Basic Rules for Biosafety

- Do not mouth pipette.
- Use biological safety cabinets for containment whenever procedures have the potential to generate aerosol droplets.
- Manipulate infectious fluids carefully to avoid spills and production of aerosols and droplets.
- Understand and apply universal safety precautions when working with biological agents and equipment contaminated with human/non-human primate blood, cells, unfixed tissue, and body fluids.
- Restrict the use of needles and syringes to those procedures for which there are no alternatives. Use needles, syringes, and other “sharps” carefully to avoid self-inoculation.
- Do not recap syringes or needles.
- Dispose of “sharps” in properly labeled leak- and puncture-resistant containers.
- Use protective laboratory coats, gloves, and eyewear as required.
- Do not wear laboratory coats outside of the laboratory. Wash laboratory coats often using WSU laundry facilities.
- Wash hands following all laboratory activities, following the removal of gloves and personal protective equipment, and immediately following contact with infectious materials.
- Do not eat, drink, store food, apply cosmetics, manipulate contact lenses, or smoke in the laboratory. Do not store any food items in the laboratory refrigerators or freezers. Do not heat or cook food in laboratory microwave ovens.
- Post the laboratory area with appropriate warning signs.
- Limit laboratory access to authorized personnel during periods of potential exposure to BSL2 or higher materials.
- The Principal Investigator (PI) must be trained for all proposed research. All personnel must complete applicable training under the supervision of the PI and demonstrate competency of laboratory procedures to the PI.
- Read and understand the content of all applicable protocols. The PI must have standard operating procedures (SOPs) for all procedures performed in his or her laboratory.
- Have a clear understanding and implement the use of Standard Microbiological Practices in daily work routines.
- Decontaminate work surfaces before and after use and immediately after spills. Clean spills according to the Infectious Waste Management Guide [http://www.wright.edu/admin/ehs/wastemgt.html](http://www.wright.edu/admin/ehs/wastemgt.html). All spills must be reported immediately to the Biosafety Officer.
- Dispose of generated biohazard waste in an approved manner as described in the *Infectious Waste Management Guide* [http://www.wright.edu/admin/ehs/wastemgt.html](http://www.wright.edu/admin/ehs/wastemgt.html).

- Follow basic principles of laboratory safety as described in the *University Chemical Hygiene Plan*. Each laboratory should have a printed version of this document. If not, please contact the Chemical Hygiene Officer at extension 2215 to request a copy.

- Become familiar with and utilize the information contained in the *Institutional Biosafety Manual*. [http://www.wright.edu/admin/ehs/safety/biological.html](http://www.wright.edu/admin/ehs/safety/biological.html)


### SUMMARY OF RECOMMENDED BIOSAFETY LEVELS FOR INFECTIOUS AGENTS

<table>
<thead>
<tr>
<th>BSL</th>
<th>AGENTS</th>
<th>PRACTICES</th>
<th>PRIMARY BARRIERS AND SAFETY EQUIPMENT</th>
<th>FACILITIES (SECONDARY BARRIERS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not known to consistently cause diseases in healthy adults</td>
<td>Standard Microbiological Practices</td>
<td>None required</td>
<td>Laboratory bench and sink required</td>
</tr>
</tbody>
</table>
| 2   | • Agents associated with human disease  
• Routes of transmission include percutaneous injury, ingestion, mucous membrane exposure | BSL-1 practice plus:  
• Limited access  
• Biohazard warning signs  
• “Sharps” precautions  
• Biosafety manual defining any needed waste decontamination or medical surveillance policies | 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 materials  
• Laboratory coats; gloves; face protection as needed | BSL-1 plus:  
• Physical separation from access corridors  
• Self-closing, double-door access  
• Exhaust air not recirculated  
• Negative airflow into laboratory |
| 3   | • Indigenous or exotic agents with potential for aerosol transmission  
• Disease may have serious or lethal consequences | BSL-2 practice plus:  
• Controlled access  
• Decontamination of all waste  
• Decontamination of laboratory clothing before laundering  
• Baseline serum | Primary barriers:  
• Class I or II BSCs or other physical containment devices used for all open manipulation of agents  
• Protective laboratory clothing; gloves; respiratory protection as needed | BSL-2 plus:  
• Physical separation from access corridors  
• Self-closing, double-door access  
• Exhaust air not recirculated  
• Negative airflow into laboratory |
| 4   | No BSL-4 work allowed at WSU | NA | NA | NA |

**SUMMARY OF RECOMMENDED BIOSAFETY LEVELS FOR ACTIVITIES IN WHICH EXPERIMENTALLY OR NATURALLY INFECTED VERTBRATE ANIMALS ARE USED**

<table>
<thead>
<tr>
<th>ABSL</th>
<th>AGENTS</th>
<th>PRACTICES</th>
<th>PRIMARY BARRIERS AND SAFETY EQUIPMENT</th>
<th>PRIMARY FACILITIES (SECONDARY BARRIERS)</th>
</tr>
</thead>
</table>
| 1    | Not known to consistently cause diseases in healthy adults | Standard animal care and management practices, including appropriate medical surveillance Programs | As required for normal care of each species | Standard animal facility:  
\- No recirculation of exhaust air  
\- Directional air flow recommended  
\- Hand washing sink is available |
| 2    | • Associated with human disease  
\- Hazard: percutaneous exposure, ingestion, mucous membrane exposure. | ABSL-1 practice plus:  
\- Limited access  
\- Biohazard warning signs  
\- “Sharps” precautions  
\- Biosafety manual  
\- Decontamination of all infectious wastes and of animal cages prior to washing | ABSL-1 equipment plus primary barriers:  
\- Containment equipment appropriate for animal species  
\- Laboratory coats, gloves, face and respiratory protection as needed | ABSL-1 plus:  
\- Autoclave available  
\- Hand washing sink available  
\- Mechanical cage washer recommended |
| 3 & 4| No ABSL-3 or ABSL-4 work allowed at WSU | NA | NA | NA |