



STANDARD OPERATING PROCEDURES (SOPs)

Care and Use of Laboratory Animals

SOP 1: Institutional Animal Care and Use Program (IACUP)

Purpose

To ensure humane, ethical, and compliant care and use of laboratory animals.

Scope

Applies to all animal research, teaching, and testing activities.

Responsibilities

- **Institutional Official (IO):** Provides authority, resources, and compliance oversight.
- **Attending Veterinarian (AV):** Oversees animal health and welfare.
- **IACUC:** Reviews protocols, inspects facilities, and monitors compliance.

Procedure

1. Establish a written Animal Care and Use Program.
2. Appoint a qualified AV with authority and access to animals.
3. Form an IACUC with required membership (scientist, veterinarian, non-scientist, public member).
4. Conduct:
 - Protocol review and approval.
 - Facility and program inspections (at least annually).
 - Review of animal welfare concerns.
5. Maintain records of meetings, inspections, and corrective actions.

Records

- IACUC meeting minutes
- Approved protocols
- Inspection and program review reports

SOP 2: Animal Use Protocol Review and Approval

Purpose

To ensure ethical justification and humane treatment of animals.

Procedure

1. Investigator submits protocol including:



- Scientific rationale.
 - Species and number justification.
 - Description of procedures.
 - Pain/distress assessment and mitigation.
 - Humane endpoints.
 - Euthanasia method.
2. IACUC reviews protocol for:
 - Application of the Three Rs.
 - Adequacy of veterinary care.
 - Personnel qualifications.
 3. Protocol is approved, modified, or withheld.
 4. Significant changes require prior IACUC approval.

Records

- Protocol submission forms
- Review of comments and approvals

SOP 3: Animal Housing, Environment, and Husbandry

Purpose

To maintain environments that support animal well-being and scientific validity.

Procedure

1. House animals in species-appropriate enclosures.
2. Maintain environmental parameters:
 - Temperature and humidity within species norms.
 - Adequate ventilation and air quality.
 - Appropriate lighting cycles.
3. Provide:
 - Adequate space (minimum recommended standards).
 - Social housing unless justified otherwise.
 - Environmental enrichment.
4. Perform daily husbandry and health observations.

Records



- Environmental monitoring logs
- Daily animal care logs

SOP 4: Veterinary Care and Health Management

Purpose

To prevent, diagnose, and treat animal disease and distress.

Procedure

1. Procure animals from approved sources.
2. Quarantine and assess health upon arrival.
3. Implement preventive medicine and surveillance programs.
4. Provide prompt clinical and emergency care.
5. Maintain individual or group health records.

Records

- Animal health records
- Treatment logs

SOP 5: Surgery, Anesthesia, Analgesia, and Euthanasia

Purpose

To minimize pain and distress during procedures.

Procedure

1. Ensure personnel are trained and qualified.
2. Use aseptic techniques for survival surgeries.
3. Provide appropriate anesthesia and analgesia.
4. Monitor animals intra- and post-operatively.
5. Apply humane endpoints when criteria are met.
6. Perform euthanasia using approved methods.

Records

- Surgical and anesthesia logs
- Postoperative monitoring records

SOP 6: Personnel Training and Occupational Health & Safety

Purpose

To protect personnel and animals from injury and disease.



Procedure

1. Provide training in:
 - Animal handling.
 - Ethics and regulations.
 - Species-specific care.
2. Enroll personnel in the Occupational Health and Safety Program (OHSP).
3. Assess risks (zoonoses, allergens, hazardous agents).
4. Provide appropriate PPE and medical surveillance.

Records

- Training attendance logs
- OHSP enrollment records

COMPLIANCE CHECKLISTS

Checklist 1: IACUC and Program Oversight

- ☐ Institutional Official appointed
- ☐ Attending Veterinarian designated
- ☐ IACUC properly constituted
- ☐ Annual program review completed
- ☐ Facility inspections conducted
- ☐ Animal welfare reporting mechanism available

Checklist 2: Animal Use Protocol Review

- ☐ Scientific justification provided
- ☐ Species and number justified
- ☐ Three Rs addressed
- ☐ Pain/distress minimized
- ☐ Humane endpoints defined
- ☐ Euthanasia method approved

Checklist 3: Housing and Environment

- ☐ Species-appropriate housing
- ☐ Temperature and humidity monitored
- ☐ Adequate ventilation
- ☐ Appropriate light cycle
- ☐ Social housing provided or justified
- ☐ Environmental enrichment implemented



Checklist 4: Veterinary Care

- ☐ Approved animal sources used
- ☐ Quarantine procedures followed
- ☐ Preventive health program in place
- ☐ Emergency care available
- ☐ Health records maintained

Checklist 5: Surgery and Procedures

- ☐ Personnel trained
- ☐ Aseptic technique used
- ☐ Anesthesia and analgesia provided
- ☐ Postoperative monitoring documented
- ☐ Humane endpoints applied

Checklist 6: Personnel Training and Safety

- ☐ Initial and continuing training documented
- ☐ OHSP enrollment completed
- ☐ PPE available and used
- ☐ Hazard assessments conducted
- ☐ Incident reporting procedures in place

Reference

All SOPs and checklists are based on the *Guide for the Care and Use of Laboratory Animals, 8th Edition* (National Research Council, 2011)