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BioSide Lines

FOSTERING SAFE WORK & LABORATORY PRACTICES THROUGH TRAINING & EDUCATION

Could Your Lab Be Affected?

Additional Agents Included in the Select Agent Regulations

The U.S. Department of Health and Human Services (HHS) and Agriculture (USDA) recently published new select agent final rules. Eleven agents and toxins are now considered Tier I agents, which are defined as agents and toxins that present the greatest risk of deliberate misuse with the most significant potential for mass casualties or devastating effects. Additional physical and personnel security provisions are required for work with Tier I agents.

The select agent and toxin list has also changed with the removal of Cercopithecine Herpesvirus 1 (Herpes B Virus), Clostridium perfringens epsilon toxin, Coccidioides posadasii/Coccidioides immitis, Flexal Virus, Rickettsia rickettsii, shigatoxins and shiga-like ribosome inactivating proteins, Akabane virus,

Bluetongue virus, Bovine spongiform encephalopathy agent, Camel pox virus, Ehrlichia ruminantium, Japanese encephalitis virus, Malignant catarrhal fever virus, Menangle virus and Vesicular stomatitis virus. Additional clarifications have been made to exclude certain strains, types, clades, etc. from the regulations.

Agents now included in the Select Agents List are SARS-associated coronavirus (SARS-CoV), Lujo virus, and Chapare virus.

CDC approval is not only required to work with select agents, it is also required for the storage of select agents. It is important to keep accurate up-to-date inventory of all microbes stored in your laboratory so that you can easily determine if a new regulation affects you. If your

inventory records are not current, now would be an excellent time to do a little spring cleaning of your freezers to update your records.

If you have any of the new select agent viruses in your possession, please contact **Rebecca Moritz, Research Compliance Specialist** in the Office of Biological Safety, at 608-890-3468 as soon as possible.

Tier I Agents:

Agents and toxins that present the greatest risk of deliberate misuse with the most significant potential for mass casualties or devastating effects

OBS Update:

The Office of Biological Safety (OBS) welcomes the addition of Carrie Smith to our staff of Risk Management Specialists. Previously with the Oklahoma State University's Biological Safety office, Carrie brings to OBS her welcome expertise in the field of plant pathology.

LABORATORY SAFETY:

The Scoop on Poop (part 2)

A frank discussion of laboratory animal waste hazards, risks and safety techniques

Our campus houses laboratories which conduct a vast amount of biomedical and agricultural animal research utilizing a variety of species.

Many animals receive a broad range of experimental biological agents some of which end up in their waste products. How is that waste safely handled and where does it go?

Generally, when animals are classified at Animal Biosafety Level 2 (ABSL2) or higher, the preferred method to avoid exposure to the biological agent is through the use of a biological safety cabinet (BSC) combined with personal protective equipment (PPE). A biological safety cabinet protects both the animals and the worker. The same type of containment caging (ventilated or micro-isolators) is used to contain the agents within the cage; and the cages are only opened within the BSC so containment is preserved when working with the animals. The amount and type of PPE used depends on the animals and the agents used. For larger animals such as non-human primates that cannot be easily handled within a BSC, more PPE is used instead to pro-

tect from exposure to biological agents or zoonotic disease. When a BSC cannot be used, PPE that protects the mucous membranes is also employed

sewer lines and the sewer system has an equivalent biohazard status since it is designed to carry human waste. This waste is decontaminated at the sewage

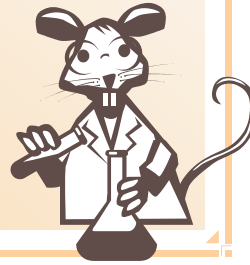
processing plant with human waste. If some of the waste from non-human primates is unable to be flushed into the sewer system from the animal room, then it is handled in a manner similar to ABSL2 rodent waste (e.g. either autoclaved prior to disposal or disposed into the regulated medical waste stream for pickup by Madison Environmental

Resources Inc. [MERI]). Waste processed as medical waste by MERI receives microwave treatment for decontamination before landfill disposal.

In summary, the majority of animal waste produced on campus goes into the normal waste stream, similar to human waste. The processing before sewer or landfill disposal varies based on agent and animal species.

For additional information on Bloodborne Pathogens or other research animal safety information, please go to the Occupational Health website <http://www.ehs.wisc.edu/occhealth.htm>

“The Scoop on Poop” is a multi-part series BioSide Lines collaboration between the UW-Madison Office of Biological Safety and the Occupational Health Research Safety training groups



when there is any exposure risk from aerosols or dust.

Laboratory waste from ABSL2 or higher animals must be decontaminated before disposal. In most facilities on campus, this involves the use of an autoclave. Cages remain sealed (or are sealed within a secondary container) during transport from the animal room to the washroom and are then autoclaved. After autoclaving, the waste goes into the normal waste stream (generally sanitary sewer) and the cages are washed normally.

Waste from ABSL2 non-human primates is handled slightly differently. It is acceptable to dispose of this waste into the sanitary sewer directly from the animal room. The waste does not require transport outside of the



Biosafety Practices: *Don't SWAP Biohazardous Materials*

UW-Madison's Surplus With a Purpose (SWAP) can be a great place to dispose of surplus lab items in order to minimize the amount of material that ends up in the landfill. However, there are a few important guidelines to keep in mind before you send unused lab equipment, furniture, or other items to SWAP.

Nothing sent to SWAP should be contaminated or potentially contaminated with recombinant or hazardous materials, including biological, chemical, or radiological hazards. If you cannot ensure that an item hasn't been thoroughly decontaminated, then it shouldn't go to SWAP. This includes furniture with absorbent surfaces that has been in a laboratory where hazardous materials have been handled. *In addition, all hazard warning labels (such as biohazard stickers) must be removed.*

Most items are sold by SWAP at the UW SWAP

shop in Verona or through their online auction site. SWAP items may be purchased by UW departments, nonprofit organizations, and members of the general public.

Many lab items can be completely decontaminated, such as through the use of bleach to inactivate minor biohazardous agents. However, other items are "iffy".

Before sending an item to SWAP, think about whether you would allow that item in your kitchen at home. If not, then don't send it to SWAP.

Additional information about the types of materials accepted at SWAP is available at their website at <http://www.bussvc.wisc.edu/swap/whatToSend.html>



Training Update: *Beyond Learn@UW*

Our mission at the Office of Biological Safety (OBS) is to help laboratories be a safe environment and to protect the researchers and personnel that work in them. One way we fulfill this mission is by providing individuals and laboratories biosafety training. OBS offers training through Learn@UW on several biosafety topics from basic biological risk assessments and handling sharps in the laboratory, to biosafety cabinet use and infectious shipping. However, biosafety training opportunities offered by OBS do not stop at Learn@UW.

In addition to on-line training, our knowledgeable trainers can also provide more specified biosafety training through guest lectures, developing and conducting hands-on training, and providing one-on-one consultations.

If you feel like your laboratory could use a more personal training, or you need assistance in developing training on a biosafety topic for your laboratory, do not hesitate to contact the OBS

Biosafety Trainers, Tara Schnell, (tschnell@fpm.wisc.edu) and Lisa Burley (lburley@fpm.wisc.edu).

We are always looking to improve our training program and serve you better. We are currently in the process of developing building specific biosafety training, targeting research facilities that have shared space and equipment. Designating clear procedures and routes for autoclaved trash, transporting materials safety between work stations, and eye wash flushing responsibilities are a few topics this training will target. Having your suggestions and feedback would be extremely valuable in this development process. What you have to say about how safely your building operates matters.

Please type the following link (https://uwmadison.qualtrics.com/SE/?SID=SV_0NRRdZUMVIJnep7) in your web browser and fill out this quick 5 minute survey for your voice to be heard. You may also find a link to this survey on our website



Biosafety Q & A

Q: How often must we update the Emergency Information card on the door outside of our laboratory?

A: The Laboratory Emergency Information card was developed in conjunction with campus emergency responders and should be updated regularly. It is recommended that they be reviewed, signed, & dated at least yearly. This information is important for Fire and Evacuation personnel if an emergency arises within your lab. Please remember that the sheets should indicate biosafety level, agent(s), and appropriate Personal Protective Equipment (PPE) for entry (e.g., lab coat, gloves, eye protection). For additional information on these cards go to the UW-Madison, Environment, Health & Safety website and check for the Fire & Life Safety information page www.ehs.wisc.edu/firelife-emergencyplanning-laboratoryemergencyinformationcarddoorcard.htm.

Q: Does our laboratory need a registered OSHA Bloodborne Pathogens Exposure Control Plan?

A: Research involving the use of human-derived substances (e.g. blood or blood components, tissues, secretions) or human-derived cell lines, may be subject to the OSHA Bloodborne Pathogens Standard. Please remember to add the Exposure Control Plan number (ECP#) in Section VII of your biosafety protocol if you checked yes to the use of human-derived substances or cell lines. Contact the UW-Madison, EH&S Occupational Health Program at 265-5000 if you have any questions regarding Bloodborne Pathogens (BBP) or to get enrolled in to the BBP program. Note: to get your new BBP information packet, please contact Carrie Ensrud in Occupational Health at censrud@fpm.wisc.edu. Additional Bloodborne Pathogen information can be found at: www.ehs.wisc.edu/occ-research-bloodbornepathogens

Q: What should be listed on the biosafety protocol?

A: We are slowly revising our biosafety protocol and, with the improvements made to our Chemical Safety group, are phasing out the chemical usage section in the biosafety protocol, with the exception of biological toxins (e.g., bacterial toxins, mycotoxins, etc.). All chemicals and drugs used in your research should be included in your Chemical Hygiene Plan and can be removed from your biosafety protocol, unless they are biological toxins. Please contact the Chemical Hygiene Officer, Jeff Zebrowski at 890-0993 with any questions regarding the Chemical Hygiene Plan. For information on the new Chemical Hygiene Plan go to: www.ehs.wisc.edu/chem-regulatorycompliance-labcompliance.htm.



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