**Biosafety Risk Assessment: Biological Agent Evaluation Worksheet**

This worksheet is intended to be used in conjunction with the “Conducting a Biosafety Risk Assessment” Standard Operating Procedure. This is meant to be used in the “Consideration of Biological and Chemical Hazards” step and will allow for evaluation of procedure-independent considerations for a biological agent or toxin.

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| **Biological Agent/Toxin Being Evaluated:** |
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| --- |
| **Date of Evaluation Completion:** |
|  |

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| --- |
| **Names of Individuals Involved in Conducting the Evaluation** |
| **Name:** | **Role:** |
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| **Information Sources Used for Evaluation:** |
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**Definitions**

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| CDC/APHIS Select Agent | As listed at <http://www.selectagents.gov/SelectAgentsandToxinsList.html> |
| PAPR | Powered Air Purifying Respirator |
| PPE | Personal Protective Equipment |

**Vaccination**

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| --- | --- | --- | --- |
| Is a vaccine available? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| ⮡ *If yes, is it recommended prior to work with this agent/toxin?* | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| Comments:  |

**Classification**

|  |  |  |
| --- | --- | --- |
| Risk group of agent/toxin: | 1: [ ]  2: [ ]  3: [ ]  4: [ ]   | Unknown: [ ]  |
| Is the agent/toxin a CDC/APHIS Select Agent? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| Comments:  |

**Disinfection**

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| --- | --- |
| Recommended disinfectants: |  |
| Comments:  |

**Recommended PPE**

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| Which of the following is recommended for work with this agent/toxin: |
| Gloves: |  |
| • Latex: | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| • Nitrile: | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| • Other (specify): |  |
| Eye protection: |  |
| • Safety glasses: | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| • Goggles or face shield: | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| • Goggles and face shield: | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| Protective clothing: |  |
| • Laboratory coat: | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| • Sleeve covers: | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| • Back-fastening gown: | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| • Coveralls: | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| • Liquid-impervious apron/gown: | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| • Other (specify): |  |
| Respiratory protection: |  |
| • N95 Respirator/PAPR: | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| • Half mask respirator: | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| Mouth/nose splash protection: |  |
| • Surgical mask: | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| Foot/shoe protection: |  |
| • Shoe covers: | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| Comments:  |

**Inhalation Risk**

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| Is this agent/toxin known to cause infection via inhalation (to cause infection via droplets or droplet nuclei that have entered the upper or lower respiratory tract): |
| • In a laboratory setting? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| • In the natural environment? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| Is the infectious dose (ID50) of this agent/toxin for the inhalation route known? |
| • Is the inhalation infectious dose known? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| ⮡ *If yes, what is the infectious dose (ID50)?* |  |
| ⮡ *If yes, is the infectious dose less than 1000?* | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| Comments:  |

**Percutaneous Exposure Risk**

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| Is this agent/toxin known to cause infection via percutaneous exposure (to cause infection through compromised skin or direct injection into the blood stream): |
| • In a laboratory setting? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| • In the natural environment? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| Is the infectious dose (ID50) of this agent/toxin for the percutaneous exposure route known? |
| • Is the percutaneous exposure infectious dose known? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| ⮡ *If yes, what is the infectious dose (ID50)?* |  |
| ⮡ *If yes, is the infectious dose less than 1000?* | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| Comments:  |

**Mucosal Membrane Risk**

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| Is this agent/toxin known to cause infection via direct contact with mucosal membranes: |
| • In a laboratory setting? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| • In the natural environment? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| Is the infectious dose (ID50) of this agent/toxin for the mucosal membrane route known? |
| • Is the mucosal membrane infectious dose known? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| ⮡ *If yes, what is the infectious dose (ID50)?* |  |
| ⮡ *If yes, is the infectious dose less than 1000?* | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| Comments:  |

**Ingestion Risk**

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| Is this agent/toxin known to cause infection via ingestion (to cause infection via contact with the gastrointestinal tract): |
| • In a laboratory setting? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| • In the natural environment? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| Is the infectious dose (ID50) of this agent/toxin for the ingestion route known? |
| • Is the ingestion infectious dose known? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| ⮡ *If yes, what is the infectious dose (ID50)?* |  |
| ⮡ *If yes, is the infectious dose less than 1000?* | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| Comments:  |

**Post-Exposure Treatments**

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| --- | --- | --- | --- |
| Do post-exposure treatments (including immuno-globulin, vaccines, and antimicrobials) exist? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| ⮡ *If yes, what are they?* |  |
| Comments:  |

**Stability**

|  |  |  |  |
| --- | --- | --- | --- |
| Is this agent/toxin stable outside of a host? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| ⮡ *If yes, specify this stability:* |  |
| Comments:  |

**Location**

|  |  |
| --- | --- |
| Is this agent/toxin endemic: |  |
| • In this state? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| • In this country? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| If only found outside of this country, in what geographic regions is this agent/toxin endemic? |  |
| Comments:  |

**Non-Human Specimen Sources**

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| --- | --- | --- | --- |
| Are specimens from non-human sources tested in this institution? | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| ⮡ *If yes, considering the host range, could this agent/toxin be present in non-human sources tested in this institution?* | Yes: [ ]  | No: [ ]  | Unknown: [ ]  |
| ⮡ *If yes, in what non-human sources tested in this institution could this agent/toxin be present?* |  |
| Comments:  |

**Sources**

1. Biological Risk Assessment in the Laboratory: Report of the Second Biorisk Management Workshop (Stefan Wagener et al., Applied Biosafety: Vol. 13, No. 3, 2008)
	1. <https://my.absa.org/tiki-download_file.php?fileId=3559>
2. CDC (Centers for Disease Control and Prevention) Biological Risk Assessment Worksheet
	1. <http://www.cdc.gov/biosafety/publications/BiologicalRiskAssessmentWorksheet.pdf>
3. Risk Assessment for Working with Infectious Agents in the Biological Laboratory (Richard Knudsen, Applied Biosafety: Vol. 6, No. 1, 2001)
	1. <https://my.absa.org/tiki-download_file.php?fileId=3175>
4. Sandia Report SAND2010-6487 Biosafety Risk Assessment Methodology (Susan Caskey et al., printed October 2010)
	1. <http://biosecurity.sandia.gov/BioRAM/Biosafety%20Risk%20Assessment%20Report.pdf>

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