NEWSLETTER
November 1, 2012

GLOBAL INDOOR HEALTH NETWORK

"WORKING TOGETHER FOR HEALTHY INDOOR ENVIRONMENTS"

http://globalindoorhealthnetwork.com

Inside This Issue

GIHN New Member

Mary Ann Tilford lives in Tucson, Arizona. Mary Ann was ill due to mold exposure and has been receiving medical treatment with one of the renowned physicians in this field. She is now in the planning process of building a safe home with mold-free materials.

Please join me in welcoming Mary Ann.

Formaldehyde Exposure in Hurricane Katrina Trailers—Settlement Reached for $42.6 Million

According to *NBC News*, a federal judge in New Orleans has approved a class-action lawsuit's settlement of $42.6 million for residents of temporary housing units that were distributed to Hurricane Katrina victims and emitted hazardous levels of formaldehyde.

Formaldehyde Exposure Settlement Reached

Massachusetts Lab Covered in Mold and Bacteria

A Massachusetts pharmacy linked to an outbreak of meningitis that has killed 25 people and infected hundreds more was covered in bacteria and mold, according to health inspectors.

Newly released documents reveal staffers at the New England Compounding Center knew about dozens of cases of supposedly sterile areas being overgrown with fungus that could potentially contaminate the pain injections being made at the facility.

In a preliminary report, the Food and Drug Administration said it found dozens of vials of drugs that had a 'greenish black foreign matter' growing inside, and each one they tested was contaminated.

But employees failed to investigate the contamination even when it exceeded the company's own safety levels.

'The entire pharmacy was an incubator of bacteria and fungus,' said former FDA officer Sarah Sellers who left the agency in 2008 after unsuccessfully pushing it to increase regulation of compounding pharmacies.

'The pharmacy knew this through monitoring results, and chose to do nothing.'

The FDA uncovered some four dozen reports of potential contamination in company records, stretching back to January this year.

Compounding pharmacies prepare their medications in clean rooms, which are supposed to be temperature-controlled and air-filtered to maintain sterility.

But FDA inspectors noted that workers at the pharmacy turned off the clean room's air conditioning every night. FDA regulators said that could interfere with the conditions needed to prevent bacterial growth.

Massachusetts Lab Covered in Mold and Bacteria

See *GIHN Videos* on page 2

GIHN Videos

Check out the Global Indoor Health Network's five new videos. They are posted on the GIHN website and on YouTube.

Global Indoor Health Network--dedicated to raising awareness about indoor air pollutants. Provides an overview of the Global Indoor Health Network including our mission, vision, fundraising objectives, Call to Action and our position statement. It also contains a brief summary of topics included in our position statement such as information on mold, asbestos, lead, radon, tobacco smoke, fragrances, chemicals and other indoor air pollutants.

http://www.youtube.com/watch?v=c7T6CAvO-MQ&feature=youtu.be

GIHN Financial and Human Costs of Mold and Other Indoor Air Pollutants. Includes statistics and economics regarding the financial and human costs of illness caused by mold and other indoor air pollutants.

http://www.youtube.com/watch?v=r2cwWEw7bzM

Global Indoor Health Network--Fundraising Ideas and Objectives. The Global Indoor Health Network is dedicated to raising awareness about the health effects of mold and other indoor contaminants. This video provides information about GIHN and their fundraising ideas and objectives.

http://www.youtube.com/watch?v=1nZWkN25AeQ

Global Indoor Health Network--Call to Action. Presents the 18 recommendations that are included in the GIHN Position Statement.

http://www.youtube.com/watch?v=LAKmGVkMViY

Big Business and the Big Lie Strategy. Presents information about the way Big Business has used the Big Lie Strategy to deny the health effects of many products and environmental factors such as tobacco, radium, coal and mold.

http://www.youtube.com/watch?v=2LggIMG6wAg

Additional videos are in the works.

Asbestos: A Deadly Dust with a Growing Legacy

Dozens of people every year are receiving the devastating news that they have contracted a fatal disease brought on by asbestos dust which was common in many workplaces.

But a union hopes claiming compensation will be made easier for victims and their families by a new database recording the details of workers, companies and their insurers involved in cases of asbestos exposure in the past.

Many clients have been diagnosed with mesothelioma, a type of cancer affecting the lungs and sometimes the abdomen.

Ken Woolley, of Unite retired members' branch, whose former members worked at British Rail and Rolls-Royce in Crewe, said: **"Mesothelioma is the greatest single cause of work-related death in the UK and a damning indictment of previous corporate negligence.**

"It is a depressing reality that the death toll is not going to abate before many lives have been lost. It is an industrial disease caused by failure on the part of employers to adequately protect their workers.

"There will also be many wives and children who have contracted the disease from inhaling dust from contaminated work clothes."

The latest information from the Health and Safety Executive shows the number of mesothelioma deaths in the country has increased from 153 in 1968 to 2,321 in 2009. More than 80 per cent of deaths were among men.

Asbestos: A Deadly Dust with a Growing Legacy

See *Mold Exposure…risk for sarcoidosis* on page 3

Mold Exposure at Home Could Increase Risk for Sarcoidosis

People who are exposed to mold in their homes could be at an increased risk for sarcoidosis, a chronic inflammatory lung disease. Researchers from Sweden and Slovenia tested 62 nonsmoking patients with sarcoidosis, 34 of whom had extrapulmonary manifestations (EPM). Patients were tested for β-glucan, an immune-modulating agent found in fungi, and accompanying inflammatory biomarkers, including interleukin (IL)-6, IL-10, and IL-12. Serum samples were also obtained from 18 control subjects with no pulmonary disease or respiratory symptoms. Results showed that levels of IL-6 and IL-12 were higher among subjects with sarcoidosis as compared with controls, and IL-12 was significantly higher among subjects with EPM. There also was a significant relation between β-glucan and mold/fungi levels in the home. Researchers conclude that the results further support the hypothesis that exposure to fungi is important for the risk of sarcoidosis. This study was presented during CHEST 2012, the annual meeting of the American College of Chest Physicians, held October 20 – 25, in Atlanta, Georgia.

Mold Exposure at Home Could Increase Risk for Sarcoidosis

Here are some additional research papers about the connection between mold exposure and sarcoidosis:

A Case Control Etiologic Study of Sarcoidosis--Environmental and Occupational Risk Factors (2004)

Antifungal Medication is Efficient in Treatment of Sarcoidosis (2011)

Causes of Pulmonary Granulomas: A Retrospective Study of 500 Cases from Seven Countries (2012)

In vitro and In vivo Reactivity to Fungal Cell Wall Agents in Sarcoidosis (2011)

Microbial Antigen Treatment in Sarcoidosis – A New Paradigm? (2007)

Mold Exposure and Respiratory Health in Damp Indoor Environments (2011)

Soldier and Family Lose Home to Black Mold

After 14 months serving in Afghanistan, SFC Brian Dinehart returned on Friday, October 19 with the 126th Cavalry out of Wyoming; but he did so with a heavy heart.

He was extremely happy to see his wife Kim and five children, ages 3 to 14, but knew the home he left behind had been deemed unlivable due to toxic black mold.

Being deployed and then having the wife call and tell you that you lost your house, it's pretty stressful to try and help her deal with it over there." Dinehart said.

Prior to Brian leaving for Afghanistan in September, a storm hit the Dinehart's Portage home on July 11.

The insurance company accepted a claim to for water damage in the basement, Kim said, but did not have it professionally dried and cleaned.

"We found it in April, we were all extremely sick. There was over 100 doctor's visits and ER visits in the meantime." Kim added. The sickness was so bad, the doctors thought her one son had cancer, she stated.

Kim and the children moved to live in her sister's basement, sleeping on air mattresses; they had pretty much lost everything except the clothes they were wearing.

"It was very, very draining; it was stressful, very heartbreaking." Kim said.

Soldier and Family Lose Home to Black Mold

See *Member Profile: Greg Weatherman* on page 4

Member Profile: Greg Weatherman

Greg Weatherman is a certified microbial consultant (ACAC) who investigates structures for microbial problems. His company, AerobioLogical Solutions, does consulting work. He started working with moldy homes and offices in 1997 in the Washington, D.C. area when most people considered mold a nuisance more than a health threat. AerobioLogical Solutions holds a Class A contractor's license in Virginia primarily for mold remediation even though the company has ceased all contracting work the last couple of years.

Greg started using polymerase chain reaction (PCR) testing in 2004 when he was looking for better test methods to help explain which properties were causing highly sensitized medical patients to leave their homes even when the best remediation efforts had been performed. This also led to testing various remediation methods to find a better way including chemically sensitive people. His latest remediation methods are also geared towards a "no odor" approach to the cleaning methods, so they become diagnostic tools to find hidden microbial reservoirs or quality assurance.

Greg wrote *Chapter 24 Testing & Remediation* in *Surviving Mold* by Dr. Ritchie Shoemaker. Greg is a peer reviewer and contributor for Post-Remediation and Testing and Verification for Mold and Bacteria (1st – 4th editions) and In-Field Test Methods and Reference Standards for Portable High Efficiency Air Filtration (PHEAF) Equipment written by Bob & Gail Brandys.

Greg holds *U.S. Patent 7,951,227 Composition & Method for Dust Suppression Wetting Agent*. This is a new method for cleaning the air with fogging using gradient or shear coagulation (physics terminology). Greg developed this method in response to the failure of HEPA filtration to clean "all" the air in a room rather than the small percentage of air that passes through a HEPA filter. The technology is licensed to AeroSolver (www.AeroSolver.com).

Greg Weatherman

Member Profile: Greg Weatherman (cont'd)

Greg has been using this air cleaning method to show there are mycotoxins containing particles floating in the air that can't be seen with a light microscope or detected by economically feasible air sampling techniques. He is building data for an eventual study to show why spore trap air samples can be misinterpreted. In both instances, he has found ochratoxin A in two different properties where health complaints were made.

Many of his microbial investigations are health complaint driven from physicians such as Dr. Ritchie Shoemaker. Greg's customer base extends to the West Coast including consultation with other consultants or contractors.

Greg can be contacted through his website at:

www.aerobioLogical.com

aerobioLogical Solutions, Inc.

Creating Indoor Solutions
Through Science Since 1997™

See *Crawl Spaces…reservoirs for mold* on page 5

Crawl Spaces as Reservoirs for Transmission of Mold to the Livable Part of the Home Environment

The abstract of the paper is provided here:

Background: Recent studies suggest that exposure to mold in damp buildings is an important environmental risk factor for childhood respiratory illness. One potential source of a damp home, is crawl space construction. A poorly constructed crawl space not only presents the possibility of contributing to a 'damp' home but can also become a reservoir for fungal growth.

Objectives: Fungal levels in the livable indoor environment have been characterized in other studies, but little has been done to assess the potential for mold growth in the crawl space. This study examines the potential for mold growth and subsequent transmission from the crawl space into the home environment.

Methods: In this study, we assessed mold contamination levels within crawl spaces from 238 study homes in North Carolina. We determined whether air leakage from the heating, ventilation, and air conditioning (HVAC) system and associated ductwork, transmitted viable mold spores from the crawl space into the living spaces within the home.

Results: The results indicate that 19% of the homes demonstrated transmission of mold spores from the crawl space into the indoor environment, 45% of the homes displayed no transmission, and 36% of the homes were indeterminate.

Conclusions: The results support the hypothesis that the HVAC system can serve as a conduit for the transmission of mold spores from the crawl space to the indoor environment of a home. This transmission likely affects children's health, given the significant amount of time they spend in the home environment. For low-income families, the HVAC system may contribute an additional source of childhood exposure and highlights the importance of the assessment of indoor environmental hazards.

Published in:

Rev Environ Health 2011;26(3):205–213

Alberta, Canada, school with mould

Students Relocated After Mould Found in School

Nearly 200 students have been relocated after mould was found in a northern Alberta (Canada) school.

The Superintendent for Northland School Division No. 61 told CTV News students at Gift Lake School had been out of class for about a week due to safety concerns.

"Some of the staff and some of the students had identified health concerns," Donna Barrett said, adding the area of concern was in the old wing of the school.

Barrett explained that students and staff were complaining about burning eyes, headaches and breathing concerns.

"There is some mould in the school," she confirmed and added that some tape used in construction of the building had tested positive for asbestos.

"What they are saying is it is contained at this time," she said.

"We know now that there is a section of the school that will have to be remediated.

"We're erring on the side of caution," she added.

Barrett said the division's priorities were safety and getting the students back in school but they were also looking at the bigger picture.

Students Relocated After Mould Found in School

See *New paper about Trichoderma* on page 6

New Research Paper about Trichoderma longibrachiatum

Here's the abstract for this new paper:

Certain species of the filamentous fungal genus *Trichoderma*, e.g. *T. longibrachiatum* and *T. citrinoviride* are among the emerging clinical pathogens and also the most common species in the indoor space of mould-damaged buildings. Molecules involved in its pathology are not known. We report here that 0.5 to 2.6 weight% of the *T. longibrachiatum* mycelial biomass consisted of thermostable secondary metabolites mitochondriotoxic to mammalian cells. These were identified by LC/MS as one 11-residue and eight 20-residue peptaibols, AcAib-Asn-Leu/Ile-Leu/Ile-Aib-Pro-Leu/Ile-Leu/Ile-Aib-Pro-Leuol/Ileol (1175 Da) and AcAib-Ala-Aib-Ala-Aib-Ala/Aib-Gln-Aib-Val/Iva-Aib-Gly-Leu/Ile-Aib-Pro-Val/Iva-Aib-Val/Iva/Aib-Gln/Glu-Gln-Pheol (1936 - 1965 Da). The toxic effects on boar sperm cells depended on these peptaibols, named trilongins. The trilongins formed voltage dependent, Na^+/K^+ permeable channels in biomembranes. The permeability ratios for Na^+ ions, relative to K^+, of the 11-residue trilongin channel, 0.95:1, and 20-residue trilongins channel, 0.8:1, were higher than those of alamethicin. The combined 11-residue and 20-residue trilongins generated channels that remained in an open state for a longer time than those formed by either one of the peptaibols alone. Corresponding synergy was observed in toxicokinetics. With 11-residue and 20-residue trilongins combined 1:2 wt / wt, an EC_{50} of 0.6 µg mL^{-1} was reached already within 30 min, and the EC_{50} shifted down to 0.2 µg mL^{-1} upon extended exposure. In contrast, with 11-residue or 20-residue trilonging separately in 30 min exposure the EC_{50} values were 15 and 3 µg mL^{-1}, respectively, and shifted down to 1.5 µg mL^{-1} and 0.4 µg mL^{-1} upon extended exposure. This is the first report on ion-channel forming peptaibols with synergistic toxicity from *T. longibrachiatum* strains isolated from clinical samples.

Published on Wiley Online Library.

Next Newsletter: December 1, 2012

Finland: Mould Damage Costs Nearly a Half Billion Euros Each Year

A new report ordered by a parliamentary committee in Finland shows that health problems associated with mould and damp problems in Finnish buildings cost around 450 million euros each year.

The committee, led by professor Kari Reijula from the Finnish Institute for Occupational Health, found that **mould and damp affects hundreds of thousands of people in Finland**.

Damp and mould affects up to 337,000 people in row houses and small dwellings in Finland, as well as up to 154,000 people in apartment blocks. Around 260,000 children attend schools or daycare centres affected by mould problems.

If the cost of repairing the problems is included in the calculations, the total reaches 1.4 billion euros.

Mould Damage Costs Nearly a Half Billion Euros Each Year

Quick Links:

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http://globalindoorhealthnetwork.com/members.html

Working Together for Healthy Indoor Environments