

UNIVERSAL PRECAUTIONS

INTRODUCTION:

Human or non-human primate primary cells, cell lines, organ cultures and body fluids may contain adventitious viruses and/or other opportunistic pathogens or zoonotic agents. Since it is extremely difficult to screen for every pathogen, **all** of the above materials must be handled with **Universal Precautions** and treated as though they are contaminated with HIV, HBV, HCV, or other bloodborne pathogens by utilizing Biosafety Level 2 (BSL-2) practices and procedures.

TRAINING REQUIREMENTS:

The following training programs must be completed annually in order to work with materials listed above:

- [Biosafety/Bloodborne pathogens training](#)
- [Exposure Control Plan](#) – lab specific training provided by the Principal Investigator
- Visit the Wayne State University “safety training for laboratories” website for further information:

<http://oehs.wayne.edu/training/laboratory-training.php>

PRACTICES AND PROCEDURES:

To minimize potential exposure to pathogens, use a combination of engineering controls, work practice controls and personal protective equipment (PPE):

Engineering Controls

- Use a Biosafety Cabinet when possible for all aerosol-generating procedures
- Use additional physical containment devices during procedures with high potential to create aerosols (e.g. centrifugation, blending, homogenization etc.)
- Use a needleless system or engineered sharps
- Use HEPA filtered vacuum lines

Work Practice Controls

- Post biohazard universal precautions signs on doors in immediate proximity to where the work will be performed



- Limit lab access while work is being conducted
- Properly dispose of biohazardous/medical waste into appropriate waste containers
- Wash hands after completion of work and before leaving laboratory
- Decontaminate equipment daily and following any spill

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- Eating, drinking, applying lip balm or contact lenses only permitted in approved non-research areas
- No mouth pipetting

Personal Protective Equipment (PPE)

- Wear appropriate street clothing - long pants and closed toed shoes
- Wear lab coat, gloves (nitrile or latex), safety glasses (or goggles) and face shield where splash potential exists

SHARPS:

- Engineered sharps: commonly used sharps (e.g. scalpels, syringes, needles, glass pipets) that have physical attributes or mechanisms that decrease the risk of injury
- MIOSHA requires any laboratory using human or primate blood, blood products, cell lines, tissues or other potentially infectious materials to review, document, and consider implementing changes in technology (including engineered sharps) that are designed to eliminate or reduce exposure to bloodborne pathogens.

BIOHAZARD WASTE CONTAINERS:



- Closeable
- Contain all contents
- Leak proof
- Puncture resistant
- Labeled with biohazard symbol
- Lined with a red biohazard bag

RESOURCES:

These requirements are based on the Department of Licensing and Regulatory Affairs [Bloodborne Infectious Diseases](#) (MIOSHA-STD-1209), Michigan Department of Environmental Quality Resource Management Division (DEQ) [Public act and rules governing disposal of medical waste](#), and the CDC publication, [Biosafety in Microbiological and Biomedical Laboratories \(BMBL\) 5th Edition](#).

For further information visit:

<http://oehs.wayne.edu/biosafety/human-materials.php>