

**CATEGORY 1 RESEARCH MEETS THREE CRITERIA (CAT 1 IS ESSENTIALLY DURC):**

- (A)** Involves one or more of the biological agents and toxins specified in Section 4.1.1 Biological Agents and Toxins within Scope of Category 1 Research; **and**
- (B)** Reasonably anticipated to result, or does result, in one of the experimental outcomes specified in Section 4.1.2; **and**
- (C)** Based on current understanding, the research institution and/or federal funding agency assesses that **the research constitutes DURC** as specified in Section 4.1.3.

**(A) CATEGORY 1 AGENTS:**

1. Abrin
2. African horse sickness virus
3. African swine fever virus
4. Bacillus anthracis
5. Bacillus anthracis Pasteur strain
6. Bacillus cereus Biovar anthracis
7. Bartonella
8. Brucella abortus
9. Brucella canis
10. Brucella melitensis
11. Brucella suis
12. Burkholderia mallei
13. Burkholderia pseudomallei
14. Botulinum neurotoxins
15. Botulinum neurotoxin producing species of Clostridium
16. Central European encephalitis virus
17. Chikungunya virus (except the vaccine strain 181/25 listed in Appendix B-II-D Risk Group2 (RG2) – Viruses)
18. Chlamydia psittaci
19. Chlamydia trachomatis (LGV serovars (L1 through L3))
20. Classical swine fever virus
21. 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>)
22. Coniothyrium glycinis (formerly Phoma glycinicola and Pyrenochaeta glycinis)
23. Coxiella burnetii
24. Crimean-Congo hemorrhagic fever virus
25. Diacetoxyscirpenol
26. Eastern Equine Encephalitis virus
27. Ebola virus
28. Flexal virus
29. Foot-and-mouth disease virus
30. Goat pox virus
31. Francisella tularensis
32. Hantaviruses including Hantaan virus
33. Hemorrhagic fever viruses as yet undefined
34. Hendra virus (Equine Morbillivirus)
35. Herpesvirus simiae (Herpes B or Monkey B virus)
36. Influenza virus 1918-1919 H1N1 (1918 H1N1)

37. Influenza virus human H2N2 (1957-1968)
38. Influenza viruses that are highly pathogenic avian influenza H5N1 strains within the Goose/Guangdong/96-like H5 lineage (HPAI H5N1)
39. 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)
40. Japanese encephalitis virus (except those strains listed in Appendix B-II-D Risk Group2 (RG2) - Viruses)
41. Lassa fever virus
42. Lujo virus
43. Lumpy skin disease virus
44. Lymphocytic choriomeningitis virus (LCM) (neurotropic strains)
45. Marburg virus
46. Middle East respiratory syndrome coronavirus (MERS-CoV)
47. Mpox (Clade I)
48. Mpox Clade II viruses containing nucleic acids coding for Mpox Clade I virulence factors
49. Mycoplasma capricolum
50. Mycoplasma mycoides
51. Newcastle disease virus
52. Nipah virus
53. Orientia tsutsugamushi (was R. tsutsugamushi)
54. Pasteurella multocida type B - "buffalo" and other virulent strains
55. Peronosclerospora philippinensis (Peronosclerospora sacchari)
56. Peste des petits ruminants virus
57. Ralstonia solanacearum
58. Rathayibacter toxicus
59. Ricin
60. Rickettsia akari
61. Rickettsia australis
62. Rickettsia Canada
63. Rickettsia conorii
64. Rickettsia prowazekii
65. Rickettsia rickettsia
66. Rickettsia siberica
67. Rickettsia typhi (R. mooseri)
68. Rift Valley fever virus
69. Rinderpest virus
70. SARS-associated coronavirus (SARS-CoV)
71. 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
72. Saxitoxin
73. Semliki Forest virus
74. Sclerophthora rayssiae
75. Sheep pox virus

**South American Hemorrhagic Fever viruses:**

73. Chapare
74. Guanarito
75. Junín
76. Machupo
77. Sabia

78. Staphylococcal enterotoxins (subtypes A,B,C,D,E)
79. Swine vesicular disease virus
80. Synchytrium endobioticum
81. T-2 toxin
82. Tetrodotoxin

**Tick-borne encephalitis complex (flavi) viruses:**

83. Far Eastern subtype
84. Siberian subtype
85. Absetterov virus
86. Hanzalova virus
87. Hypr virus
88. Kumlinge virus
89. Kyasanur Forest disease virus
90. Omsk hemorrhagic fever virus
91. Russian spring-summer encephalitis viruses
92. Transmissible spongiform encephalopathies (TSE) agents (Creutzfeldt-Jacob disease and kuru agents)
93. Variola major virus (Smallpox virus)
94. Variola minor virus (Alastrim)
95. Venezuelan equine encephalitis virus
96. Xanthomonas oryzae
97. Yellow fever virus
98. Yersinia pestis

Category 1 agents also include:

- Any **human** pathogens that are not assigned a RG in the NIH Guidelines, but are recommended by the BMBL to be handled at BSL-3 or BSL-4.
- Any **human** pathogens that are not assigned a RG in the NIH Guidelines or specifically recommended by the BMBL to be handled at BSL-3 or BSL-4, but are recommended by a risk assessment by the IBC to be handled at BSL-3 or BSL-4.

**CATEGORY 2 DEFINITIONS (CAT 2 IS ESSENTIALLY PPP/PEPP):**

- Pathogen with Pandemic Potential (PPP): A pathogen that is likely capable of wide and uncontrollable spread in a human population and would likely cause moderate to severe disease and/or mortality in humans. Pathogens with pandemic potential are often those with little to no pre-existing immunity in the human population.
- Pathogen with Enhanced Pandemic Potential (PEPP): A PPP resulting from the enhancement of the transmissibility and/or virulence of a pathogen. Enhanced PPPs do not include naturally occurring pathogens that are circulating in or have been recovered from nature, regardless of their pandemic potential

**CATEGORY 2 RESEARCH MEETS THREE CRITERIA:**

- (A)** Involves, or is reasonably anticipated to result in, a PPP as specified in Section 4.2.1; **and**  
**(B)** Reasonably anticipated to result, or does result, in one or more of the experimental outcomes or actions specified in Section 4.2.2; **and**

- (C) Based on current understanding, the research institution, federal funding agency, and/or Departmental multidisciplinary review entity assesses that **the research is reasonably anticipated to result in the development, use or transfer of a PEPP or an eradicated or extinct PPP that may pose a significant threat to public health, the capacity of health systems to function, or national security** as specified in Section 4.2.3.

**(A) CATEGORY 2 AGENTS:**

A PPP, or any pathogen that will be modified in such a way that is reasonably anticipated to result in a PPP.

**CATEGORY 2 DEFINITIONS:**

- Pathogen with Pandemic Potential (PPP): A pathogen that is likely capable of wide and uncontrollable spread in a human population and would likely cause moderate to severe disease and/or mortality in humans. Pathogens with pandemic potential are often those with little to no pre-existing immunity in the human population.
- Pathogen with Enhanced Pandemic Potential (PEPP): A PPP resulting from the enhancement of the transmissibility and/or virulence of a pathogen. Enhanced PPPs do not include naturally occurring pathogens that are circulating in or have been recovered from nature, regardless of their pandemic potential