Please edit the highlighted sections throughout the entire document . If a section is not relevant to the research, please remove it. Remove this statement and all highlighting prior to submission.

Please also use the Reference Tab in Word and select "!Update Table" (on the left side of the menu under Table of Contents) when you are finished to correctly alignin the page numbers with the proper heading in the Table of Contents.

Safety Manual for Name of Experiment/Protocol – BSL 1 or 2 Containment (All research deemed non -

Signature Page:

This manual MUST be read by all lab staff (before beginning work with type of samples. Please acknowledge that you have read this manual by printing and signing your name below.

PRINT NAME	SIGNATURE	DATE

e.

BSC. Moving arms in and out slowly, perpendicular to the face opening of the cabinet, will reduce this risk. Other personnel activities in the room (e.g., rapid movement, opening/closing room doors, etc.) may also disrupt the cabinet air barrier. For this reason, access to the work area is restricted when work is in progress.

- 4. Before beginning work, the investigator should adjust the stool height so that his/her face is above the front opening. Manipulation of materials should be delayed for approximately 1 minute after placing the hands/arms inside the cabinet. This allows the cabinet to stabilize and to "air sweep" the hands and arms to remove surface microbial contaminants. When the user's arms rest flatly across the front grille, room air may flow directly into the work area, rather than being drawn through the front grille. Raising the arms slightly will alleviate this problem. The front grille must not be blocked with research notes, discarded plastic wrappers, pipetting devices, etc. All operations should be performed on the work surface at least 4 inches from the inside edge of the front grille.
- 5. Equipment that causes turbulence (centrifuge, vortex, etc.) should be placed in the back 1/3 of the work surface. All other work in the cabinet should stop while the apparatus is running.
- Separate clean and contaminated items. Minimize movement of contaminated items over clean items (work from clean to dirty). Remove contaminated items only after decontaminated or sealed in a red biohazard bag.
 - 1. Solid waste generated in the BSC is collected in a red biohazard bag near the cabinet. At end of session, or when 2/3 full, the bag is then closed, the outside of the bag is sprayed with 10% bleach.
 - 2.

biosafety cabinet. The flask contains bleach, which will disinfect the liquid, and we have installed a HEPA filter on the vacuum line. At the end of each work session, bleach is aspirated through the vacuum line tos t-2 (ont)-, andwn36 re f*005to317.57336 (3 ET 9 0.0

C. Pipette Usage

- 1. Never mouth pipette. Mechanical pipetting aids are to be used when pipetting all material.
- 2. Always perform aerosol generating pipetting operations in a biosafety cabinet.
- 3. Use plugged pipettes for transfer or measurement of biohazardous materials when available. This blocks the escape of aerosolized material.
- 4. Do not mix biohazardous fluids by repeated suction and expulsion from pipettes. This generates aerosols.
- 5. Do not bubble air through biohazardous fluids. This generates aerosols.
- 6. Do not forcibly expel liquids from pipettes. This generates aerosols. Discharge as close as possible to the fluid or down the side of the container.
- 7. Avoid accidentally dripping infectious liquids from pipettes.
- 8. Disposable pipettes must only be disposed to a red biohazardous bag.

SAFETY

A. Basic Biosafety Guidelines

- 1. Mechanical pipetting aids are to be used when pipetting all material. Mouth pipetting is prohibited no matter what the material or manipulation.
- 2. Eating, drinking, storing food, and applying cosmetics are not permitted in laboratory work areas. Food should not be stored in refrigerators or freezers used to store biohazardous material.
- 3. Hands should be washed immediately after procedures involving biohazardous materials and routinely before leaving the laboratory.
- 4. Workers should decontaminate their work area following work with biohazardous material and immediately after any spill. The laboratory area should be kept free of materials not pertinent to the work.
- 5. Safety glasses should be worn to protect the eyes from splashes of infectious material that will enter the body through the conjunctival capillaries. Contact lenses should not be worn in the laboratory because they impede the removal of foreign objects and may entrap materials beneath them.
- 6. Gloves should be worn to protect personnel from infection through contact with biohazardous materials and entry into the body via skin abrasions.
- 7. Laboratory coats should be worn in the laboratory to protect personnel from spilled material. Laboratory coats should not be worn outside the laboratory and must be disinfected or clearly labeled as infective before being removed from the laboratory.
- 8. All technical procedures should be performed in a manner to reduce the generation of aerosolized material that may enter the body inhalation. Procedures or activities expected to produce infectious aerosols <u>must</u> be performed in an approved/certified BSC. Operations such as centrifugation, sonication, or vortexing are known aerosol generating procedures. Materials which are placed in centrifuge buckets and sealed in the biosafety cabinet may be centrifuged in the laboratory desktop centrifuge.

- 9. The "buddy system" should be instituted in all laboratories. Personnel should not be working alone on hazardous projects.
- 10. Always remember that you are the individual with the ultimate responsibility for your own health and safety. You will directly benefit from active involvement and commitment to the health and safety program of the laboratory. When you see a potential for exposure or the release of infectious material, be proactive and point this out to the person or persons involved or someone who can resolve the situation. Be persistent in seeing that the situation is resolved and assist any personnel you find not using good

is aspirated thru the vacuum line to disinfect it. The disinfected liquid waste is then poured down the sink. This should be done carefully to avoid splashing and aerosol generation. Afterwards the drain should be flushed with disinfectant of sufficient quantity to at least fill the trap, then the sink is rinsed with copious amounts of water.

- C. Sharps
 - 1. Sharps, such as hypodermic needles, razor blades, or glass Pasteur pipettes, must be segregated from other wastes. All sharps are discarded in labeled, puncture-resistant "sharps" containers. A small "sharps" container is kept in the hood to collect contaminated sharps. Sharps containers are sealed and placed in the large biohazard box, as for other solid waste. Do not recap sharps prior to disposal.
- D. Additional Specific Considerations
 - 1. All the general lab safety measures described in this document apply to the usage and handling human blood samples in the BSL-2 containment.
- E. Handling of Material
 - Flasks, pipettes, and any other solid material that encounter reagents containing – XXXXS ni0/st-0/eFtRor0ugl9/2dea8tb0/eft /TT

- B. Hand Protection
 - Gloves, either latex or nitrile, are worn to provide barrier protection for the hands. Cuts and abrasions on the hands must be occluded before gloves are put on. The integrity of the gloves must be checked before use to ensure their barrier function. Gloves should be long enough to enclose the lower sleeve of the lab coat. Used gloves are disposed of as biohazardous waste.
- C. Eye Protection
 - 1. Our eyes have very little natural barrier protection. Biohazardous agents can gain direct access to the blood stream by penetrating the very vulnerable conjunctival membranes. Therefore, safety glasses will be worn at all times when working with any biohazardous material . An emergency eyewash station is located [location].

HAZARDS COMMUNICATION

- A. Signage
 - 1. All signs and labels are req(s)-2 (-6 (y)8.f)-6 (r)-5. 1 0 Td ()Tj -0.002 Tc 0.002 Tw Tw 1.(a0er)-

- 1. CITI Initial Biosafety Training
- 2. EH&S Lab Safety Training
- 3. Additional necessary procedural and safety trainings specific to the research being conducted.

SDS (Safety Data Sheets)

All the relevant SDS are stored as soft copy/electronic version in the computers in "Dr X's lab" (a common drive mapped in each lab computer). Hard copies of the SDS are available in the cabinet in XX, 1234.