Mandatory Laboratory Animal Coordinator (LAC) Lecture

- Definition
- Process
- Training
- Responsibility
- Training of laboratory personnel
- ACAP
- Inspections
- Euthanasia
- Policies and Exceptions
- DLAM Facilities and Satellites
- EHS general laboratory policies
What is a Laboratory Animal Coordinator (LAC)?

- The LAC is a trained and certified member of the research team who is responsible for coordinating animal activities in the laboratory. Once fully trained and certified, the LAC is responsible for training other members of the research laboratory in proper animal handling and animal welfare rules and regulations.
How to Become the LAC:

• Hands on rodent training and LAC didactic will be one time only.

• Must demonstrate proficiency in all relevant animal techniques BEFORE being approved by OACU Training and Compliance to train and certify laboratory personnel.

• The degree of proficiency of the proposed LAC will be assessed by Training and Compliance Coordinators (TCC) during rodent training.
LAC Proficiency Assessment

Assessment:

- **I:** Allowed to train and certify laboratory personnel immediately
- **II:** More experience required before able to train laboratory personnel **
- **III:** Significantly more experience required before the level of proficiency required of a LAC attained **
- ** If you received a I or II during your initial training, you may return for recertification once you feel you are proficient and comfortable training personnel (Proficiency Level I). Call a TCC for observation and subsequent certification access!
Rodent Training

- IACUC Training and Compliance Coordinators conduct rodent wet labs
  - Mouse Techniques
  - Rat Techniques
  - Aseptic Techniques
- To register, visit our website at https://apps.research.unc.edu/events/index.cfm
- IACUC Training and Compliance Coordinators conduct one-on-one training sessions for proficiency demonstration. Please contact the Office of Animal Care and Use at 966-5569 to schedule an appointment.
LAC Duties

• If LAC changes: Inform the IACUC, and the new LAC must receive the necessary training:
  - LAC lecture (required)
  - Rodent training (if applicable)

• This is to ensure that the IACUC is informed of all personnel changes and to ensure that “investigators and other personnel are appropriately qualified and experienced for conducting procedures on living animals.”
Training: Other Vertebrates and Isoflurane Vaporizer

- DLAM Veterinary Services will provide one-on-one training for investigators using other species (once animals are in-house).
  - Contact Veterinary Surgical Laboratory Supervisor, at 966-4576.

- To schedule an appointment for Isoflurane vaporizer training, contact the Veterinary Technician Supervisor 843-3407.
Mouse Breeding

- Mandatory Mouse Breeding Policy Lecture
- Mouse Action Required Card
- Voluntary Basic Mouse Breeding Colony Management Lecture
Rat Breeding

- No Lecture required
- Must follow UNC Rat breeding policy
- Rat Action Required Card
Training Lab Personnel

• After the LAC is certified and has achieved a Proficiency Level I, s/he may train other researchers in the lab

• The LAC may not train:
  • retro-orbital bleed and / or injection
    • these techniques are to be performed on anesthetized animals only.
  • decapitation or cervical dislocation without anesthesia
Required Online Orientations/Certifications

- All personnel – PI, LAC, Animal Handlers
  - IACUC – completed only once
  - DLAM- every three years (only if animals are housed in DLAM facilities)
- Animal Handler Profile – updated annually
- Research Profile
- Lab Worker Registration

- Protocol approval will be contingent on completion of orientation and training for all personnel on the application.
ACAP

- On-line animal use application.
- List all personnel involved with the project on the protocol.
- Ensure all roles and techniques employed in an application are listed in the relevant personnel role(s) and technique(s) profile(s).
- Completing orientation does not automatically add personnel to animal use applications – amendment to add new personnel needs to be submitted by the PI and approved by the OACU before animal work or DLAM access allowed.
If an application describes breeding and excess animals must be culled, ensure that culling of pups and adults is addressed in the appropriate section of the animal use application.

If animals are culled (pups and adults), indicate the method of euthanasia.

Although unweaned pups (mice and rats) do not count towards the application animal number, they are vertebrate animals and must be treated in compliance with federal and institutional policies.
Grant Congruency

- Side-by-side grant/IACUC application comparison
- Federally Regulated
- IACUC approval required prior to funding
- All animal procedures performed must be included on IACUC application
- All animal procedures described in a grant must be described in an approved IACUC application
- Once a favorable NIH grant score has been obtained, request a Grant Congruency Review online
Grant Congruency

• All DOD and NIH grants are being reviewed by an IACUC Grants Specialist

• Grant Congruency Informational Handout: http://research.unc.edu/files/2012/11/CCM3_035269.pdf

• Grant Congruency Procedures: http://research.unc.edu/files/2012/11/CCM3_035267.pdf

• Please contact the Office of Animal Care and Use at 966-5569 for additional questions

April 2015 IACUC Lab Animal Coordinator
IACUC Inspections

- Semiannual Investigator Laboratories
- Semiannual Animal Facilities
- Informational Inspections (every two years)
- Unannounced Mouse Breeding Checks
- Facility Spot Checks

- Procedural Observation – to be scheduled as part of semiannual or informational inspection when possible
Procedural Observation

• Conducted every three years per laboratory or if the person who was originally observed leaves the laboratory within the three year period

• Does not need to occur before initiating the procedure in the lab

• If a lab is performing any of the following procedures, a procedural could be conducted: (If it is required, our office will contact the lab.)
  – studies involving surgery (survival / non-survival)
  – behavioral studies involving aversive conditioning
  – studies involving animals in pain category E
Euthanasia
(Inhalational or Injectable Anesthetic)

• Every animal of any age euthanized under the effect of any anesthetic (inhalational or injectable) must be confirmed dead before the carcass is placed in the cooler.

Some of the approved methods to confirm death are:

- cervical dislocation
- decapitation
- thoracotomy
- organ harvest

(*Note- Neonatal rodents are resistant to hypoxia and can take a much longer time to succumb to compressed CO2 gas*)
Proper Disposal

- Ensure the research staff place animal carcasses in non-PVC containing, sealed, see-through plastic bags labeled with application identification number only.
- Bags are provided in a variety of sizes by DLAM.
- Deposit carcasses in facility animal freezers.
- DLAM now incinerates all animal carcasses. Complete the incineration form posted on the outside of the animal freezer when disposing of carcasses.
Carcasses & Cages

• **All** carcasses and experimental materials **must** be removed from cages **prior** to drop off in dirty cage area
• When bringing cages to the lab space, **empty cages must be returned to the animal facility** within a reasonable amount of time
• Do not store animal cages within or outside of the lab
Double Check all Cages before Placing in Dirty Cage Area!
If animals are to be euthanized by DLAM, the cage(s) must be identified by a euthanasia card and a euthanasia form must be completed. Contact the DLAM facility supervisor if you have any questions.
No Euthanasia Permitted in Animal Housing Areas Unless Specified in the Protocol or Directed by a DLAM Veterinarian.
Monitoring and Documentation

- Design a monitoring log that meets the specific needs for your experiment(s)

- Abide by the monitoring schedule described in the approved animal care application and ensure adequate documentation of the monitoring

- If animals are to be monitored by lab staff over the weekend, place a monitoring log on the back of the room door. This will alert DLAM staff that the required observations are occurring

April 2015

IACUC Lab Animal Coordinator
Monitoring and Documentation

- DLAM provides Investigator Health Monitoring cards which can be utilized for documenting an animal’s health status after an experimental manipulation (i.e. surgery, injection, etc.)
Policies

• If investigator’s staff is responsible for feeding, watering or cage changes, the investigator must maintain an up-to-date ‘Check Sheet for Duties Performed By Investigator’ log within the animal room.
  
• Ensure the information requested in the upper right hand corner is supplied.

• If the approved animal care application indicates that the investigator will monitor health, weight, or other parameters, documentation logs should be readily available to IACUC.
### Sample PI Check Sheet

**DUTIES PERFORMED BY INVESTIGATOR CHECK SHEET**

**PRINCIPAL INVESTIGATOR:** John Doe  
**PROTOCOL #:** 12-345

**INDIVIDUAL(S) PERFORMING DUTIES:** Jane Doe  
**CONTACT # (Monday – Friday):** 867-5309

**BUILDING:** Taylor  
**ROOM #:** B10  
**SPECIES:** Mouse

**CURRENT MONTH/YEAR:** 8/2013  
**DATE DUTIES BEGIN:** 8/1/2013  
**DATE DUTIES END:** 8/30/2013  
**Ongoing**

***For each duty performed indicate the time and initials of individual performing duties***

<table>
<thead>
<tr>
<th>DUTIES:</th>
<th>Example</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observed feed only (maximum of 2 consecutive days between observations; daily if restricted)</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
</tr>
<tr>
<td>Feed added to cage</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
</tr>
<tr>
<td>Cage Change (weekly: mouse conventional and rat ventilated; every other week: mouse ventilated; twice weekly: rat conventional)</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
</tr>
<tr>
<td>Monitoring (as described in protocol)</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
</tr>
<tr>
<td>Observed water bottles only (maximum of 2 consecutive days between observations; daily if restricted)</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
</tr>
<tr>
<td>Water bottles changed (sanitized weekly)</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
<td>JD</td>
</tr>
</tbody>
</table>

---

**Comments:** [Revised 08/2013]
Exceptions

• “Exceptions” are deviations from approved IACUC or federal policy.
• “Exceptions” are filed by investigator and must be approved by the IACUC prior to implementation.
• Cage cards of all animals covered by exceptions must be marked with a red letter “E” in the upper right corner. [Reverse-light cycle rooms require the “E” to be in black ink].
• Investigator personnel are responsible for maintaining an up to date copy of the “Exception” in the DLAM metal box located outside of each animal housing room.
Adverse Effects

- Report to Office of Animal Care and Use (OACU) & Veterinary Services *any* unanticipated adverse effects occurring in experimental animals.

- OACU and Veterinary Services encourages laboratories to also *report adverse effects which are not covered in approved animal use protocols*.

- In most cases, DLAM Veterinarians strongly recommend that *animals, particularly surgical models, be able to acclimate to their environment for a period of at least 3-5 days prior to manipulation*.
Amendments

- Any changes to the approved protocol must be reviewed and approved by the IACUC prior to implementation!
- Amendment Guidelines available on the IACUC website. Click HERE
Items Required in Laboratory

- Access to all current approved animal use applications including amendments
- PI animal health records
- Drug logs – analgesia, anesthesia and euthanasia
- Laboratory safety plan and MSDS sheets
- Hazard signs
Lab Postings

• How to report animal mistreatment or animal use application noncompliance.
  • This is available on the IACUC website (HERE)
• Posting of emergency telephone numbers
• Needle safety
• (CO₂ Euthanasia Policy) if applicable)
Suggestions

• Means to track all animal use

• *Guide for the Care and Use of Laboratory Animals*

• Keep a telephone log of conversations with DLAM personnel such as Veterinary Technicians.
DLAM Facilities

• **New personnel** should contact the DLAM building supervisor for a **facility orientation**.

• If you remove animals from the facility for procedures and wish to return them to the animal quarters, you **must** have prior DLAM facility supervisor approval.

• Identify the use of chemical hazards at the cage side in addition to the application.
Cage Side Identification of Chemical Hazards

- To ensure the safety of research and DLAM personnel when handling bedding, cages etc. (chemicals that could be harmful to DLAM staff)
- Part of the mandatory DLAM facility orientation
- Place correct DLAM card and all requested information on all applicable cages
- Training document available [HERE](#)
DLAM Issues

- **Biosecurity** – facility/room access
- **Proper use of cage cards** – attention to animal health cards, and yellow cage density cards
- **Green Health Check** and **Red Vet Care cards** are the official health record. (Health Check Card- Used to report to DLAM that an animal is sick; Veterinary Care Card- DLAM Veterinary technicians use to document the progress of the animal regularly until the health care case has been resolved). **Do not throw colored cage cards away!** DLAM staff will collect them.

April 2015

IACUC Lab Animal Coordinator
Security Issues

• All personnel entering facilities must have valid UNC issued picture identification.
• Please remember – Do not share building access cards or keys!!
• Do not let unauthorized personnel into facilities.
• Make sure that all lab members are aware of any security alerts.
• Report any problems or suspicious activities to Campus Police immediately.
Emergency Contact

• **Establish a 24-hour contact name and phone number (cell or beeper) that DLAM can contact at any time to ask animal health-related questions.**

• **Do not use the lab phone number as the emergency contact number.**
Emergency Contact

• A name and number must be posted within every animal room

• Update contact information when necessary

• Forms provided by DLAM
Animal Transport

- **Animal transport** between facilities is regulated by DLAM. The SOP is available on the IACUC website.

- All cages, animals and carcasses must be covered during transportation to or from a facility.

- Animals may be taken to PI laboratories for a maximum of 12 hours.

- Usually only for non-survival procedures
Satellite Facilities

- A non-DLAM facility in which animals are housed for greater than 12 hours and are cared for by the principal investigator.

- IACUC approved Satellite Facility guidelines are available for review on the IACUC website.
Satellite Approval

- Rigorous approval process
- Daily animal care and observation required
- Contact DLAM veterinary personnel to report any animal health concerns.
- Quarterly IACUC inspection
- On-line animal census documentation
EHS-Safety Eye washes

• Each research group is responsible for ensuring that emergency eyewash facilities, both within its laboratory space and in nearby common areas, remain operational and accessible.

• Check the system at least once a month. A quick (~5 second) activation of the eyewash verifies water pressure, and flushes rust, scale, and other debris out of the system.

• Verify monthly eyewash checks by filling out inspection tags located on or near the units.

• Inspection tags can be ordered from Fisher (Part No. NC9787676) or you can keep track on a piece of paper near eyewash.
EHS-Secondary Containment

- Secondary containment is used to prevent the spread of chemical spills, including spills involving chemical wastes.
- Required:
  - When moving chemicals through or between buildings.
  - Secondary containment is required for all glass containers of liquid chemical hazardous materials (including waste) stored on the floor.
  - Secondary containment is also required for all containers of liquid chemical hazardous waste, with capacity of 4 liters or less, regardless of storage location.
- Recommended Types:
  - Plastic trays
  - Plastic tubs
  - Bottle Jockeys
  - Plastic buckets
PPE for Animal Work in Labs

- PPE required is based on risk assessment of procedures being done in lab space.
- Minimum lab PPE: safety glasses/goggles, gloves and lab coats are required as well as any additional PPE based on risk assessment of animal work.
- Examples of Additional PPE:
  - Puncture resistant gloves
  - Surgical masks
  - Respiratory protection
  - Sleeve covers
  - Face shields
Sharps

- Sharps include:
  - Razor blades
  - Scalpels
  - Lancets
  - Syringes (with/without needles)
  - Slide covers

- Disposal:
  - Biohazard
    - Collect directly into red Sharps containers marked with Biohazard symbol
    - Remove containers for disposal when 2/3 full
    - Place “x” with autoclave tape on container, place in red bag and autoclave
    - After autoclaving dispose in regular trash
  - Chemical
    - Collect directly into white plastic Sharps containers marked with “Chemically Contaminated Sharps”
    - Remove containers for disposal when 2/3 full
    - Submit online EHS waste pickup form
  - Non-hazardous
    - Collect directly into white plastic Sharps containers marked as “Non-hazardous Sharps”
    - Remove containers for disposal when 2/3 full
    - Dispose in regular trash
Sink Disposal of Chemicals

- Do not use the sanitary sewer for the disposal of hazardous materials, with the exception of trace quantities associated with cleaning and washing operations, e.g., glassware.
- Under no circumstances should halogenated or non-halogenated solvents be sewered directly or in aqueous solution when the solvent concentrations are more than trace (e.g. >1% by volume).
- Only neutral salts and buffers may be disposed of down the drain. Do not dispose any of the following down the drain:
  - acids with a pH < 6.0 s.u.
  - bases with a pH > 10 s.u.
  - solvents
  - alcohols, ethers, esters, ketones, aldehydes, amines, amides, nitriles, ethidium bromide, carbon disulfide, phenol or phenolic materials, other halogenated or non-halogenated hydrocarbons, or other chemical agents unless present as trace constituents in aqueous solution
  - sodium azide containing wastes
  - formaldehyde containing wastes
  - solutions with heavy metals
EHS Contact Information

- EHS [http://www.ehs.unc.edu/](http://www.ehs.unc.edu/)
- 919-962-5507
Network of Laboratory Animal Coordinators

- A useful collection of people that exchange ideas and experiences. (listserv)
- Serves as the liaison that improves communication between PIs and the IACUC.
- [http://research.unc.edu/Offices/NLAC/index.htm](http://research.unc.edu/Offices/NLAC/index.htm)
Useful Websites

- Office of Laboratory Animal Welfare
  http://www.grants.nih.gov/grants/olaw/olaw.htm

- Guide for the Care and Use of Lab Animals

- IACUC
  http://research.unc.edu/Offices/iacuc/index.htm

- DLAM http://research.unc.edu/offices/laboratory-animal-medicine/index.htm

- EHS http://ehs.unc.edu/
Contact Information

• The Office of Animal Care and Use

Phone: 919-966-5569

Email: iacuc@med.unc.edu
Questions ?