



Employee Occupational Health Program

University of Wyoming
Laramie, WY, 82071
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[Pursuant to compliance with: 7 CFR Part 331, 9 CFR Part 121, 29 CFR Parts 1910, 1960, and 42 CFR Part 73]

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Introduction

This document describes the Occupational Health Program at the University of Wyoming (UW-OHP) intended for employees (faculty and staff) involved in work activities or approved research requiring occupational health-based risk assessment and/or medical surveillance. This program is in compliance with federal regulations, including 29 CFR Part 1960 and is not a replacement or substitution for the Wyoming Department of Workforce Services Workers' Compensation Program or other personal health insurance/wellness programs. The immediate goal of UW OHP is to address and manage potential health-based risks associated with potentially hazardous workplace environments.

Individuals covered under the UW Occupational Health Program should understand risk assessments (completed by their supervisors) specific to their workplace and potential hazards therein. Participants are encouraged to consult the UW Safety Office website or contact the UW Safety Office directly for questions or more information. This plan and program will be reviewed annually.

Definitions

Access to Tier 1 Biological Select Agents and Toxins (BSAT): An individual will be deemed authorized to have access to Tier 1 BSAT at any point in time if and only if the individual has possession of a Tier 1 BSAT (e.g. the ability to use, transport, or manipulate with non-malicious intent) or the ability to gain possession of a Tier 1 BSAT.

Biocontainment: Use of physical barriers (e.g. biosafety cabinet, PPE) and good laboratory practices to contain pathogenic organisms and toxins to prevent accidental exposure of workers and the surrounding community during scientific research. Containment levels range from the lowest Biological Safety Level (BSL) (BSL-1; minimal isolation) to the highest at level 4 (BSL-4; full isolation).

Biological Safety Specialist: This position serves the University of Wyoming for biological safety and compliance. Reporting to the Office of Research and Economic Development, the Biological Safety Specialist is designated as either the Responsible Official for Select Agents, or an Alternate Responsible Official.

Biological Select Agents and Toxins (BSAT): Microorganisms or organic compounds which have been deemed to have the ability to pose a severe threat to public, animal, or plant health or well-being. A list of select agents can be found at: <http://www.selectagents.gov> (sections 3 and 4 of the federal select agent regulations).

Biosafety in Microbiological and Biomedical Laboratories (BMBL; 5th ed.): A reference created and managed by the U.S. Dept. of Health and Human Services (CDC; NIH), which outlines current protocols and procedures for biosafety in research laboratories throughout the United States. The current edition can be viewed online, free of charge:
<http://www.cdc.gov/biosafety/publications/bmbl5/>

Federal Select Agent Program: The joint management of federal select agent regulations by the Center for Disease Control (CDC) and the United States Department of Agriculture's Animal and Plant Health Inspection Service (USDA-APHIS).

Hazard Communication: The use of product labels, printed media (safety data sheets; SDS), electronic media, and the like to convey acute and chronic hazards when using or handling a particular product, chemical, or organism. The information may include health hazards, flammability hazards, reactivity hazards, and other hazards.

High-Risk Individuals: Individuals who have risk or health factors which may predispose them to disease or injury while at the workplace. Such individuals may include (not a complete list): women who are pregnant or are of childbearing age, individuals who are immunocompromised, or individuals with disabilities.

Human Resources (HR): The Human Resources Department's mission is to serve as the primary human resources unit for the University of Wyoming providing and continuously improving services for employees, students, retirees, applicants, departments and external agencies; thus enabling the University to serve the people of the State of Wyoming.

Institutional Animal Care and Use Committee (IACUC): The committee at the University of Wyoming charged with oversight of authorized animal care and use in accordance with 9 CFR Part 2.

Laboratory Acquired Infection (LAI): Infection or disease contracted at the laboratory workplace due to exposure of bacteria, virus, or toxin handled at the same workplace. In order for an LAI to occur, there must be adequate infectious dose of the organism along with appropriate route(s) of entry into the body.

Occupational Health Program (OHP): A program developed by the University of Wyoming, in compliance with 7 CFR Part 331, 9 CFR Part 121, 29 CFR Parts 1910, 1960, and 42 CFR Part 73 to assist UW employees with the identification and control of the potential risks arising from physical, chemical, biological, and other workplace hazards in order to establish and maintain a safe and healthy working environment. These hazards may include, but are not limited to, chemical agents and solvents, heavy metals such as lead and mercury, physical agents such as loud noise or vibration, and physical hazards such as electricity or dangerous machinery.

Occupational Safety and Health Administration (OSHA): Managed by the U.S. Dept. of Labor, OSHA's mission is to assure safe and healthful workplaces by setting and enforcing standards, and by providing training, outreach, education and assistance.

Personal Protective Equipment (PPE): Specific clothing or outerwear required to be worn or used by the worker to reduce the risk of accidental exposure, infection, or injury. PPE may include appropriate gloves, lab coat/gown, eye/ear protection, and respiratory protection. PPE users must be trained in the use and maintenance of appropriate PPE for their workplace.

Principal Investigator (PI): The individual responsible to direct a scientific project or program and who is responsible for the scientific merit and technical direction of that program.

Responsible Official (RO): The individual designated by UW to have authority and control over the Tier 1 BSAT and to assure compliance with federal regulations. Alternate Responsible Officials may act for the RO in her/his absence and must have the same ability to assume the full authority to fulfill all of the responsibilities of the RO.

Risk Group (RG): The category an organism or toxin is placed in (RG1; lowest, through RG4; highest) to describe pathogenicity, toxicity, availability of treatment, and mortality if exposed.

Safety Office: Under UW Operations, the Safety Office promotes health, safety, and environmental protection services to the University.

Select Agent Regulations: Specific regulations within the Code of Federal Regulations (CFR). Specifically: 7 CFR Part 331; 9 CFR Part 121; 42 CFR Part 73. Visit: www.selectagents.gov for more information.

Standard Operating Procedures (SOP): A set of written instructions that document a routine or repetitive activity followed by an organization, department, or group. The development and use of SOPs are an integral part of a successful quality system as it provides individuals with the

information to perform a job properly, and facilitates consistency in the quality and integrity of a product or end-result.

Tier 1 Biological Select Agents and Toxins (Tier 1 BSAT): A subset of the Select Agent and Toxin list designated as such because these particular organisms or toxins present the greatest risk of deliberate misuse with the most significant potential for mass casualties or deleterious effects on the economy, critical infrastructure, or public confidence.

United States Department of Health and Human Services (HHS): The government department with regulatory and oversight authority over the Center for Disease Control (CDC), and National Institute of Health (NIH), Food and Drug Administration (FDA), and others. For more information, please visit: www.hhs.gov.

University of Wyoming Institutional Biosafety Committee (IBC): A committee consisting of the UW Biosafety Specialist, members of the UW research community, and community-at-large, charged with the review and risk-assessment of research protocols requiring the use of potentially bio-hazardous materials or organisms. The National Institute of Health (NIH) has official authority over the IBC.

Wyoming State Veterinary Laboratory (WSVL): A State facility located at the University of Wyoming established to provide accessible, timely, accountable, and accurate diagnostic services, animal disease research, and education to veterinarians, students, others interested in animal health, and the people of Wyoming. The Wyoming State Veterinary Laboratory is a fully accredited laboratory committed to the maintenance of a quality assurance program that ensures that all procedures and documentation are in compliance with the quality standards of the American Association of Veterinary Laboratory Diagnosticians (AAVLD).

Wyoming OSHA: Wyoming OSHA works towards ensuring that employers are in compliance with Federal OSHA's rules and regulations. Wyoming OSHA adopts, by reference, many Federal OSHA general industry and construction industry standards. Employers must comply with applicable OSHA standards, as adopted by Wyoming OSHA, and comply with the requirements of the Wyoming Occupational Health and Safety Act.

Participants

Employees covered by the UW-OHP include the following:

1. Employees required to wear a respirator as part of their employment- respiratory protection;
2. Employees who work with animals under an approved IACUC protocol;
3. Employees working with Tier 1 BSAT or other identified select agents, or
4. Other high-risk individuals as identified by the UW Safety Office or Office of Research and Economic Development, or as required by state or federal regulations.

Occupational health service elements include, but may not be limited to:

- Pre-placement medical evaluations or screening;

- Vaccinations (if required),
- Periodic medical evaluations, and
- Respirator fit testing.

The goal of the UW OHP is to promote a safe and healthy workplace. This is accomplished by limiting opportunities for exposure, promptly detecting and treating exposures, and using information gained from work injuries to further enhance safety precautions.

UW OHP covered employees shall comply with UW rules, regulations, policies, and procedures regarding workplace health and safety. These are available on line or through the Safety Office or Office of Research and Economic Development. Criteria for participation in and coverage by the UW OHP will be applied equally and fairly to UW employees based upon workplace risk assessments or in accordance with applicable regulatory requirements.

Covered employees must accurately complete and understand the necessary forms provided by the UW Safety Office or Office of Research and Economic Development in collaboration with UW Human Resources and the Wyoming State Veterinary Laboratory (for optional serum banking). Privacy and confidentiality will be maintained in accordance with applicable law. UW may receive limited medical information that is specific to the injury and pertinent to the job task.

As outlined in the UW Affirmative Action Plan, the University of Wyoming is committed to a policy of nondiscrimination. The University's policy has been, and will continue to be, one of nondiscrimination, offering equal opportunity to all employees and applicants for employment on the basis of their demonstrated ability and competence without regard to such matters as race, gender, color, religion, national origin, disability, age, veteran status, sexual orientation, genetic information, political belief, or other status protected by state and federal statutes or University Regulations.

Cost of UW-OHP

Qualified, licensed health care professionals will be contracted by UW to provide necessary occupational health services to covered employees. These services shall be limited to the initial screening and follow-up described in this policy, including, but not limited to, pre-placement medical evaluations, and medical surveillance (as required). The cost of participation in the UW OHP will be borne by UW.

Training

A direct supervisor or principal investigator (PI) is responsible to ensure training and a workplace hazard assessment is provided to their employees. Individuals or groups covered by the UW OHP will be instructed and trained in the following (list may be amended as necessary):

- Applicable online safety training;
- Hazard Communication, which may include (not a complete list):
 - Recognizing signs and symptoms of exposure;
 - Inherent risks and hazards (acute and chronic) at the workplace;
 - Use of appropriate PPE and hazard control;
 - Emergency response and procedures;

- How to read a safety data sheet (SDS).
- Other aspects of the UW Occupational Health Program and processes as applicable.

Depending on the work activity or research project, employee vaccinations may be required to minimize risk of disease to the employee. The appropriate vaccines will be made available to the employee, at no cost in accordance with applicable regulations and as determined from a medical evaluation.

Exposure or Injuries

In the event of an occupational exposure or injury, the affected employee will receive appropriate first-aid immediately. The employee must then contact their supervisor for advice on subsequent procedures. Supervisors must be notified of workplace-related exposures or injuries as soon as possible, but no later than 72 hours of the incident. Supervisors must notify UW HR or the Safety Office as soon as possible after notification from the employee. In addition, the Wyoming Workers' Compensation Program may apply (please contact UW-HR for further information). In response to the incident, the medical provider should be provided with the following information:

- Potential infectious agent or toxin (if applicable);
- Mechanism of exposure or injury;
- PPE worn/used at the time of incident;
- Time and place of the incident;
- First-aid provided at the time of the incident, and
- Relevant medical history which may affect treatment.

Medical Surveillance

Medical surveillance is the systematic assessment of employees exposed or potentially exposed to occupational hazards. This assessment monitors individuals for adverse health effects and determines the effectiveness of exposure prevention strategies. The goal of medical surveillance and treatment will be to prevent or mitigate a specific illness or disease upon the onset of defined and recognized symptoms or help identify unrecognized exposures as soon as possible so that further injury can be prevented and proper treatment may be initiated. Employees covered by the UW OHP will have access to clinical and occupational health services as contracted by UW. In the event an employee experiences specific disease symptoms due to a work-related, accidental exposure or injury, appropriate medical treatments and subsequent surveillance will be made available to the employee by licensed, qualified health care professionals.

Respiratory Protection

The primary objective for this program is to protect employee(s) from atmospheric contamination. Following the certification process, a respirator shall be provided to UW employee(s) when such equipment is necessary to protect the health of such employee(s) at the workplace. The department shall provide the appropriate respirators and cartridges with the cost of participation in the

program borne by the employee's hiring/supervising department. The UW Safety Office, is responsible for UW's respiratory protection program. Program elements include, but are not limited to:

- Initial (and annual thereafter) hazard assessment and training;
- Medical evaluation (ability/medical fitness to wear a respirator);
- Respirator protection training, and
- Respirator fit testing.

The UW Respiratory Protection Program along with applicable forms and questionnaires can be viewed in detail on the UW Safety Office website.

Work with Animals

The UW Office of Research and Economic Development oversees the IACUC. Following project approval, The Office of Research and Economic Development, in collaboration with the UW Safety Office, will provide information on UW OHP to researchers in accordance with UW's Animal Welfare Assurance. Employees who work with animals are required to complete all applicable training as outlined in UW's animal Welfare Assurance, the IACUC Manual, and the approved IACUC protocol. A copy of the Assurance and Manual can be found at: <http://www.uwyo.edu/research/compliance/animal-care/index.html>.

To minimize the risk of disease to the employee while working with animals, employee vaccinations may be required. These vaccinations will be provided to the employee, at no cost to the employee. Please see UW's Animal Welfare Assurance for additional information.

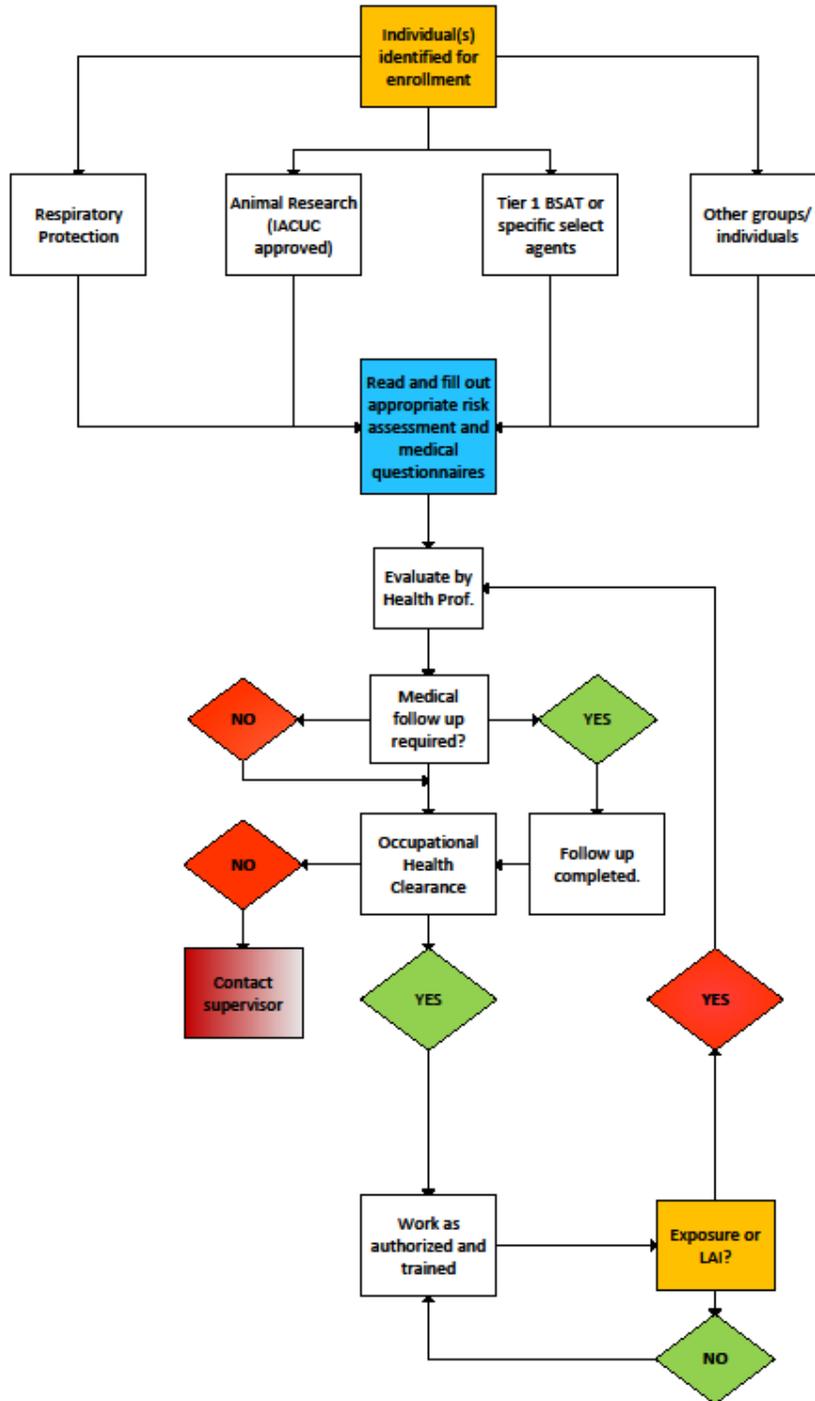
Access to Tier 1 BSAT and Other Specified Select Agents

Individuals granted access to Tier 1 BSAT (see UW Personnel Suitability Assessment Program) must participate in the UW OHP. In addition, individuals working with other select agents may also be covered in the UW OHP (contact the UW Biological Safety Specialist). More information can be found in Appendix B of this document.

Other At-Risk Individuals

Based on apparent risk or possible hazards at the workplace or as required by state or federal regulations, other at-risk individuals (see definitions) not listed or included in the above categories may be enrolled in the OHP. Supervisors will ensure that appropriate training and workplace hazard assessments are provided to employees who may be in this category.

Appendix A: Occupational Health Program Overview



Appendix B: Occupational Health for Employees with Access to Tier 1 BSAT

This addendum to the UW Occupational Health Program is designed to provide required information regarding occupational health, risk assessment, medical surveillance, and available medical treatment **ONLY** to individuals authorized by the UW Biological Safety Specialist (see UW Personnel Suitability Program) to work with Tier 1 BSAT. ALL individuals with authorized access to Tier 1 BSAT at UW must participate in the UW OHP and abide by the guidelines therein. In summary, this appendix:

- Is an addendum to the UW OHP;
- Is a supplement to the UW Biosafety Plan for Tier 1 BSAT as required by current federal select agent regulations;
- Is not a substitution or replacement for the Wyoming Department of Workforce Services Workers' Compensation program or other personal health insurance/wellness programs, and
- Has been designed to protect individuals from work-related risks associated with specific activities and protect the community from potentially communicable diseases associated with Tier 1 BSAT use.

Risk Assessment

Before research commences with a select agent a risk assessment will be conducted to identify potential hazards and mitigating steps. This general risk assessment will be completed by supervisors or Principle Investigators and reviewed by the Biosafety Specialist and Institutional Biosafety Committee prior to employee enrollment in the UW OHP. In addition, all Tier 1 BSAT users will complete a workplace-specific risk assessment and identify hazard mitigation methods prior to Tier 1 BSAT project approval. The workplace specific risk assessment will include:

- Identification of organism
- Risk group of organism
- Route of exposure
- Infectious dose
- Agent virulence
- Environmental stability
- Communicability
- Genetic modifications
- Inherent risk
- Available resources (pre- and post-prophylaxis)
- Available vaccine options
- Use of PPE
- Biocontainment requirements

The risk assessment will specifically identify:

- The hazard characteristics of a known infectious or potentially infectious agent or material
- Activities that could result in an accidental exposure to an agent
- Likelihood that such an exposure will cause an LAI
- Probable consequences of such and infection or intoxication

Training

It is the policy of UW OHP to assure that any employee working with Tier 1 BSAT receives information and training regarding infectious agents and potential hazards which may be present in their workplace specific to their job duties prior to the onset of work activities.

Medical Evaluation and Surveillance

Planning and preparation

Clinical and occupational health services will be provided to workers authorized to access Tier 1 BSAT through licensed and qualified health care professionals as contracted by UW. UW may receive limited medical information that is specific to the injury and pertinent to the job task.

Pre-Placement Medical Exam

Before an individual can be authorized to work with Tier 1 BSAT, the individual will receive a pre-placement medical evaluation. This assessment may include the evaluation and review of:

- Pre-existing medical records or medical history;
- Potential health hazards (i.e. risk of LAI) in the work area;
- Current or chronic medical problems (allergies, etc.);
- Opportunity to participate in serum banking;
- Vaccination/immunization history, and/or
- Respiratory fitness.

Medical Evaluation and Surveillance

Individuals working with Tier 1 BSAT are encouraged to contact the occupational health provider about new or changed conditions. Enrolled personnel will undergo periodic medical evaluations to assure that the authorized individual(s) can continue work safely (fitness for duty). Medical evaluations may include factors which may indicate fitness for duty (e.g. antibody titer, pulmonary function test, etc.).

The goal of medical surveillance is to help identify exposures as soon as possible so that further injury can be prevented and proper treatment may be initiated. Medical surveillance must be conducted following a suspected exposure to a biological agent.

Post-Exposure Emergency Medical Consultation Evaluation and Management

In the event an authorized user of Tier 1 BSAT experiences a potential exposure to Tier 1 select agent or observes signs or symptoms of a LAI, they will seek immediate medical attention and notify their immediate supervisor. Supervisors must be notified of workplace-related exposures or injuries as soon as possible, but no later than 72 hours of the incident. Supervisors must notify UW HR or the Safety Office as soon as possible after notification from the employee. In addition, the Wyoming Workers'

Compensation Program may apply (please contact UW-HR for further information). In response to the incident, the medical provider should be provided with the following information:

- Potential infectious agent or toxin (if applicable);
- Mechanism of exposure or injury;
- PPE worn/used at the time of incident;
- Date, time and place of the incident;
- First-aid provided at the time of the incident, and
- Relevant medical history which may affect treatment.

Specific signs and symptoms of diseases and emergency medical treatment related to Tier 1 BSAT at UW can be found in the Biosafety Plan and the Incident Response Plan for the UW Select Agent Program.

Individuals receiving periodic medical surveillance should follow prescribed recommendations or treatments as provided by the licensed health care professional. Recommendations may include (not a complete list):

- Immunizations or vaccinations;
- Changes in work habits;
- Use of specific PPE, or
- Other treatments as prescribed.

Post-exposure risk assessment

A risk assessment will be conducted by the Principle Investigator or supervisor, and the Biological Safety Specialist after potential occupational exposure to any Tier 1 BSAT. This assessment may be used by occupational health doctors, and others involved in the accident investigation. Assessment of the risk will include consideration of the following conditions/circumstances:

- All breaches in the established safety practices while working with Tier 1 BSAT;
- All injuries incurred inside laboratory when handling Tier 1 BSAT;
- Unexplained acute illness or febrile disease in a Tier 1 BSAT worker;
- All incidents covered under section 19(b) of the section agent regulations

For additional information, please see the Federal Select Agent Program guidance for reporting incidences of theft, loss, or release, which may be found at:

<http://www.selectagents.gov>

The exposure risk assessment will identify all potentially exposed individuals. Factors determining the nature of the potential exposure include:

- Agent or toxin information,
- The nature of the mishap and associated circumstances,
- The specific personal protective equipment worn at the time of the incident,
- Evaluation of mechanical barriers (safety cabinets, HVAC, HEPA filters, etc.).
- First aid procedures performed in response to the incident, or
- Personal health issues that may make an individual more susceptible to infection.

Hazard Communication

All personnel approved for access to Tier 1 BSAT at UW will be provided with the following information prior to the onset of work:

- The potential risks and health hazards when working with the Tier 1 BSAT;
- Other hazards within the workplace (SDS, etc.);
- Typical signs and symptoms of the disease(s) due to LAI;
- The available pre- and post-exposure resources for medical treatment and surveillance;
- Policies for immediate reporting and documenting all potential occupational exposures or LAI, and
- Location of site-specific information related to hazard communication, safety, and/or emergency response.

Visitor Policy

UW will ensure at-risk visitors are provided access to the UW Occupational Health program on a risk-based approach.

Reporting and Analyzing Occupational Exposure

All potential occupational exposures will be evaluated by the RO or ARO to identify factors which may have contributed to the incident. Corrective actions will be performed and documented to mitigate the risk of reoccurrence.

Records Management and Retention

All Tier 1 BSAT personnel occupational health-related records will be maintained for three (3) years by the RO/ARO, or the UW Biological Safety Specialist.

References

Biosafety in Microbiological and Biomedical Laboratories, 5th Edition. U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institutes of Health. HHS Publication No. (CDC) 21-1112. Revised December 2009.

Occupational Health Program Guidance Document for Working with Tier 1 Select Agents and Toxins. 7 CFR Part 331, 9 CFR Part 121, 42 CFR Part 73. Centers for Disease Control and Prevention (CDC) Division of Select Agents and Toxins, Animal and Plant Health Inspection Service (APHIS) Agriculture Select Agent Program. 05 July 2013.

Electronic Code of Federal Regulations, Title 42: Part 73, Select Agents and Toxins. December 9, 2013.

Identifying and Evaluating Hazards in Research Laboratories: *Guidelines developed by the Hazards Identification and Evaluation Task Force of the American Chemical Society's Committee on Chemical Safety*. **Copyright 2013 American Chemical Society.**