Microbiology 2004, Vol 55:361-374.
- Gordon WA, Cantor JB, Johanning E, Charatz HJ, Ashman TA, Breeze JL, Haddad L, Abramowitz S. **Cognitive impairment associated with toxigenic fungal exposure: a replication and extension of previous findings.** Applied Neuropsychology 2004, 11 (2), 65-74.
- Jedrychowski W, Maurgeri U, Perera F, Stigter L, et al. **Cognitive impairment of 6-year-old children exposed to mold-contaminated homes in early postnatal period.** Prospective birth cohort study in Poland. Physiology and Behavior 2011 204:989-95.
- Karunasena E. **The mechanisms of neurotoxicity induced by a *Stachybotrys chartarum* trichothecene mycotoxin in an in vitro model.** A dissertation in microbiology and immunology, submitted to the graduate faculty of Texas Tech University Health Sciences Center for the degree of Doctor of Philosophy . i-ix, 1-114.
- Karunasena E, Larranaga MD, Simoni JS, Douglas DR, Straus DC. **Building-associated neurological damage modeled in human cells: a mechanism of neurotoxic effects by exposure to mycotoxins in the indoor environment.** Mycopathologia 2010;170:377-390.
- Kilburn KH. **Role of molds and mycotoxins in being sick in buildings: neurobehavioral and pulmonary impairment.** Adv Appl Microbiol. 2004; 55:339-59. University of Southern California Keck School of Medicine Environmental Sciences Laboratory Alhambra, California 91803, USA. PMID: 15350801.
- Kilburn KH. **Indoor mold exposure associated with neurobehavioral and pulmonary impairment: A preliminary report.** Ach Environmental Health 2003 Jul; 58(7):390-8.
- Kilburn KH. **Neurobehavioral and pulmonary impairment in 105 adults with indoor exposure to molds compared to 100 exposed to chemicals.** Toxicol Ind Health. 2009 Oct-Nov; 25(9-10):681-92.
- Kilburn KH, Thrasher JD, Nina I. **Do terbutaline- and mold-associated impairments of the brain and lung related to autism?** Toxicology and Industrial Health 2009 25:681-92.
- Wang J, Fitzpatrick DWW, Wilson JR. **Effects to the trichothecene T-2 toxin on neurotransmitters and metabolites in discrete areas of the rat brain.** Food & Chemical Toxicol. 1998, 36:947-953.
- Crago BR, Gray MR, Nelson LA, Davis M, Arnold L, Thrasher JD. **Psychological, neuropsychological and electrocortical effects of mixed mold exposure.** Arch Environ Health 58:452-63.
- Simon TE (2003). **Use of functional brain imaging in the evaluation of exposure to mycotoxins and toxins encountered in DesertStorm/Desert Shield.** Archives Environ Health 58:406-9.
- Epstein P, Harding P, Konopka L, Curtis C (2008). **Functional imaging for clinical evaluation of mild to moderate toxic encephalopathic brain disease: A study of seven patients.** J Nutri Health Care 17:148-56.
- Rini JF, Grant IH. **Neurological Disease After Mold Exposure, Immune Risks & Response to Biofilm-Focused Antifungal Therapy.** In Abstracts: 52nd Interscience Conference on Antimicrobial Agents and Chemotherapy, American Society for Microbiology, San Francisco CA, September 10, 2012, M-1063. p 113.
- Islam Z, Hegg CC, Bae HK, Pestka JJ. **Satratoxin G-induced apoptosis in PC-12 neuronal cells is mediated by PKR and caspase independent.** Toxicol Sci. 2008 Sep;105(1):142-52. Epub 2008 Jun 4 Center for Integrative Toxicology, Michigan State University, East Lansing, Michigan 48824-1224, USA.
- Islam Z, Harkema JR, Pestka JJ. **Satratoxin G from the black mold *Stachybotrys chartarum* evokes olfactory sensory neuron loss and inflammation in the murine nose and brain.** Environ Health Perspect. 2006 Jul; 114(7):1099-107.

Wang J, Fitzpatrick DWW, Wilson JR. **Effects to the trichothecene T-2 toxin on neurotransmitters and metabolites in discrete areas of the rat brain.** Food & Chemical Toxicol .1998,36, 947-953.

Wang J, Fitzpatrick DWW, Wilson JR. **Effects to the trichothecene T-2 toxin on blood-brain barrier permeability monoamine oxidase activity and protein synthesis in rats.** Food & Chemical Toxicol.1998, 36,955-961.

Zhang X, Boesch-Saadatmandi C, Lou Y, Wolffram S, Huebbe P, Rimbach G. **Ochratoxin A induces apoptosis in neuronal cells.** Genes Nutr. 2009 Mar;4(1):41-8. Epub 2009 Jan 16 Institute of Pharmacology, Toxicology and Biochemical Pharmaceutics, College of Pharmaceutical Sciences, Zhejiang University, 310058, Hangzhou, China.

## **Section IV. Health and Exposure to Toxic Molds in Water-Damaged Buildings**

**Damp indoor spaces and health.** Institute of Medicine for the National Academy 2004.

Fisk WJ, Eliseeva EA, Mendell MJ. **An association of residential dampness and mold with respiratory tract infections and bronchitis: a meta-analysis.** Environmental Health 2010, 9:72. 1-11.

Fisk WJ, Lei-Gomez Q, Mendell MJ. **Meta-Analyses of the associations of respiratory health effects with dampness and mold in homes.** Indoor Environment Dept, Lawrence Berkley National Laboratory, Berkley CA 94720 , supported by the Indoor Environments Division, Office of Radiation and Indoor Air, Office of Air and Radiation of the U.S. Environmental Protection Agency. Jan 2006, 1-21.

Goldstein GB. **Adverse reactions to fungal metabolic products in mold-contaminated areas.** J Allergy Clin Immunol 2006; 118:760-761.

Grant IH. **Clinical Spectrum, Risks for Progressive Disease and Response To Antifungal Therapy Following Environmental Exposure To Aspergillus-Penicillium.** Mycoses 2011; 54 (Supplement 2): 97.

Grant IH. **Markers for Illness and Progression following Environmental Exposure to Stachybotrys.** Mycoses 2011; 54 (Supplement 2): 97.

Grant IH. **Reversing Persistent Debility After Past Heavy Environmental Mold Exposure and Immune.** In: Abstract Book of the 30th Congress of the European Academy of Allergy and Clinical Immunology, Istanbul, Turkey June 2011.

Grant IH, Rini JF. **Immune Risks for Persistent Debility after Mold Exposure & Response to Antifungal Biofilm Therapy.** Journal of General Internal Medicine, Volume 27, Supplement 2 / July 2012: pages S216-217.

Gray MR, Thrasher JD, Crago R, Madison RA, Arnold L, Campbell AW, Vojdani A. **Mixed mold mycotoxicosis: immunological changes in humans following exposure in water-damaged buildings.** Arch Environ Health, 2003 Jul; 58(7):410-420.

Green BJ, Tovey ER, Sercombe JK, Blachere FM, Beezhold DH, Schmechel D. **Airborne fungal fragments and allergenicity.** Med Mycol. 2006 Sep; 44 Suppl 1:S245-55.

Hope JH, Hope BE. **A review of diagnosis and treatment of ochratoxin A inhalational exposure associated with human kidney disease including focal segmental glomerulosclerosis.** J Environmental Public Health 2012 Volume 2012, Article ID 835059, 10 pages.

Hope JH. **A review of the mechanism of injury and treatment approaches for illness resulting from exposure to water-damaged buildings, mold and mycotoxins.** The Scientific World Journal 2013, Volume, Article ID 767482, 20 pages.

Johanning E, Biagini R, Hull D, Morey P, Jarvis B, Landsbergis P. Int Arch Occup Environ Health. 1996;68(4):207-18. **Health and immunology study following exposure to toxigenic fungi (Stachybotrys chartarum) in a water-damaged office environment.**

- Johanning E, Landsbergis P, Gareis M, Yang CS, Olmsted E. **Clinical experience and results of a Sentinel Health Investigation related to indoor fungal exposure.** Environ Health Perspect. 1999 Jun; 107 Suppl 3:489-94.
- Kilburn KH. **Towards healthy homes.** Toxicol Ind Health 2009 25(9-10):737-740.
- Kilburn KH. **Summary of the 5th International Conference on Bioaerosols, Fungi, Bacteria, Mycotoxins, and Human Health.** Arch Environ Health. 2003 Aug;58(8):538-42.
- Kilburn KH, Gray M, Kramer S. **Nondisclosure of conflicts of interest is perilous to the advancement of science.** Allergy Clin Immunol 2006; 118:766-767.
- Lieberman, A, Rea W, Curtis L. **Adverse health effects of indoor mold exposure.** J Allergy Clin Immunol 2006; 118:763.
- Marinkovich VA. **Position paper on molds is seriously flawed.** J Allergy Clin Immunol 2006; 118:761-762.
- Mazur LJ, Kim J, the Committee in Environmental Health. **Spectrum of Noninfectious Health Effects From Molds.** American academy of pediatrics. Pediatrics 2006 Vol. 11, 1909-1926.
- Mendell MJ, Mirer AG, Cheung K, et al. **Respiratory and Allergic and Health Effects of Dampness, Mold and Dampness-related Agents: A Review of Epidemiologic Evidence.** Environ. Health Perspectives vol.119:748-756 (2011).
- MMWR. **Health concerns associated with mold in water-damaged homes after hurricanes Katrina and Rita- New Orleans area, Louisiana October 2005.** Morbidity Mortal Weekly Rep. 2006, 35, JAN 20, 41-44.
- Park JH, Schleiff PL, Atfield MD, et al. **Building-related respiratory symptoms can be predicted with semi-quantitative indices of exposure to dampness and mold.** Indoor Air 2004; 14: 425-433.
- Park J-H, Cox-Ganser JM, Kreiss K, White SK, Rao CV. **Hydrophilic fungi and ergosterol associated with respiratory illness in a water-damaged building.** Environ Health Perspec 2008 116:45-50.
- Park J-H, Kreiss K, Cox-Ganser JM. **Rhinosinusitis as risk factors for asthma symptoms in occupants of a water-damaged building.** Indoor Air 2012 22:395-404.
- Park J-H, Cox-Ganser JM. **Mold exposure and respiratory health in damp indoor environments.** Frontiers Biosci 2011 E3:757-71.
- Rao CY, Cox-Ganser JM, Chew GL, Doekes G, White S (2005). **Use of surrogate markers of biological agents in air and settled dust samples to evaluate a water-damaged hospital.** Indoor Air 2005;15 (suppl 9):89-97.
- Rea WJ, Didriksen N, Simon TR, Pan Y, Fenyves EJ, Griffiths B. **Effects of toxic exposure to molds and mycotoxins in building-related illnesses.** Arch Environ Health. 2003 Jul; 58(7):399-405.
- WHO Guidelines for indoor air quality: dampness and mould.** 2009.
- Allerman I, Wilkins CK, Madsen AM. **Inflammatory potency of dust from the Indoor environment and correlation to content of NAGase and fungi.** Toxicology 2002 20:1522-31.
- Akpinar-Elci M, White SK, Siegel PD, Park J-H, et al. **Markers of upper airway inflammation associated with microbial exposure and symptoms in occupants of a water-damaged building.** Amer J Indust Med 2013 56:522-530.
- Porter PC, Lim D, Maskatia PK, Mak G, Tsai CL, et al. **Airway surface mycosis in chronic T-2 associated airway disease.** J Clin Immunol 2015 134:325-31.
- Porter P, Polikepahad S, Qian Y, Knight JM, et al. **Respiratory tract allergic disease and atopy: experimental evidence for fungal infectious etiology.** Med Mycol 49:S158-63.

Blanc PD, Quinlan PJ, Katz PP, Balmes JR, et al. **Higher environmental moldiness index values measured in home of adults with asthma, rhinitis or both conditions.** Environ Res 2013 122:98-101.

Denning SV, Pleury A, Cole DC. **Global burden of allergic bronchopulmonary aspergillosis with asthma and its complication chronic pulmonary aspergillosis in adults.** 2013 51:361-370.

Iossfova YY, Cox-Ganser JM, Park J-H, White SK, Kreiss K. **Lack of respiratory improvement following remediation of a water-damaged office building.** Amer J Indust Med 2011 54:26-077.

Van Woerden HC, Gregory C, Brown R, Marchesi R, et al. **Differences of fungi in induced-sputum samples from asthma patients and non-atopic controls: a community based case control study.** Infectious Dis 2013 13:69.

Wolff CHJ. **Innate immunity and the pathogenicity of inhaled microbial particles.** Int J Biol Sci 2011 7:261-68.

**NIOSH Mold Alert.** Publication No. 2013-102.

## **Section V. Chronic Sinusitis, Rhinitis and Olfactory Neurons: Exposure to Mold, Bacteria and Mycotoxins**

Chakrabarti A, Denning DW, Ferguson BJ, Ponikau J, Buzina W, et al. **Fungal Rhinosinusitis: A categorization and definitional schema addressing the current controversies.** Laryngoscope 2009 119:1809-18.

Dennis DP. **Chronic Sinusitis: Defective T-Cells Responding to Superantigens Treated by Reduction of Fungi in the Nose and Air.** Archive Environ Health July 2003 Vol. 58 (No. 7):433-41.

Dennis D, Robertson D, Curtis L, Black J. **Fungal exposure endocrinopathy in sinusitis with growth hormone deficiency: Dennis-Robertson syndrome.** Toxicology Indust Health 2009: 25: 669–680.

Foreman A, Psaltis AJ, Tan LW, Wormald P-J. **Characterization of bacterial and fungal biofilms in chronic Rhinosinusitis.** Amer J Rhinology Allergy 2009 23:556-61.

Foreman A, Wormald P-J. **Different Biofilms, Different Disease? A Clinical Outcomes Study.** 2010 Laryngoscope, 120:1701–1706, 2010.

Brewer JH, Thrasher JD, Hooper D. **Chronic illness associated with mold and mycotoxins: is nasosinus fungal biofilm the culprit?** Toxins (Basel). 2013 Dec 24;6(1):66-80. doi: 10.3390/toxins6010066.

Carey SA, Plopper CG, Hyde DM, Islam Z, Pestka JJ, Harkema JR. **Satratoxin-G from the black mold *Stachybotrys chartarum* induces rhinitis and apoptosis of olfactory sensory neurons in the nasal airways of rhesus monkeys.** Toxicologic Pathology 2012;40:887-898.

Fanning S, Mitchell AP. **Fungal Biofilms.** PLoS Pathogens April 2012 | Volume 8 | Issue 4 | e1002585.

Huttunen K, Hyvarinen A, Nevalainen A, Komulainen H, Hirvonen M. **Production of proinflammatory mediators by indoor bacteria and fungal spores in mouse and human cell lines.** Environ Health Perspec 2002; 111:85-92.

Islam Z, Harkema JR, Pestka JJ. **Satratoxin G from the black mold *Stachybotrys chartarum* evokes olfactory sensory neuron loss and inflammation in the murine nose and brain.** Environ Health Perspect. 2006 Jul; 114(7):1099-107.

Muller FM. **Aspergillus Biofilms.** Mycoses 2011; 54 (Supplement 2): 37.

Park J-H, Kreiss K, Cox-Ganser JM. **Rhinosinusitis as risk factors for asthma symptoms in occupants of a water-damaged building.** Indoor Air 2012 22:395-404.



- Ponikau JU, Sherris DA. **The role of airborne mold in chronic rhinosinusitis.** J Allergy Clin Immunol 2006; 118:762-763.
- Ramage G, Mowat E, Jones B, Williams C, Lopes-Ribot J. **Our current understanding of fungal biofilms.** Crit Rev Microbiol 35:340.
- Siddiqui A, Shah AA, Bashir SH. **Craniocerebral aspergillosis of sinonasal origin in immunocompetent patients: Clinical Spectrum.** 2004 Neurosurgery 55:602-13
- Sharma D, Mahajan N, Rao S, Khurana N, Jain S. **Invasive maxillary aspergillosis masquerading as malignancy in toe cases of cytology and rapid diagnostic tool.** J Cytol 2012 29:194-96.
- Duggal P, Wise SK. **Chapter 8: Invasive fungal rhinosinusitis.** Am J Rhinol Allergy 2-13 Suppl 1;s28039.
- Guo C, Ghadersohi S, Kephart GM, Laine RA, Sherris DA, Kita H, Ponikau RJ. **Improving the detection of fungi in eosinophilic mucin: Seeing what we could not see before.** Otolaryngol Head Neck Surg 2012 147:943-9.
- Karvala K, Nordman H, Luiikonen R, Nykyri E, et al. **Occupational rhinitis in damp and mold workplaces.** Am J Rhinol 22:457-62.
- Turner JH, Soudry E, Nayak JV, Hwang PH. **Survival outcomes in acute invasive fungal sinusitis: A systematic review and quantitative synthesis of published literature.** Laryngoscope 123:1112-18.
- Cox-Ganser JN, White SK, Jones R, Hilsbos K, et al. **Respiratory morbidity in office workers in a water-damaged building.** Environ Health Perspec 2005 223:485-90.
- Lee DH, Yoon TM, Lee JK, Joo YE, Partk KH, Chul L. **Invasive fungal sinusitis of the sphenoid sinus.** Clin Exper Otolaryngology 2024 #:181-87.
- Gray MR, Thrasher JD, Hooper D, Dumanov MJ, Cravens H, Jones T. **Sphenoid Aspergilloma Diagnosed as a Malignancy: A Case Report.** Otolaryngology 2025 R:2 (online).
- Ponikau JU, Sherris D, Kern EB, Homburger HA, Frigas E, et al. **The diagnosis and incidence of fungal rhinitis.** Mayo Clin Prod 1999 74:877-84.
- Marcolini TR, Safaider MC, Socher JA, Lucena GO. **Differential diagnosis and treatment of isolated pathologies of the sphenoid sinus: Retrospective study of 46 cases.** Int Arch Otolaryngol 2015 19:124-29.
- Desoubeaux F, Bailey E, Chandener J. **Diagnosis of invasive aspergillosis: Updates and recommendations.** Med Mal Infect 2014 <http://dx.doi.org/10.1016/j.medmal.2013.11.006> (online).
- Gorovoy R, Kazanjian M, Kersten RC, Kim HJ, Vageli MR. **Fungal rhinosinusitis and imaging modalities.** Saudi J Ophthalmology 2012 26:419-26.
- Muskherji SK, Figueroa RE, Ginsberg LE, Zeifer BA, Marple BF, et al. **Allergic fungal sinusitis: CT findings.** Radiology 1998 207:417-22.
- Kern EB, Sherris D, Stergiou AM, Katz LM, Rosenblatt LC, Ponikau J. **Diagnosis and treatment of chronic rhinosinusitis: focus on intranasal Amphotericin G.** Therap Clin Risk Management 2007 3:319-25.
- Likness MM, Pallanchy JF, Sherris DA, Kits H, Mashtare TL, Ponikau JU. **Computed tomography scans as an objective measure of disease severity in chronic rhinosinusitis.** Otolaryngol Head Neck Surg 2014 150:305-11.
- Fleishman GM, Miller JD, Kin GG, Zanation AM, et al. **Treatment of frontal sinusitis with difficult anatomy: A hybrid balloon technique in four cases.** Allerg Rinol 5:e120 (online).
- Thulasidas P, Valdyanathan V. **Role of modified endoscopic maxillectomy in persistent chronic maxillary sinusitis.** Int Arch Otolaryngol 2014 18:159-64.

Mehta R, Panda NK, Mohindra S, Chakraharti A, Singh P. **Comparison of Amphotericin B and Itraconazole in chronic invasive fungal sinusitis.** Indian J Otolaryngol Head Neck Surg 2013 65:S288-94.

Nazeri M, Hashemi SJ, Ardehali M, Rezaei S, Seyedousavi SM, et al. **Fungal sinusitis in Tehran Iran.** Iran J Public Health 2015 44:374-79.

Lee DH, Lee JK, Joo YE, Park KH, Lim AX. **Invasive fungal sinusitis of the sphenoid sinus.** Clin Exper Otolaryngol 2014 3:181-87.

Lee S-H, Kim H-J, Lee J-W, Yoon Y-H, Rha K-S. **Categorization and clinipathological features of chronic rhinosinusitis with eosinophilic mucin in a Korean population.** Clin Exper Otolaryngol 2015 8:39-45.

Pallanch J, Yu L, Delone D, Robb R, Homes DR, et al. **3-D volumetric computed tomographic scoring as an objective outcome measure for chronic rhinosinusitis: Clinical correlations and comparisons to Lund-Mackay scoring.** Int Forum Allerg Rhinol 2013 3:963-72 (on line).

Hirotsu M, Shiozawa A, Ono N, Miwa M, Kikuchi K, Ikeda K. **Fungal extracts in eosinophilic chronic rhinosinusitis induced cytokines from the nasal polyp cells.** Laryngoscope 2014 124:E347-53.

## **Section VI. Mold and Bacteria in Water-Damaged Indoor Environments: Asthma and Rhinitis**

Andersson MA, Nikulin M, Koljalg U, Andersson MC, et al. **Bacteria, molds and toxins in water-damaged building materials.** Appl Environ Microbiol 1997 63:387-93.

Hirvonen MR, Huttunen K, Roponen M. **Bacterial strains from moldy buildings are highly potent inducers of inflammatory and cytotoxic effects.** Indoor Air 2005; 15 (Suppl 9). 65-70.

Andersen B, Frisvad JC, Sondergaard, Rasmussen IS, Larsen LS. **Association between fungal species and water-damaged building materials.** Appl Environ Micro Biol 2011 77:4180-88.

Andersson MA, Mikkola R, Kroppenstedt RM, Rainey FA, et al. **The mitochondrial toxin produced by *Streptomyces griseus* strains isolated from an indoor environment is Valinomycin.** Appl Environ Microbiol 64:4767-73.

Baxter DM, Perkins JL, McGhee CR, Seltzer JM. **A regional comparison of mold spore concentrations outdoors and inside “clean” and “mold contaminated” Southern California buildings.** J Occup Environ Hygiene 200 2:8-18.

Sordillo JE, Alwis UK, Hoffman E, Gold DR, Milton DK. **Home characteristics as predictors of bacterial and fungal microbial biomarkers in house dust.** Environ Health Perspec 2010 119:189-95.

Vesper S, McKinstry C, Haugland R, Wymer L, Bradham K, et al. **Development of an environmental relative moldiness index for US homes.** JOEM 2007 49:829-33.

Kettleson E, Kumar S, Reponen T, Vesper S, Meheust D, et al. **Stenotrophomonas, Mycobacterium, and Streptomyces in home dust and air: associations with moldiness and other home/family characteristics.** Indoor Air 2013 23:387-95.

Norback S, Cai G-H. **Fungal DNA in hotel rooms in Europe and Asia – associations with latitude, precipitation, building data, room characteristics and hotel ranking.** J Environ Monitoring 2011 13:2896-2903.

Cabral JPS. **Can we use indoor fungi as bioindicators of indoor air quality? Historical perspectives and open questions.** Sci Total Environ 2010 408:4285-95.

Muekherji SK, Figueroa RE, Ginsburg LE, Zeifer BA, Marple BF, et al. **Allergic fungal sinusitis: CR Findings.** Radiology 1998; 207:417-22.

Dennis DP. **Chronic sinusitis: Defective T-cells responding to Superantigens , treated by reduction of fungi in the nose and air.** Arch Environ Health 2002; 58:433-41.

Kern EG, Sherra D, Stergiou AM, Kat LM, Rosenblatt LC, Ponikau J. **Diagnosis and treatment of chronic rhinosinusitis: focus on intranasal Amphotericin B.** Therapeut Clin Risk Management 2007 3:319-25.

## **Section VII. Innate Immunity: Fungi and Bacteria**

Wolf CHJ. **Innate immunity and the pathogenicity of inhaled microbial particles.** Internat J Bioi Sci 2011 7:261-68.

Timm M, Madsen AM, Hansen JV, Moesby L, Hansen EW. **Assessment of total inflammatory potential bioaerosols by suing a granulocyte assay.** Appl Environ Microbiol 2009 75:76-55-62.

Gomez P, Hackert T, Moore Mm, Knight DA, Tebuttt SJ. **Functional genomics of human bronchial epithelial cells directly interacting with conidia of Aspergillus fumigatus.** BMC Genomics 2010 11:358.

Weldon DR. **What drives the inflammatory response in rhinosinusitis.** Allergy Asthma Proceedings 2006 27:441-46.

Esteban A, Popp MW, Vyas VK, Strijbis K, et al. **Fungal recognition is mediated by the association of dectin1 and galectin-3 in macrophages.** PNASUSA 2011 108(34): 14270-5.

Ferwerda S, Ferwerda G, Plantinga TS, Willment JA, et al. **Human dectin-1 deficiency and mucocutaneous fungal infections.** N Engl J Med 2009361:1750-67.

Chai YA, de Boer MGJ, van der Velden WJFM, Plantinga TS, et al. **Y238X stop codon polymorphism in the human  $\beta$ -glucan receptor Dectin-1 and susceptibility to invasive Aspergillosis.** J Infectious Dis 2011 203:73643.

Fogelman B, Thorn J, Rylander R. **Inhalation of (1-3)-beta-D glucan causes airway eosinophilia.** Mediators Inflammation. 2001 10:13-19.

Lyakh L, Trinchieri G, Provezza L, Carra G, Gerosa F. **Regulation of interleukin-12/interleukin-23 production and the T-helper 17 response in humans.** Immunol Res 2008 226: 112-31.

Vojdani A, Lambert J. **The Role of Th17 in Neuroimmune Disorders: Target for CAM Therapy. Part I.** Evid Based Complement Alternat Med. 2011;2011:927294. doi: 10.1093/ecam/nep062. Epub 2011 Jun 16.

Vojdani A, Lambert J. **The Role of Th17 in Neuroimmune Disorders: Target for CAM Therapy. Part II.** Evid Based Complement Alternat Med. 2011;2011:984965. doi: 10.1093/ecam/nep063. Epub 2011 Jun 16.

Vojdani A, Lambert J, Kellermann G. **The Role of Th17 in Neuroimmune Disorders: A Target for CAM Therapy. Part III.** Evid Based Complement Alternat Med. 2011; 2011 :548086. doi: 10.1093/ecam/nep064. Epub 2011 Jun 16.

Gringhuis SI, Wevers SA, Kaptein TM, van Capel TM, et al. **Selective C-Rel activation via Malt 1 controls anti-fungal TH-17 immunity by Dct-1 and Dectin-2.** PLoS Pathogens 2011 7:issue 1 e1001259.

Miller JD, Sun M, Gilyan A, Roy J, Rand TG. **Inflammation-associated gene transcription and expression induced by low molecular weight compounds from fungi from the built environment.** Chemic-Biological Interactions 2010 183: 113-124.

Rand TG, Sun M, Gilyan A, Downey J, Miller JD. **Dectin-1 and inflammation associated gene transcription and expression in mouse lungs by a toxic (1,3)-beta-D glucan.** Arch Toxicology 2010 Mar; 84(3):205-20.

Rand TG, Robbins C, Rajaraman O, Sun M, Miller JD. **Induction of Dectin-1 and asthma-associated signal transduction pathways in RAW 264.7 cells by a triple-helical (1,3)-beta-D glucan.** Arch Toxicol. 2013 Oct; 87(10):1841-50.

Lauren M. Lilly, Melissa A. Gessner, Chad W. Dunaway, Allison E. Metz, Lisa Schweibert, Casey T. Weaver, Gordon D. Brown, and Chad Steele. **The  $\beta$ -glucan receptor dectin-1 promotes lung immunopathology during fungal allergy via IL-22.** J Immunol. 2012 Oct 1; 189(7):3653-60.

Reid OM, Gow NAR, Brown DG. **Pattern recognition: recent insights from Dectin-1.** Curr Opin Immunol 2009 (1)30-37.

Werner JI, Metz AE, Horn O, Schoeb TR, Hewitt MM, et al. **Requisite role for Dectin-1  $\beta$ -glucan receptor in pulmonary defense against Aspergillus fumigatus.** J Immunol 2009 182:4938-46.

Gordon S. **Pattern recognition receptors: Doubling up for the innate immune response.** Cell 2002 111(7): 927-30.

## **Section VIII. Chronic Fatigue, Toxins, Mitochondria, Oxidative Stress and Vitiligo**

Institute of Medicine. **Beyond Myalgic Encephalomyelitis/Chronic Fatigue Syndrome.** Redefining an illness 2015.

Morris G, Berk M. **The many roads to mitochondrial dysfunction in neuroimmune and neuropsychiatric disorders.** BMC Medicine 2015 13:68 DOI 10.1186/s12916-015-0310-y.

Gorman GS, Elson JL, Newman J, Payne G, McFarland R, et al. **Perceived fatigue is highly prevalent and debilitating in patients with mitochondrial disease.** Neuromuscular Disorders 2015 doi:10.10161 (online).

Hardcastle SL, Brenu EW, Johnston S, Nguyen T, Huth R, et al. **Characterization of cell functions and receptors in chronic fatigue syndrome/Myalgic encephalomyelitis (CFS/ME).** BMC immunology 16:35 (online).

Vasiadi M, Newman J, Theoharides TC. **Isoflavones inhibit poly (I:C)-induced serum, brain, and skin inflammatory mediators – relevance to chronic fatigue syndrome.** J Neuroinflammation 2014 11:158: (online).

Zeineh MM, Kang J, Atlas SE, Raman MM, Reiss AL, et al. **Right arcuate fasciculus abnormality in chronic fatigue syndrome.** Radiology 2015 2:527-26.

Kaushik N, Fear O, Richards SC, McDermott CR, Nuwaysir EF, Kellam P, Harrison T J, Wilkinson RJ, Tyrrell DA, Holgate ST, Kerr JR. **Gene expression in peripheral blood mononuclear cells from patients with chronic fatigue syndrome.** J Clin Pathol. 2005 Aug; 58(8):826-32.

Booth NE, Myhill S, McLaren-Howard J. **Mitochondrial dysfunction and the pathophysiology of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS).** Int J Clin Exp Med. 2012; 5(3): 208-220.

Myhill S, Booth NE, McLaren-Howard J. **Targeting mitochondrial dysfunction in the treatment of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) - a clinical audit.** Int J Clin Exp Med. 2013;6(1):1-15. Epub 2012 Nov 20.

Vermeulen RG, Vermeulen van Eck IW. **Decreased oxygen extraction during cardiopulmonary exercise test in patients with chronic fatigue syndrome.** J Transl Med. 2014 Jan 23;12:20. doi: 10.1186/1479-587612-20.

Jammes Y, Steinberg JG, Mambriani O, Bregeon P, Delliaux S. **Chronic fatigue syndrome: assessment of oxidative stress and altered muscle excitability in response to incremental exercise.** J Internal Med 2005 257:299-310.

Meyer JN, Leung MC, Rooney JP, Sandoel A, Hengartner MO, Kisby GE, Bess AS. **Mitochondria as a target of environmental toxicants.** Toxicol Sci 2013 Jul;134(1 ):1-17. doi: 10.1093/toxsci/ktf102. Epub 2013 Apr 29.

Wallace KB, Starkov AA. **Mitochondrial targets of drug toxicity.** Ann Rev Pharmacol Toxicol 2000;40:353-88.

Al-Hammadi S, Marzouqi F, Al-Mansouri A, Shahin A, Al-Shamsi M, Mensah-Brown E, Souid AK. **The cytotoxicity of aflatoxin b1 in human lymphocytes.** Sultan Qaboos Univ Med J. 2014 Feb; 14(1):e65-71. Epub 2014 Jan 27.

Zhou HR, Islam Z, Pestka JJ. **Induction of competing apoptotic and survival signaling pathways in the macrophage by the ribotoxic trichothecene deoxynivalenol.** Toxicol Sci. 2005 Sep;87(1): 113-22.

Zhang X, Boesch-Saadatmandi C, Lou Y, Wolfram S, Huebbe P, Rimbach G. **Ochratoxin A induces apoptosis in neuronal cells.** Genes Nutr. 2009 Mar; 4(1):41-8.

Kamp HG, Eisenbrand G, Schlatter J, Worth K, Janzowski C. **Ochratoxin A: induction of (oxidative) DNA damage, cytotoxicity and apoptosis in mammalian cell lines and primary cells.** Toxicology. 2005 Jan 31; 206(3):413-25.

Frye RE, Rossignol DA. **Mitochondrial dysfunction can connect the diverse medical symptoms associated with autism spectrum disorders.** Pediatr Res. 2011 May; 69(5 pt 2):41 R-7R.

Frye RE1, Delatorre R, Taylor H, Slattery J, Melnyk S, Chowdhury N, James SJ. **Redox metabolism abnormalities in autistic children associated with mitochondrial disease.** Transl Psychiatry. 2013 Jun 18; 3:e273. doi: 10.1038/tp.2013.51.

Rossignol DA, Frye RE. **Mitochondrial dysfunction in autism spectrum disorders: a systematic review and meta-analysis.** Mol Psychiatry. 2012 Mar; 17(3):290-314.

Rossignol DA, Frye RE. **Evidence linking oxidative stress, mitochondrial dysfunction, and inflammation in the brain of individuals with autism.** Frontiers Physiology 2014;5Article 150.

Bin-Umer MA, McLaughlin JE, Basu D, McCormick S, Tumer NE. **Trichothecene mycotoxins inhibit mitochondrial translation--implication for the mechanism of toxicity.** Toxins (Basel). 2011 Dec; 3( 12): 1484501.

Svoboda D, Grady HJ, Higginson J. **Aflatoxin B1 injury in rat and monkey liver.** Am J Pathol. 1966 Dec; 49(6): 1 023-51.

Ringot D, Chango A, Schneider Y-J, Larondelle Y. **Toxicokinetics and toxicodynamics of ochratoxin A, an update.** 2006 Chemic-Biological Interactions 159:18-46.

Nagase M, Alam MM, Tsushima A, Yoshizawa T, Sakato N. **Apoptosis induction by T-2 toxin: activation of caspase-9, caspase-3, and DFF-40/CAD through cytosolic release of cytochrome c in HL-60 cells.** Biosci Biotechnol Biochem. 2001 Aug; 65(8):1741-7.

Islam Z, Nagase M, Ota A, Ueda S, Yoshizawa T, Sakato N. **Structure-function relationship of T-2 toxin and its metabolites in inducing thymic apoptosis in vivo in mice.** Biosci Biotechnol Biochem. 1998 Aug;62(8):1492-7.

Czajkowski R, Mecnsks-Jindzilt K. **Current Aspects of Vitiligo genetics.** Postepy Derm Aller 2014;74:747-55.

Laddha NC, Dwivedi M, Mansuri MS, Dani AR, et al. **Vitiligo: interplay between oxidative stress and immune system.** Exper Dermatology 2011, 22:245-50.

Glassman SJ. **Vitiligo, reactive oxygen species and T-cells.** Clinical Sci 2011 120:99-120.

Sorensen B, Jones JF, Vernon SD, Rajeevan MS. **Transcriptional control of complement activation in an exercise model of chronic fatigue.** Mol Med 15(1-2): 34-42.

Nijs J, Nees A, Paul L, De kooning M, et al. **Altered immune response to exercise in patients with chronic fatigue syndrome/Myalgic encephalomyelitis: A systematic literature review.** Exercise Immunology Rev 2014;20:94-116.

Morris G, Berk M, Walder K, Maes M. **The Putative Role of Viruses, Bacteria, and Chronic Fungal Biotoxin Exposure in the Genesis of Intractable Fatigue Accompanied by Cognitive and Physical Disability.** Mol Neurobiol, DOI 10.1007/s12035-015-9262-7.

## **Section IX. Ochratoxin A and Kidney Disease and Tissue Presence of Mycotoxins**

Brasel TI, Campbell AE AW, Demers RF, Ferguson BS, et al. (2004). **Detection of trichothecene mycotoxins in sera from individuals exposed to Stachybotrys chartarum in indoor environments.** Arch Environ Health 59:317-23.

Hope JH, Hope BE (2012). **A review of the diagnosis and treatment of Ochratoxin A inhalational exposure associated with human illness and kidney disease including focal segmental glomerulosclerosis.** J Environ Public Health 2012 Article 1.0. 835059,10 pages.

Hope J (2013). **A review of the mechanism of injury and treatment approaches for illness resulting from exposure to water-damaged buildings, mold and mycotoxins.** The Scientific World Journal, 2013, Article 1.0. 767482, 20 pages.

Gazinska P, Herman O, Gillet C, et al. (2012). **Comparative immunohistochemical analysis of ochratoxin S tumourgenesis in rats and urinary carcinoma in humans: Mechanistic significance of p-S5 ribosomal protein expression.** Toxins 4:643-62.

Ansai N, Jutaba P, Endon H (2010). **Molecular mechanism of ochratoxin A transport in the kidney.** Toxin 2:1381-98.

Yoedanova P, Willfried K, Tsoleva S, Dimitrov P (2010 ). **Ochratoxin A and  $\beta$ 2-microglobulin in BEN patients and controls.** Toxins 2:780-92.

Hooper DG, Bolton VE, Guilford FT, Straus DC (2009). **Mycotoxin detection in human samples from patients exposed to environmental molds.** Int J Mol Sci 10:1465-75.

Brewer JH, Thrasher JD, Straus DC, Madison RA, Hooper O (2013). **Detection of mycotoxins in patients with chronic fatigue.** Toxins 5:605-17.

Brewer JH, Thrasher JD, Hooper O (2014). **Chronic illness associated with mold and mycotoxins: Is Naso-Sinus fungal biofilm the culprit?** Toxins 6:66-80.

Thrasher JD, Hooper D, Taber J (2014). **Family of six, their health and death of a 16-month-old male from pulmonary hemorrhage: Identification of mycotoxins and mold in the home, lungs, liver and brain of deceased infant.** Inter J Clin Toxicol 2, 1-10.

## **Section X. Endotoxins and Health**

Raja S, Xu Y, Ferro AR, Jaques PA, Hopke OK (2010). **Resuspension of indoor aeroallergens and relationship to lung inflammation in asthmatic children.** Environ Int.36:8-14.

Bouillard LS, Oevleeschouwer MJ, Michel O (2006). **Characteristics of the home bacterial contamination and Endotoxin related release.** Pharm Belg 61:63-6.

Ryan PH, Bernstein O, Lockey J, Reponen T, Levin L, et al. (2009). **Exposure to traffic-related particles and Endotoxin during infancy is associated with wheezing at age 3 years.** Am J Respir Crit Care Med 180:1068-75.

Thorne PS, Kulhankova K, Yin M, Cohn R, Arbes SJ, Zeldin OC (2005). **Endotoxin exposure is a risk for asthma in the United States housing.** Am J Respir Crit Care Me. 172:1371-77.

Szponar B, Larsson L, Oomagala-Kulawik J (2012). **Endotoxin markers in bronchoalveolar lavage fluid of patients with interstitial lung disease.** Multidisciplinary Respir Med 7:54.

Reynier F, de Vos AF, Hoogerwerf J, Bresser P, et al. (2012). **Gene expression profiles of macrophages in alveolar macrophages induced by lipopolysaccharides in humans.** *Molecular Med* 18:1303-11.

Rojas M, Woods CR, Mora AI, Xu J, Brigham KL (2005). **Endotoxin-induced lung injury in mice: structural, functional and biochemical responses.** *Am J Physiol Lung Cell Mol Physiol* 288:L33341.

Iwamoto S, Iwai S, Tsujiyama K, Kurahashi C, Takeshita K (2007). **TNF- $\alpha$  drives human CD14<sup>+</sup> monocytes to differentiate into CD70 dendritic cells evoking Th1 and Th2 responses.** *J Immunology* 179:1445-57.

Jagiello PJ, Thorne PS, Watt JL, Frees KL, Quinn TJ, et al. (1996). **Grain dust and Endotoxin inhalation challenges produce similar inflammatory responses in normal subjects.** *Chest* 110:26370.

Gehrig U, Douwes J, Doekes G, Koch A, Bischof W, et al. (2001). **Beta(1-3)-glucan in house dust of German homes: Housing characteristics, occupant behavior, and relations with endotoxins, allergens and molds.** *Environ Health Perspec* 109: 139-44.

Hekyes Z, Elekes K, Nemeth J, Pozsgai G, Sandor K, et al. (2007). **Role of transient receptor potential vanilloid 1 receptors in Endotoxin-induced airway inflammation in the mouse.** *Am J Physiol Lung cell Mol Physiol* 292:L 1173-81.

Iossifova YY, Cox-Ganser JM, Park JH, White SK, Kreiss K (2011). **Lack of respiratory improvement following remediation of a water-damaged office building.** *Amer J Indust Med* 54:269-77.

Schnyder-Candrian S, Quesniaux VFJ, Di Padova F, Maillet I, et al. (2005). **Dual effects of p38, MAPK on TNF-dependent bronchoconstriction and TNF-independent neutrophil recruitment in lipopolysaccharide-induced acute respiratory distress syndrome.** *J Immunol* 175:262-269.

Mueller-Anneling LJ, O'Neill ME, Thorne P (2006). **Biomonitoring for assessment of organic dust-induced lung inflammation.** *Eur Respir J* 27:1096-1101.

Tufekci KU, Gene S, Gene K (2011). **The Endotoxin-induced neuroinflammation model of Parkinson's Disease.** *Parkinson's Disease* 2011: Article 10 487450.

Martinez FD (2007). **CD14, Endotoxin, and asthma risk.** *Proc Am Thorac Soc* 4:221-5.

Choi DY, Liu M, Hunter RL, Cass WA, Pandya J, et al. (2009). **Striatal neuroinflammation promotes Parkinsonism in rats.** *PLoS ONE* 4:e85482.

Semmler A, Hermann S, Mormann F, Weberpals M, Paxian SA, et al. (2008). **Sepsis causes neuroinflammation and concomitant decrease in cerebral metabolism.** *J Neuroinflammation* 5:38.

Cunningham C, Wilcockson DC, Campion S, Lunnon K, Perry VH (2005). **Central and systemic Endotoxin challenges exacerbate the local inflammatory response and increase neuronal death during chronic neurodegeneration.** *J Neuroscience* 25:9275-84.

## **Section XI. Fungal Proteins and Allergies**

Cramer R (2014). **Structural aspects of fungal allergens.** *Seminars Immunopathol* Nov 21.

Denning OW, O'Driscoll BR, Hogaboam CM, Bowyer P, Niven RM (2006). **The link between fungi and severe asthma: a summary of evidence.** *Eur Respir J* 27:615-26.

Cramer R, Gargani M, Rhyder C, Huitema C (2014). **Fungi: the neglected allergenic sources.** *Allergy* 69:786-85.

## Section XII. Microbial Volatile Organic Compounds

Waliinder R, Ernstgard L, Johanson G, Norbick O, et al. (2005). **Acute effects of a fungal volatile compound.** Environ Health Perspec 113:1775-78.

Demyttenaere JCR, Morina RM, De Kimpe N, Sandra P (2004). **Use of headspace solid-phase microextraction and headspace sorptive extraction for the detection of the volatile metabolites by toxigenic Fusarium species.** J Chromatography A1027:147-54.

Gorham K, Hokeness K (2012). **Effects of mold exposure on Murine splenic lymphocytes.** I Res J Biological Sci 1:53-6.

Korpi A, Jarnberg J, Pasanen AL (2009). **Microbial volatile organic compounds.** Critical Rev Toxicology 39: 139-93.

Lavine BK, Mirjankar N, Lebouf R, Rossner A (2012). **Prediction of mold contamination from microbial volatile compound profiles using solid phase microextraction and gas chromatography/mass spectrometry.** Microchemical J 103:37-41.

Mendell MJ (2007). **Indoor residential chemical emissions as risk factors for respiratory and allergic effects in children: A review.** Indoor Air 17:259-77.

ASHRAE Research Grant 243-TRP (2005). **Detection and removal of gaseous effluents and by-products of fungal growth that affect environments - Phase II: Development of a MVOC database.**

Pollizzi V, Adams A, Malysheva SV, de Saeger S, et al. (2012). **Identification of volatile markers for indoor fungal growth and chemotaxonomic classification of Aspergillus species.** Fungal Bioi 116:947-53.

## Section XIII. Synergism and Additive Toxic Effects of Mycotoxins

Klaric MS, Rumora L, Ljubanovic D, Pepelnjak S (2008). **Cytotoxicity and apoptosis by fumonisin G1, beauvericin and ochratoxin A in porcine kidney PK15 cells: effects of individual and combined treatment.** Arch Toxicol 82:247-55.

Bensassi F, Gallerne C, Sharaf el Dein O, Hajlaoul MR, et al. (2014). **In vitro investigation of toxicological interactions between the fusariotoxins deoxynivalenol and zearalenone.** Toxicon 84:1-6.

Chen F, Ma Y, Xue C, Ma J, Xie Q, et al. (2008). **The combination of deoxynivalenol and zearalenone at permitted feed concentrations causes serious physiological effect in young pigs.** J Vet Sci 9:39-44.

Huff WE, Kubema LF, Harvey RG, Doerr JA (1988). **Mycotoxin interactions in poultry and swine.** J Animal Sci 66:2351-55.

Islam Z, Pestka J (2003). **Role of IL-113 in Endotoxin potentiation of deoxynivalenol-induced corticosterone response and leukocyte apoptosis in mice.** Toxicol Sci 74:93-102.

Zhou HR, Harkema JR, Hotchkiss JA, Yan O, et al. (2000). **Lipopolysaccharide and trichothecene (deoxynivalenol) synergistically induce apoptosis in murine lymphoid organs.** Toxicol Sci 53:25363.

Huttunen K, Pelkonen J, Nielson K, Nuutinen U, et al. (2004). **Synergistic interaction in simultaneous exposure to Streptomyces californicus and Stachybotrys chartarum.** Environ Health Perspec 112:659-65.

Penttinen M, Pelkonen J, Tapanainen M, MakiPaakkanen J, et al. (2009). **Co-cultivated damp building microbes Streptomyces californicus and Stachybotrys chartarum induce immunotoxic and genotoxic responses by oxidative stress.** Inhal Toxicol 21:857-67.



Penttinen P, Pelkonen J, Huttunen K, Hirvonen MR (2006). **Co-cultivation of *Streptomyces californicus* and *Stachybotrys chartarum* stimulates the production of cytostatic compound(s) with immunotoxic properties.** Toxicol Appl Pharmacol 217:342-51.

Rojas M, Woods CR, Mora AI, Xu J, Brigham KL (2005). **Endotoxin-induced lung injury in mice: structural, functional and biochemical responses.** Am J Physiol Lung Cell Mol Physiol 288:L33341.

Iwamoto S, Iwai S, Tsujiyama K, Kurahashi C, Takeshita K (2007). **TNF- $\alpha$  drives human CD14<sup>+</sup> monocytes to differentiate into CD70 dendritic cells evoking Th1 and Th2 responses.** J Immunology 179:1445-57.

Jagiello PJ, Thorne PS, Watt JL, Frees KL, Quinn TJ, et al. (1996). **Grain dust and endotoxin inhalation challenges produce similar inflammatory responses in normal subjects.** Chest 110:26370.

Gehrig U, Douwes J, Doekes G, Koch A, Bischof W, et al. (2001). **Beta(1-3)-glucan in house dust of German homes: Housing characteristics, occupant behavior, and relations with endotoxins, allergens and molds.** Environ Health Perspec 109: 139-44.

Hekyes Z, Elekes K, Nemeth J, Pozsgai G, Sandor K, et al. (2007). **Role of transient receptor potential vanilloid 1 receptors in endotoxin-induced airway inflammation in the mouse.** Am J Physiol Lung Cell Mol Physiol 292:L 1173-81.

Iossifova YY, Cox-Ganser JM, Park JH, White SK, Kreiss K (2011). **Lack of respiratory improvement following remediation of a water-damaged office building.** Amer J Indust Med 54:269-77.

Schnyder-Candrian S, Quesniaux VFJ, Di Padova F, Maillet I, et al. (2005). **Dual effects of p38, MAPK on TNF-dependent bronchoconstriction and TNF-independent neutrophil recruitment in lipopolysaccharide-induced acute respiratory distress syndrome.** J Immunol 175:262-269.

Mueller-Annelling LJ, O'Neill ME, Thorne PS (2006). **Biomonitoring for assessment of organic dust-induced lung inflammation.** Eur Respir J 27:1096-1101.

Tufekci KU, Gene S, Gene K (2011). **The endotoxin-induced neuroinflammation model of Parkinson's Disease.** Parkinson's Disease 2011: Article ID 487450.

Martinez FD (2007). **CD14, Endotoxin, and asthma risk.** Proc Am Thorac Soc 4:221-5.

Choi DY, Liu M, Hunter RL, Cass WA, Pandya J, et al. (2009). **Striatal neuroinflammation promotes Parkinsonism in rats.** PLoS ONE 4:e5482.

Semmler A, Hermann S, Mormann F, Weberpals M, Paxian SA, et al. (2008). **Sepsis causes neuroinflammation and concomitant decrease in cerebral metabolism.** J Neuroinflammation 5:38.

Cunningham C, Wilcockson DC, Campion S, Lunnon K, Perry VH (2005). **Central and systemic Endotoxin Challenges exacerbate the local inflammatory response and increase neuronal death during chronic neurodegeneration.** J Neuroscience 25:9275-84.

## **Section XIV. Mycotoxins, Mitochondria and Apoptosis**

Finsterer J, Ohnsorge P. **Influence of mitochondrion-toxic agents on the cardiovascular system.** Reg. Toxicol Pharmacology 2013 67:434-45.

Assaf H, Azouri H, Pallardy M. **Ochratoxin A induces apoptosis in human lymphocytes through down regulation of Bcl-xL.** Toxicol Sci 2004 79:335-44.

Bin-Umer MA, McLaughlin JE, Basu D, McCormick S, Tumer NE. **Trichothecene mycotoxins inhibit mitochondrial translation - Implication for the mechanism of toxicity.** Toxins 2011 3:1484-1501 (online).

Hoehler D, Marquardt RR, McIntosh AT, Hatch GM. **Induction of free radicals in hepatocytes, mitochondria, and microsomes of rats by ochratoxin A and its analogs.** Biochim Biophysica Acta 1997 357:225-33.

Zhang Z, Boesch-Saadamandi C, Kiu Y, Wolfram S, Huebbe P, Rimbach G. **Ochratoxin A induces apoptosis in neuronal cells.** Genes Nutr 2009 4:41-8.

Zhou H-R, Islam Z, Pestka JJ. **Induction of competing apoptic and survival signaling pathways in the macrophage by the ribotoxic trichothecenes Deoxynivalenol.** Toxicol Sci 2005 87:113-22.

Zhuang Z, Yang D, Huang Y, Wang S. **Study on the apoptosis mechanism induced by T-2 toxin.** PLoS ONE 2013 8:e83105 (online).

Ribeiro DHB, Ferreira FL, Da Silva VN, Aquino S, Correa B. **Effects of aflatoxin B1 and fumonisins B1 on the viability and induction of apoptosis in rat primary hepatocytes.** Int H Mol Sci 2010 11:1944-55 (online).

Doi K, Uetsuka K. **Mechanisms of mycotoxin-induced dermal toxicity and tumorigenesis through oxidative stress-related pathways.** J Toxicol Pathol 2104 27:1-10.

Al-Hammadi S, Marzouqi F, Al-Mansouri A, Sahin A, et al. **The cytotoxicity of aflatoxin B1 in human lymphocytes.** Sultan Univ Med J 2014 14:e65-71.

Morris G, Berk M. **The many roads to mitochondrial dysfunction in neuroimmune and neuropsychiatric disorders.** BMC Medicine (2015) 13:68 DOI 10.1186/s12916-015-0310-y.

Copyright © Dr. Jack Thrasher and Moms Aware, Inc.  
All rights reserved.