

## **PATHOGEN INVENTORIES**

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### **Scope**

This SOP applies to all faculty and staff with collections of pathogenic agents at UNL whether the agents are actively being used or are in long-term storage.

### **Purpose**

Pursuant to best practices in biosafety stewardship and in order to avoid stockpiles of unknown or abandoned pathogenic agents at UNL, it is institutional policy for all faculty and staff to maintain an inventory of all pathogenic agents in their possession at UNL.

### **Definitions**

*Pathogenic agents:* Any microbiological agent or biological toxin that is capable of causing disease in humans, animals or plants. Lab-adapted strains of microbes are not included under this definition; examples include K12-derived *E. coli* strains and *S. cerevisiae*.

### **Inventory Requirements**

An inventory listing all pathogenic agents in the possession of a faculty or staff member must be maintained by the faculty or staff member. The inventory must be kept current and accurate at all times. An updated copy of the inventory must be submitted to EHS biosafety staff whenever new agents are added/removed or at least annually. The inventory must at a minimum contain the following information:

- Genus and species of microbiological agents; or name and species of origin for biological toxins
- Strain information: list all strains of the agents possessed. (*If known, please include the genotype of the microbe indicating all antibiotic resistance genes and any mutations that may increase virulence, host range or pathogenicity*)
- Location of agent
- Status of agent (e.g., long-term storage, active use, etc.)

If the inventory has not changed in the past 12 months after initial submission of an inventory document, an email indicating as such can be submitted following the procedures below.

## Submission procedures

Inventories must be submitted using the following email address: [ibc@unl.edu](mailto:ibc@unl.edu)  
Inventories must be submitted as email attachments in any of the following formats: Microsoft Excel (.xls, .xlsx or, .csv), Microsoft Word, or PDF.

Proprietary database file formats will not be accepted. As we do not have access to specialty software that may have been used to create the database file.

Please format the email subject line as follows:

**“Year Pathogenic Agent Inventory for PI Name – Department – Building”**

*Sample subject line:* “2014 Pathogenic Agent Inventory for Matthew Anderson – Environmental Health & Safety – Agriculture Warehouse 1”

Updated inventories will be requested every year during the annual safety survey. If your inventory changes significantly in the interim period, please submit an update more frequently. If no changes in inventory have occurred, send an email using the same subject line formatting, but indicate in the email body that no changes to the inventory have occurred since the last submission.

## Inventories and Lab Decommissioning

When you are preparing to leave UNL, please submit a final inventory approximately **one month** prior to your lab shutting down. This will allow sufficient time for the Biosafety staff to review your inventory and advise on the following:

- Requirements for shipping your inventory to your new institution;
- Best disinfection methods for disposing of the inventory; or
- Procedures for transferring your inventory to another faculty member.

## Disposal of Pathogenic Agents

Follow the procedures outlined in the EHS SOP, **Disposing of Biohazardous Materials Including Recombinant Nucleic Acids** to properly discard biological agents.

### **Important:**

**Do not dispose of pathogenic agents or recombinant materials in the regular trash.**

If you find pathogenic agents while conducting an inventory that are no longer needed or of which the identity is unknown, please verify that the agent is not on the Select Agent and Toxin list found in **Appendix A** of this document. If you do determine that you possess one of the agents on the Select Agent and Toxin list, contact EHS immediately, keep the agent in a locked freezer and do not discard the agent without permission from EHS.

**Abandoned Agents**

If you are aware of pathogenic agents or other biological materials that have been abandoned in a freezer, cold room or other type of long term storage, please contact EHS at 402-472-4925 for assistance with disposal options.

Questions or comments about this process can be directed to the email address provided above ([ibc@unl.edu](mailto:ibc@unl.edu)) or to the UNL Biosafety Officer at 402-472-9554.

## Appendix A

Below is the complete list of Select Agents and Toxins. These agents are regulated by the federal government and possession of these agents requires registration with either CDC/HHS or USDA-APHIS. Additionally, disposal/destruction of these agents must be documented and paperwork submitted to the appropriate federal agency.

### *HHS and USDA Select Agents and Toxins 7CFR Part 331, 9 CFR Part 121, and 42 CFR Part 73*

#### **HHS SELECT AGENTS AND TOXINS**

##### **Abrin**

##### **Botulinum neurotoxins\***

Botulinum neurotoxin producing species  
of *Clostridium*\*

##### **Conotoxins**

##### *Coxiella burnetii*

Crimean-Congo haemorrhagic fever virus

##### **Diacetoxyscirpenol**

Eastern Equine Encephalitis virus<sup>3</sup>

Ebola virus\*

##### *Francisella tularensis*\*

Lassa fever virus

Lujo virus

Marburg virus\*

Monkeypox virus<sup>3</sup>

Reconstructed replication competent forms of the  
1918 pandemic influenza virus containing any  
portion of the coding regions of all eight gene  
segments (Reconstructed 1918 Influenza virus)

##### **Ricin**

##### *Rickettsia prowazekii*

SARS-associated coronavirus (SARS-CoV)

##### **Saxitoxin**

South American Haemorrhagic Fever viruses:

Chapare

Guanarito

Junin

Machupo

Sabia

##### **Staphylococcal enterotoxins A,B,C,D,E subtypes**

##### **T-2 toxin**

##### **Tetrodotoxin**

Tick-borne encephalitis complex (flavi) viruses:

Far Eastern subtype

Siberian subtype

Kyasanur Forest disease virus

Omsk hemorrhagic fever virus

Variola major virus (Smallpox virus)\*

Variola minor virus (Alastrim)\*

*Yersinia pestis*\*

#### **OVERLAP SELECT AGENTS AND TOXINS**

##### *Bacillus anthracis*\*

*Bacillus anthracis* Pasteur strain

*Brucella abortus*

*Brucella melitensis*

*Brucella suis*

*Burkholderia mallei*\*

*Burkholderia pseudomallei*\*

Hendra virus

Nipah virus

Rift Valley fever virus

Venezuelan equine encephalitis virus<sup>3</sup>

#### **USDA SELECT AGENTS AND TOXINS**

African horse sickness virus

African swine fever virus

Avian influenza virus<sup>3</sup>

Classical swine fever virus

Foot-and-mouth disease virus\*

Goat pox virus

Lumpy skin disease virus

*Mycoplasma capricolum*<sup>3</sup>

*Mycoplasma mycoides*<sup>3</sup>

Newcastle disease virus<sup>2,3</sup>

Peste des petits ruminants virus

Rinderpest virus\*

Sheep pox virus

Swine vesicular disease virus

USDA PLANT PROTECTION AND QUARANTINE (PPQ)

SELECT AGENTS AND TOXINS

*Peronosclerospora philippinensis*

(*Peronosclerospora sacchari*)

*Phoma glycinicola* (formerly *Pyrenochaeta glycines*)

*Ralstonia solanacearum*

*Rathayibacter toxicus*

*Sclerophthora rayssiae*

*Synchytrium endobioticum*

*Xanthomonas oryzae*

\*Denotes Tier 1 Agent

Toxins are highlighted in green.