NATURAL SCIENCES BIOSAFETY POLICY MANUAL

MGA

MIDDLE GEORGIA STATE UNIVERSITY

Contents

ABOUT THE MGA DEPARTMENT OF NATURAL SCIENCES BIOSAFETY COMMITTEE

ACTIVITIES REQUIRING APPROVAL

RISK GROUP

5. **Biotoxins with an LD 50 of less than 100 micrograms per kilogram of body weight in vertebrates.**
6. **Plant Pathogens**
7. **Mammalian Cell Culture**

CHANGES TO THE MUA:

PIs must submit to the NS Biosafety Committee for review and approval any changes to their MUA. Changes are made within the existing MUA and not as a separate document. Unless specified otherwise, the proposed changes must not be implemented until the PI receives a written approval notice from the NS Biosafety Committee. The types of changes that require an amendment to the MUA are:

Addition or deletion of individuals on the MUA

Change in facility or use of facility

Additional objectives to the project

New sources of nucleic acids (including RNA and DNA)

New vectors

New recipient organisms

New biohazardous materials (toxins, viral vectors)

Change in procedures or use of biohazardous materials

RENEWAL:

MUA'S will be valid for 3 years, or if amendments have been made, 3 years from the last approved amendment. PI's must submit a renewal of the MUA at the time of expiration in order to continue research.

PI ELIGIBILITY
Full time members of the Faculty

REQUESTING EXCEPTIONS TO THIS POLICY

Individuals holding academic appointments not covered by this policy may serve as Principal Investigator upon request to the Chair of the NS Biosafety Committee. Requests will be considered under the following condition: the individual must be deemed to have the necessary experience and independence to safely administer the project.

TRAINING

All personnel listed on the MUA must complete any training required by the NS Biosafety Committee before they can be approved to work with the biohazardous materials. See Appendix E for more information on Resources and Training.

PROCEDURES FOR REPORTING INCIDENTS INVOLVING BIOHAZARDOUS MATERIALS

Reportable Incidents, Examples:

Needlestick

Contact with eyes, nose, mouth

Inhalation of aerosolized material (e.g., large spill outside of biological safety cabinet agents at BSL-3)

Contact with open wounds, cuts, scratches

Bites/scratches from infected animals

Bites from animals with introduced r/sNA molecules

Release or loss of transgenic plants, animals or materials

Immediate Action:

If personnel are exposed to infectious agents or r/sNA, the following actions should be taken as noted by exposure type:

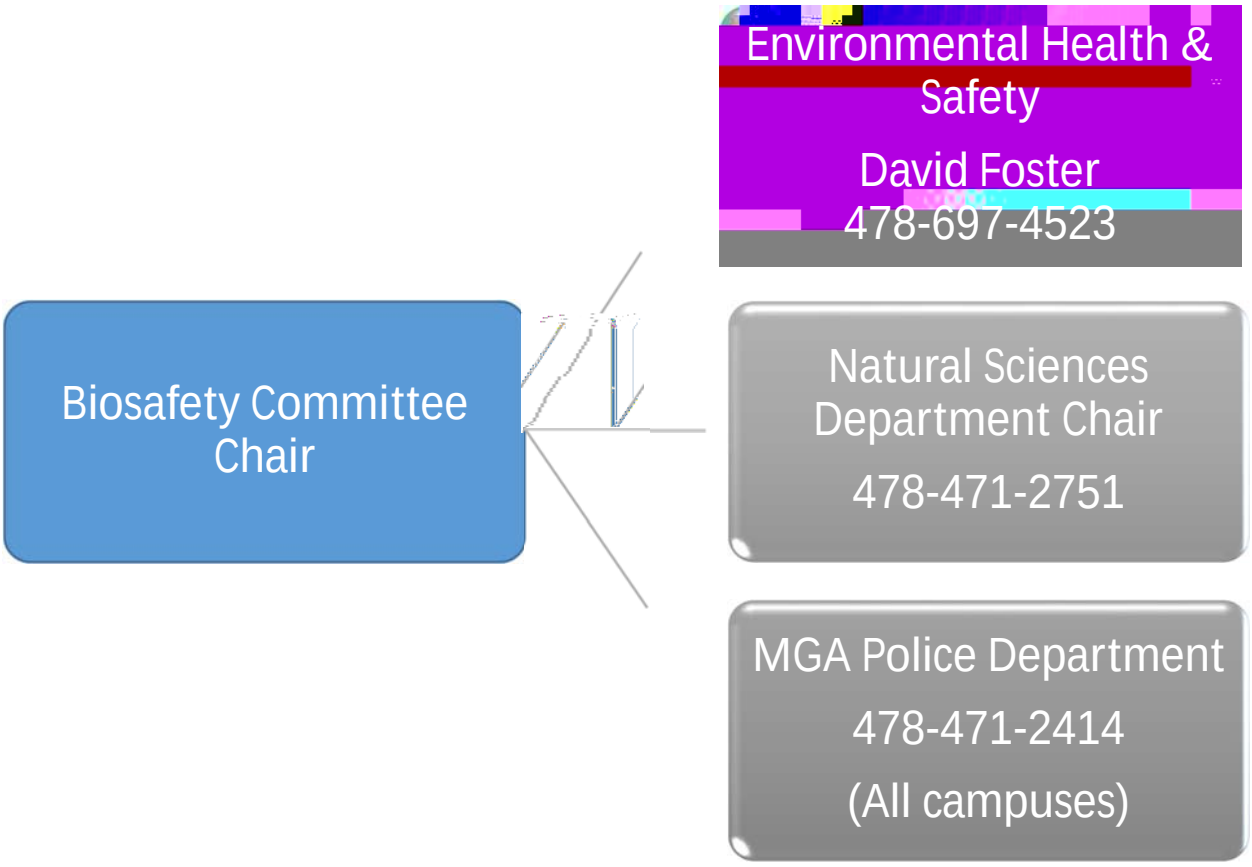
Splash to eyes: Flush with water at eyewash for 10 minutes

Needlesticks, cuts, scratches, animal bites: Wash area with soap and water for 10 minutes

Perform first aid, if applicable

Notify supervisor/principle investigator and/or Biosafety Committee Chair to initiate the Emergency Response Plan.

EMERGENCY RESPONSE PLAN CALL TREE



INVESTIGATOR RESOURCES

BIOSAFETY MEMORANDUM OF UNDERSTANDING AND AGREEMENT (APPENDIX A)

TEACHING LABORATORY SAFETY STATEMENT (APPENDIX B)

BIOSAFETY CHECKLIST FOR LABS (APPENDIX C)

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APPENDIX A

Instructors/Personnel Teaching Laboratories	Campus and location	Office phone

COMPLETE FOR ALL MUAs
Please list all laboratory personnel (including students or volunteers). Laboratory personnel working at BSL-2 are required to have medical insurance if they are not paid by the University payroll. Please provide name, title and insurance carrier for non-university laboratory personnel. Please provide name, title and personnel ID numbers for all personnel.

MGA ID Number	Name	Title (or Student)	Insurance Carrier

Describe protective measures that will be used to prevent exposures.

Experiments using biohazardous materials and toxins must follo w the CDC/NIH Biosafety in Microbiological and Biomedical Laboratories (BMBL) Guidelines (5th Edition-2009). Experiments using recombinant or synthetic nucleic acid molecules must follow the NIH Guidelines for Research Involving Recombinant or Synthetic Nucle ic Acid Molecules, (April 2016).

I, _____ (printed name), acknowledge that the above information is correct to the best of my knowledge.

_____ _____
Researcher or Lab Coordinator Date

_____ _____
Chair, Department of Natural Sciences Date

_____ _____
Chair, Natural Science Biosafety Committee Date

_____ _____
MGA Environmental Health & Safety Officer Date

Biosafety Committee Decision on Proposed Activity:

□ Approve □ Deny □ Modify and Resubmit _____
Date

Statement from NS Biosafety Committee on Decision:

APPENDIX B

TEACHING LABORATORY SAFETY STATEMENT

MIDDLE GEORGIA STATE UNIVERSITY MICROBIOLOGY LABORATORY

The lab exercises in this course involve the use of living organisms. Although the microorganisms we use are not considered to be highly virulent, all microorganisms should be treated as potential pathogens (organisms capable of causing disease).

The following rules must be observed **at all times** to prevent accidental injury to and infection of yourself and others and to minimize contamination of the lab environment:

Before you begin class:

1. Do NOT enter the laboratory when your laboratory course is not in session.
2. Know the location of all emergency equipment.
3. If instructions are unclear, ASK before you begin.
4. Perform only those tasks and experiments that are authorized by your instructor.
5. Place all personal items, such as bags, purses, and jackets in the location designated by your instructor.
6. Clean your work area with dilute disinfectant solution at the beginning AND end of each lab.

To avoid injury:

1. Pay attention to what you are doing.
2. No running or playing around in the laboratory.
3. Be careful when using Bunsen burners or alcohol burners. Long hair should be tied back. Be aware of loose clothing that could catch on fire. The flames burn quite hot and are often blue, this makes the flame difficult to see.
4. Avoid wearing scarves, necklaces or large earrings that could become contaminated.
5. Turn your Bunsen burner or alcohol burner off when you have completed your task. Do not leave a flame unattended.
6. Make sure your gas supply is completely off before you leave the lab.
7. Ethanol and other reagents that you will use are flammable, DO NOT place them near a flame.

To avoid contamination or possible infection:

1. Consider all microorganisms that you work with as potential pathogens.
2. Eating, drinking and smoking are prohibited in the laboratory. Do not bring food or drink into the laboratory. Do not place anything in your mouth or eyes while in the lab. Keep your hands away from your mouth and eyes.

3. Do not sit on lab benches!!
4. No open toed shoes or open heeled shoes are allowed in the l

2. Discard all old cultures and used media into the appropriate receptacles to be autoclaved. Discard plastic Petri dishes and swabs in the BIOHAZARD BAG. D

Safety Data Sheets (SDS) located in chemical storage prep-room

The first aid kit is located in supply storage prep-room

The eyewash station is located on side of classroom next to supply storage prep-room

The shower is located is located on side of classroom next to supply storage prep-room

The fire extinguishers are located in front of classroom next to doorway

COCHRAN, DILLARD 89*:*

STUDENT AGREEMENT ON LABORATORY SAFETY

I have read the Teaching Laboratory Safety Statement of the Department of Natural Sciences, Middle Georgia State University, and I understand its content. I agree to abide by all laboratory rules set forth by the instructor. I realize tha

A P P E NGH X F

BIOSAFETY CHECKLIST FOR LABS

APPENDIX D

NS BIOSAFETY COMMITTEE MEMBERSHIP AND GUIDELINES

Definitions

Biological Materials: These shall include living organisms, products produced by such organisms, organic chemicals produced to mimic activity/actions of such products, and recombinant DNA molecules.

Hazardous Materials: Any biological materials which present a risk to the well-being of humans, animals, or plants either directly or indirectly.

Incident: Any situation involving a hazardous agent(s) that results in potential imminent danger to the public health or welfare.

Duties and Powers of the Natural Sciences Biosafety Committee

1. The NS Biosafety Committee shall be comprised of at least five faculty/staff members; at least four members should have direct experience in working with hazardous biological or chemical agents. The Environmental Health and Safety Officer at Middle Georgia State University shall serve as an *ex officio* member of this Committee.

2. Members of the NS Biosafety Committee and its Chair shall be appointed by and report to the Chair of Natural Sciences at Middle Georgia State University. Except for the Environmental Health and Safety Officer, terms of appointment shall last for two years.

3. The NS Biosafety Committee shall have three principal functions:

a. The development and implementation of policies for the safe conduct of research and teaching involving potentially hazardous biological materials and any research involving recombinant DNA.

b. The authorization of projects involving potentially hazardous biological materials or recombinant DNA through review of each researcher's Memorandum of Understanding and Agreement (MUA).

c. The protection of the University community by halting unauthorized or non-compliant projects.

Duties and Powers of the Environmental Health and Safety Officer

1. The Environmental Health and Safety Officer shall function as a primary agent of the NS Biosafety Committee in the routine administration of the biological safety program. Specifically, the Environmental Health and Safety Officer shall monitor and enforce compliance with the safety guidelines established by the NS Biosafety Committee.

2. The Environmental Health and Safety Officer shall have responsibility for making periodic inspections of all facilities using biological materials considered hazardous under existing University standards.

3. All decisions by the Environmental Health and Safety Officer shall be binding pending review by the NS Biosafety Committee.

Updated: 02/25/2020

NS Biosafety Committee Chair, and Chair of Natural Sciences will together determine when and under what conditions a research facility may be reopened following an incident.

APPENDIX E

TRAINING AND RESOURCES

https://www.usg.edu/facilities/rtk-ghs -Right to Know (University System of Georgia)

https://www.usg.edu/facilities/training/pathogens/ - Blood Borne Pathogens (University System of Georgia)

https://www.cdc.gov/biosafety/publications/bmbl5/BMBL.pdf - Biosafety in Microbiological and Biomedical Laboratories 5

APPENGHX F

GUIDELINES FOR APPROPRIATE SIGNAGE

- ApproQed sign indicMPing POe presence [illegible]
  poinPs

- Sign musP incorporMPe POe uniQersMl NioOMzMrd symNol

- All equipmenP used RiPO NioOMzMrdous mMPeriMls musP OMQe [illegible]

- PosPed informMPion musP include: POe [illegible]
  nMme (or oPOer responsiNle personnel) [illegible] pOone numN[illegible]
  procedures for enPering Mnd exiPing [illegible] Age[illegible]
  posPed in MccordMnce RiPO POe insPiPuPionMl policyB

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SAMPLE OCCUPATIONAL EXPOSURE SHEET FOR AVAILABILITY IN LABORATORIES

O c c u pMPi o n M l E xBartonella henselae

Bartonella henselae

Bartonella henselae

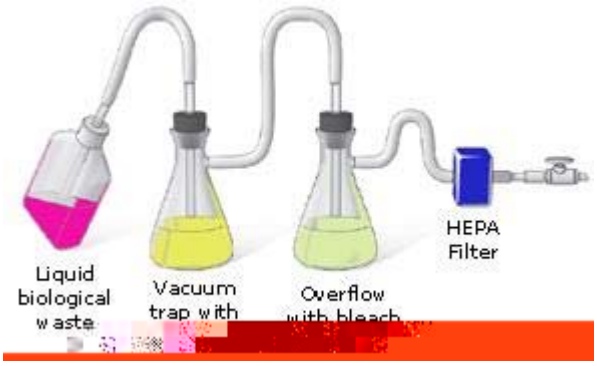
Ctenocephalides
felis Bartonella henselae

Bartonella henselae

A P P E NGHX H

INFORMATION ON SELECT SAFETY EQUIPMENT OR PROCEDURES

V AFU U M IHN E P R O T EFTHO N



Initial Corrective Actions Taken:

Date and Time of Notification to Principle Investigator: _____

Principal Investigator: _____

Principal Investigator Signature: _____

Date & Time of Notification to Biosafety Officer: _____

[redacted]dated: 02/25/2020

Person[redacted] injury or exposure
Spill/re[redacted]ase
Other a[redacted]icipated event(explain in as much detail as possible):

[redacted]osafety Incident & Investigation Report (continued)

INJURY/EXPOSURE	**SPILL/RELEASE**
Immediate Action Taken: **Cleansed affected area** **Rinsed with eyewash/safety shower** **Person received medical attention** **Notified Biosafety Officer** **Notified Biosafety Committee** **Other:**	Immediate Action Taken: **Spill contained and disinfected (small spill)** **Room evacuated (large spill)** **Notified Biosafety Officer** **Notified Biosafety Committee** **Other:**

DESCRIBE TREATMENT/CLEANUP PROCEDURE INCLUDE TIME LINE AND SPECIFIC DETAILS:

Biosafety Incident & Investigation Report (continued)

1. Has there been any signs of illness associated with the incident?
2. List relevant training received by the individual(s) involved,

4. List personal protective equipment (PPE) donned at the time of incident:
5. Was an equipment failure associated with the incident? Yes or No **If yes, please describe.**
6. Has the root cause of the incident been identified? Yes or No **If yes, please describe.**
7. Discuss in detail corrective actions taken
Biosafety Committee & Biosafety Officer's recommended follow up procedures:

Principal Investigators Name: _____

Principal Investigators Signature: _____

Biosafety Officer's Name: _____

Biosafety Officer's Signature: _____