<table>
<thead>
<tr>
<th>Biosafety Level (BSL)</th>
<th>Controls</th>
<th>Corresponding Risk Group/ Representative organisms</th>
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| **BSL-1**            | ▪ Work is conducted on open bench tops using standard microbiological practices.  
▪ Benchtops are resistant to water, heat, solvents and other chemicals.  
▪ Laboratory furniture must be non-porous for easy cleaning and decontamination.  
▪ A sink is available for hand washing.  
▪ Researchers must have Lab specific training.  
▪ Laboratory coats, gloves face and eye protection as needed. | **Risk Group 1** agents are not associated with disease in healthy adults. Examples include: *E. coli K-12, Laccaria bicolor, Saccharomyces cerevisiae, Lactobacillus acidophilus, Baculoviruses, adenov-associated virus* |
| **BSL-2**            | ▪ BSL-1 and  
▪ Work may be conducted on open bench tops.  
▪ Biosafety cabinets or other physical containment devices used for procedures causing splashes or aerosols.  
▪ An autoclave must be available for decontamination of waste.  
▪ Limited access to laboratory, warning signs, “sharps” precautions.  
▪ A biosafety manual is required with standard operating procedures for storage, use, waste disposal, emergency response, medical surveillance, etc.  
▪ Laboratory coat, gloves, face and eye protection as needed. | **Risk Group 2** agents are associated with human or animal diseases that are rarely serious. Effective treatment and preventative measures are available. Examples include: working with human blood, *Streptococcus pyogenes, Giardia spp., Microsporum canis, human Adenoviruses, Hepatitis virus.* |
| **BSL-3**            | BSL-2 and  
▪ Biosafety cabinets or other physical containment devices used for all manipulations of agents.  
▪ Controlled access to laboratory, self-closing double doors, negative pressure in laboratory, exhaust air not re-circulated.  
▪ Protective clothing, gloves, face, eye and respiratory protection as needed. | **Risk Group 3** agents are associated with serious or lethal human or animal diseases. Effective treatment and preventive measures may be available. Examples include: *Yersinia pestis, Francisella tularensis, Coccidioides immitis, Prions, Hantavirus, Influenza viruses A H1N1 (1918), H2N2 (57-68) and H5N1 (bird flu)* |
| **BSL-4**            | ▪ BSL-3 and  
▪ Separate building or zone; dedicated supply and exhaust air, dedicated vacuum systems and decontamination systems.  
▪ All procedures conducted in Class III BSC or class I or II with full body, air supplied, positive pressure suit.  
▪ Change clothing before entering, shower on exit. | **Risk Group 4** agents cause serious or lethal human or animal disease and are readily transmitted. Effective treatment and preventive measures are not usually available. Examples include: Smallpox virus, Ebola virus, No bacterial, fungal or parasites in this group.