

## STANDARD OPERATING PROCEDURE

**TITLE:** Rodent: Biological Level 2 + Hazard Study Information  
For ACVS Directly Managed Facilities

**SOP NO.:**

**REVISION:** 01

**EFF. DATE:** DRAFT

**SUPERSEDES:**

### APPROVALS

Prepared by (print name): Melissa Pickering, Tamie Fulford,

Jane Cator, Lynne Turner Dept.: ACVS \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed by (print name): Jennifer Stanley Dept.: Western University's OH&S \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed by (print name): Ian Welch Dept.: ACVS \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed by (print name): Tyrrel de Langley Dept.: ACVS \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Approved by (print name): \_\_\_\_\_ Dept.: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Comment [JS1]:** . The comments in blue were done in July 2012 by Dr. Dekaban and J. Stanley. These comments have been re-added to the version of the file received September 2012. The original file with the comments was sent to Lynne Turner July 31, 2012.

**Comment [JS2]:** THE COMMENTS IN TURQUOISE AND CAPITALS ARE FROM OCTOBER 2012

**Comment [JS3]:** Remove and this can be signed by the Chair of the Biohazards Subcommittee once reviewed at an upcoming meeting

### 1.0 PURPOSE

1.1 To outline the procedures for all personnel who are required to work with or could be exposed to Level 2+ hazards when present in any ACVS (Animal Care and Veterinary Services) directly managed facility at Western University.

1.2 Level 2+ hazards are defined as including but not limited to bacteria, non-indigenous viruses & Recombinant Viral Vectors.

**Comment [JS4]:** Should this also apply off-campus since the AUS process is city-wide? See Dr. Dekaban's comments from July 2012. Does this exclude VRL/LHRI/LHSC? Is this what is meant by the term "ACVS Directly Managed Facilities"? If so, perhaps the term could be defined.

### 2.0 SCOPE

2.1 This SOP applies to all researcher personnel, ACVS staff, Facilities Management staff or other personnel that are working with or could potentially be exposed to the Rodent Biological Level 2+ Hazards when present in any ACVS directly managed facilities at Western University.

2.2 This SOP must be followed in conjunction with SOP #800 "Operations & Maintenance of Biological Safety Cabinets, Health Sciences/West Valley".

**Comment [JS5]:** may include but not limited to bacteria and other microorganisms, viruses, prions, parasites or pathogens of plant or animal origin

**Comment [JS6]:** (BSC) could be added

## STANDARD OPERATING PROCEDURE

**TITLE:** Rodent: Biological Level 2 + Hazard Study Information  
For ACVS Directly Managed Facilities

**SOP NO.:**

**REVISION:** 01

**EFF. DATE:** DRAFT

**SUPERSEDES:**

### 3.0 RESPONSIBILITIES

#### 3.1 RESEARCHER AND APPROVED RESEARCH STAFF

3.1.1 The researcher must have an approved OH&S Biological Agents Registry Form (BARF) before the hazard can be used in ~~the~~ a room approved and certified for Level 2 + work.

3.1.2 The researcher must ensure that research staff has completed Western's WHMIS and Biosafety Training including the Standard Operating Procedure (SOP) for Use of Biological, Chemical, Radiation and/or Physical Agents with Live Animals prior to entry into an approved hazards room.

3.1.3 The researcher must ensure that approved research staff has received specific Level 2+ room hands-on training by ACVS staff prior to entry into the approved hazards room.

3.1.3.1 Where applicable, training will be provided in order to use Allentown Biological Containment (BCU) Caging.

3.1.4 Researcher must ensure that research staff follows the UWO Biosafety Guidelines and Procedures Manual for Containment Level 1 & 2 Laboratories – Level 2+ section.

3.1.5 The researcher or designate must provide the following information to facility managers via fmgr@uwo.ca a minimum of 3 business days prior to the administration of any hazard:

3.1.5.1 Investigator Name

3.1.5.2 Animal Use Protocol number

3.1.5.3 Name of hazard(s)

3.1.5.4 Administration start and end dates

3.1.5.5 Proposed location of housed animals

3.1.5.6 BARF approval number and expiry date

3.1.6 Approval must be given by a facility manager before administration of any hazard begins.

3.1.7 The researcher or designate must ensure cages are labeled with completed biohazard cage cards once hazards have been administered (see attachments).

3.1.7.1 Biohazard cage cards are available in the room or from the Animal Care Staff (see attachment for example)

3.1.8 The researcher or designate must ensure the posted Biohazard Level 2+ door signage has been completed in full including (see attachments for example):

3.1.8.1 Investigator Name

3.1.8.2 Name of Hazard

**Comment [JS7]:** PEOPLE MUST COMPLETE THE TRAINING THAT IS REQUIRED FOR THE TASK. THUS LAB SAFETY, RADIATION TRAINING, ETC. MAY BE REQUIRED PER THE SOP.

**Comment [JS8]:** SOMETIMES YOU REFER TO "RESEARCHER" AND SOMETIMES "THE RESEARCHER". YOU MAY WANT TO BE CONSISTENT?

**Comment [JS9]:** HAVE?

**Comment [JS10]:** THE ALLENTOWN ...

**Comment [JS11]:** FOLLOW NOT FOLLOWS?

**Comment [JS12]:** Reference to UWO needs to be changed to Western University

**Comment [JS13]:** What is the purpose of this? Given that people need to follow Level 2 plus precautions upon entry into the room, regardless of the hazards present, why is this required? It should not make any difference from a biosafety point of view.

**Comment [JS14]:** BIOHAZARD(S)

**Comment [JS15]:** This is on their AUP, so why do researchers need to supply this again?

**Comment [JS16]:** Should Researcher be capitalized in this document?

**Comment [JS17]:** ENSURE THAT?

**Comment [JS18]:** THERE ARE NO ATTACHMENTS. IS IT POSSIBLE TO REVIEW/SEE THESE?

**Comment [JS19]:** BIOHAZARD(S)

## STANDARD OPERATING PROCEDURE

**TITLE:** Rodent: Biological Level 2 + Hazard Study Information  
For ACVS Directly Managed Facilities

**SOP NO.:**

**REVISION:** 01

**EFF. DATE:** DRAFT

**SUPERSEDES:**

3.1.8.3 Contact Name(s)  
3.1.8.4 Contact Phone number(s)

3.1.9 The researcher will ensure that all involved research staff read, understand, sign-off on and follow the contents of the *Project Specific Biohazard Study Information* binder for further *Researcher Responsibilities*. The binder is to include copies of the protocol, specific SOPs, specific requirements, staff sign-off sheets and other project related information.

3.1.10 The researcher and research staff are required to comply with Sections:

3.1.10.1 \_\_\_\_\_ Section 4.0 PROCEDURES,  
3.1.10.2 \_\_\_\_\_ Section 5.0 HEALTH and SAFETY &  
3.1.10.3 \_\_\_\_\_ Section 6.0 PPE Requirements.

### 3.2 ANIMAL CARE (AC) STAFF

3.2.1 Are responsible to read, understand, sign-off on, and follow all associated documentation and signage for the biohazard and Level 2+ room, including the *Project Specific Biohazard Study Information* binder.

3.2.2 Are responsible to ensure that animals are housed in containment caging appropriate for the biohazard.

3.2.3 Are responsible to comply with Sections 4.0 PROCEDURES, 5.0 HEALTH and SAFETY & 6.0 PPE Requirements.

### 3.3 LEAD HAND AND/OR FACILITY MANAGER

3.3.1 Are responsible to authorize the use of biohazard administration in animals associated with an ACVS-managed facility

3.3.2 Are responsible to supply an appropriate housing room within an ACVS-managed facility, and notify the researcher of the assigned location.

3.3.3 Are responsible to ensure that ACVS staff members have received training in Western's Biosafety Training Program prior to entry into approved room.

3.3.4 Are responsible to post yellow Biohazard Level 2+ door signage on the designated room(s) and notify the researcher that it has been posted. Signage must include:

3.3.4.1 Name of Approved Researcher

**Comment [JS20]:** YOU MAY WANT TO REWORD THIS, AS IT SOUNDS LIKE ONLY THESE 3 SECTIONS NEED TO COMPLIED WITH.

**Comment [JS21]:** PERHAPS THE TERM "ACVS DIRECTLY MANAGED FACILITY" SHOULD BE USED TO BE CONSISTENT WITH THE TITLE OF THE SOP? IF SO, THIS APPLIES TO 3.3.2 AS WELL.

**Comment [JS22]:** THEY NEED BIOSAFETY TRAINING, WHMIS AND OTHER TRAINING DEPENDING ON THE HAZARDS.

## STANDARD OPERATING PROCEDURE

**TITLE:** Rodent: Biological Level 2 + Hazard Study Information  
For ACVS Directly Managed Facilities

**SOP NO.:**

**REVISION:** 01

**EFF. DATE:** DRAFT

**SUPERSEDES:**

- 3.3.4.2 BARF Permit # - enter on bottom left hand corner
- 3.3.4.3 Name of Hazard
- 3.3.4.4 Start Date for Use of Hazard – enter under list of biohazard

Comment [JS23]: CALL IT THE BIOSAFETY APPROVAL #

- 3.3.5 Are responsible to accompany ~~OH&S biohazard officer~~ Biosafety Officer during ~~yearly~~ regular Level 2+ inspections.
- 3.3.6 Are responsible to ensure Class II Biological Safety Cabinets (BSCs) are up-to-date with ~~yearly~~ annual certifications and related copies of certificates are provided in the room.

### 4.0 PROCEDURES

- 4.1 Use of Hazard: Biological agents at Level 2+ must be handled and administered in a certified Class II biological safety cabinet (BSC) unless otherwise permitted by the Biohazards Subcommittee.
  - 4.1.1 All cage manipulations and animal handling must be performed in a BSC using containment/isolation techniques & procedures
  - 4.1.2 A layer of towels moistened in disinfectant (see 4.2.1) must be placed on the working surface of the BSC prior to opening cages and performing any manipulations with cages or mice.
    - 4.1.2.1 A layer of paper towels may be placed over the moistened towels as a working surface for mouse anesthesia and vaccinations.
  - 4.1.3 BSC must be wiped down with an appropriate disinfectant (see 4.2.1) at the end of use and then again with isopropyl alcohol to help prevent corrosion of BSC.
- 4.2 Required Disinfectants:
  - 4.2.1 Biological Safety Cabinet – Clidox (1:5:1 Dilution)
  - 4.2.2 Floor – 10% Bleach Dilution with Water
  - 4.2.3 Cage Wiping – Clidox (1:5:1 Dilution)
  - 4.2.4 Cage Dunking – 10% Bleach Dilution in Water
  - 4.2.5 Water Disposal – 10% Bleach Dilution in Water
  - 4.2.6 Spray Bottle – Accel TB/Accel Prevention
- 4.3 Cage & Bedding Decontamination and Removal Procedure: With the exception of 4.3.4, research staff will be responsible to perform the following procedures to decontaminate and remove dirty bedding, water, and caging supplies:
  - 4.3.1 Dirty Bedding –
    - 4.3.1.1 Within the BSC, dump & scrape out the dirty bedding one at a time from up to 14 cages into a doubled bag (garbage or biohazard) for incineration.

Comment [JS24]: For more information, see Dr. Dekaban's comments from July 2012.

Comment [JS25]: THE BSC?

Comment [JS26]: Is it ethanol or isopropyl alcohol?

Comment [JS27]: DILUTION WITH WATER OR IN WATER? SHOULD BE CONSISTENT WITH 4.2.4.

Comment [JS28]: Is this the same as Accel TB?

Comment [JS29]: See Dr. Dekaban's comments from July 2012. How big are the bags? A large bag and multiple cages in the hood at once will cause serious disturbances to the laminar air in the hood rendering it useless.

## STANDARD OPERATING PROCEDURE

**TITLE:** Rodent: Biological Level 2 + Hazard Study Information  
For ACVS Directly Managed Facilities

**SOP NO.:**

**REVISION:** 01

**EFF. DATE:** DRAFT

**SUPERSEDES:**

- 4.3.1.2 When finished dumping & scraping up to 14 cage(s) seal the bag and wipe the outer bag with the appropriate disinfectant (see 4.2.1). Use extra bags as required.
- 4.3.1.3 Remove the bag from the BSC and room while still wet with disinfectant.
- 4.3.1.3.1 If the disinfectant dries before the bag is removed from the room, the bag must be sprayed with Accel TB/Accel Prevention before removing from the room.
- 4.3.2 *Dirty Water* –
- 4.3.2.1 Within the BSC, dump the water from the soiled water bottles into a container and add concentrated bleach to equal a dilution of not less than a 10% Bleach dilution in water (see 4.2.5, example 250 mls conc. bleach // 2250mls water).
- 4.3.2.2 Dispose of decontaminated water down drain.
- 4.3.3 *Dirty Caging Supplies* –
- 4.3.3.1 Within the BSC cages, bottles, sipper tubes and other housing supplies are to be wiped with the appropriate disinfectant (see 4.2).
- 4.3.3.2 Once removed from the BSC the cages, bottles, sipper tubes and other housing supplies are to be dunked with an appropriate disinfectant (see 4.2.4) and placed into the red taped off entry square for removal at the end of the day.
- 4.3.3.3 Research staff will remove cages to the hallway and place on the designated cart.
- 4.3.4 Animal Care staff will move the disinfected cages to the cage wash area.
- 4.4 Laboratory Waste & Carcass Disposal:
- 4.4.1 Waste and infected carcasses must be double bagged, identified with the risks and wiped out of the BSC with an appropriate disinfectant (see 4.2).
- 4.4.2 The carcass bag should be removed from the room while still wet.
- 4.4.2.1 If the carcass bag dries it must be wiped down with the appropriate disinfectant before leaving the room.
- 4.4.3 Laboratory waste should be disposed of according to the hazardous waste disposal protocol.  
[http://www.uwo.ca/humanresources/docandform/docs/ohs1/manuals/hazardous\\_handbook.pdf](http://www.uwo.ca/humanresources/docandform/docs/ohs1/manuals/hazardous_handbook.pdf)
- 5.0 HEALTH & SAFETY**
- 5.1 **Toxicological Information:** In case of an exposure, follow instructions on the MSDS in the facility binder located in the designated room and in the MSB main office, and immediately seek medical assistance as follows:
- 5.1.1 *During Work Hours* - Immediately go to Staff Workplace Health, UWO, and bring the MSDS copy; inform supervisor; supervisor to complete and submit an Accident/Incident Reporting Form and Investigation Report.

Comment [JS30]: BAG OF BEDDING

Comment [JS31]: See 4.2.6

Comment [JS32]: COMBINE 250 ML OF CONCENTRATED BLEACH WITH 2250 ML OF WATER

Comment [JS33]: See Dr. Dekaban's comment from July 2012. How long before dumping it down the drain? There needs to be limitations on the container size and number of bottles in the hood at one time.

Comment [JS34]: PERHAPS A COMMA - WITHIN THE BSC, CAGES...

Comment [JS35]: 4.4.2 REFERS TO WIPING THE CARCASS BAG, 4.3.1.3.1 REFERS TO SPRAYING THE BEDDING BAG. PERHAPS IT SHOULD BE CONSISTENT? WIPING GENERATES LESS AEROSOLS SO IT IS PREFERRED FROM A SAFETY POINT OF VIEW.

Comment [JS36]: Hazardous Materials Management Handbook

Comment [JS37]: EMERGENCY PROCEDURES

Comment [JS38]: EMERGENCY PROCEDURES

Comment [JS39]: REMOVE REFERENCE TO UWO

Comment [JS40]: COPY OF MSDS; PERHAPS MSDS SHOULD BE DEFINED AS MATERIAL SAFETY DATA SHEET

## STANDARD OPERATING PROCEDURE

**TITLE:** Rodent: Biological Level 2 + Hazard Study Information  
For ACVS Directly Managed Facilities

**SOP NO.:**

**REVISION:** 01

**EFF. DATE:** DRAFT

**SUPERSEDES:**

5.1.2 *After Work Hours* - Go to University Hospital Emergency Department, and bring the MSDS copy; inform supervisor; supervisor to complete and submit an Accident/Incident Reporting Form and Investigation Report.

Comment [JS41]: SHOULD SUPERVISOR BE CAPITALIZED?

Comment [JS42]: ADD LINK?

### 6.0 Personal Protective Equipment (PPE): Please reference PPE Chart

6.1 The appropriate individually fitted NIOSH-approved respirator must be used

6.1.1 Important Note: User must be fit tested for respirator prior to use.

Comment [JS43]: ADD COMMENT ABOUT THE FIT TEST BEING LESS THAN 2 YEARS OLD (SIMILAR TO LEVEL 2 SOP)

6.2 Disposable gloves (doubled)

6.3 Approved safety glasses

6.4 Tyvek or approved back-closure gown

6.5 Foot covers (doubled)

6.6 Bonnet

6.7 For wiping/dunking caging Extra PPE includes:

6.7.1 Individually fitted ½ face respirator (for use when dunking with bleach)

6.7.2 Chemical gloves or Medical grade glove with 14mm thickness and an extended cuff over single pair of disposable gloves

Comment [JS44]: ARE RESEARCH STAFF DUNKING WITH BLEACH?

### REVISION HISTORY

Revision	Reason(s) for Revision	Initiated by

## STANDARD OPERATING PROCEDURE

---

**TITLE:** Rodent: Biological Level 2 + Hazard Study Information  
For ACVS Directly Managed Facilities

**SOP NO.:**

**REVISION:** 01

**EFF. DATE:** DRAFT

**SUPERSEDES:**

---

### REFERENCES / ASSOCIATED MATERIALS

Standard Operating Procedure (SOP) for Use with Biological, Chemical, Radiation and/or other Physical Agents with Live Animals

Toxicological Information: See MSDS in binder located in room.

Treatment for exposure to Agent: See MSDS.

Biological Agents Registry Forms for approved Researchers

Hazardous Waste Disposal Protocol -  
[http://www.uwo.ca/humanresources/doc/ohs1/manuals/hazardous\\_handbook.pdf](http://www.uwo.ca/humanresources/doc/ohs1/manuals/hazardous_handbook.pdf)

### ATTACHMENTS

Personal Protective Equipment Chart.

MSDS for listed hazard.

Bio Hazard Study Information Sheet Example

Biohazard Containment Level 2+ signage Example

Biohazard Cage Card Example

**Comment [JS45]:** PERHAPS WE SHOULD USE THE PHRASE "HEALTH AND SAFETY INFORMATION". THE MSDS CONTAINS MORE THAN TOXICOLOGICAL INFORMATION.

**Comment [JS46]:** Title is incorrect, see Section 4 for information.

**Comment [JS47]:** THERE ARE NO ATTACHMENTS AVAILABLE FOR REVIEW.

**Comment [JS48]:** TO HAVE CONSISTENT SPELLING, THIS SHOULD BE BIOHAZARD