



Commitment to Excellence Since 1916

The Colorado Law Enforcement

Officer

Colorado Law Enforcement Officers' Association

Fall/Winter 2011



Garfield County Sheriff's Office

Garfield County Sheriff's Office ⁶
See article on page

TOXIC MOULD ²⁰
See article on page

TOXIC

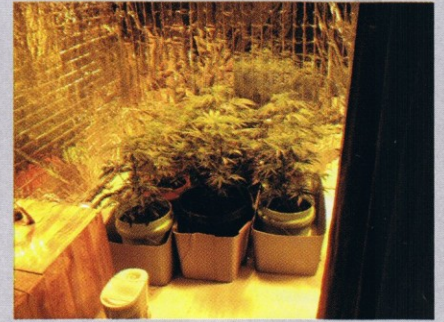
in Marijuana



MOLD

Grow-ops

by Caoimhin P. Connell, Forensic Industrial Hygienist-Forensic Applications



Horror stories abound on the Internet of cops raiding marijuana grow-ops and being exposed to toxic molds. YouTube videos have impressive screen shots of these raids that are always accompanied by a phone number and contact information of someone who will come in and test the air for these toxic molds.

But, it begs the question - why are none of these stories published by the US EPA, the US Centers for Disease Control, the US National Institutes of Health, or any legitimate scientific or regulatory agency? The answer is that in spite of the growing popular myth of toxic mold in general, and toxic molds in grow-ops in particular, there is no such hazard.

Toxic mold is a myth.

Toxic mold has been known to be a myth for decades. There is no such thing as toxic mold, and there never has been. The whole "toxic mold" myth began as an article in a legitimate scientific and medical publication¹ in 1994. The article falsely claimed that an exotic sounding black mold named *Stachybotrys atra* had caused the death of children in Ohio.

However, the article failed to meet the appropriate standards to be called a "scientific paper," and immediately upon release, across the globe, many scientists, including me, cried

"FOUL!" (In addition to being a road deputy in a rural county, I am also an internationally recognized authority on indoor molds and mold exposures.)

Bowing to pressure from the scientific world, the US Centers for Disease Control (CDC) convened two international groups of scientists to review the initial article. Independently, both groups of reviewers concluded that:

The available evidence does not substantiate the reported epidemiologic associations – between household water damage and AIPH or between household fungi and AIPH – or any inferences regarding causality.

The CDC issued a formal retraction² of the initial report, but it was too late; a brand new, and mostly bogus, industry was born in the US: "Toxic Mold Remediation."

Don't confuse this issue with the hazards of clanabs and methlabs involved in processing other types of materials, including THC-- those hazards are real. Rather, this article focuses on the urban myth of toxic mold and the fact that every legitimate scientific group that has reviewed the data has concluded that there are NO known causal associations between illness and these "toxic mold" exposures found in residences. >>



Con-men and charlatans are not new to Western society and Jonathan Swift said it best in 1710:

*Falsehood flies and the truth comes limping after;
so that when men come to be undeceived it is too
late: the jest is over and the tale has had its effect.*

And indeed it is the case here, where, to this day, there is no evidence that the mold called *Stachybotrys* has the ability to cause the illnesses which are frequently attributed to this common, ordinary, everyday mold. *Stachybotrys*, the ultimate "toxic black mold" is certainly found in marijuana grows; but it is also found in every hospital, every court room, every attorney's office, and in every home, squad room, school and other building in Colorado, without exception. Finding *Stachybotrys* (or any other black mold) in a home is like finding air in a home - of course it's there.

It has been calculated that a person would have to spend 10,822 years³ in a heavily contaminated home, exposed to extremely elevated *Stachybotrys* spore counts, to receive the necessary dose to reach a toxic level.⁴

And yet, to this day, remediation companies and "Certified Mold Inspectors" and "Senior Scientists" and other

meaningless, often self-appointed titles, are running around frightening property owners, cops, and communities collecting bogus "air samples" and performing bogus "mold tests" and making a lot of money cleaning up houses that could just as easily, safely, and efficiently be cleaned by your Mom (Mom would probably clean even more thoroughly).

In 2004, the US Institute of Medicine attempted to put an end to the public fear by releasing an exhaustive study⁵ that declared that there were NO causal relationships between indoor molds and the many claimed illnesses. More recent studies from the World Health Organization⁶ (2009) concurred with the IOM study. Decade after decade and study after study has come out saying the same thing - there is no such thing as "toxic mold" and there are NO known health effects ever demonstrated as being caused by indoor mold exposures.

Even where exposures are extremely elevated, we do not see the types of illnesses being attributed to "toxic molds." On a daily basis, US employees working at lumber yards, silos, barn yards and green houses are exposed to concentrations of this, and other molds, that are much higher than that which you and I will be exposed during a raid on any marijuana grow operation. >>

"Toxic mold is a myth."



COMMERCIAL & RESIDENTIAL

METRO MIX, LLC

DENVER - CASTLE ROCK & Surrounding Areas

Serving Colorado Since 1999

**COLORADO OWNED
WITH NO FOREIGN INFLUENCE**

State Certifies
To Do Corp.
Of Engineers &
State Contracts

**Average Age
of Fleet
2 1/2 Years**

303-429-1996
303-429-1988 Fax

www.metro-mix.net **Best On Time Delivery... Bar None**

The "toxic mold industry" would lead you to believe that the mold issue is so new, and that so very little is known, and that there is too much controversy surrounding this unknown to draw any conclusion regarding exposure issues -- nothing could be further from the truth! In my office, I have a standard text on indoor molds and Bacteria dated 1955, and in that standard text, the author cites references from the early 1800's.

Hundreds and hundreds of publications in scientific and medical literature address exposures to these organisms. For example, at the same time irresponsible journalist were fanning the wild flames of "toxic mold" in the US, boring German scientists were plodding away publishing boring articles of interest to other scientists, such as Dill and Trautmann who were quietly reporting human exposures to *Stachybotrys atra* as high as 7,500 spores per cubic meter of air (spores/m³) in a plant potting operation, with no observed health effects. These levels are massively higher than can be expected during a raid on a grow-op. Lumber mill employees may be exposed to 100,000,000 spores/m³, and the farmer sitting atop his tractor in the great, clean outdoor air, may be breathing in 10,000,000 spores during grain harvesting.

Compare this to typical exposures in heavily mold contaminated properties which may run as high as 4,000 spores/m³ (which is still lower than the typical summer outdoor air); your exposures to the same molds during a bust may be as high as 30,000 spores/m³, (outdoor air in New Orleans runs at about 80,000 spores/m³).

Dr. Abba Terr, M.D. summed up the medical field's opinion in a peer-reviewed journal⁸ when he wrote:

No convincing cases of human allergic disease or infection from this mold [Stachybotrys] have been published. [He concluded] The current public concern for adverse health effects from inhalation of Stachybotrys spores in water-damaged buildings is not supported by published reports in the medical literature.

This opinion is similar to that which had already appeared in 1998 by Dr. Fung with the Sharp Rees-Stealy Medical Group and University of California San Diego. Dr. Fung reported in the Journal of Clinical Toxicology⁹ that:

A critical review of papers, reports, and studies on Stachybotrys mycotoxins revealed only descriptive reports of suspected animal and human poisoning secondary to consumption of mold contaminate foods. No studies of good toxicologic and epidemiologic designs answer whether airborne mycotoxins produced by Stachybotrys could produce specific human toxicity.

Dr. Harriet Burge, probably the Planet Earth's most authoritative expert on the issue, performed a review of 70 available literature and her assertion was: The review yielded many studies of the role of fungi in allergic disease, but none that systematically documented such a role for mycotoxins or fungal volatiles. Many case studies were found, but none of

these unequivocally document a cause/effect relationship between mycotoxin exposure by inhalation and human disease in residential, school, or office settings. >>

W.T. COHAN & ASSOCIATES, Inc.

2293 Broadway
Grand Junction, CO 81505
970-254-0128

B & G Equipment
301 E. 8th Street
Greeley, CO 80631

Buddy Truesdale

970-352-2288

ROCKY MT. WIRELINE SERVICE

2144 Highway 6 & 50
Grand Junction, CO

970-243-9828

UNLOCK-IT

Harold King

Thornton

Phone - 303-550-7456

Fax - 303-252-0779

Email - unlockit@q.com

Commercial & Residential

Lock Safes Keys Door Hardware



Dr. Burge concluded:

The review led to the conclusion that that the primary result from fungal exposure is allergic disease, and that the evidence for inhalation disease resulting from mycotoxin exposure in residential and office settings is extremely weak.

Finally, perhaps one of the most thorough and comprehensive reviews of contemporary literature on the subject (with an astounding 465 scientific and medical references) was the Kuhn and Ghannoum review¹⁰ which concluded that:

While many papers suggest a similar relationship between Stachybotrys and human disease, the studies nearly uniformly suffer from significant methodological flaws, making their findings inconclusive. As a result, we have not found supportive evidence for serious illness due to Stachybotrys exposure in the contemporary environment.

Virtually all of the hype on toxic mold is currently coming from the "toxic mold remediation" companies who make their money by inducing fear. In fact, virtually ALL "mold tests" performed by "Certified Mold Inspectors," "Senior Scientists," Home Inspectors and other mold practitioners are entirely meaningless, and not interpretable. Unfortunately, a lot of the air sampling being performed by some legitimate scientific researchers is also fatally flawed, and becomes the source of rejection of their research.

If you get tired of being a cop, you too can be a "Certified Mold Tester" by sitting at your computer, and, without ANY training at all, print out your own "certificate" that declares you as certified -- and instantly, in 48 States (including Colorado), you are now a "Certified Mold Expert," and you have a certificate to prove it!

Law Enforcement personnel have enough headaches to deal with during grow-op raids without having to invent imaginary "toxic mold" threats. During a raid, your main threats are electrocution, bad guys, slips and falls, exposure to THC, and other issues. During the tear-down process,

you may very well experience a running nose and itching eyes; and perhaps one in 10,000 officers may experience a bona fide allergic reaction due to an unknown allergy to the plant matter. These are legitimate concerns and they are some of the types of concerns being considered by my US Department of Homeland Security committee called the "Health, Medical, and Responder Safety" Subgroup.

When planning and executing a grow-op raid, let's stick with addressing the legitimate health threats associated with the operation and leave the toxic mold scare to science fiction writers.

1 Dearborn DG, et al: Acute Pulmonary Hemorrhage/Hemosiderosis Among Infants — Cleveland, January 1993–November 1994. MMWR December 09, 1994 / 43(48):881–883

2 Update: Pulmonary Hemorrhage/Hemosiderosis Among Infants — Cleveland, Ohio, 1993–1996 Morbidity and Mortality Weekly Report, Centers for Disease Control, Vol. 49, No. 9, March 10, 2000

3 Connell, CP Health Effects of Moulds (Molds): State of Knowledge, <http://www.forensic-applications.com/moulds/sok.html>

4 Rao, C.Y., H.A. Burge and J.D. Brain: The time course of responses to intratracheally instilled toxic *Stachybotrys chartarum* spores in rats. Mycopathologia 149: 27–34, 2000.

5 Institute of Medicine, National Academies of Science: Damp Indoor Spaces and Health Committee on Damp Indoor Spaces and Health, ISBN 0-309-09193-4, May 25 2004

6 Damp, Indoor Spaces and Health: World Health Organization Guidelines For Indoor Air Quality Dampness And Mould (ISBN 798 92 890 4168 3), WHO Regional Office for Europe, Scherfigsvej 8, DK-2100 Copenhagen Ø, Denmark

7 Dill and Trautmann: "Massenentwicklung von *Stachybotrys chartarum* auf kompostierbaren Pflanzentöpfen aus Altpapier" Mycoses 40 (Suppl 1) p. 110–114, (1997)

8 Terr, A. I.: *Stachybotrys*: relevance to human disease Annals of Allergy Asthma and Immunology (87, Suppl 1: 57–63) 2001

9 Fung F, Clark R, Williams S: *Stachybotrys*, a Mycotoxin-Producing Fungus of Increasing Toxicologic Importance; Clinical Toxicology 36 (1&2)79–86, 1998)

10 Kuhn, DM, Ghannoum MA: Indoor Mold, Toxigenic Fungi, and *Stachybotrys chartarum*: Infectious Disease Perspective Clinical Microbiology Reviews, Vol 16, No 1, Jan 2003, pp. 144–172

Author's bio.

In addition to being a patrol deputy with a rural county sheriff's office, Mr. Connell has been a practicing Industrial Hygienist for 24 years. He is the current contracting Industrial Hygienist for the US National Center for Atmospheric Research and serves as a subject matter expert in Industrial Hygiene for the US Department of Homeland Security IAB (HMRS). Mr. Connell also serves on several national and international committees including the AIHA Clandestine Drug Lab Work Group, and the ASTM International D22 Committee, where he is the primary author of an upcoming ASTM standard on moulds. Mr. Connell has testified as an expert witness on microbiological issues including moulds.