UC RIVERSIDE | Environmental Health & Safety

# Human/NHP

## Tissue | Fluids | Cell Lines

### Standard Operating Procedure

*All research involving the materials described in this SOP must be documented and approved in a Biological Use Authorization (BUA) prior to use.*

RISK GROUP 2

**Principal Investigator**

**SOP for BUA #**

**BUA Expiration Date**

## Description

There is a recognized bloodborne pathogen risk from working with primary and immortalized human and Non-Human Primate (NHP) cells, tissues, and body fluids. *Universal Precautions* is the concept that all human blood and body fluids are treated as potentially contaminated with infectious bloodborne pathogens. Since NHP material may carry bloodborne pathogens such as Herpes B or *Mycobacterium tuberculosis,* Universal precautions are also applied to NHP tissue, bodily fluids, and cells.

Cells immortalized with viral agents (e.g. SV-40, EBV, Adenovirus) or contain viral genomic material pose additional hazards to laboratory workers.

**Universal precautions are applied to all laboratory procedures involving human or NHP material. All workers must complete Bloodborne Pathogens (BBP) training annually, complete once a Hepatitis B vaccine declination/request form, and work under the practices and procedures of the UCR Exposure Control Plan.**

## Personal Protective Equipment

- Closed-toe shoes; long pants or equivalent
- Long-sleeved lab coat
- Safety glasses or goggles when a splash risk is present
- Surgical mask or Face shield when splash risk is present

# Engineering Controls

Biosafety cabinet (BSC) or other primary containment device should be used for all procedures.

Replace glass with plastic where possible.

Engineered sharps protection such as self-sheathing needles are strongly recommended.

HEPA filter must be attached to any house vacuum line used for procedures involving human/NHP material.

# Procedures

## USE.

The practices and procedures defined in the UCR Exposure Control Plan should be followed. All unfixed human/NHP material should be handled at BSL-2.

- Always wash hands after removing gloves and before exiting the lab.
- Minimize sharps usage.
- Perform procedures within biosafety cabinets and minimize the creation of splashes and aerosols.
- All work surfaces should be decontaminated before and after use using 10% bleach followed by 70% alcohol or Institutional Biosafety Committee (IBC) approved disinfectant.
- Affix a biohazard symbol sticker on equipment used with these materials (i.e. BSCs, centrifuges, incubators, etc.)

## CENTRIFUGATION.

Place a biosafety hazard sticker on any centrifuge used for human/NHP material. Always use sealed rotors, safety cups, or safety buckets if they are available. Load and unload rotors inside biosafety cabinet. Wipe or spray the exterior of the tubes with approved disinfectant when loading or removing samples from rotor.

If a spill occurs during centrifugation, stop the centrifuge, notify lab members, and leave the lab. Close the door and post a warning sign not to enter. Wait for at least 30 minutes to allow aerosols to settle. Upon return, follow spill procedures to clean up the interior of the centrifuge. All contaminated PPE and cleanup material should be disposed of as biohazardous waste.

## STORAGE.

Equipment housing long-term storage of cells or tissue (e.g. $N_2$ dewar or -80°C freezer) should have a biohazard symbol sticker located on the outside (EH&S can provide stickers). Short-term storage of cells or tissue should be clearly marked and labeled with the hazard.

### TRANSPORT.

All biohazardous material should be transported in a leak-proof primary container labeled with the hazard name then placed into a leak-proof, rigid, non-breakable secondary container clearly labeled with the biohazard symbol as well as PI name and contact information. If the human/NHP material is in liquid solution, the secondary container should also contain enough absorbent material to soak up a spill. Transport of cells/tissue/fluid to vivaria locations must be approved by the IACUC and be reflected in the PI's Animal User Protocol (AUP).

## Decontamination and Waste

- All work surfaces should be decontaminated with freshly-made 10% bleach for 5 minutes or approved disinfectant for appropriate contact time.
- Full-strength bleach may be added to liquid waste to achieve a final concentration of 10% bleach. After 30 minutes contact time with the bleach, the liquid waste may be poured down the drain followed by copious amounts of water.
- Gloves and other contaminated solids should be disposed of as biohazardous waste.
- Contaminated sharps should be placed into a red biological sharps container. **Do not recap needles**. Contact EH&S if you require a sharps container (x2-5528 or ehslaboratory@ucr.edu)

## Spills

If the spill is inside a Biosafety Cabinet, do not turn off biosafety cabinet or close sash.

Remove any contaminated clothing or PPE and dispose of as biohazardous waste.

Put on fresh gloves (and PPE, if necessary) and cover spill area with paper towels. Pour freshly made 10% bleach (or approved disinfectant) over paper towels starting at the perimeter of the spill moving toward the center; be careful not to splash bleach. Any objects in spill area should be decontaminated with 10% bleach (or approved disinfectant) as well. Allow 30 minutes of contact time for the bleach.

If there are any sharps, including broken glass, use forceps or tongs to pick up and place into sharps container. Place disinfectant-soaked paper-towels into biohazardous waste bag and wipe area with disinfectant and paper towels again. Mop if needed. Remove gloves and dispose as biohazardous waste.

**All spills must be reported to EH&S and lab supervisor within 24 hours.**

EH&S contact information:

Phone: (951) 827-5528

Email: ehsbiosafety@ucr.edu

Website: https://ehs.ucr.edu/ ('Report an Incident' link at top of page)

# First Aid & Emergencies

**Workers exposed to bloodborne pathogens should be evaluated by a medical professional following any exposure incident.**

## SKIN.

Wash with soap and water for 15 minutes. Carefully remove any contaminated clothing and dispose of as biohazardous waste. Report incident to supervisor and EH&S. Seek medical attention if needed.

## NEEDLESTICK / SHARPS INJURY.

Flush wound with soap and water. Immediately seek medical attention. Report incident to supervisor and EH&S.

## INGESTION.

Immediately seek medical attention. Report incident to supervisor and EH&S.

## MUCOUS MEMBRANE.

Flush at emergency eyewash station for at least 15 minutes. Ask for assistance, if necessary. Seek immediate medical attention. Report incident to supervisor and EH&S.

**All exposures must be reported to EH&S and lab supervisor within 72 hours.**

EH&S contact information:

Phone: (951) 827-5528

Email: ehsbiosafety@ucr.edu

Website: https://ehs.ucr.edu/ ('Report an Incident' link at top of page)

# References

**UCR Bloodborne Pathogens and Aerosol Transmissible Diseases Exposure Control Plan**
https://ehs.ucr.edu/sites/g/files/rcwecm1061/files/2020-06/BLOODBORNE%20PATHOGENS%20AND%20AEROSOL%20TRANSMISSIBLE%20DISEASES%2006-2020.pdf

**UCR Hepatitis B Vaccine Request/Declination Form**
https://ehs.ucr.edu/sites/g/files/rcwecm1061/files/2019-05/hepatitis_b_vaccination_request_declination_form_2016_0829.pdf

**BMBL 6th Edition**
https://www.cdc.gov/labs/pdf/SF__19_308133-A_BMBL6_00-BOOK-WEB-final-3.pdf

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# Acknowledgement

*By signing below I acknowledge that I have read, understand, and agree to abide by the procedures and practices described in this document.*

**Principal Investigator** **Date**

| Name | Signature | Date |
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