

## Characterizing Biological Agents:

Please identify the following agents as a low, moderate, or high biosecurity risk. And defend its placement by identifying the biological agent properties, the production and/or dissemination properties, and the consequences if the agent was used in a bioattack.

### **1. *Mycobacterium tuberculosis* (TB)**

- a. WHO Risk Group 3 agent
- b. Communicable to humans and animals
- c. Infectious via inhalation
- d. Moderately treatable
- e. Moderate to low mortality rate
- f. Highly stable

### **2. *Variola major* (Small pox)**

- a. WHO risk group 2 agent prior to eradication , risk group 4 post eradication
- b. Communicable to humans
- c. Infectious via inhalation
- d. Vaccination exists
- e. Moderate to low (30%) mortality rate
- f. Highly stable

### **3. *Bacillus anthracis* (anthrax)**

- a. WHO risk group 2 agent (risk group 3 if doing aerosolization studies)
- b. Communicable to humans and animals
- c. Infectious via inhalation, ingestion, and contact
- d. Treatable
- e. Vaccine exists
- f. Untreated inhalation high mortality rate, others low mortality rate
- g. Highly stable

### **4. Avian influenza (H5N1)**

- a. WHO risk group 3 agent
- b. Communicable to animals and potential from animal to people
- c. Infectious via inhalation and contact
- d. Vaccination exists for poultry
- e. Mortality rate moderate to low
- f. Moderate stability

**5. Ebola Zaire**

- a. WHO risk group 4 agent
- b. Communicable to humans and non-human primates
- c. Infectious via injection or close contact
- d. No treatment, vaccine still in development
- e. High mortality rate
- f. Unstable

**6. *Yersinia pestis* (plague)**

- a. WHO risk group 3 agent
- b. Communicable to humans and animals
- c. Infectious via vectors (fleas) and inhalation
- d. Treatable
- e. Moderate mortality rate
- f. Highly Stable

**7. Herpes simiae (B virus)**

- a. WHO risk group 3 agent
- b. Communicable to humans and non-human primates
- c. Infectious via injection and close contact
- d. No treatment
- e. High mortality rate
- f. Unstable

**8. Rabies virus**

- a. WHO risk group 3 agent
- b. Communicable to humans and animals
- c. Infectious via injection (inhalation is a high quantity) and close contact
- d. No treatment
- e. High mortality rate
- f. Moderately stable

### **Characterizing Adversaries:**

Identify what adversaries you would expect to see in a risk assessment for a facility you are inspecting. Identify the different outsiders you are concerned about and what type of insiders you are concerned about. Do not just think about the researchers but think about all the different roles at a facility.

**Adversary, motive, access to the agents:**

1.

2.

3.

4.

5.

## Characterizing the facility:

Please identify the key factors in assessing the facility vulnerabilities in each of these areas.

- **Physical security**

- 1.
- 2.
- 3.
- 4.
- 5.

- **Personnel security**

- 1.
- 2.
- 3.
- 4.
- 5.

- **Material handling and control measures**

- 1.
- 2.
- 3.
- 4.
- 5.

- **Transport security**

- 1.
- 2.
- 3.
- 4.
- 5.

- **Information security**

- 1.
- 2.
- 3.
- 4.
- 5.

- **Program management practices**

- 1.
- 2.
- 3.
- 4.
- 5.

## **Characterize the Risk:**

Based on the above agents, adversaries, and facility factors, identify high consequence events and those with a high likelihood. (Assume a lacking at a facility in the key factors you identified above)

**High Consequences:**

**High Likelihood:**

**Identify the events which would be unacceptable.**

1.

2.

3.

4.