

Biological Risk Assessment

Permit Holder:	Date submitted:
	Location (for this work):

**Complete ONE form for all activities related to work with biohazardous materials at the SAME risk group level. If work with biohazardous materials is occurring in multiple labs, please indicate the location in the column as indicated.**

**1.0 Hazardous Characteristics of a Biological Agent**

List all organisms below that will be manipulated during the work. Organisms that form a collection and are not manipulated should be appended as a separate list. If you are not isolating/culturing pathogens from environmental, human or animal clinical samples, under organism, describe sample type.

Organism	# Organism required to initiate infection	Treatment available?	Splash Potential Concentration	Origin
	Infectious Dose <input type="checkbox"/> Healthy individuals susceptible <input type="checkbox"/> Immunocompromised individuals susceptible <input type="checkbox"/> Not applicable (cell lines/tissues)	<input type="checkbox"/> Vaccination <input type="checkbox"/> Prophylaxis <input type="checkbox"/> Other	<input type="checkbox"/> Liquid culture <input type="checkbox"/> Culturing <input type="checkbox"/> Stock <input type="checkbox"/> Solid Culture <input type="checkbox"/> Sampling only <input type="checkbox"/> Volumes >1L Working concentration	<input type="checkbox"/> Pure culture ordered from supplier <input type="checkbox"/> Exotic pathogen (not normally found in North America) <input type="checkbox"/> Endemic pathogen (can be cultured from environment in N.A.) <input type="checkbox"/> Human Clinical Sample <input type="checkbox"/> Isolates <input type="checkbox"/> Environmental Sample <input type="checkbox"/> Isolates <input type="checkbox"/> Animal Sample <input type="checkbox"/> Isolates
	Infectious Dose <input type="checkbox"/> Healthy individuals susceptible <input type="checkbox"/> Immunocompromised individuals susceptible <input type="checkbox"/> Not applicable (cell lines/tissues)	<input type="checkbox"/> Vaccination <input type="checkbox"/> Prophylaxis <input type="checkbox"/> Other	<input type="checkbox"/> Liquid culture <input type="checkbox"/> Culturing <input type="checkbox"/> Stock <input type="checkbox"/> Solid Culture <input type="checkbox"/> Sampling only <input type="checkbox"/> Volumes >1L Working concentration	<input type="checkbox"/> Pure culture ordered from supplier <input type="checkbox"/> Exotic pathogen (not normally found in North America) <input type="checkbox"/> Endemic pathogen (can be cultured from environment in N.A.) <input type="checkbox"/> Human Clinical Sample <input type="checkbox"/> Isolates <input type="checkbox"/> Environmental Sample <input type="checkbox"/> Isolates <input type="checkbox"/> Animal Sample <input type="checkbox"/> Isolates

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Organism	PSDS (Provide hyperlink)	Vector Use?	Toxin Production under experimental conditions?	Viral Replication Competency	<b>Mode of Transmission</b>
		<input type="checkbox"/> None <input type="checkbox"/> Yes, list vector(s)	<input type="checkbox"/> None <input type="checkbox"/> Yes, list toxin(s)	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <input type="checkbox"/> N/A	<input type="checkbox"/> Inhalation <input type="checkbox"/> Ingestion <input type="checkbox"/> Injection <input type="checkbox"/> Direct Skin, Eye or mucosal membrane exposure
		<input type="checkbox"/> None <input type="checkbox"/> Yes, list vector(s)	<input type="checkbox"/> None <input type="checkbox"/> Yes, list toxin(s)	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <input type="checkbox"/> N/A	<input type="checkbox"/> Inhalation <input type="checkbox"/> Ingestion <input type="checkbox"/> Injection <input type="checkbox"/> Direct Skin, Eye or mucosal membrane exposure
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**3.0 Genetic modification**

	<b>List each organism and Corresponding Section of Biosafety Protocols that addresses safe work</b>
<input type="checkbox"/> Primary Cell Line	
<input type="checkbox"/> Secondary Cell Line	
<input type="checkbox"/> Oncogenic	
<input type="checkbox"/> Recombinant techniques	
Describe the Genetic Modification to be used:	

**4.0 Hazardous Characteristics of Laboratory Procedures (Check any that will be used with biohazardous agents listed above)**

Laboratory Procedure	Corresponding Section of Biosafety Protocols that discusses how to safely conduct the task (Cite which manual and section)
<input type="checkbox"/> Working with Animals (potential for bites/scratches)	
<input type="checkbox"/> Sharps Use, Needles	
<input type="checkbox"/> Glass	
<input type="checkbox"/> Pipetting	
<input type="checkbox"/> Mixing	
<input type="checkbox"/> Pouring infectious materials	
<input type="checkbox"/> Lyophilizing	
<input type="checkbox"/> Cell sorting	
<input type="checkbox"/> Blenders	
<input type="checkbox"/> Centrifuge	
<input type="checkbox"/> Sonicator	
<input type="checkbox"/> Vortex	
<input type="checkbox"/> Grinding	
<input type="checkbox"/> Vigorous Shaking	

<input type="checkbox"/> Homogenizing	
<input type="checkbox"/> Flaming inoculating loops	
<input type="checkbox"/> Large volume of biohazardous material in use, greater than 1 L	
<input type="checkbox"/> Toxin production	
<input type="checkbox"/> Cryogenic techniques	
<input type="checkbox"/> Collection of Environmental Samples	
<input type="checkbox"/> Culturing Environmental Samples	
<input type="checkbox"/> Collection of Human tissues, bodily fluids	
<input type="checkbox"/> Manipulation of Human tissues, bodily fluids	
<input type="checkbox"/> Opening containers of infectious materials whose internal pressures may be different from ambient (e.g. heated samples)	
<input type="checkbox"/> Biohazardous materials in powdery form	
<input type="checkbox"/> Transport biohazardous materials outside of the lab	
<input type="checkbox"/> Ship/Receive/Transport biohazardous materials outside of the lab building	
<input type="checkbox"/> Non-standard manipulation (not listed above)	

## 5.0 Dual Use Potential

Dual Use Research is biological research with legitimate scientific purpose, the results of which may be misused to pose a biologic threat to public health and/or national security.

Does this research (check all that apply):	Y	N
Allow for increased pathogenicity?	<input type="checkbox"/>	<input type="checkbox"/>
Widens pathogen's host range?	<input type="checkbox"/>	<input type="checkbox"/>
Renders vaccination or standard treatment ineffective?	<input type="checkbox"/>	<input type="checkbox"/>
Allow for non-standard contamination or increased transmissibility?	<input type="checkbox"/>	<input type="checkbox"/>
Allow for increased ability of the pathogen to survive in conditions such as public food/water supply or animal feed supply?	<input type="checkbox"/>	<input type="checkbox"/>
Allow for concealment of a RG 2, 3 or 4 pathogen from detection	<input type="checkbox"/>	<input type="checkbox"/>
Allow for ease in obtaining RG 2, 3 or 4 pathogen? (e.g make it yourself kit, or isolate at home kit)	<input type="checkbox"/>	<input type="checkbox"/>

## 6.0 Hazards Associated with Work Practices, Safety Equipment and Facility Safeguards

PPE in Use

Gloves When?

Labcoats When?

Safety Glasses When?

Face Shields When?

Biosafety Spill Kit Locations?

- Two pairs of gloves
- Spill warning signs (minimum two signs)
- Tape
- Tongs
- Absorbent materials (can be paper toweling)
- Disinfectant, list
- Disposal bags or containers

Biosafety cabinet available?

Biosafety Protocols for safe use of Biosafety Cabinet in Section \_\_\_\_\_ of Biosafety Manual.

Centrifuge Safety Cups

Sealed Centrifuge Rotors

**Medical Surveillance** (Choose one)

Users are advised of symptoms of infection, and reporting of all known exposures or potential Laboratory Acquired illnesses to Supervisor AND Biosafety Officer

Additional measures of medical surveillance are suggested (supply details).

## **7.0 Post Exposure Protocols/ Emergency Procedures**

Cite section of manual



## 8.0 Waste handling and decontamination

Autoclave to be used

Location?

Last Validation performed:

Chemical Disinfection to be used

List disinfectants and concentrations?

When used?



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Date BSC Review: \_\_\_\_\_ BSO's Signature: \_\_\_\_\_ Chair's Signature: \_\_\_\_\_

yy/mm/dd