Guidance Document for Research Work with Animal Specimens

Background
The purpose of this guidance document is to provide information to minimize occupational exposure to zoonotic diseases focusing on contact with animal tissue or products, or contact with items contaminated by these products. Animal products include, but are not limited to, tissue, bone, body fluids and discharges such as blood, urine, feces, milk, products of conception, perspiration, saliva, hair, dander and any other discharges. Items that could be contaminated by these products include sharps, cages, vehicles, bench tops, clothing, gloves, etc.

Safety Issues
Clemson University works to provide a safe and healthy workplace for faculty, staff and students. Providing for a safe workplace involves the processes of hazard identification, risk assessment and risk management.

Hazards are identified by examining the animal species, source of the animals, known zoonotic diseases and the manipulations to be performed in the research. Zoonotic diseases are those infectious agents that are transmissible from animals to humans. In some cases, the infected animal may show no signs of illness and still be capable of transmitting an infectious agent. Therefore, the potential exposure to some pathogens that may contaminate or infect animal tissue cannot be completely disregarded. Some examples of common zoonotic pathogens, include but are not limited to, E. coli 0157:H7 and Toxoplasma gondii.

The risk of working with animal specimens is the potential exposure to infectious disease, animal toxins, or preservatives.

Animal Specimen Research at Clemson University
At Clemson University, employees and students conduct research involving the use of animal specimens. Clemson is currently recommending that researchers submit an IBC application at least completing Sections A and B and a Hazard Acknowledgement Form for research involving animal specimens from non USDA inspected sources or from a source not approved by the University Veterinarian. Culturing of an agent requires an IBC application. Refer to the instructions in the IBC application to determine if an IBC application is needed. Some of the items on the IBC application may not be applicable, and they can be identified as such. The forms can be obtained from the IBC website http://www.clemson.edu/research/compliance/ibc/. No IBC application is needed if the tissue is from a USDA inspected source, not cultured or approved by the Clemson University Veterinarian. However, when an IBC application is not submitted for research work, the following form is to be sent to the IBC office: "Clemson University Acknowledgment Form for Working with Animal Specimens in Research" acknowledging risks involved.

Work Practices
In general, personal protective equipment (PPE) should include safety glasses or goggles, protective gloves such as nitrile, lab coat or gown, and closed shoe. Work in some situations or locations may require the use of additional protective equipment. Activities in which aerosols or splashes may be created need to be conducted in a certified biological safety cabinet, or with other physical containment equipment or other personal protective equipment (e.g. face shields, respirators). Researchers should use professional judgment, personal experience and common sense and be adaptable and be cognizant of pertinent new information. Members of the research team must receive appropriate training on zoonoses and potential hazards according to the degree of risk associated with the work involved.

The Office of Research Compliance (864-656-1525) can be contacted for information on submitting an IBC application and the Occupational Health Nurse (864-656-5529) for information on zoonotic training and medical surveillance.
CLEMSON UNIVERSITY
Acknowledgment of Working with Animal Specimens in Research

☐ I have read and understand the Clemson University “Guidance Document for Research Work with Animal Specimens”

☐ I am aware that tissues, cells and organs, bodily fluids derived directly from animals (inspected or uninspected) may harbor zoonotic pathogens.

☐ I have read the available material on risk of exposure to zoonotic agents associated with animal specimens and other hazards associated with handling of these animal specimens. I also realize that I may contact Will Mayo, Occupational Health Nurse (864-656-5529 or wmayo@clemson.edu) for additional information or if I have questions.

☐ I will ensure that appropriate personal protective equipment and safety precautions are routinely utilized.

Print Name: _________________________________________________

Signature of Principal Investigator: ____________________________

Date: __________

Please return this form to:

IBC Coordinator
Office of Research Compliance
223 Brackett Hall
Clemson University
Clemson, South Carolina 29634-5704
(864) 656-0118 or Fax: (864) 656-4475

Please contact the IBC Office in the Office of Research Compliance if you have questions.
Zoonotic Training

( NOTE: To access the links click on the highlighted word. If this does not work, please hold down the "Ctrl" key and left click using your mouse.)

If the animals are going through a USDA-inspected facility, and pass ante mortem and post mortem inspection at the plant, the risk of exposure to some zoonotic agents is significantly diminished but not eliminated. These diseases include such infections as rabies, and conditions such as mad cow disease, or other infections including but not limited to tuberculosis that are regularly associated with the manifestation of detectable signs or lesions. The incidence of many of these diseases is extremely low to absent in the US national herd.

These generally are not bloodborne, but leptospirosis and all infectious agents (streptococcus, staphylococcus, pasturella, edwardsiella, etc.) are a consideration. Proper first aid and wound care after an incident should greatly minimize the chance of problems with these infections.

Potential exposure to some pathogens that may contaminate or infect either the fetuses or placentas cannot be disregarded. Placental infections of protozoa such as Toxoplasma and Neospora may be present, not to mention agents such as Coxiella (Q Fever), without cattle showing any clinical signs of illness, and these animals would pass into the food chain. E. coli O157:H7 and Salmonella may exist in sub clinical "carrier" states in the digestive tract of cattle that pass through slaughter plants with no detectable signs of illness/infection. During the slaughter process, contamination of viscera (including uterus and the contents of a pregnant uterus), could occur from feces of these animals and potentially serve as a source of zoonotic infections.