

## Category 1 List of Agents and Toxins

### HHS Select Agents and Toxins

1. Abrin
2. *Bacillus cereus* Biovar *anthracis*
3. Botulinum neurotoxins
4. Botulinum neurotoxin producing species of *Clostridium*
5. Conotoxins (Short, paralytic alpha conotoxins containing the following amino acid sequence X<sub>1</sub>CCX<sub>2</sub>PACGX<sub>3</sub>X<sub>4</sub>X<sub>5</sub>X<sub>6</sub>CX<sub>7</sub>)
6. *Coxiella burnetii*
7. Crimean-Congo haemorrhagic fever virus
8. Diacetoxyscirpenol
9. Eastern Equine Encephalitis virus
10. Ebola virus
11. *Francisella tularensis*
12. Lassa fever virus
13. Lujo virus
14. Marburg virus
15. Mpox virus
16. 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)
17. Ricin
18. *Rickettsia prowazekii*
19. SARS-associated coronavirus (SARS-CoV)
20. SARS-CoV/SARS-CoV-2 chimeric viruses resulting from any deliberate manipulation of SARS-CoV-2 to incorporate nucleic acids coding for SARS-CoV virulence factors
21. Saxitoxin

### South American Haemorrhagic Fever viruses

22. Chapare
  23. Guanarito
  24. Junín
  25. Machupo
  26. Sabia
27. Staphylococcal enterotoxins (subtypes A,B,C,D,E)
  28. T-2 toxin
  29. Tetrodotoxin

### Tick-borne encephalitis complex (flavi) viruses

30. Far Eastern subtype
  31. Siberian subtype
32. Kyasanur Forest disease virus
  33. Omsk hemorrhagic fever virus
  34. Variola major virus (Smallpox virus)
  35. Variola minor virus (Alastrim)
  36. *Yersinia pestis*

### Overlap Select Agents and Toxins

37. *Bacillus anthracis*
38. *Bacillus anthracis* Pasteur strain

39. *Burkholderia mallei*
40. *Burkholderia pseudomallei*
41. Hendra virus
42. Nipah virus
43. Rift Valley fever virus
44. Venezuelan equine encephalitis virus

#### USDA Veterinary Services (VS) Select Agents and Toxins

45. African swine fever virus
46. Avian influenza virus
47. Classical swine fever virus
48. Foot-and-mouth disease virus
49. Goat pox virus
50. Lumpy skin disease virus
51. *Mycoplasma capricolum*
52. *Mycoplasma mycoides*
53. Newcastle disease virus
54. Peste des petits ruminants virus
55. Rinderpest virus
56. Sheep pox virus
57. Swine vesicular disease virus

#### USDA Plant Protection And Quarantine (PPQ) Select Agents and Toxins

58. *Coniothyrium glycines*  
(formerly *Phoma glycinicola* and *Pyrenochaeta glycines*)
59. *Ralstonia solanacearum*
60. *Rathayibacter toxicus*
61. *Sclerophthora rayssiae*
62. *Synchytrium endobioticum*
63. *Xanthomonas oryzae*

NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules (NIH Guidelines), Appendix B, Risk Group 4 and subset of Risk Group 3

[https://osp.od.nih.gov/wp-content/uploads/NIH\\_Guidelines.pdf](https://osp.od.nih.gov/wp-content/uploads/NIH_Guidelines.pdf)

#### **Risk Group 4 (RG4) - Bacterial Agents**

None

#### **Risk Group 4 (RG4) - Fungal Agents**

None

#### **Risk Group 4 (RG4) - Parasitic Agents**

None

#### **Risk Group 4 (RG4) - Viral Agents**

- Arenaviruses
  - Guaranito virus
  - Lassa virus
  - Junin virus (except the candid #1 vaccine strain listed in Appendix B-II-D Risk Group2 (RG2) – Viruses)
  - Machupo virus
  - Sabia
- Bunyaviruses (Nairovirus)
  - Crimean-Congo hemorrhagic fever virus
- Filoviruses
  - Ebola viruses
  - Marburg viruses
- Flaviruses - Group B Arboviruses
  - Tick-borne encephalitis virus complex including Absetterov, Central European encephalitis, Hanzalova, Hypr, Kumlinge, Kyasanur Forest disease, Omsk hemorrhagic fever, and Russian spring-summer encephalitis viruses
- Herpesviruses (alpha)
  - Herpesvirus simiae (Herpes B or Monkey B virus)
- Paramyxoviruses
  - Equine Morbillivirus (Hendra virus)
- Hemorrhagic fever viruses as yet undefined

#### **Risk Group 3 (RG3) - Bacterial Agents Including Rickettsia\***

- Bartonella
- Brucella including B. abortus, B. canis, B. suis
- Burkholderia (Pseudomonas) mallei, B. pseudomallei
- Coxiella burnetii (except the Phase II, Nine Mile strain listed in Appendix B-II-A, Risk Group 2 (RG2) - Bacterial Agents Including Chlamydia)
- Francisella tularensis (except those strains listed in Appendix B-II-A, Risk Group 2 (RG2) – Bacterial Agents Including Chlamydia)
- Orientia tsutsugamushi (was R. tsutsugamushi)
- Pasteurella multocida type B -"buffalo" and other virulent strains
- Rickettsia akari, R. australis, R. canada, R. conorii, R. prowazekii, R. rickettsii, R. siberica, R. typhi (R. mooseri)
- Yersinia pestis (except those strains listed in Appendix B-II-A, Risk Group 2 (RG2) - Bacterial Agents Including Chlamydia)

#### **Risk Group 3 (RG3) - Fungal Agents\***

None

#### **Risk Group 3 (RG3) - Parasitic Agents**

None

#### **Risk Group 3 (RG3) - Viruses and Prions\***

- Alphaviruses (Togaviruses) - Group A Arboviruses
  - Chikungunya virus (except the vaccine strain 181/25 listed in Appendix B-II-D Risk Group2 (RG2) – Viruses)
  - Semliki Forest virus
  - Venezuelan equine encephalomyelitis virus (except the vaccine strains TC-83 and V3526,

- see Appendix B-II-D (RG2) – Viruses)
- Other viruses as listed in the reference source (see Section V-C, Footnotes and References of Sections I through IV)
- Arenaviruses
  - Flexal
  - Lymphocytic choriomeningitis virus (LCM) (neurotropic strains)
- Bunyaviruses
  - Hantaviruses including Hantaan virus
  - Rift Valley fever virus
- Coronaviruses
  - SARS-associated coronavirus (SARS-CoV)
  - Middle East respiratory syndrome coronavirus (MERS-CoV)
- Flaviviruses - Group B Arboviruses
  - Japanese encephalitis virus (except those strains listed in Appendix B-II-D Risk Group2 (RG2) - Viruses)
  - Yellow fever virus
  - Other viruses as listed in the reference source (see Section V-C, Footnotes and References of Sections I through IV)
- Orthomyxoviruses
  - Influenza viruses 1918-1919 H1N1 (1918 H1N1), human H2N2 (1957-1968), and highly pathogenic avian influenza H5N1 strains within the Goose/Guangdong/96-like H5 lineage (HPAI H5N1).
- Poxviruses
  - Monkeypox virus (Clade I & Clade II containing nucleic acids coding for clade I MPVX virus virulence factors)
- Prions
  - Transmissible spongiform encephalopathies (TSE) agents (Creutzfeldt-Jacob disease and kuru agents)(see Section V-C, Footnotes and References of Sections I through IV, for containment instruction)

**EXCLUDED RG3 Agents:**

- Human immunodeficiency virus (HIV) types 1 and 2
- Human T cell lymphotropic virus (HTLV) types 1 and 2
- Simian immunodeficiency virus (SIV)
- Mycobacterium tuberculosis, Mycobacterium bovis
- Clade II of MPVX viruses unless containing nucleic acids coding for clade I MPVX virus virulence factors
- Vesicular stomatitis virus
- Coccidioides immitis (sporulating cultures; contaminated soil)
- Histoplasma capsulatum, H. capsulatum var. duboisii

**Note:** This list may be updated in the Implementation Guidance on a periodic basis.