

<h2 style="text-align: center;">Laboratory Biosafety Level 2 Registration and Inspection Report</h2>		<p>Oklahoma State University Center for Health Sciences</p> <p>Institutional Biosafety Committee</p>
Lab PI/Contact Person:	Inspection Date:	Inspected By:
Lab Location (Bldg/Rm #):	Dept:	Phone #:
Type: <input type="checkbox"/> Registration <input type="checkbox"/> Inspection-every 3 years		
List of Agents That Will Be Used/Stored: <input type="checkbox"/> Recombinant DNA : <input type="checkbox"/> Parasitic: <input type="checkbox"/> Bacterial: <input type="checkbox"/> Toxin: <input type="checkbox"/> Viral: <input type="checkbox"/> Prion: <input type="checkbox"/> Fungal: <input type="checkbox"/> Human:		
<p><input type="checkbox"/> Biosafety Level 2 (BSL-2) is suitable for work involving agents that pose moderate hazards to personnel and the environment. It differs from BSL-1 in that 1) laboratory personnel have specific training in handling pathogenic agents and are supervised by scientists competent in handling infectious agents and associated procedures; 2) access to the laboratory is restricted when work is being conducted; and 3) all procedures in which infectious aerosols or splashes may be created are conducted in biological safety cabinets (BSCs) or other physical containment equipment. BSL-2 is appropriate when work is done with any human-derived blood, body fluids, tissues, or primary human cell lines where the presence of an infectious agent may be unknown. If work with any human-derived blood or other potentially infectious human material is to be conducted, personnel are required to take the OSHA Bloodborne Pathogen training offered by the Office of Research, Laboratory Safety Coordinator and have the opportunity to take the Hepatitis B vaccination series.</p>		

BSL	AGENTS	PRACTICES	SAFETY EQUIPMENT	FACILITIES
2	<p>Associated with human disease.</p> <p>Hazard: percutaneous injury, ingestion, mucous membrane exposure</p>	<p>BSL-1 practices plus: Limited access</p> <p>Biohazard warning signs</p> <p>Sharps precautions</p> <p>Biosafety manual defining exposure controls, waste decontamination and medical surveillance policies</p>	<p>Primary Barriers: Class I or II BSCs or other physical containment devices used for all manipulations of agents that cause splashes or aerosols of infectious organisms</p> <p>Personal Protective Equipment (PPE): lab coats, gloves, face protection as needed</p>	<p>BSL-1 plus: Autoclave or other means of decontamination of wastes must be available in the facility</p>

A. Standard Microbiological Practices for BSL-2	Yes	No	Comments
1. Is access to the laboratory limited or restricted at the discretion of the PI when experiments are in progress?			
2. Are hand washing facilities available and do personnel wash hands after working with potentially hazardous material and before leaving the laboratory?			
3. Are eating, drinking, smoking, applying cosmetics and food storage forbidden in laboratory areas?			
4. Are mechanical pipetting devices used and mouth pipetting prohibited?			
5. Are policies and equipment in place for working with sharps (needles, scalpels, pipettes, broken glassware)? a. Is there a sharps container present? b. Is there a box for broken glass present? c. Sharps not bent, sheared, recapped or otherwise manipulated by hand? d. Are non-disposable sharps placed in a hard walled container for transport to be decontaminated?			
6. Is care taken to minimize the creation of splashes and aerosols?			
7. Are work surfaces decontaminated with an appropriate disinfectant after completion of work and after any spill of potentially infectious material?			
8. Are all cultures, stocks, and other potentially infectious material decontaminated (such as autoclaving) before disposal?			
9. Is appropriate signage posted at the entrance to the laboratory to include the universal biohazard symbol? Note: <i>Posted information must include the following: the lab's biosafety level, the responsible person's name, telephone number, agent information, and required procedures for entry/exit.</i>			
10. Is an effective pest management program in place?			

11. Has the PI provided appropriate training in regards to job duties, necessary precautions to prevent exposures, and exposure evaluation procedures?			
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B. Special Practices for BSL-2	Yes	No	Comments
1. Have all personnel entering the lab been advised of the potential hazards and met specific entry/exit requirements (e.g. immunizations)?			
2. Have personnel been provided medical surveillance and offered appropriate immunizations for agents that may be present?			
3. Is there a policy/procedure in place describing the collection and storage of serum samples from at-risk personnel?			
4. Has a laboratory-specific biosafety manual been written by the PI and adopted that includes standard operating procedures for biosafety and is it accessible to lab personnel?			
5. Has the PI ensured and documented that all personnel demonstrate proficiency in standard and special microbiological practices before working with BSL-2 agents?			
6. Are there durable, leak proof containers available for collection, handling, processing, storage or transport of infectious materials within a facility?			
7. Are there procedures in place for the routine decontamination of equipment after spills as well as in preparation for servicing? a. Is there a supply of agent appropriate decontamination solution ready for use? b. Is there a container of disinfectant in the BSC?			
8. Are incidents that result in exposure to infectious materials immediately evaluated and treated according to procedures described in the lab biosafety manual?			

9. Are animals and plants not involved in research prohibited from the lab?			
10. Are all procedures that may produce aerosolization* of infectious materials conducted in a BSC or other physical containment device?			

* **aerosolization** can occur from: pipetting, centrifuging, grinding, blending, shaking, mixing, sonicating, opening containers of infectious materials, inoculating animals intranasally, and harvesting infected tissues from animals or eggs.

C. Safety Equipment (Primary Barriers and PPE)	Yes	No	Comments
1. Are BSCs, centrifuges with sealed rotor and/or safety cups, other physical containment equipment or PPE used when: a. Procedures with a potential for creating infectious aerosols are used? b. High concentrations or large volumes of infectious agents are used?			
2. Are lab coats, gowns or smocks worn while working with hazardous materials? a. Are they removed before entering non-laboratory areas? b. Is there a procedure for disposal and/or disinfecting of protective clothing?			
3. Are eye and face protection (goggles, mask, face shield) used when manipulations of infectious material are performed outside of a BCS, other containment device or as determined by risk assessment? a. Are eye and face protection disposed of as biowaste or decontaminated before reuse?			
4. Are gloves worn (2 pair are recommended) and special care taken to avoid skin contamination when working with infectious materials or animals?			
5. Are BSCs maintained properly and certified annually?			

6. Are eye, face and respiratory protection used in rooms containing infected animals as determined by a risk assessment? a. If respiratory protection is used or required is a Respiratory Protection Program being followed?			
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D. Laboratory Facilities (Secondary Barriers)	Yes	No	Comments
1. Are all laboratory doors self-closing and have locks?			
2. Does the lab have a sink available for hand washing preferably near the exit door?			
3. Is the laboratory designed for easy cleaning and decontamination?			
4. Is laboratory furniture capable of supporting loads and uses?			
5. Are bench tops made of material impervious to water and resistant to heat, organic solvents, acids, alkalis and other chemicals?			
6. If the lab has windows that open, are they fitted with fly screens?			
7. Are BSCs located away from doors, windows that can be opened, heavily traveled areas and other possible airflow disruptions?			
8. Are vacuum lines protected with HEPA filters or their equivalent? Note: A liquid disinfectant trap may be required.			
9. Is an eyewash station readily available?			
10. Are lab chairs covered with a non-porous (no fabric) material that can be easily decontaminated?			
11. Is there a method available for decontaminating wastes (e.g. autoclave, chemical disinfection or other validated decontamination method) in the facility?			

INSPECTION FINDINGS			
Checklist Number	Deficiencies	Corrective Action	Status

Registration/Inspection Disposition: ☐ Approved for BSL-2 work ☐ Provisionally approved for BSL-2 work

Comments:

IBC Representative Signature:	IBC Representative Signature:
Date:	Date:

NOTES:

A. Laboratory Specific Biosafety Manual

The CDC's ***Biosafety in Microbiological and Biomedical Laboratories*** (BMBL) can be useful to the PI in writing his/her biosafety manual. It can be found at this URL: <http://www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm>

The manual should be designed to: 1) protect employees, visitors, and the surrounding community from the health hazards in the laboratory; 2) meet applicable federal, state, and institutional guidelines or requirements; 3) define responsibilities for laboratory safety; 4) provide laboratory specific standard operating procedures; 5) provide information about safe work practices, safety equipment, and personal protective equipment; and 6) serve as a resource for laboratory staff.

Key Elements of a Laboratory Specific Biosafety Manual (as applicable):

Responsibilities

Safe handling of sharps

Identification of biohazards

Waste processing

Entry requirements

Disinfection/spill response

General laboratory safety practices

Emergency procedures

Identification of operations that require engineering controls and safety equipment	Training requirements and documentation
Administrative controls	Pest control management
Animal Safety Practices (if applicable)	Transport of infectious materials protocol
	Security

The above information was extracted from a guidance document published by the Centers for Disease Control (CDC); see reference #4 below. More specific information regarding each of the key elements above may be found on the OSU-Stillwater Biosafety webpage at <http://compliance.vpr.okstate.edu/IBC/gs-biological.aspx>.

B. Other helpful references

1. NIH Guidelines for Research Involving Recombinant DNA Molecules
http://oba.od.nih.gov/rdna/nih_guidelines_oba.html
2. Bloodborne Pathogen regulation
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051&p_text_version=FALSE
3. An excellent Powerpoint presentation by the CDC on biosafety
<http://www.cdc.gov/od/ohs/pdffiles/Module%20-%20Biosafety.pdf>
4. Biosafety Manual guidance document published by the CDC
<http://www.selectagents.gov/resources%5CDevelopment%20of%20a%20Biosafety%20Plan.pdf>.