

West Virginia University  
Assurance of Compliance with Public Health Service (PHS)  
Policy on Humane Care and Use of Laboratory Animals

West Virginia University, hereinafter referred to as institution, hereby gives assurance that it will comply with the Public Health Service Policy on Humane Care and Use of Laboratory Animals, hereinafter referred to as PHS Policy.

I. APPLICABILITY

This Assurance is applicable to all research, research training, experimentation, teaching, testing, exhibition or maintenance of animals and related activities, hereinafter referred to as activities, involving live, vertebrate animals supported by the Public Health Service (PHS) and non-PHS funds and conducted at this institution, or at another institution as a consequence of the sub-granting or subcontracting of a PHS-conducted or supported activity by this institution. "Institution" includes the following branches and major components of *West Virginia University: Health Sciences Center, Eberly College of Arts and Sciences, Davis College of Agriculture, Forestry and Consumer Sciences, College of Engineering and Mineral Resources, and Potomac State College.*

II. INSTITUTIONAL POLICY

- A. This institution will comply with all applicable provisions of the Animal Welfare Act and other Federal statutes and regulations relating to animals.
- B. This institution is guided by the "U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training."
- C. This institution acknowledges and accepts responsibility for the care and use of animals involved in activities covered by this Assurance. As partial fulfillment of this responsibility this institution will make a reasonable effort to ensure that all individuals involved in the care and use of laboratory animals understand their individual and collective responsibilities for compliance with this Assurance as well as all other applicable laws and regulations pertaining to animal care and use.
- D. This institution has established and will maintain a program for activities involving animals in accordance with the Guide for the Care and Use of Laboratory Animals (Guide).

III. INSTITUTIONAL PROGRAM FOR ANIMAL CARE AND USE

- A. The lines of authority and responsibility for administering the program and ensuring compliance with this Policy are as described by the organizational chart, included as Attachment A. As summarized by the attached organizational chart, the President of West Virginia University, the Chief Executive Officer, has designated the Provost and Vice President for Academic Affairs and Research, Dr. Gerald E. Lang, as the Institutional Official. The WVU Animal Care and Use Committee (ACUC) discharges its responsibilities via sequential reporting lines through the Director of Research Compliance and the Vice President for Research & Economic Development to the

Institutional Official, and through direct lines of communication with the Institutional Official, the Director of the Office of Laboratory Animal Resources (OLAR) and the attending veterinarians of the University Veterinary Office. The University Veterinary Office provides veterinary coverage for all animals at WVU and has direct communication with the Institutional Official and ACUC, and the reports to the Office of Research Compliance. OLAR exercises control and authority over animal activities, and central space and personnel, at the Health Sciences Center, and the Life Sciences and Engineering facilities. The Division of Animal and Veterinary Science controls animal activities at three farm locations and reports to the Dean of the College of Agriculture, Forestry and Consumer Sciences. The Agricultural Science unit at Potomac State College directs an animal science program and reports to the President of Potomac State College. The respective heads of both agricultural colleges report to Provost Lang, the Institutional Official.

- B. The qualifications, authority, and percent of time contributed by veterinarian(s) who will participate in the program are:

Garry Linton, D.V.M.

Charles Gerald (Garry) Linton, Jr., D.V.M., Diplomate, ACLAM served as Assistant Director of the Office of Laboratory Animal Resources from July 1994 to June 1996. He has served as the Director and Attending Veterinarian for the Office of Laboratory Animal Resources since July 1996. Dr. Linton began his post-doctoral training in laboratory animal medicine with a clinical residency at The Bowman Gray School of Medicine of Wake Forest University from 1990-1991. He completed his training as a post-doctoral fellow in laboratory animal medicine at The University of Texas Southwestern Medical Center at Dallas from 1991-1994. Dr. Linton is a Diplomate of the American College of Laboratory Animal Medicine (1995). Dr. Linton has complete, direct program authority for activities occurring under OLAR management.

Robert E. Pitts, D.V.M.

Robert E. Pitts was appointed as a non-tenure track Clinical Assistant/Extension Veterinarian to a 12 month 50/50 position with the Division of Animal and Veterinary Sciences and WVU Extension Service in December of 2000. Dr. Pitts earned the D.V.M. degree from Louisiana State University in 1978, after completing both a B.S. Degree in Animal Science in 1973 and M.S. Degree in Reproductive Physiology in 1974 from West Virginia University. Prior to his appointment at WVU, Dr. Pitts had previously own and operated the Middle Island Animal Clinic and been a Veterinary Supervisor for the Meat and Poultry Inspection Division of the West Virginia Department of Agriculture. Dr. Pitts is the attending veterinarian for the Division of Animal and Veterinary Science Livestock Farm at Morgantown and the Reedsville Farm at Reedsville. Dr. Pitts is the Director of the Food Animal Research Facility. Presently about 10% of his time is associated with veterinary care issues.

Darin K. Matlick DVM

Darin Matlick was appointed Clinical Assistant Professor of Animal and Veterinary Sciences in July 2003. Dr. Matlick earned his Bachelor of Science in Animal and Veterinary Sciences from West Virginia University in 1999, where he was also a recipient of the Dr. Kidder Memorial Scholarship. He then Graduated Veterinary School at The Ohio State University in 2002 where he received the Pharmacia Outstanding Food Animal Student Award. Dr. Matlick was a staff Veterinarian at Casselman Veterinary

Clinic in Garrett County Maryland prior to his appointment at West Virginia University. Dr. Matlick has full institutional authority for all veterinary care issues at Potomac State College Farms and at Wardensville Experiment Station Farms administered by the Division of Animal and Veterinary Sciences. Dr. Matlick is 80% of full time and a 12 month faculty member.

The Office of Laboratory Animal Resources employs one full-time veterinarian to provide veterinary care. The full-time veterinarian, Dr. Garry Linton, Director of the Office of Laboratory Animal Resources, devotes 100% of his time to the support of the animal care and use program. He has full institutional authority on all veterinary care issues at all animal facility sites under the care of the Office of Laboratory Animal Resources. Dr. Linton's duties include: clinical care of animals, oversight of facility management, research support and consultation with investigators on comparative medicine issues, training of all personnel involved with animal research and ACUC membership. Dr. Linton is directly involved in the monitoring and care of animals since he serves as the full-time attending veterinarian for the facility. He is available twenty-four hours a day by pager for emergencies.

Arrangements with other veterinarians have been made in case Dr. Linton is unavailable. These veterinarians include Dr. Leslie Dozsa, former OLAR Director, Dr. Ann Hubbs, Dr. Bob Pitts, Dr. Paul Nicolaysen, and Dr. Robert Havern. Instructions on how to reach the veterinarian on call are posted throughout the facility and are provided to investigative personnel.

The College of Agriculture has two full-time veterinarians, Dr. Robert Pitts and Dr. Darin Matlick, who contribute 10 percent and 80 percent time, respectively, toward veterinary care issues. Their duties include establishing, implementing, and maintaining animal health programs; monitoring animals health; clinical care of animals; maintaining clinical health records; medical oversight of faculties; and research support, consultation, and collaboration with investigators as necessary and appropriate. Both veterinarians are available on a 24 hour emergency basis via beeper.

In the rare instances when both staff veterinarians are unavailable, the Division of Animal and Veterinary Sciences has contracted for veterinary service with the following:

Drs. George and Cindy Seiler of the Paw Prints Veterinary Clinic for the FARF; Dr. Frank Carey for Morgantown and Reedsville Livestock Farms; and Dr. Morris Homan for the Wardensville Experiment Farm. Instructions on how to reach attending veterinarians and contract veterinarians on call are posted in various farm offices and other facilities as appropriate.

- C. This institution has established an Institutional Animal Care and Use Committee (ACUC), which is qualified through the experience and expertise of its members to oversee the institution's animal program, facilities, and procedures. The ACUC, appointed by the President of West Virginia University, meets the compositional requirements set forth in the PHS Policy at IV.A.3.b. Attachment B is a list of names, earned degrees and other credentials of the ACUC chairperson and members.
- D. The ACUC will:

1. Review at least once every six months the institution's program for humane care and use of animals, using the Guide as a basis for evaluation. Typically, on a monthly basis, the ACUC determines who receives annual or semi-annual monitoring reports. Each principal animal user whose protocol and lab is not personally inspected by ACUC members will receive a self-report, which includes selected information concerning the protocol and which requests specific information from the animals use, and serves to re-approve the protocol.
2. Inspect at least once every six months all of the institution's animal facilities (including study areas and satellite facilities) using the Guide as a basis for evaluation. When the Committee approves a protocol, it includes the lab and the protocol on the list for possible semi-annual or annual inspection. A committee member will contact the animal user if a lab inspection is needed and reviews the protocol with the animal user.
3. Prepare reports of the ACUC evaluations as set forth in the PHS Policy at IV.B.3. and submit the reports to the Provost. The Committee inspects facilities and evaluation of the entire animal use program in a report. The report is reviewed by the ACUC and upon approval, submitted with recommendations to the Institutional Official.
4. Review concerns involving the care and use of animals at the institution. The AWA (2.32, (c), p. 18) requires that institutions establish a system by which employees and students can report cases of alleged misconduct or deficiencies in animal care and treatment without fear of discrimination or reprisal. At WVU, Persons may contact (anonymously, if they wish) the Chairperson of the Institutional Animal Care and Use Committee (IACUC, Animal Care and Use Committee or ACUC), Director of the Office of Laboratory Animal Resources or the Director of the Division of Animal and Veterinary Sciences about such matters.
5. Make written recommendations to the Provost regarding any aspect of the institution's animal program, facilities, or personnel training. The ACUC reviews the Animal Care and use Program using the Guide Policy and Act. Written recommendations to the Institutional Official are made accordingly.
6. Review and approve, require modifications in (to secure approval) or withhold approval of those activities related to the care and use of animals as set forth in the PHS Policy at IV.C. All protocols are screened by the Administrative Review Committee (ARC) and receive Full Committee review. The ARC consists of the Chair of the ACUC and the attending veterinarian of OLAR. A primary and secondary reviewer are assigned to each protocol. Modifications or additional information are reviewed by a subcommittee of the ACUC before approval can be given.
7. Review and approve, require modifications in (to secure approval) or withhold approval of proposed significant changes regarding the use of animals in ongoing activities as set forth in the PHS Policy at IV.C. *Any modification must be submitted in written form, which is then reviewed by the ARC. Significant modifications require Full Committee review and two reviewers are assigned.*
8. Notify investigators and the institution in writing of its decision to approve or withhold approval of those activities related to the care and use of animals, or of modifications

required to secure ACUC approval as set forth in the PHS Policy at IV.C.4. Investigators receive written notification verified by Lilo Ast, Senior Program Coordinator for the ACUC.

9. The procedures which the ACUC will follow to fulfill the requirements set forth in the PHS Policy at IV.B are: the ACUC meets monthly, 12 months a year, to review all submitted protocols. The Committee inspects all facilities twice a year, including study areas. Laboratories are inspected annually (as determined by the ACUC at a Full Committee meeting). Reports and any recommendations of the Committee are forwarded to the Provost. Minimally protocols are reviewed annually, and at a Full Committee meeting receive continued annual or semi-annual renewal. All protocols must be re-submitted on a three year basis.

10. The ACUC is authorized to suspend an activity involving animals as set forth in the PHS Policy at IV.C.6. Procedures are outlined in Attachment C.

E. Dr. Andrew Cockburn, Associate Director of Research Compliance, or his designee, is the individual authorized by this institution to verify ACUC approval of those sections of applications and proposals related to the care and use of animals.

F. The institution's health program for personnel who work in laboratory animal facilities or have frequent contact with animals is included as Attachment D.

G. The total gross number of square feet in each animal facility, the species of animals housed therein and the average daily inventory, by species, of animals in each facility is included as Attachment E.

H. The training or instruction available to scientists, animal technicians, and other personnel involved in animal care, treatment, or use are included as Attachment F.

#### IV. INSTITUTIONAL STATUS

As specified in the PHS Policy at IV.A.2, as Category 2, all of this institution's programs and facilities, including satellite facilities, for activities involving animals have been evaluated by the IACUC and will be reevaluated by the IACUC at least once every six months in accord with IV.B.1. and 2. of the PHS Policy, and reports prepared in accord with IV.B.3. of the PHS Policy.

All IACUC semiannual reports will include a description of the nature and extent of this institution's adherence to the Guide. Any departures from the Guide will be identified specifically and reasons for each departure will be stated. Reports will distinguish significant deficiencies from minor deficiencies. Where program or facility deficiencies are noted, reports will contain a reasonable and specific plan and schedule for correcting each deficiency. Semiannual reports of the IACUC evaluations will be submitted to [*insert name or title of the Institutional Official signing the Assurance*]. Semiannual reports of IACUC evaluations will be maintained by this institution and made available to the Office of Laboratory Animal Welfare (OLAW) upon request. The most recent semiannual report of the IACUC is attached.

#### V. RECORDKEEPING REQUIREMENTS

- A. This institution will maintain for at least three years:
  - 1. A copy of this Assurance and any modifications thereto, as approved by PHS.
  - 2. Minutes of ACUC meetings, including records of attendance, activities of the committee, and Committee deliberations
  - 3. Records of applications, proposals, and proposed significant changes in the care and use of animals and whether ACUC approval was given or withheld.
  - 4. Records of semiannual ACUC reports and recommendations as forwarded to Dr. Gerald Lang, Provost and Vice President for Academic Affairs and Research.
  - 5. Records of accrediting body determinations.
- B. This institution will maintain records that relate directly to applications, proposals, and proposed changes in ongoing activities reviewed and approved by the ACUC for the duration of the activity and for an additional three years after completion of the activity.
- C. All records shall be accessible for inspection and copying by authorized OLAW or other PHS representatives at reasonable times and in a reasonable manner.

## VI. REPORTING REQUIREMENTS

- A. At least once every 12 months, the ACUC, through the Institutional Official, will report in writing to the Office of Laboratory Animal Welfare (OLAW):
  - 1. Any change in the status of the institution (e.g., if the institution becomes accredited by AAALAC or AAALAC accreditation is revoked), any change in the description of the institution's program for animal care and use as described in this Assurance, or any changes in ACUC membership. If there are no changes to report, this institution will submit a letter to OLAW stating that there are no changes.
  - 2. Notification of the date that the ACUC conducted its semiannual evaluations of the institution's program and submitted the evaluations to the Provost.
- B. The ACUC, through the Institutional Official, will provide the OLAW promptly with a full explanation of the circumstances and actions taken with respect to:
  - 1. Any serious or continuing noncompliance with the PHS Policy.
  - 2. Any serious deviations from the provisions of the Guide.
  - 3. Any suspension of an activity by the ACUC.
- C. Reports filed under VI.A.2. and VI.B. above shall include any minority views filed by members of the ACUC.

VII. INSTITUTIONAL ENDORSEMENT AND PHS APPROVAL

A. Authorized Institutional Official

Name: Gerald E. Lang  
Title: Provost  
Address: 206 Stewart Hall  
Morgantown, West Virginia 26506-6203  
Phone: (304) 293-5701  
  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

B. PHS Approving Official

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Phone: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

C. Effective Date of Assurance \_\_\_\_\_

D. Expiration Date of Assurance \_\_\_\_\_

**ATTACHMENTS**

Attachment A - Organizational Chart

Attachment B - ACUC Membership List

Attachment C - Procedures to Suspend a Protocol

Attachment D - Occupational Health and Safety Program for Animal Users

Attachment E - Animal Facilities & Animal Census

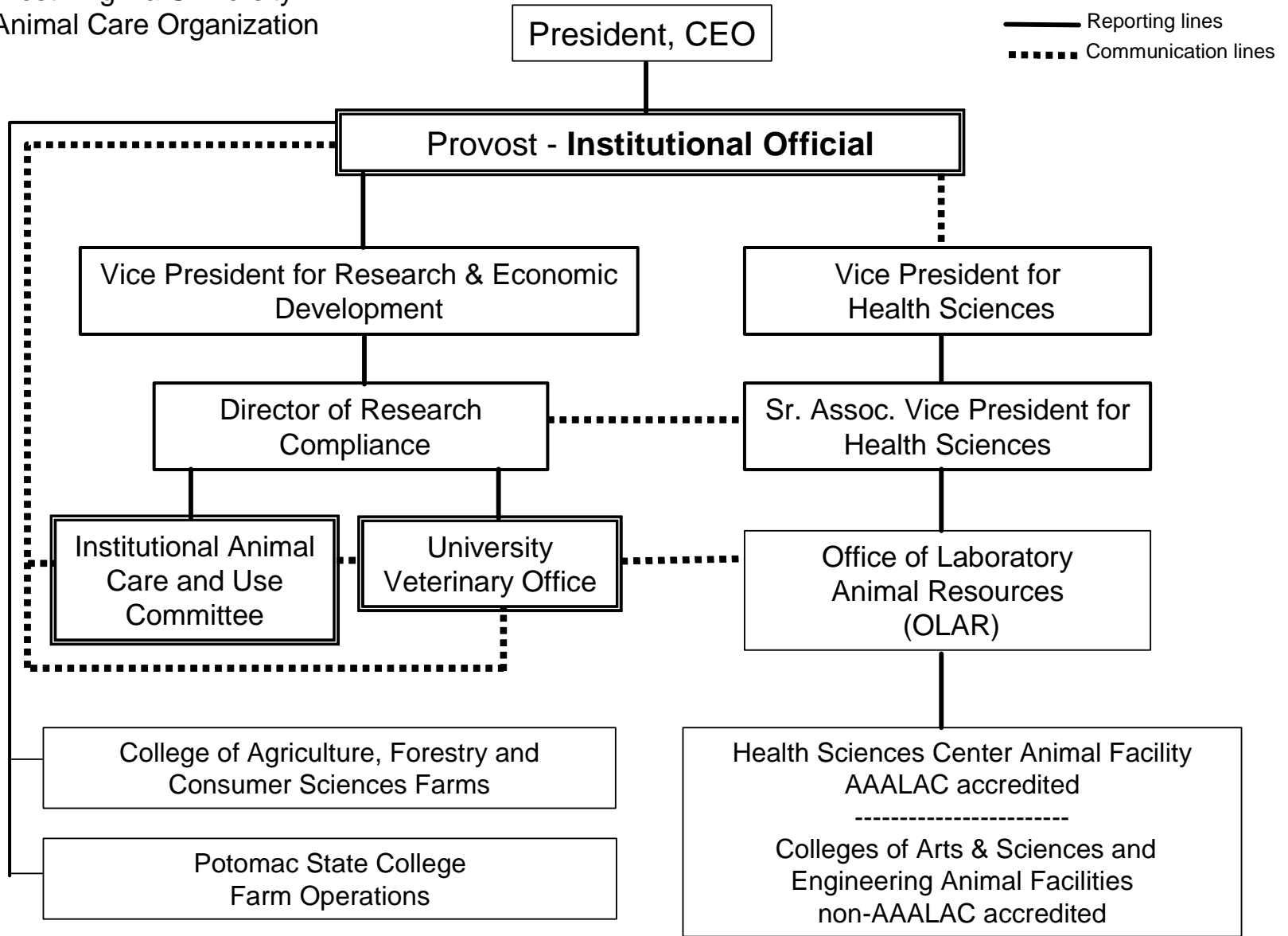
Attachment F - Training and Instruction

**ATTACHMENT A**

**ORGANIZATIONAL CHARTS**



West Virginia University  
Animal Care Organization



**ATTACHMENT B**

**ACUC MEMBERSHIP LIST**

**MEMBERSHIP OF THE INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE** Date: June 2004

NAME OF INSTITUTION: West Virginia University

ASSURANCE NUMBER: **A3597-01**

Chairperson Name, Title, and Degree/Credentials		Business Address, Phone, Fax, and Email of Chairperson		
Name: Stanley D. Yokota		Address: Department of Physiology POB 9229 West Virginia University Morgantown, WV 26508		
Title: Associate Professor of Physiology				
Degree/credentials: Ph.D.		Phone: 304-293-1492	Fax: 304-293-3850	Email: <a href="mailto:Syokota@hsc.wvu.edu">Syokota@hsc.wvu.edu</a>

Name of Member/Code*	Degree/Credentials	Position Title	PHS Policy Membership Requirements**
James Adams	B.S.	Community Representative	Non-affiliated
Andrew Cockburn	Ph.D.	Assoc. Dir. Research Compliance	Non-voting
John M. Connors	Ph.D.	Assoc. Prof. Physiology	Scientist
William T. Jones	B.S., M.S.	Farm Manager	Non-scientist
Kennon A. Lattal	Ph.D.	Professor of Psychology	Scientist
C.G. Garry Linton	D.V.M.	Attending Veterinarian	Veterinarian
Michael Perone	Ph.D.	Professor of Psychology	Scientist (alternate)
Robert E. Pitts	D.V.M.	Attending Veterinarian	Veterinarian
David Smith	Ph.D.	Professor of Pharmacology	Scientist
John E. Warren	Ph.D.	Professor of Animal Science	Scientist
David B. Yelton	Ph.D.	Professor of Microbiology	Scientist

**ATTACHMENT C**

**ACUC Guidelines**

## Chapter VII Noncompliance and Appeals

Whenever questions arise concerning possible noncompliance with ACUC guidelines and other applicable regulations, the ACUC chair and the Committee have the authority to investigate and take appropriate action to ensure compliance or to terminate the project. The principle animal user must cooperate with the ACUC and provide any documentation the Committee may request.

### **A. Authority**

The chair has discretion to temporarily suspend a project under either of the following circumstances:

1. substantial evidence or reasonable suspicion of noncompliance
2. information suggesting that the animals on the project have been mishandled, mistreated, injured, or have died unexpectedly (under questionable circumstances)

### **B. Penalties**

Failure to comply with the requirements of the review process may result in suspension or termination of a project or actions taken under the university scientific misconduct policies.

### **C. Procedures**

Direct all questions or concerns regarding noncompliance with federal law and regulations or with ACUC policies to the chair or the executive secretary of the ACUC.

#### **1. Temporary Suspension**

If the chair temporarily suspends animal use, the animal user(s) and members of the ACUC will be notified promptly and in writing of the suspension and reason(s) for it.

#### **2. Ad hoc Committee**

The chair appoints an ad hoc committee of ACUC members, who will aid in the investigation. The ad hoc committee will offer the animal user(s) and other appropriate personnel an opportunity to meet immediately and discuss the issue.

The executive secretary will provide the animal user(s) with a copy of this chapter and place the issue on the agenda for the next committee meeting.

Note: It is the policy of the ACUC to invite the principal animal user to the next meeting to discuss any questions or concerns.

### 3. Full Committee Meeting

The Committee may confirm or rescind the suspension, convert the suspension to a termination, or conduct further investigation.

### 4. Revocation of Suspension

If the ACUC decides to rescind a suspension, it will so notify the animal user(s) and that person's department chair and dean within seven (7) calendar days.

### 5. First Report

If the ACUC decides to uphold a suspension, to terminate or to conduct further investigation, it will, within seven (7) calendar days, notify the animal user(s) of the nature of the concerns.

As required by university policy, the WVU assurance with the Office of Laboratory Animal Welfare (OLAW) and Animal Welfare Act regulations, the Committee will submit a report of serious or continuing noncompliance with ACUC requirements to the institutional official, who will submit it to OLAW with copies to

1. animal user(s)
2. the department chair(s)
3. dean(s)
4. vice president(s)
5. the provost
6. the general counsel
7. U.S. Department of Agriculture
8. funding source

## **D. Appeals**

If an animal user disagrees with the Committee's decision to suspend or terminate a protocol, he or she may appeal that decision by appearing before the Committee or by requesting an advisory review panel.

The request for an appeal must be made to the ACUC executive secretary, in writing, within seven calendar days of receipt of the Committee's notification of disapproval, suspension, or termination. The entire appeal process is to be completed within 120 calendar days of receipt of the Committee's notification.

**ATTACHMENT D**

Occupational Health and Safety Program  
for Animal Users

**West Virginia University Occupational Health and Safety Program for Persons Working  
with Animals**

## **A. POLICY**

- 1) The IOEH and EH&S are responsible for developing institutional policy for personal hygiene and protection for persons working with animals.
- 2) The Institute of Occupational and Environmental Health (IOEH) and Environmental Health and Safety (EH&S) shall develop appropriate policies for hazard identification, risk assessment and risk management related to animal care and use at West Virginia University (WVU).
- 3) The IOEH is responsible for the medical evaluation and preventive medicine for university community members (faculty, staff, students, and visitors) working with animals.
- 4) IOEH institutional policies, “Animal Care Center Worker Health Policy” and “Human Health during Animal Contact Policy” provide the framework for the occupational health and safety program involving animal work at WVU.
- 5) The Institutional Animal Care and Use Committee (IACUC) is responsible for ensuring that an appropriate occupational health and safety program is in place for all persons who work with animals.

## **Occupational Health and Safety Program Description**

### **B. HAZARD IDENTIFICATION AND RISK ASSESSMENT**

- 1) In general, the IOEH, EH&S, and the University Veterinary Office (UVO) are responsible for hazard identification, risk assessment and management. The Institutional Biohazard Committee (IBC) and the Radiation Safety Committee (RSC) provide specific approval when wild animals, experimental infections, recombinant DNA products, human tissues or radiation are involved, prior to ACUC approval.
- 2) Identification and Evaluation of Potential Hazards such as animal bites, chemical cleaning agents, allergens, zoonoses, and Dangers such as Hazardous Biologic, Chemical, or Physical Agents including Ionizing and Non-ionizing radiation:
  - a) The ACUC, in consultation with IOEH, EH&S, the UVO, and appropriate researchers is responsible for approving species-specific standard recommendations for minimizing or eliminating animal bites, physical hazards, allergens or zoonoses related to the species of animals used at WVU. The species-specific standard recommendations describe the physical, allergy and zoonotic risks and procedures, including the use of Personal Protective Equipment (PPE), to minimize or eliminate these risks.
  - b) When a principal investigator (PI) submits an ACUC protocol form, he/she is obligated to address human health issues, either through acceptance of the species-specific standard recommendations, or through an alternate procedure which is acceptable to the ACUC, with advice from IOEH and EH&S prior to a final decision.
  - c) If a PI plans to work with wild animals, experimental infections, recombinant DNA products, human tissues or radiation, the PI must obtain approval from the IBC or RSC

before the ACUC will approve the ACUC protocol form. Regardless, ALL proposals involving animals must be reviewed and approved by the ACUC before any work with animals can commence. The IBC or RSC may impose additional PPE or other safety requirements.

d) The IOEH, EH&S and UVO will develop recommendations for special species or activities as needed.

3) Management of Potential Hazards such as animal bites, chemical cleaning agents, allergens, zoonoses, and Dangers such as Hazardous Biologic, Chemical, or Physical Agents including Ionizing and Non-ionizing radiation:

a) The IOEH, EH&S and UVO species-specific standard recommendations (including IBC or RSC-specific requirements or special recommendations) may serve as training documents for persons working with animals. “Hands on” training and additional information can be provided by the IOEH, EH&S, UVO, IBC, RSC and / or PI as proposed in the ACUC protocol.

b) IOEH is responsible for the medical evaluation and preventive medicine for persons who working with potential hazards. The IOEH medical personnel manage cases involving injury or illness related to animal care and use.

### **C. MEDICAL EVALUATION AND PREVENTIVE MEDICINE FOR PERSONNEL**

1) The IOEH and EH&S are responsible for operating the occupational health and safety (OHS) program.

2) All persons with animal contact shall be required to complete general animal handling and species-specific training prior to animal contact. This training shall include physical, allergy and zoonotic risks, recommended handling procedures, and the use of Personal Protective Equipment (PPE), to minimize or eliminate these risks.

3) Individual animal users shall have the right to refuse any or all aspects of the human health protection plan associated with their protocol. If an individual refuses to participate in colony protection measures then they may be refused animal contact.

4) IOEH is responsible for developing and managing the medical evaluation and preventive medicine program for persons working with animals, based upon the species and protocols involved.

5) IOEH is responsible for developing the processes to clear personnel to work with animals. The IOEH informs the ACUC if persons are not fit to carry out animal care or use work or if special accommodations are required.

6) All animal users, as identified on each ACUC protocols and class list are included in the OHS program. This includes research / teaching faculty and staff, animal care staff, graduate students, undergraduate students and visiting research / teaching personnel.

7) Research / teaching faculty and staff, and Graduate students:

Before initiating animal care and use activities, research / teaching faculty and staff and graduate students shall enter medical species specific surveillance program administered by

the IOEH medical personnel. The medical evaluation and preventive medicine program, at the minimum, involve a health questionnaire reviewed by the IOEH medical personnel. Based upon the species involved, the magnitude of the exposure, and the results of the questionnaire, IOEH may require physical examinations and additional medical evaluations when indicated. IOEH medical evaluations and preventive medicine plans are updated at least annually through health questionnaires.

8) Animal care staff:

a) The Office of Laboratory Animal Resources (OLAR) Staff:

All new OLAR animal care staff receive a comprehensive medical evaluation at the time of employment that includes: physical examinations; pulmonary function tests; Complete Blood Count; pure tone audiology; serum banking before exposure to primates; measles, mumps, rubella vaccinations and/or testing; TB testing at appropriate intervals. OLAR employees are immunized against tetanus, rabies, and hepatitis A and B. IOEH medical evaluations and preventive medicine management of OLAR staff, including physical examinations, occur annually or more frequently if needed.

b) The College of Agriculture, Forestry and Consumer Sciences Staff:

Animal handling staff, faculty, and graduate students shall be enrolled in a medical monitoring program. This shall include an annual questionnaire, ensuring current tetanus immunization, rabies vaccination for the veterinarian, their assistants, and others designated by the attending veterinarian. Physical examination and

pulmonary function testing on an intermittent basis. Additional medical evaluation and immunizations will be determined by the IOEH using species-specific guidelines as appropriate.

9) Undergraduate students:

A) It is acknowledged that there are various levels of exposure during undergraduate courses.

1. For courses where the exposure is purely observational (no physical contact with the animal by students), such as in-class demonstrations or facility tours, no surveillance or medical monitoring shall be required. The faculty shall make an announcement to the class of the activity and provision of appropriate alternatives for students with allergies.
2. For regularly scheduled courses with animal contact, the need for and type of the medical monitoring shall be determined based upon the magnitude and type of contact and specified in the animal use protocol. It is expected that for most courses this will be limited to an education program with self-referral for follow-up when indicated.
3. For special topics or research experiences with animal contact, the need for and type of the medical monitoring shall be specified in the animal use protocol. It is expected that the students will comply with whatever monitoring and surveillance protocols are in the animal use protocol, as are all other workers covered under the protocol.

Before initiating animal care and use activities, undergraduate students will complete a medical questionnaire and further evaluations if indicated. The medical evaluation and preventive medicine program, at the minimum, involve an IOEH-managed exposure information and advice. A health questionnaire will follow animal species-specific information and recommendations. Certain responses to questions direct the student to seek medical follow up with University Health Services (Student health). University Health

Service will communicate with the IOEH concerning the student's medical case if there are issues which need to be addressed. IOEH can require additional medical evaluations if indicated. IOEH medical evaluations and preventive medicine plans are updated at least each semester through the health questionnaires completed for courses involving live vertebrate animals. A record, devoid of medical information, is maintained by the office of research compliance indicating which students have completed the health questionnaire.

10) Visiting research / teaching personnel:

The PI serving as host is responsible for enrolling visiting research / teaching personnel who work with animals in an IOEH medical evaluation and preventive medicine program before visiting personnel begin their animal work.

11) Facilities Personnel:

Building maintenance and janitorial personnel shall be enrolled in a program appropriate to their level of exposure to animals. All facilities and janitorial staff with potential animal contact will complete an annual surveillance questionnaire. Most maintenance personnel will receive surveillance for colony protection plus tetanus and hepatitis A & B immunizations.

Most janitorial staff will receive tetanus and hepatitis B. In the event that a facilities or janitorial staff member has an episode of contact with non-human primates, the protocol for persons not enrolled in serum banking will be followed.

12) Special precautions for personnel who work with nonhuman primate:

All persons working with nonhuman primates have serum banking samples taken before exposure to primates, shortly after exposure and at yearly intervals; measles, mumps, rubella vaccinations and/or testing; TB testing before exposure to primates and every six months thereafter; and Hepatitis A vaccinations. Additionally, a protocol will be established for the evaluation and treatment of personnel who do not "work with non-human primates", yet who experience contact with a non-human primate or related fomites.

a) Training:

The Director of OLAR provides biosafety training for all persons caring for or using nonhuman primates.

b) Bite/wound kits and follow-up medical care:

Bite/wound kits are provided in the facility housing nonhuman primates. Follow-up medical care is provided by the IOEH and the Ruby (University) Hospital Emergency department, where a treatment protocol has been established.

c) Provision of additional protective clothing:

All persons working with nonhuman primates must wear gloves, eye protection, face masks, caps, gowns / lab coats and shoe covers.

#### **D. PERSONAL HYGIENE AND PROTECTION**

Personal protective equipment and work clothing provided for animal care personnel:

OLAR Animal care personnel are provided work clothes (scrub suits), gloves, lab coats, shoe covers, eye / ear protection, caps, masks and respirators.

College of Agriculture, Forestry and Consumer Sciences animal care personnel are

provided with coveralls or other outer clothing, rubber shoe covers, and gloves suitable to the animals they are working with. Additional protective equipment such as eye/ear protection, mask and respirators are available and will be provided when deemed appropriate for the assigned task or activity.

1) Arrangements for laundering work clothing:

OLAR: In-house (Health Sciences Center animal facility) laundering facilities are available for OLAR animal care personnel work clothing.

College of Agriculture, Forestry and Consumer Sciences animal care personnel: Laundry and shower facilities vary with farm location. The Morgantown location (FARF & Poultry Facility) has both laundry and shower facilities available to the staff. Wardensville unit has a limited shower and no laundry facilities available to staff. The Reedsville unit has no shower and/or laundry facilities available to staff.

2) Provisions for washing hands, showering, and changing clothes:

OLAR: Hand washing sinks are available in animal holding rooms, procedure rooms and locker rooms. Showers are available in locker rooms. In general, work clothes can be worn outside the animal facility (but not away from work) if they have been covered with a lab coat or gown during work with animals (except nonhuman primates). The outer lab coat or gown must remain in the animal facility. Lab coats, gowns and work clothes used with nonhuman primates are placed in the laundry after their use.

Davis College of Agriculture, Forestry and Consumer Sciences animal care personnel: Multiple hand washing sites are available at all farm locations. Work clothes are generally worn away from the work site at the respective (demonstration) farm units. The exception is at the Farm Animal Research Facility (FARF) where outer clothing for the permanent staff personnel is laundered and remain in the facility.

3) Procedures (equipment and instructional) that reduce potential for physical injury:

OLAR: Equipment used to reduce the potential for injury include: personal protective gear such as eye protection, gloves, work boots, hearing protection and lift tables. The OLAR Supervisor is responsible for safety training and oversight of personnel.

Davis College of Agriculture, Forestry and Consumer Sciences animal care personnel: The College representative to the offices of IOEH and EH&S is responsible for all safety training related to all identified chemical, equipment and animal care hazards. Annual safety training programs are available to all staff for chemical, equipment and animal care hazards. Appropriate protective equipment (work boots, steel toed shoes, gloves, etc.) is available to the animal care workers.

4) Eating, drinking, and smoking in animal facilities:

OLAR: Eating and drinking is restricted in the animal facilities and permitted only in the staff lunch room 213, break room 198, supervisor's office room, Life Sciences Building office or institutional cafeteria and vending room. Smoking is not permitted in the animal facilities or any University buildings.

Davis College of Agriculture, Forestry and Consumer Sciences animal care personnel: Eating and drinking are restricted to office and /or lunch room areas identified for all farm locations. Smoking is not permitted in the animal facilities or any University buildings.

## **E. PROCEDURES INVOLVING HAZARDS**

Institutional policies are developed according to the information listed in the section “**A. POLICY**” of this document. The ACUC requires prior approval by the appropriate committee (IBC or RSC) overseeing hazardous agents used in animal protocols before ACUC review.

After review and approval by the appropriate committees (IBC, RSC, IACUC), persons working with hazardous agents can be identified (by the committees, EH&S or IOEH) for special medical monitoring / management.

Follow-up medical care is provided by the IOEH and the Ruby Memorial (University) Hospital.

Exposures to potential hazards should be reported immediately to the animal care facility supervisor or attending veterinarian. Exposures involving non-human primates should follow the existent policy and after irrigation report either to IOEH or the Ruby Memorial Hospital Emergency Department. Follow-up care is provided by IOEH.

The appropriate safety committee (IBC or RSC), EH&S, and the IOEH oversee personnel safety. The UVO and animal care supervisors provide oversight by ensuring that the proper husbandry practices are used to protect animal care personnel and investigators. Procedures might include special animal housing arrangements and/or personal protective equipment as necessary to protect personnel.

Hazardous agents are contained within the study environment by: restricting entry to the area, using special animal housing equipment or research equipment, isolating animals and using other specific equipment or procedures as required by the IBC, RSC, EH&S, or IOEH.

Anesthetic gases are scavenged by an active scavenging vacuum unit connected from the anesthetic machine to a central vacuum line or canisters. When appropriate, exhaust hoods can be used for anesthetic gas scavenging.

A current list of hazardous or potentially hazardous agents currently approved to be used in animals is maintained by the IACUC.

Animals exposed to hazardous agents are managed by using equipment such as microisolator units, reverse laminar flow units and personal protective equipment. The IBC, RSC, EH&S, or IOEH prescribe the safety practices required for each class of agent and assesses personnel exposure on a case by case basis. Special facilities dedicated to housing animals exposed to potentially hazardous materials are not available. Animals exposed to hazards are maintained either in conventional animal holding rooms or laboratory spaces (for short periods of time, typically) with the proper equipment and procedures.

## **Nonhuman Primate Biosafety - Macaques**

### **I. Selected Zoonoses:**

**-Herpes B virus** (Herpes siniae, B virus, Cercopithecine herpes I)  
See CDC article (Holmes, et al 1995 - included).

#### **-Herpes Simplex virus**

The virus is transmitted via active herpes lesions from humans to monkeys (and monkeys to monkeys). Monkeys should not be exposed to humans with active herpes lesions (oral vesicles and ulcers). An infection in monkeys can cause encephalitis and death.

#### **-Mycobacterium tuberculosis (TB) and other Mycobacterium spp.**

The organism is transmitted by the respiratory or oral route, typically from humans to nonhuman primates. Lesions in monkeys include granulomas in many organs including the lungs. TB testing of humans and monkeys is important in controlling the spread of infections.

#### **-Human Measles (Rubeola) virus (Paramyxoviridae)**

This virus is transmitted to monkeys from human hosts by respiratory secretions. Infections in monkeys can result in pneumonia and other clinical conditions. Prevention is by vaccination of humans.

#### **-Mumps (Paramyxovirus)**

Infections with this virus are usually subclinical in monkeys, but there are reports of cases involving parotitis in chimps. Prevention is by vaccination of humans.

#### **-Rubella (German Measles, Togaviridae)**

The virus is carried by humans, but monkeys can seroconvert and experience reproductive problems (abortions and stillbirths).

#### **-Hepatitis B virus (Hepadna virus)**

This virus is rare in nonhuman primates. Chimps have been shown to transmit the virus to people. Macaques have shown to be seropositive for the virus. Transmission is via blood usually, but can be transmitted by the oral and respiratory routes also. The infection is usually subclinical in nonhuman primates.

#### **-Hepatitis A virus (Picorna Enterovirus)**

Natural hosts of this virus can include almost any primate species, including humans. Transmission of the virus is accomplished by the fecal-oral route. The infection is usually subclinical, but it can cause gastroenteritis and jaundice.

#### **-Entamoeba histolytica**

This protozoan parasite is carried by asymptomatic carriers, but it can cause colitis and diarrhea. Transmission is by the fecal-oral route. The infection is usually subclinical, but it can cause gastroenteritis and jaundice.

#### **-Shigella spp. (S. flexneri, S. sonnei, other less common species)**

This organism is common in monkeys, and can be carried by asymptomatic carriers. Transmission is by the fecal-oral route. Infections can cause colitis with bloody, mucoid diarrhea. Prevention is by good sanitation and husbandry practices.

#### **-Salmonella spp. (S. typhimurium, S. enteritidis)**

This organism is not as common as Shigella, but infections can cause cases of enteritis. Prevention

is by good sanitation and husbandry practices and control of contamination of food.

### **-Simian Immunodeficiency Virus (SIV, Retroviridae: lentivirinae)**

"...the seroprevalence of SIV in Asian macaques is low and most SIV infections in these species are related to their use as animal models of AIDS..." (Occupational Health and Safety in the Care and Use of Research Animals, 1997). "SIV has been isolated from several species of macaques (...Macaca arctoides) housed in laboratories. SIV does not infect Asian monkeys in the wild. SIV<sub>MAC</sub> (SIV-Macaca mulatta) is closely related to SIV<sub>SMM</sub>(SIV-Cercocebus torquatus atys (Sooty mangabey) and probably represents a cross-species infection that occurred in captivity" (CL David Foundation 1995 meeting notes from Gary Baskin, DVM, Tulane Regional Primate Research Center).

## II. Medical Monitoring Program for Personnel Working with Nonhuman Primates

-Dr. John Meyer or Dr. Edward Doyle, Institute of Occupational and Environmental Health (IOEH), phone number 293-3693.

-Pre-, Post-contact (3 wks) serum bank samples

-Annual TB test

-MMR test/boosters, Hepatitis A vaccinations

-If injuries or exposures occur: Initial (or stored) Post-injury/exposure and follow up serum samples

## III. First Aid for Injuries

See First Aid Sign and Instructions (included)

## IV. \*Procedures

Nonhuman Primates are handled under the CDC Animal Biosafety Level 2 guidelines which include:

- Personnel training
- Limited access to areas housing animals - Only authorized personnel
- Biohazard warning signs
- Sharps precautions. Do not recap needles if they have been used in primates or their tissues/body fluids.
- Potentially contaminated Broken glassware handled by forceps, etc. and not by hand
- Biosafety manual describing waste decontamination or medical surveillance policies: All biological wastes are considered biohazardous and will be incinerated by OLAR.
- Work surfaces are decontaminated after use or spills:  
Decontaminate surfaces contaminated with primate tissues or body fluids by using Spor-Klenz (undiluted or diluted as directed) or bleach (minimal strength of 1/32). All contaminated wastes are considered biohazards and will be incinerated by OLAR.
- Protective clothing and equipment when working around monkeys (upon entry to areas housing primates):
  - Masks, Respirator masks should be worn (instead of surgical masks) if body fluids or tissues might be aerosolized (surgical drilling, etc.) - see the veterinary staff for further information
  - Eye protection (face shields or approved safety goggles). Prescriptive eyewear alone does not

constitute adequate protection

-Gloves (double gloving is recommended)

-Caps, Lab coats or Gowns, Shoe covers

- Wash hands after handling animals or surfaces potentially contaminated with primate tissues or body fluids or removing gloves.

\*These procedures apply to the animal housing room, OLAR procedure room and the laboratory.



**ATTACHMENT E**

**ANIMAL FACILITIES  
&  
ANIMAL CENSUS**



# FACILITY AND SPECIES INVENTORY

Date: May 2004

NAME OF INSTITUTION: West Virginia University

ASSURANCE NUMBER: A3597-01

Laboratory, Unit, or Building*	Gross Square Feet	Species Housed in Unit	Approx. Avg.Daily Inventory
OLAR, Health Sciences Center	27,508	Cat	19
		Dog	4
		Ferret	0
		Frog	24
		Gerbil	0
		Guinea Pig	12
		Mice	1,310
		Quail	126
		Rabbit	42
		Rat	412
		Snake	25
		Turtle	0
Life Sciences Building	3572	Fish	22
		Pigeon	79
		Rat	96
Engineering Building	900	Rat	0
Stewartstown Farm - Dairy	23,100	Dairy cattle	140
Stewartstown Farm – Livestock	16,250	Beef cattle	112
		Sheep	242
Stewartstown Farm - Poultry	14,110	Poultry	615
Reedsville Farm	14,320	Beef Cattle	200
Reymann Farm - Livestock	37,975	Beef Cattle	190
	12,356	Sheep	112
Reyman Farm – Poultry	8,800	Poultry	0
Reyman Farm - Aquaculture		Trout	700
Potomac State College - Livestock	10,000 (approx)	Horse	30
		Beef Cattle	19



**ATTACHMENT F**

**TRAINING AND INSTRUCTION**

## **ATTACHMENT F**

Personnel Training. WVU and the ACUC has charged Dr. Linton with the authority and responsibility for the education of animal care and research staff. Dr. Linton has implemented a formal in-house personnel training program for OLAR staff, animal care and technical personnel and research staff. Investigators and research staff receive certification after completing an on-line training session and test covering federal regulations and institutional policies which govern their work. Specialized training dealing with the specific procedures of animal use is provided on a case by case basis by either the Veterinary Staff, or the Principal Investigator of the project, if it is more appropriate.

The responsibility of education for animal use in the Division of Animal and Veterinary Sciences in the College of Agriculture, Forestry and Consumer Sciences has currently been assigned to Dr. Robert Pitts. Dr. Matlick is responsible for similar training at Potomac State College.



