



# The Bio-Zone

June 24th, 2005

## Mold... It's not just on leftovers!!

### Walk-In Coolers and Mold:

Recently, several walk-in coolers on campus were found to be severely contaminated with visible mold. The remediation costs for these coolers totaled nearly \$50,000. Even worse than the financial burden, mold has been associated with possible respiratory health effects; therefore, it is essential to prevent large outgrowths. Frequent visual observations, especially in older buildings where design and insulating materials are outdated, are required to help halt mold contamination at MSU.

High moisture levels and abundant food sources such as paper, cardboard, agars and media make refrigerators and walk-in cooler units ideal environments for mold growth. The most obvious types of mold include the black/grayish growth that occurs on paper products, floors, walls etc. Other less obvious types of mold include the white, powdery fungi commonly found on surfaces of the cooler. Many people incorrectly assume this is oxidative degradation on cooler surfaces, but this is a species of mold which can cause ill health effects. Cleaning, locating water infiltration sources and maintenance must also become standard operating procedures for all MSU facilities containing walk-in refrigeration units. Coolers need to be cleaned bi-annually or more often if mold is more persistent. If coolers are shared among several groups, the cleaning and maintenance responsibilities can be shared. The process of cleaning includes the following:

1. Remove all paper products from the walk-in unit,
2. Using a slightly diluted (similar to dilution when washing dishes) general dish detergent (we recommend Dawn dishwashing soap) wipe all surfaces down with a cloth towel,
3. Wipe up any excess water to prevent additional moisture from being present in the cooler,
4. Note: appropriate personal protective equipment should be worn while cleaning, including: splash goggles, lab coat and disposable gloves.

The ORCBS Biosafety Team will be checking coolers during laboratory inspections so please keep records of all cleaning dates. If mold continues to persist, contact the ORCBS Biosafety Team for additional assistance.

**Water Infiltration:** Leaky faucets, pipes, and roofs, ground water entry and overflowing toilets are all sources of water infiltration. Infiltrated water can saturate ceiling tiles, insulation and drywall leading to ideal conditions for mold growth. It is important to report any water infiltration events or evidence of water damage in campus buildings immediately. For incident reporting you may contact the Physical Plant or the ORCBS Biosafety Team to have the problem addressed. Water left standing has the potential to cause significant damage if not corrected in a timely manner.



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### Upcoming Biosafety Training:

- Bloodborne Pathogens Initial  
7/7/05, 2pm
- Biological Safety  
7/12/05, 2pm
- Bloodborne Pathogens Initial  
8/3/05, 9am
- Biological Safety  
8/16/05, 9am

\*All training is held in room 164, Giltner Hall

# Meet the ORCBS Bio-safety Team

**Dr. Jamie Sue Willard** joined the ORCBS Biosafety Team as a Biological Safety Industrial Hygienist in August of 2002. She earned her Bachelor's of Science and Doctorate degrees from MSU where she specialized in muscle food safety. Her Master's degree was awarded from the University of Kentucky where she completed her thesis research in muscle food processing. In January of this year, she was officially named the Biological Safety Officer for MSU. Her goal is to provide the University with timely, personable, and informative services to meet an ultimate objective of preventing biologically related occupational exposures and maintaining regulatory compliance.



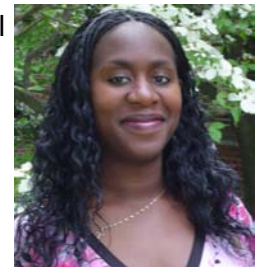
**Patti Pawski**, Assistant Biological Safety Officer, joined the ORCBS in July 1999 as a Biological Safety Industrial Hygienist specializing in bloodborne pathogen safety and compliance. Additionally, she manages the online biological safety related trainings, biosafety cabinet inventory and maintenance schedules, N-95 respiratory protection and safer sharps programs for MSU. Patti earned her Bachelor's of Science degree from the University of California-Berkeley in molecular and cellular biology with an emphasis in neurobiology.



**Amber Bitters** joined the Biosafety Team as a Biological Safety Industrial Hygienist in August of 2004. Before that she was the biological safety graduate assistant. She received both a Bachelor's of Science degree in Microbiology and Molecular Genetics and a Master's of Science degree in Food Safety from Michigan State University. At the ORCBS, she is a critical part of the water infiltration and mold remediation inspection team. Amber also manages the recombinant DNA registration program, provides technical assistance for researchers shipping biological materials, conducts laboratory inspections and assists with all other biological safety related issues that arise.



**Stephanie Edwards** joined the Biosafety Team in March of 2005 as a Biological Safety Industrial Hygienist. Stephanie will assist in all areas of biosafety including, but not limited to trainings, biological safety laboratory and clinical inspections, and fit testing. Her focus will be in medical waste management and biological shipping. Stephanie received her Bachelor's of Science degree from MSU in the Animal Science Program, and will be pursuing her Master's degree in Toxicology in the fall of 2005 from the Department of Animal Science.



**Shannon Soltysiak** joined the Biosafety Team in May of 2005 as the Biological Safety Graduate Assistant. She will be responsible for the autoclave testing program and will assist in respiratory fit testing and laboratory inspections. Shannon attended MSU for her undergraduate degree in Zoology and is currently pursuing a Master's of Forensic Science degree in Forensic Biology.



**Zach Hansmann** joined the Biosafety Team in May of 2004 as a Biological Safety Aide. A Human Biology senior at MSU, Zach is interested in pursuing medicine after graduation. At ORCBS he is responsible for maintaining the worker training system and aides in the campus wide autoclave testing program. Additionally, Zach is responsible for much of the photography used in campus wide training.



**Jamillah Rahmaad**, an undergraduate Biological Safety Aide joined the ORCBS Team in May of 2005. She is a Medical Technology senior at MSU. She has an interest in pursuing a career as a Physician Assistant. Her focus at ORCBS is to aide in employee safety education, test the accuracy of laboratory autoclaves, inform workers of proper hazardous waste disposal and assist the ORCBS Biosafety Team.



## Recombinant DNA Use

The National Institutes of Health (NIH) defines recombinant DNA molecules as: molecules that are constructed outside living cells by joining natural or synthetic DNA segments to DNA molecules that can replicate in a living cell, or molecules that can result from the replication of those previously described.

If your recombinant DNA use falls within this broad definition, you must register your project with the MSU Institutional Biosafety Committee (IBC). All registrations are filled out electronically. Access to the online registration form and additional information regarding project registration can be found under the recombinant DNA section of the "Biosafety in Research" website ([www.biosafety.msu.edu](http://www.biosafety.msu.edu)).

Please keep the following in mind:

- Any work involving recombinant DNA use, regardless of the funding source, needs to be registered with the IBC.
- Recombinant DNA use that is categorized as exempt under the NIH Guidelines must still be registered with the IBC.
- Recombinant DNA registration is project-specific.

## Shipping at State

### New Shipping Policy:

Michigan State University has changed its policy on the shipment of biological materials. Unless you ship frequently (i.e., once a month or more), you must contact the Biosafety Team at the ORCBS each time you need to send biological materials and we will properly package your shipment for you. This change is a result of the continuously changing regulations and the liabilities and fines associated with non-compliance. The International Air Transportation Authority has issued several changes, effective January 1, 2005, regarding the shipment of diagnostic specimens, infectious substances and genetically modified microorganisms.

All MSU personnel wishing to ship biological materials with or without dry ice must initially contact the ORCBS Biosafety Team for assistance. If you are part of a group that ships infrequently we will package your shipment and prepare the paperwork for you. If you are part of a group that ships frequently (i.e., once a month or more) we will arrange for you to receive updated training on the regulatory changes as soon as possible. The training is offered through a CD (Saf-T-Pak), which you can view in your own office or laboratory at your convenience.

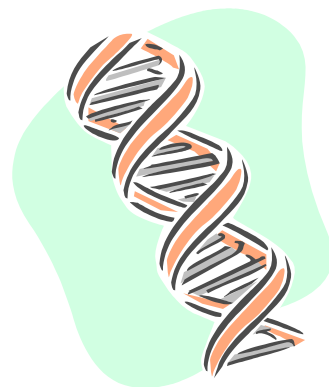
For assistance with shipping please contact:

**Dr. Jamie Sue Willard**  
Biological Safety Officer  
353-1877

**Amber Bitters**  
Biological Safety Industrial Hygienist  
432-5262

### Reminder!

- **All biological materials must have a completed material transfer agreement before shipment. Contact the Office of Intellectual Property (355-2186 or online at <http://www.oip.msu.edu> for details.**
- **Shipments involving chemicals or materials on dry ice (other than biological materials) must be shipped through MSU Stores care of Nathan Maher.**

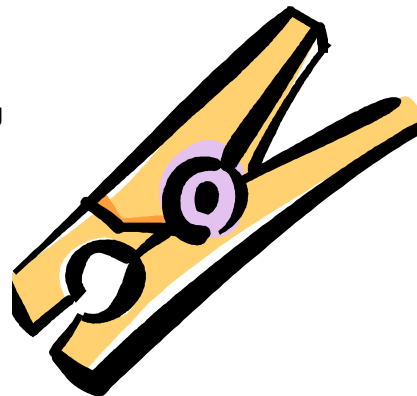


**Remember:**  
**Fines due to improper shipment of materials are not paid for by the university, but rather the individual sending the materials!**



## Laundry and You...

Lab coats frequently become soiled with blood or other body fluids when working with human or animal specimens. To ensure the safety of our laundry personnel it is important that you remember not to include these soiled items with your normal laundry. Lab coats that are contaminated with blood or other potentially infectious body fluids (human or animal) must be placed in an orange or red bio-hazard bag before being sent to the laundry for cleaning. Additionally, please be certain to empty your laboratory coats or other personal coverings of sharp items. At the laundry facility, several exposures to needles have occurred so please be certain to double check your pockets.



## Online Biosafety Courses

The Biosafety Team has developed an online Biosafety training course that is specifically designed for individuals involved in animal-related activities and research. The online training should be taken by those who will be working with animals or animal materials in lieu of the in-person Biosafety Training provided by the ORCBS. If you are conducting animal related procedures you are required to take the training (even if you have taken the in-person Biosafety training) as it contains information on zoonotic infections required when conducting animal research or diagnostics. The course contains the material covered in the in-person training as well as additional material that is specific to those people doing animal-related research.

The course consists of two sections: Biosafety Basics and Biosafety Principles. Biosafety Basics is required for people who handle live animals or handle animal-derived materials. This includes, but is not limited to, animal caretakers, DCPAH administrative personnel, and individuals who handle animal products or wastes. Personnel listed on Animal Use Forms (AUCAUC) must also take the Basics section. Others who are required to take the second portion of the training, Biosafety Principles, must also complete the Biosafety Basics before continuing to the Principles section.

The second part of the course, Biosafety Principles, is required for Veterinary Medicine students who will be starting clinical rotations, personnel who will be using or handling animals or animal-derived materials in conjunction with infectious agents, and personnel who will be working in the DCPAH lab environment.

The course can be accessed at [www.orcbs.msu.edu](http://www.orcbs.msu.edu) under the online courses housed in the training link.

## The Buzz on Biosafety Cabinets

The certification of Biosafety cabinets (BSC) and laminar flow hoods plays a critical role in their performance. Certification should be performed at least annually and whenever the cabinet is moved, serviced, or when the HEPA filters are replaced. Annual certification includes a variety of leak & airflow-related tests, and is the best means to identify potential sources of contamination which can affect your work. Early detection of mechanical problems can result in dollars saved over the life of your cabinet as well.

From the regulatory perspective, in accordance with the "Biosafety in Microbiological and Biomedical Laboratories" or BMBL, work with human and other primate cells should be performed using BSL-2 practices and containment. This includes the use of a "properly maintained Biosafety cabinet." In accordance with National Sanitation Foundation (NSF) 49, a properly maintained Biosafety cabinet is one which is used and decontaminated properly and inspected annually using the testing methodology outlined in NSF 49.



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Come see us on the web!



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<http://www.biosafety.msu.edu/>

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A publication of the Biological Safety Team at  
The Office of Radiation, Chemical, and Biological Safety