

**Institutional Biosafety Committee**  
**The University of Southern Mississippi**

*The National Institutes of Health has established regulations for working with Recombinant DNA and certain microorganisms and toxins. Failure of anyone conducting research at/for The University of Southern Mississippi to comply with these regulations, even if that person does not receive funding from NIH, could cause the University to lose all funding from NIH. To help Southern Miss comply with these regulations, please check these forms to determine if your work will be required to follow any of the NIH guidelines.*

\_\_\_\_\_ Will your work involve recombinant DNA?

If **NO**, skip to the next page. If **YES**, answer the remaining questions.

\_\_\_\_\_ Will your work involve the deliberate transfer of a drug resistant trait to microorganisms that are not known to acquire the trait naturally?

\_\_\_\_\_ Will your work involve the deliberate formation of recombinant DNA containing genes for the biosynthesis of toxin molecules lethal for vertebrates at an LD50 of less than 100 nanograms per kilogram body weight?

\_\_\_\_\_ Will your work involve the deliberate transfer of recombinant DNA, or DNA or RNA derived from recombinant DNA, into human research participants?

\_\_\_\_\_ Will your work involve the introduction of recombinant DNA into Risk Group 2, 3, or 4 agents?

\_\_\_\_\_ Will your work involve the transfer of DNA from Risk Group 2, 3, or 4 agents into nonpathogenic prokaryotes or lower eukaryotes?

\_\_\_\_\_ Will your work involve the use of infectious DNA or RNA viruses or, defective DNA or RNA viruses in the presence of helper virus in tissue culture systems?

\_\_\_\_\_ Will your work involve whole animals in which the animal's genome has been altered by stable introduction of recombinant DNA, or DNA derived therefrom, into the germ-line?

\_\_\_\_\_ Will your work involve viable recombinant DNA-modified microorganisms tested on whole animals?

\_\_\_\_\_ Will your work involve genetically engineering plants by recombinant DNA methods, or experimentation with such plants, or propagation of such plants, or to use plants together with microorganisms or insects containing recombinant DNA?

\_\_\_\_\_ Will your work involve more than 10 liters of culture?

*[continued on next page]*

\_\_\_\_\_ Will your work involve the use of any of the microorganisms or toxins listed on the next three pages? If yes, please list which one(s) here.

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If any of these questions are answered YES, the Biosafety Officer should be notified, and he should be provided with a copy of the research proposal.

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## Appendix B-III. Risk Group 3 (RG3) Agents

RG3 agents are associated with serious or lethal human disease for which preventive or therapeutic interventions *may be* available.

### Appendix B-III-A. Risk Group 3 (RG3) - Bacterial Agents Including Rickettsia

- Bartonella*
- Brucella* including *B. abortus*, *B. canis*, *B. suis*
- Burkholderia (Pseudomonas) mallei*, *B. pseudomallei*
- Coxiella burnetii*
- Francisella tularensis*
- Mycobacterium bovis* (except BCG strain, see [Appendix B-II-A](#), Risk Group 2 (RG2) - Bacterial Agents Including Chlamydia), *M. tuberculosis*
- Pasteurella multocida* type B -"buffalo" and other virulent strains
- Rickettsia akari*, *R. australis*, *R. canada*, *R. conorii*, *R. prowazekii*, *R. rickettsii*, *R. siberica*, *R. tsutsugamushi*, *R. typhi* (*R. mooseri*)
- Yersinia pestis*

### Appendix B-III-B. Risk Group 3 (RG3) - Fungal Agents

- Coccidioides immitis* (sporulating cultures; contaminated soil)
- Histoplasma capsulatum*, *H. capsulatum* var.. *duboisii*

### Appendix B-III-C. Risk Group 3 (RG3) - Parasitic Agents

None

### Appendix B-III-D. Risk Group 3 (RG3) - Viruses and Prions

- Alphaviruses (Togaviruses) - Group A Arboviruses
- Semliki Forest virus
  - St. Louis encephalitis virus
  - Venezuelan equine encephalomyelitis virus (except the vaccine strain TC-83, see [Appendix B-II-D](#) (RG2))
  - 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

- Flaviviruses (Togaviruses) - Group B Arboviruses
- Japanese encephalitis virus
  - Yellow fever virus
  - Other viruses as listed in the reference source (see [Section V-C](#), Footnotes and References of Sections I through IV)

- Poxviruses
- Monkeypox virus

- Prions
- Transmissible spongiform encephalopathies (TME) agents (Creutzfeldt-Jacob disease and kuru agents)(see [Section V-C](#), Footnotes and References of Sections I through IV, for containment instruction)

Retroviruses

- Human immunodeficiency virus (HIV) types 1 and 2
- Human T cell lymphotropic virus (HTLV) types 1 and 2
- Simian immunodeficiency virus (SIV)

Rhabdoviruses

- Vesicular stomatitis virus

**Appendix B-IV. Risk Group 4 (RG4) Agents**

RG4 agents are likely to cause serious or lethal human disease for which preventive or therapeutic interventions are *not usually* available.

**Appendix B-IV-A. Risk Group 4 (RG4) - Bacterial Agents**

None

**Appendix B-IV-B. Risk Group 4 (RG4) - Fungal Agents**

None

**Appendix B-IV-C. Risk Group 4 (RG4) - Parasitic Agents**

None

**Appendix B-IV-D. Risk Group 4 (RG4) - Viral Agents**

Arenaviruses

- Guanarito virus
- Lassa virus

--Junin virus

- Machupo virus
- Sabia

Bunyaviruses (Nairovirus)

- Crimean-Congo hemorrhagic fever virus

Filoviruses

- Ebola virus
- Marburg virus

Flaviruses (Togaviruses) - 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

Hemorrhagic fever agents and viruses as yet undefined

**HHS NON-OVERLAP SELECT AGENTS AND TOXINS**

- Crimean-Congo haemorrhagic fever virus
- Coccidioides posadasii*
- Ebola viruses
- Cercopithecine herpesvirus 1 (Herpes B virus)
- Lassa fever virus
- Marburg virus
- Monkeypox virus
- Rickettsia prowazekii*
- Rickettsia rickettsii*

**South American haemorrhagic fever viruses**

- Junin
- Machupo
- Sabia
- Flexal
- Guanarito

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

- Central European tick-borne encephalitis
- Far Eastern tick-borne encephalitis
- Russian spring and summer encephalitis
- Kyasanur forest disease
- Omsk hemorrhagic fever

- Variola major virus (Smallpox virus)
- Variola minor virus (Alastrim)
- Yersinia pestis*
- Abrin
- Conotoxins
- Diacetoxyscirpenol
- Ricin
- Saxitoxin
- Shiga-like ribosome inactivating proteins
- Tetrodotoxin

**HIGH CONSEQUENCE LIVESTOCK PATHOGENS AND TOXINS/ SELECT AGENTS (OVERLAP AGENTS)**

- Bacillus anthracis*
- Brucella abortus*
- Brucella melitensis*
- Brucella suis*
- Burkholderia mallei* (formerly *Pseudomonas mallei*)
- Burkholderia pseudomallei* (formerly *Pseudomonas pseudomallei*)
- Botulinum neurotoxin producing species of *Clostridium*
- Coccidioides immitis*
- Coxiella burnetii*
- Eastern equine encephalitis virus
- Hendra virus
- Francisella tularensis*
- Nipah Virus
- Rift Valley fever virus
- Venezuelan equine encephalitis virus
- Botulinum neurotoxin
- Clostridium perfringens* epsilon toxin
- Shigatoxin
- Staphylococcal enterotoxin
- T-2 toxin

**USDA HIGH CONSEQUENCE LIVESTOCK PATHOGENS AND TOXINS (NON-OVERLAP AGENTS AND TOXINS)**

- Akabane virus
- African swine fever virus
- African horse sickness virus
- Avian influenza virus (highly pathogenic)
- Blue tongue virus (Exotic)
- Bovine spongiform encephalopathy agent
- Camel pox virus
- Classical swine fever virus
- Cowdria ruminantium* (Heartwater)
- Foot and mouth disease virus
- Goat pox virus
- Lumpy skin disease virus
- Japanese encephalitis virus
- Malignant catarrhal fever virus (Exotic)
- Menangle virus
- Mycoplasma capricolum*/M.F38/*M. mycoides capri*
- Mycoplasma mycoides mycoides*
- Newcastle disease virus (VVND)
- Peste Des Petits Ruminants virus
- Rinderpest virus
- Sheep pox virus
- Swine vesicular disease virus
- Vesicular stomatitis virus (Exotic)

**LISTED PLANT PATHOGENS**

- Liberobacter africanus*
- Liberobacter asiaticus*
- Peronosclerospora philippinensis*
- Phakopsora pachyrhizi*
- Plum Pox Potyvirus
- Ralstonia solanacearum* race 3, biovar 2
- Schlerophthora rayssiae* var *zeae*
- Synchytrium endobioticum*
- Xanthomonas oryzae*
- Xylella fastidiosa* (citrus variegated chlorosis strain)