



The Bio-Zone

March 12, 2007

Upcoming Biosafety Training:

- Blood Borne Pathogen: 4/19/07, 2 pm
- Biological Safety: 4/24/07, 2 pm
- Biological Safety: 5/15/07, 9 am
- Blood Borne Pathogen: 5/16/07, 9 am

All training held in Room 164 Giltner Hall. Sign up to attend at www.orcbs.msu.edu

New to MSU? Welcome!

We know that principal investigators new to the university are inundated with paperwork and information. The ORCBS would like to ease some of that burden by offering new PIs a consultation visit rather than starting out with a full-fledged inspection. The consultation consists of a visit from members of the Chemical, Biological and Radiation Safety Teams.

During the consultation, the new PI will be given information on a variety of topics including: training requirements, waste han-



dling, safety manuals, hazard identification, and various campus resources. We can also arrange to conduct a mock inspection to ensure that the lab is in full compliance when it is time for the official inspec-

tions. If you are a new PI and have not had a consultation, or you are a department in the process of hiring new faculty members and would like to set up consultations for them, please contact the ORCBS at 355-0153.

Inside this issue:

Training Requirements	2
Transporting Materials on Airplanes	3
Sharps Safety	3
Transgenic Plants and Field Trials	4
Meet the Biosafety Team	5
Services Offered By ORCBS	6

Before You Dump It, Re-Bag It!

The bright orange or red color of the bags reminds us of the biohazardous waste we are disposing of. However, other faculty and staff who do not work



in our lab will be uncertain if the waste was actually autoclaved to kill infectious and hazardous materials. The Michigan Medical Waste Regulatory Act (MMWRA) requires a visible differentiation between pre- and post- autoclaved bags. Therefore, it is extremely important that after autoclaving (using the posted temperature, pressure, and time require-

ments) the orange or red biohazard bag is sealed and then placed into a non-transparent black trash bag. Additionally, this is the policy of MSU's trash removal service. Please be sure that before you discard any autoclaved biohazard bag to place it in a non-transparent black garbage bag, and seal it before placing it in the dumpster.

Training, Training, and More Training

We often get questions regarding what training courses are required for working in a laboratory. The Biological Safety Office offers several different training courses tailored to meet the needs of different research environments. The courses that you need depend on the type of laboratory, clinic, etc. that you are working in and what type of work you will be doing. Refer to the descriptions below to help determine the courses you need or contact the Biosafety Office if you have additional questions.



[“Training is everything. The peach was once a bitter almond; cauliflower is nothing but cabbage with a college education.”](#)

- Mark Twain

Biosafety Training: This is an in-person class that is required for anyone working in a biosafety level 2 or higher laboratory and for anyone that is working with recombinant DNA molecules. You should not take this course if you are handling animal materials. Instead, you should complete Biosafety Principles for Animal Users.

Biosafety Basics for Animal Users: This training course has been developed specifically to address the needs of MSU personnel whose job duties or coursework involves contact with and care of animals or animal diagnostic products. This course will fulfill medical waste training requirements for Animal Use Forms and offer biosafety awareness basics.

Biosafety Principles for Animal Users: This is the second part of the online course for people who handle animal materials. You must take this part of the training if you are working in an animal biosafety level 2 laboratory or if you are working with animal materials in a biosafety level 2 lab or in conjunction with recombinant DNA molecules.

Bloodborne Pathogens Initial: This is a MIOSHA required in-person class that is required for anyone who will be handling human-derived materials, including blood and cell lines. Certain groups, such as healthcare workers can take this class online.

Bloodborne Pathogens Refresher: This is an online course that is required by MIOSHA each year after taking the Bloodborne Pathogens Initial course.

Medical Waste Training: This is for supervisors and employees who must comply with the Michigan Medical Waste Regulatory Act (MMWRA) training requirements. The MMWRA training requirements apply to every employee who generates, handles, treats and/or disposes of biohazardous waste (including sharps) at MSU. It includes general policies that apply to MSU biohazardous waste generators.

The Biosafety Office also offers specialized courses as requested. These include, but are not limited to, Monkey B training, Infectious Substance and Biological Materials Shipping, and Biosafety Cabinet training. If you have a need for a specialized class, please contact our office.

Transporting Materials on Airplanes

Due to frustrations with shipping regulations, time constraints, or just the perceived notion that it will be easier, researchers often inquire as to whether they can just take research materials on an airplane with them, either in checked or carried-on baggage. Before trying to do this, please note that there are many items that are restricted from this and that attempting to take items onto an airplane that are not permissible can lead to some very serious consequences.

The International Air Transportation Association (IATA) states that “Dangerous goods must not be carried by passengers or crew as or in checked baggage; as or in carry-on baggage; or on their per-

son.” Although there are a few exceptions to this, regulated biological materials (i.e., Category A infectious substances, Category B biological substances and genetically modified organisms) are not among them. The Transportation Security Administration (TSA) also has rules that limit what passengers can bring. Therefore, the carriage of materials that are not considered to be dangerous goods may still be restricted from being placed in checked or carried-on baggage. Refer to the TSA website for additional information.

Whatever the mode of transport that is allowable for you, be it shipping through a courier or carrying on an airplane, you must have a Material Transfer

Agreement in place before transporting any materials from the University. A copy of the agreement should be included with the package containing your materials.

For more information on Material Transfer Agreements, contact the [Office of Intellectual Property](#).

The International Air Transportation Association (IATA) states that “Dangerous goods must not be carried by passengers or crew as or in checked baggage; as or in carry-on baggage; or on their person.”



Sharps Safety

All syringes, needles, scalpels, and intravenous tubing with needles attached qualify as sharps. In addition to that, any item that can puncture the skin and is contaminated with potentially infectious materials is also considered a sharp. Because of their safety hazard, all sharps must be handled with care

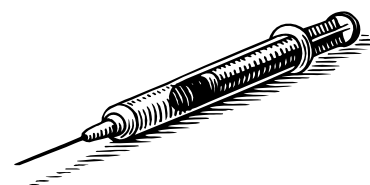
and special precautions must be taken to prevent accidents. To ensure employee safety, always follow these MSU guidelines:

- Sharps should be placed into an approved MSU sharps container immediately following use.
- All personnel should be trained in safe sam-

ple collection procedures by experienced staff.

- Do not expose sharp devices until necessary.
- **Never** leave exposed sharps unattended.
- Do not leave needles in pockets of coveralls, smocks or lab coats.

(cont. page 4)



Sharps



(cont. from page 3)

- Never overfill sharps containers. They should be permanently closed when they are $\frac{3}{4}$ full, or within 90 days of first use, whichever occurs first.

- Safer sharps are required by MIOSHA's Bloodborne Infections Disease Standard for use with all human blood or other human potentially infectious materials. A safer sharp is one that has a safety mechanism built into the design that allows the user to enclose or to retract the sharp without recapping or manipulating the device.

Training Alert: The use of sharps falls under the Michigan Medical Waste Regulatory Act and therefore requires training before use. Please ensure that you have completed Medical Waste Training if you are using sharps in your research or clinical activities.

*Registration documents must be turned in to the IBC and be fully reviewed **before** planting takes place. Please allow 6-8 weeks for the review process.*

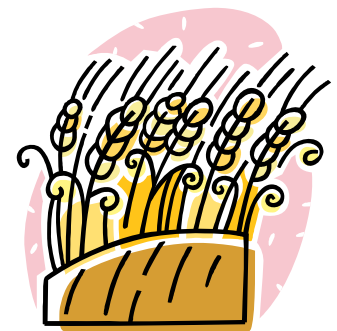
Transgenic Plants and Field Trials

It's that time of year again. With the planting season just around the corner, the MSU Institutional Biosafety Committee (IBC) would like to remind plant-related departments that field trials of transgenic plants require registration with the IBC in the form of a completed field release registration document. Registration documents must be turned in to the IBC and be fully reviewed **before** planting takes place. Please allow 6-8 weeks for the review process.

The field release document is based in part on the National Institutes of Health's Guidelines for Research Involving Recombinant DNA Molecules (NIH Guidelines)

and the guidance from the Animal and Plant Health Inspection Service of the United States Department of Agriculture (USDA-APHIS). To obtain the most recent version of the Field Release Registration Document please visit the Biosafety in Research website (<http://www.biosafety.msu.edu>).

Please feel free to contact Dr. Ned Walker, IBC Chair (355-6463 x1595), Dr. Jamie Sue Willard, Biosafety Officer (353-1877) or Amber Bitters, Biosafety Industrial Hygienist (432-5262) if you need further assistance.



Who's Who in the Biosafety Office

March 12, 2007



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 2005, she was officially named 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 Bachelors of Arts 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. 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 manages the toxin program and biosafety issues involving animal research. She also conducts laboratory inspections and biosafety training. Additionally she assists with the recombinant DNA registration program, fit testing, water infiltration and mold remediation inspections, and biological shipping. Stephanie received her Bachelor's of Science degree from MSU in the Animal Science Program, and is currently pursuing a degree in Toxicology in the Department of Animal Science.



Mollie Tubbs joined the Biosafety Team in August of 2006 as the Biological Safety Graduate Assistant. She will be responsible for the autoclave testing program, Material Transfer Agreement follow-ups, coordinating shipping training and assisting in laboratory inspections. Mollie attended Boston University for her undergraduate degree in Biology with a concentration in marine science. She is currently pursuing a Professional Masters in Science degree in Zoo and Aquarium Management.

The goal of the Biosafety team 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.



**Office of Radiation,
Chemical, Chemical,
and Biological
Safety**

Michigan State University
Biosafety Office
164 Giltner Hall
East Lansing, MI 48823
Phone: 517-355-0153
Fax: 517-432-8659
E-mail: orcbs@msu.edu
www.orcbs.msu.edu

Biosafety Staff (cont.)



Jamillah Rahmaad, an undergraduate Biological Safety Assistant joined the ORCBS Team in May of 2005. She is an Interdisciplinary Studies of Health senior at Michigan State University. After graduation she plans to pursue a career in Health Administration. Her focus at ORCBS is to assist with employee safety education, test accuracy of campus wide autoclaves, inform workers of proper hazardous waste disposal and assist in all aspects of administrative work for the Bio-Safety Team.



Kara Heuvelhorst, an undergraduate Biological Safety Aide, joined the ORCBS Team in May of 2006. She is a Biochemistry Sophomore at MSU. She plans to pursue medical school and become a Health Care Professional. Her goal at ORCBS is to assist in campus-wide safety education. She also aids the ORCBS Biosafety Team in the enforcement of biological safety

The 5th Edition of the Biosafety in Microbiological and Biomedical Laboratories put forth by the CDC and NIH is now available [online](#) at

www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm.

Services Provided by the ORCBS Biosafety Team

- Biological and blood-borne pathogen laboratory inspections
- New faculty laboratory consultation
- Autoclave inspections
- Coordination of biosafety cabinet inspections



- Various training classes offered online and in person. See

- [website](#) for details
- Facilitate mold remediation
- Assistance with shipping specimens and samples
- Consultative services for biosafety related issues