

Memorandum to: [Fred King, PhD]
From: Institutional Animal Care and Use Committee
Subject: Semiannual Report of the Program Review and Facility Inspection
Date: [January 29, 2021]

This report summarizes the IACUC's results of its most recent program review and facility inspection, as required by the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals ([Policy](#)), Section [IV.B.1.-3.](#), the *Guide for the Care and Use of Laboratory Animals* ([Guide](#)), and the Animal Welfare Act ([AWA](#)) regulations, as applicable. Submission of semiannual reports to the Institutional Official is a condition of this institution's Animal Welfare Assurance with the NIH Office of Laboratory Animal Welfare (OLAW).

Since the last review, the following changes have occurred in the institution's program for animal care and use (PHS Policy [IV.A.1.a.-i.](#)): [optional]

Personnel updates to the WVU Animal Care and Use Program include the hiring of a new OLAR clinical veterinarian and the following changes to IACUC membership: retirement of one scientist member; appointments of one alternate to full member status (Scientist/Biosafety Officer), one new member (Clinical Veterinarian) and two scientist alternates.

In light of the Covid-19 Pandemic, the IACUC approved a change in procedures for protocol amendment review to support the restart of animal research activities (WVU IACUC Policy: Review Process for Requested Modifications to Approved IACUC Protocols). More specifically, requests to increase animal numbers with no new procedures or drugs/experimental substances can be reviewed administratively, allowing for a more rapid turn-around for approval. Per OLAW's guidance on Significant Changes to Animal Activities (NOT-OD-14-126), an increase in approved animal numbers can be handled administratively if there is an approved IACUC policy in place.

I. Description of the Nature and Extent of the Institution's Adherence to the PHS Policy, the *Guide*, and the AWA

Departures from the PHS Policy, the *Guide*, and the AWA.

Select A or B:

- ☐ A. There were no departures during this reporting period.
☒ B. The following departures have been reviewed and approved by the IACUC: *[include reason for each departure]*

Please see the attached "Fall 2020 Departures".

II. Deficiencies in the Institution's Animal Care and Use Program

Animal Care and Use Program Review Date(s):

Select A or B:

- ☐ A. There were no deficiencies in the program during this reporting period.
☒ B. The following deficiencies have been identified: *[describe each deficiency, identify each deficiency as either minor or significant, and provide a reasonable and specific plan and schedule for the correction of each deficiency, deficiencies may be recorded on a separate table and attached, the last page of OLAW's Sample Semiannual Program Review and Facility Inspection Checklist provides a sample table]*

The IACUC utilized the OLAW Assurance template, OLAW's Semiannual Program Review Checklist, and the FASS Guide to conduct the semiannual program review. Please see attached summary "Fall 2020 Program Review - Deficiencies".

III. Deficiencies in the Institution's Animal Facility

Animal Facility Inspection Date(s):

Select A or B:

- ☐ A. There were no deficiencies in the animal facility during this reporting period.
- ☒ B. The following deficiencies have been identified: *[describe each deficiency, identify each deficiency as either minor or significant, and provide a reasonable and specific plan and schedule for the correction of each deficiency, deficiencies may be recorded on a separate table and attached, the last page of OLAW's Sample Semiannual Program Review and Facility Inspection Checklist provides a sample table]*

Please see the attached "Fall 2020 Facility and Surgical Inspections".

IV. Minority Views

Select A or B:

- ☒ A. No minority views were submitted or expressed.
- ☐ B. The following minority views were expressed: *[insert minority views here or attach]*

V. Status of AAALAC Accreditation *[identify accredited facilities, if applicable]*

AAALAC full re-accreditation was granted in 2019 and covers HSC, RNI, LSB and the FARF.

VI. Signatures *[signatures of a majority of the IACUC members required by AWAR (§2.31,c,3), if applicable]*

Names of IACUC Members	Signatures
See attached signature pages	

FALL 2020 DEPARTURES

Protocol Number	Species	Departure Category	Departure Description
1603000971	Rat	No Enrichment ¹	Withhold crinkle paper or any other type of enrichment to animals undergoing UCMS (unpredictable chronic mild stress) because it will dampen the effects of the depressive stimulus, thereby impacting the scientific results from those groups.
1604002026; 1801012067	Mouse	No Enrichment ¹	During metabolic testing in CLAMs metabolic cages, animals are singly housed without enrichment up to 7 days.
1801012067	Mouse	Irregular diurnal cycles ² ; No daily monitoring ³	Mice are kept in complete darkness up to 72 hours with no daily checks (singly housed, water bottle fill limited to minimize flooding risk & hydrogel provided).
1803013440	Mouse	Irregular diurnal cycles ²	Dark rearing of mice (blindness model) for max of 60 days.
1801012111; 1803013068; 2008035833	Mouse Rat Mouse	Restraint- no adaptation ⁴	No acclimation is provided to restraint because it is being used as a stress model.

References from The Guide (8th Ed.):

1. Environmental Enrichment pp. 52-54.

"Novelty of enrichment through rotation or replacement of items should be a consideration."

This should statement does not have an exception explicitly stated. The Guide also references a study that does not support the view that environmental enrichment can compromise experimental results:

"Some scientists have raised concerns that environmental enrichment may compromise experimental standardization. A systematic study in mice did not find evidence to support this viewpoint (Wolfer et al. 2004), indicating that housing conditions can be enriched without compromising the precision or reproducibility of experimental results. Further research in other species may be needed to confirm this conclusion."

2. Illumination pp.47-49.

"A time-controlled lighting system should be used to ensure a regular diurnal cycle..."

This should statement does not have an exception explicitly stated.

3. Emergency, Weekend, and Holiday care, pp. 74:

"Animals should be cared for by qualified personnel every day, including weekends and holidays, both to safeguard their well-being and to satisfy research requirements."

This should statement does not have an exception explicitly stated.

4. Physical Restraint pp. 29-20.

"Animals to be placed in restraint devices should be given training (with positive reinforcement) to adapt to the equipment and personnel."

This should statement does not have an exception explicitly stated.

FALL 2020 PROGRAM REVIEW- DEFICIENCIES

ABBREVIATIONS: Attending Veterinarian (AV); Institutional Animal Care and Use Committee (IACUC); Beef Quality Assurance (BQA); Inter-Institutional Agreement (IIA); Environmental Health and Safety (EHS); Memorandum of Understanding (MOU); Office of Animal Welfare (OAW); Office of Laboratory Animals (OLAR); Office of Sponsored Programs (OSP); Post Approval Monitoring (PAM); Principal Investigator (PI); West Virginia Division of Natural Resources (WVDNR)

OLAW CHECKLIST TOPIC	NATURE OF DEFICIENCY	PLAN/SCHEDULE FOR CORRECTION
Animal Care and Use Program		
Inter-institutional collaborations are described in formal written agreements (<i>Guide, p 15</i>)	MINOR: The OAW does initiate IIAs or MOUs when collaborations involving animal use are identified from information provided by OSP or voluntarily provided by PIs. This was marked as a minor deficiency since there is no official IACUC policy on inter-institutional collaborations.	A specific question about collaborations has been added to the form in the new Quali electronic protocol system. An IACUC policy on inter-institutional collaborations will be created. This will provide more guidance to PIs in regards to responsibilities for reporting collaborations to the IACUC. Transition to active protocols in Quali system will start in 1 st quarter of 2021.
Written agreements address responsibilities, animal ownership, and IACUC oversight (<i>Guide, p 15</i>)	MINOR: This was marked minor since there is room for improvement.	MOUs are currently being developed for veterinary care across sister campuses and for collaborations with organizations such as Hearts of Gold. Projected complete is 1 st quarter of 2021.
<ol style="list-style-type: none"> 1. Establishing standard operating procedures can assist an institution in complying with regulations, policies, and principles as well as with day-to-day operations and management. (<i>Guide p7</i>) 2. Husbandry procedures and production methods at agricultural research facilities are revised as research demonstrates improvements. (FASS p3) 3. The IACUC must review and approve all written operating procedures involving the potential to cause pain or distress and should review all written operating procedures pertaining to animal care and husbandry (FASS p2) 4. The attending veterinarian, in conjunction with the principal scientist, should formulate written procedures to assess the health status of a herd or flock obtained from a vendor before acquiring animals. (FASS p8) 	MINOR: An effort started earlier this year to improve procedure documentation and consistency across the agricultural program. Currently the OAW is working with the AV, Agricultural Clinical Veterinarian, and other agricultural stakeholders to revise documentation and ensure the expectations of the Ag Guide are met.	Projected completion date is September 30 of 2021.
Disaster Planning and Emergency Preparedness		
<ol style="list-style-type: none"> 1. Disaster plans for each facility to include satellite locations are in place (<i>Guide, p 35, p 75</i>) 2. A site-specific emergency plan must be developed to care for agricultural animals that are used for research and teaching (Ag Guide p23) 	MINOR: Both satellite facilities and specific agricultural research animal sites require more site-specific information to be included in the university's disaster plan.	In the first quarter of 2021 the AV will be heading a project to completely revise the disaster plan. One of the objectives will be to develop more site-specific information for various satellite facilities and agricultural research sites.

FALL 2020 PROGRAM REVIEW- DEFICIENCIES

OLAW CHECKLIST TOPIC	NATURE OF DEFICIENCY	PLAN/SCHEDULE FOR CORRECTION
Disaster Planning and Emergency Preparedness (cont.)		
1. Plans include essential personnel and their training (<i>Guide, p 35</i>) 2. Employees understand their role in an emergency response plan (AG GUIDE p23)	MINOR: The training aspect of this statement was considered a minor deficiency. It was noted that in the past, OLAR personnel were given Disaster Plan training, but training across other campuses and for Satellites may be inconsistent.	Suggestions for improvement include a more formal, documented process of training personnel on Disaster Plans/Preparedness in both the biomedical and agricultural programs, as well as Satellites. Projected completion: 2 nd quarter 2021.
IACUC		
IACUC evaluates the effectiveness of training programs (<i>Guide, p 15</i>)	MINOR: The PAM program and IACUC review of reported adverse events help determine areas where training programs may be lacking. This was marked as a minor deficiency as there is room for improvement.	The effectiveness of the training programs will be explicitly evaluated at a minimum every 3 years, rather than just on an as needed basis. Projected completion of first evaluation: last quarter 2022.
IACUC Records and Reporting Requirements		
Semiannual report to the IO (PHS Policy, IV.B.): Includes a plan and schedule for correction for each deficiency identified	MINOR: This is clearly included for inspection deficiencies. However, this was marked a minor deficiency as it may not have been provided as consistently for program deficiencies in the past.	The current program review report explicitly includes this information (correction completed).
Veterinary Care		
Veterinary access to all animals is provided (<i>Guide, p 14</i>) [must]	MINOR: Although there is veterinary emergency access to all animals via campus security/police, this item was marked a minor deficiency as the AV would like to have regular access to Satellite facilities for veterinary checks.	A list of Satellite areas where keys or key card access is needed is being put together, and the relevant facility/building managers will be contacted. The AV is planning to have the veterinary technicians start to do walk throughs to check the spaces and the animals. Projected completion: 1 st quarter 2021.
Veterinary Care – Clinical Care and Management		
1. Procedures are in place to address: Veterinary review and oversight of medical and animal use records (<i>Guide, p 115</i>) 2. Medical Records are maintained in the manner established by the attending veterinarian (AG GUIDE p11) 3. Attending veterinarian must communicate with, and oversee veterinary care provided by other veterinarians. (FASS p9) 4. Medical record system must be structured so that information is easily collected, gathered, analyzed, summarized, and available to the veterinarian, the principal scientist, and the IACUC (FASS p11)	MINOR, REPEAT: This item was marked as a repeat deficiency from the Spring 2020 review due to ongoing issues with obtaining adequate records from a sister campus farm. It was noted that records were available at 2/3 sites at the farm in question during the Fall 2020 inspections.	The Attending Veterinarian and Clinical Agricultural veterinarians are evaluating software that will allow them to share records electronically online. This will allow for greater standardization and consistent access to all pertinent parties. It is expected that this will be completed by September 30, 2021 consistent with other identified improvements in the Agriculture research program.

FALL 2020 PROGRAM REVIEW- DEFICIENCIES

OLAW CHECKLIST TOPIC	NATURE OF DEFICIENCY	PLAN/SCHEDULE FOR CORRECTION
Veterinary Care – Animal Procurement and Transportation/Preventative Medicine		
Population status of wildlife species is considered prior to procurement (<i>Guide, p 106</i>)	MINOR: This item was marked as a minor deficiency since the current protocol form does not ask for this information directly. However, it was noted that the scientific collection permits required by the WVDNR or other state agencies would presumably cover this for target species.	The new Kualu protocol form asks about population status of any non-target species that may be impacted by the research. Transition to active protocols in Kualu system will start in 1 st quarter of 2021.
Appropriate records are maintained on animal acquisition (<i>Guide, p 106</i>)	MINOR: This item was marked as a minor deficiency as there was some uncertainty regarding what types of records are maintained by the fish Satellite PIs who do not procure through OLAR.	The AV plans to increase veterinary oversight of Satellites, and procurement records can be requested during semiannual Satellite inspections. Projected completion: 1 st quarter 2021.
Veterinary Care – Surgery		
<ol style="list-style-type: none"> 1. Researchers have appropriate training to ensure good technique (<i>Guide, p 115</i>). 2. Surgical training provided is documented and the competency of personnel assured. (AG GUIDE p11) 3. Surgical training program must be reviewed by the IACUC and under the direction of the attending veterinarian or his/ her designee (AG GUIDE p11) 	MINOR: This item was marked as a minor deficiency as increased oversight is needed. Currently, good surgical technique is evaluated on protocols selected for PAM, but otherwise falls primarily on the PI to determine. Surgery training is not offered by OLAR on a regular basis, but rather on request. Currently online surgical practices training is offered but not mandatory for all surgical protocols.	One of the duties of the new OLAR clinical veterinarian will be maintaining a training program that includes surgery and euthanasia. A subcommittee will be formed to evaluate the current training programs for animal use at WVU and to assure that training requirements are consistent with the Guide and the Ag Guide. Projected completion: 2 nd to 3 rd quarter 2021.
Effective procedures for sterilizing instruments and monitoring expiration dates on sterile packs are in place (<i>Guide, p 119</i>).	MINOR: This item was marked as a minor deficiency, as the recent surgical space inspections revealed that some non-OLAR autoclaves being used for surgical supplies/instruments are not appropriately validated or maintained.	The current IACUC policy on Sterile Pack Processing has been updated to add information regarding responsibilities for autoclave validation and documentation (correction completed).
Veterinary Care – Pain, Distress, Anesthesia, Analgesia		
Guidelines for selection and use of analgesics and anesthetics are in place and regularly reviewed and updated (<i>Guide, p 122</i>)	MINOR: Although it was noted that there is a relatively recently updated formulary posted to OLAR's website, the AV feels that it is not very user friendly for PIs. This was therefore marked as a minor deficiency.	The AV is working with the clinical veterinarians to create a new formulary that will be easier for PIs to use and apply to their protocols. Projected completion: 1 st quarter 2021

FALL 2020 PROGRAM REVIEW- DEFICIENCIES

OLAW CHECKLIST TOPIC	NATURE OF DEFICIENCY	PLAN/SCHEDULE FOR CORRECTION
Veterinary Care – Euthanasia		
Standardized methods are developed and approved by the veterinarian and IACUC that avoid distress and consider animal age and species (<i>Guide</i> , pp 123-124)	MINOR: Although this is done on a per protocol basis as part of the veterinary/IACUC review of protocols, the item was marked as a minor deficiency because current IACUC guidelines only cover cervical dislocation/decapitation. Broader euthanasia guidelines are needed.	The AV is working with clinical veterinarians and PAM Administrators to draft more comprehensive euthanasia guidelines in terms of both method and species (correction completed).
Training is provided on appropriate methods for each species and considers psychological stress to personnel (<i>Guide</i> , p 124)	MINOR: This item was marked as a minor deficiency, as currently hands-on training falls mainly on the PI and is provided by OLAR only on request. The CITI modules offer some species-specific euthanasia information, but not all species are represented in the currently offered list of courses.	One of the duties of the new OLAR clinical veterinarian will be maintaining a training program that includes surgery and euthanasia. Projected completion: 2 nd to 3 rd quarter 2021.
Procedures and training are in place to ensure death is confirmed (<i>Guide</i> , p 124) [must]	MINOR: Although the procedure aspect was considered acceptable since it is subject to veterinary and IACUC review in the protocol itself, the training aspect of this item was considered a minor deficiency due to the same reason as described above.	One of the duties of the new OLAR clinical veterinarian will be maintaining a training program that includes surgery and euthanasia. Projected completion: 2 nd to 3 rd quarter 2021.
Personnel Qualifications and Training		
Training program content includes (<i>Guide</i> , p 17): Humane practices of animal use (e.g., research procedures, use of anesthesia, pre- and post-operative care, aseptic surgical techniques and euthanasia (<i>Guide</i> , p 17))	SUGGESTED IMPROVEMENT: This was marked as acceptable, but there was a suggestion for improvement. The AV would like the IACUC to consider making the aseptic CITI module mandatory rather than recommended.	The topic will be presented to the IACUC for discussion and vote at an IACUC meeting in the first quarter of 2021. Projected completion: 1st quarter 2021.

FALL 2020 PROGRAM REVIEW- DEFICIENCIES

OTHER TOPICS	NATURE OF DEFICIENCY	PLAN/SCHEDULE FOR CORRECTION
Procedures for reporting clinical emergencies	MINOR: This additional programmatic deficiency was identified during IACUC discussion of an adverse event involving research personnel performing a clinical intervention without prior veterinary consultation. The AV expressed concerns that PIs and research personnel are not aware of the proper procedures to follow when there is a clinical emergency, particularly when it occurs outside of normal staffing hours.	The OAW, IACUC Chair, and AV are working on an update to the IACUC's Adverse Event/Unexpected Outcome Reporting Policy to incorporate guidelines for reporting clinical emergencies. A revised policy and procedure is likely to be approved by the IACUC by the 1 st quarter 2021.
Sect. 2.31 (d)(5) of the Animal Welfare Act states that the IACUC is to conduct continuing reviews of activities involved with animals not less than annually.	MINOR: An annual review of IACUC protocol #1812019943 was initiated in September of 2020 utilizing the new KUALI protocol system. Difficulties in implementing the system led to delays in successful completion of the review within the time frame required by this regulation. Prior to approval of the annual review after this period, the PI contacted the OAW and asked to close the protocol. As a result, the review was not completed.	This was a one-time occurrence that is resolved since the PI ultimately decided to close the protocol and no animal use occurred during the timeframe covered by the annual review. Note that In November of 2020 the USDA announced they would be holding listening sessions on a proposal for the elimination of the annual review requirement to better align with the policies of the National Institutes of Health and the Guide for Care and Use of Laboratory Animals.
Social Environment (The Guide, 8th Ed).: "In the absence of other animals, enrichment should be offered such as a positive interaction with the animal care staff and additional enrichment items or addition of a companion animal in the room or housing area."	MINOR: During facility inspections, the AV observed a trend where singly housed animals were not provided with extra enrichment in the cage.	The AV is working on an OLAR Enrichment SOP and will inform PIs that a second form of enrichment will be provided for singly housed animals unless an exception is approved in the protocol. Projected completion: 1 st or 2 nd quarter of 2021.

FALL 2020 PROGRAM REVIEW- DEFICIENCIES

FASS TOPICS	NATURE OF DEFICIENCY	PLAN/SCHEDULE FOR CORRECTION
Health and Safety of Personnel and Public		
<p>1. Residues of 3 groups of chemicals must be prevented from occurring in research animals if those animals, or their products, are going into the human food chain. These are 1) approved drugs used according to directions on the label, 2) drugs used in an extra-label fashion, and 3) other chemicals such as herbicides, pesticides, and wood preservatives.) (FASS p12)</p> <p>2. Before animals may be slaughtered for human or animal food purposes, sent to auctions or other markets, a time must be allowed for medications, drugs approved by the Food and Drug Administration (FDA), or substances allowed by the FDA for experimental testing under the Investigational New Animal Drug (INAD) exemption to be depleted from the tissues. (FASS p12)</p> <p>3. For Animals destined human or animal food purposes, sent to auctions or other markets, a: A record of the products used, dose, route of administration, duration of treatment, and period of withdrawal must be maintained for substances used in live animals during research (FASS p12)</p>	<p>MINOR:</p> <ul style="list-style-type: none"> • Treatment sheet outlines withdrawal time. It was noted that currently, there are no known active studies where substances without FDA-approved withdrawal times are used in animals offered for sale. • Evaluated at protocol review for Ag animals. • Records collected at protocol level; Better administration levels need to be kept. • Agronomy- Sometimes functions (drugs, withdrawal, injection location) occur without knowledge of vets or farm managers. 	<p>Records for drug withdrawal for use in animals entering the human food chain should be improved. Records should be maintained at the administrative level to improve consistency and oversight. A policy may be needed for any future studies that use substances without an FDA-approved withdrawal time.</p> <p>The Attending Veterinarian and Clinical Agricultural veterinarians are evaluating software that will allow them to share records electronically online. This will allow for greater standardization and consistent access to all pertinent parties.</p> <p>Initial discussions of creating subcommittee to evaluate current procedures as to meeting the expectation of the Ag Guide has begun. A projected completion date of evaluation and implementation of improvement would be September 30, 2021</p>

FALL 2020 PROGRAM REVIEW- DEFICIENCIES

FASS TOPICS	NATURE OF DEFICIENCY	PLAN/SCHEDULE FOR CORRECTION
Health and Safety of Personnel and Public (cont.)		
Pharmaceuticals intended for use in food-producing animals must be managed responsibly. Storage should be in an area that is clean and dry and that offers protection from changes in temperature, sunlight, dust, moisture, and vermin (FASS p12)	MINOR: The Veterinary staff indicated the need to evaluate procedures for drug storage for consistency with stipulations of the AG Guide. There may currently be situations needing improvement. For example drugs stored in program trucks where constant temperature control cannot be verified may exist.	A review and update of drug storage procedures needs to be completed. Expected implementation of identified procedure modifications by September 30, 2021.
<p>1. Harmful products are properly labeled and stored, a record of their purchase and expiration dates are kept and personnel are informed of potential hazards and wear appropriate protective equipment (FASS p14)</p> <p>2. Records of all potentially harmful products used in the facility, their storage, their use, and their disposal are maintained in a manner similar to the quality assurance programs used by responsible farmers in the food animal industry. (FASS p13)</p>	MINOR: A recent isolated incident at one of the farms involving a hazard exposure to humans and animals highlighted a need to assess chemical safety procedures for the Agricultural program and ensure procedures are consistent with the expectations of the Ag Guide.	<p>The OAW is currently working to implement enhanced pre-review procedures that should help indicate which protocols include harmful products so that EHS can ensure that these needs are addressed for the protocol.</p> <p>A long-term plan within EHS is to create a Chemical Safety Committee (similar to Biosafety and Radiation Safety) that will provide more oversight of chemical hazard use.</p> <p>The agriculture stakeholders are currently assessing software that would assist in improving records of chemical inventory and use.</p> <p>Current projection date of implementation for most Agricultural programmatic improvements is September 30, 2021</p>
<p>1. Workers do not leave workplace in protective clothing that has been worn in animal areas (FASS p25)</p> <p>2. Personnel are not allowed to eat, drink, apply cosmetics, or use tobacco in animal facilities (FASS 25)</p> <p>3. Procedures to protect visitors to animal facilities are in place (FASS p25)</p>	MINOR: The biosecurity program for the agricultural sites is due for an update and organization.	An overall review of biosecurity at the Agricultural research facilities is planned. It is expected that this will include policies, procedures, and recommendations that ensure the program is consistent with the requirements of the Ag Guide. Currently it is projected that changes will be implemented by September 30, 2021.

FALL 2020 PROGRAM REVIEW- DEFICIENCIES

FASS TOPICS	NATURE OF DEFICIENCY	PLAN/SCHEDULE FOR CORRECTION
Biosecurity		
<p>1. Herd health and sanitation programs are in place to prevent disease outbreak (FASS p26)</p> <p>2. When warranted, waste and bedding that have been removed from a site occupied by an animal that has died is moved to an area that is inaccessible to other animals and the site appropriately disinfected. (FASS p9)</p> <p>3. Newly acquired animals undergo a quarantine and acclimation period, including preventive and clinical treatments as appropriate for their health status (FASS p8)</p>	<p>MINOR: The current biosecurity program should be better organized and show consistency in procedures and responsibilities.</p>	<p>The Ag stakeholders group are currently discussing ways to improve the biosecurity and decrease the possibility of transmission of disease between animals and for those diseases that may be transmissible to people. Program improvements are projected to be implemented by September 30, 2021.</p>

FALL 2020 FACILITY INSPECTION DEFICIENCIES*

FACILITY	Room Type	Deficiency Type	Deficiency Category	Deficiency	Plan of Correction	Projected completion date
FARF	Surgical Area	Drugs/General Supplies	Minor	Expired drugs that are not anesthetics/analgesics/euthanasia solutions	Expired drugs were appropriately destroyed/discarded.	complete
FARF	Surgical Area	Drugs/General Supplies	Minor	Expired drugs that are not anesthetics/analgesics/euthanasia solutions	Vet staff disposed of bottles.	complete
FARF	Surgical Prep Area	EH&S Issues	Minor	Improper sharps disposal	The information was provided to the laboratory and the OLAR staff discussed proper disposal of sharps.	2/14/21
FARF	Supply Room	Drugs/General Supplies	Minor	Expired drugs that are not anesthetics/analgesics/euthanasia solutions	Vet staff disposed of bottles and completed inventory in the drug cabinet.	complete
Hearts of Gold Training Facility: MOU Coverage	Exterior: play area - non-USDA	Area Maintenance	Minor	Damaged fencing	A work order was submitted, and the fence was repaired.	4/15/21
Hearts of Gold Training Facility	Supply Room	EH&S Issues	Minor	Unlabeled substance (cleaning solution/chemicals)	Substances have been properly labeled.	complete
HSC Main	Animal Holding	Environment	Minor	Hot/cold temperatures	OLAR is working with facilities to adjust the temperature set point in these rooms to ensure the guide standards are maintained.	complete

*Deficiencies are identified as contrary to the requirements of the Guide for Care and Use of Laboratory Animals, eighth edition.
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WVU FOIA #21026-012

FALL 2020 FACILITY INSPECTION DEFICIENCIES*

FACILITY	Room Type	Deficiency Type	Deficiency Category	Deficiency	Plan of Correction	Projected completion date
HSC Vivarium	Procedure Room	Sanitation	Minor	Dirty procedure room	This room is used for RBC testing in the water maze which involves the use of non-toxic paint to mask the location of the escape platform and the maximize the contrast of the rodents for the tracking software. The sink, floor, buckets, and curtains are stained with the non-toxic paint - they are not "dirty", they are painted. Floors are swept and mopped daily after use and were re-swept and mopped the evening prior to inspection. Hoses and buckets are used daily for maze preparation. Will wash c	complete
HSC Vivarium	Storage	Sanitation	Minor	Clean but uncovered cages	OLAR ordering more covers.	complete
HSC Vivarium	Storage	Area Maintenance	Minor	Loose/broken/missing floor tile	Work order submitted.	4/15/21

*Deficiencies are identified as contrary to the requirements of the Guide for Care and Use of Laboratory Animals, eighth edition.
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WVU FOIA #21026-013

FALL 2020 FACILITY INSPECTION DEFICIENCIES*

FACILITY	Room Type	Deficiency Type	Deficiency Category	Deficiency	Plan of Correction	Projected completion date
HSC Vivarium	Storage	Drugs/General Supplies	Minor	Secondary drug containment not appropriately labeled	OLAR properly labeled the secondary drug containers	complete
HSC Vivarium	Service Area	Environment	Minor	High humidity	Working with facilities to adjust room temperature setpoint.	4/15/21
HSC Vivarium	Procedure Room	Sanitation	Minor	Dirty procedure room	Tables have been cleaned, floor sweep, and trash emptied.	complete
HSC Vivarium	Surgical room	Records	Minor	Inadequate record keeping (see notes)	Work on adding room log	1/22/21
HSC Vivarium	Animal Holding	Environment	Minor	No temperature monitors/broken thermometer	Temperature monitor placed in the room	complete
HSC Vivarium	Surgical room	Drugs/General Supplies	Minor	Secondary drug containment not appropriately labeled	Drug containment now labeled appropriately	complete
HSC Vivarium	Procedure Room	Drugs/General Supplies	Minor	Secondary drug containment not appropriately labeled	Drug containment now labeled appropriately	complete
HSC Vivarium	common space	Drugs/General Supplies	Minor	Secondary drug containment not appropriately labeled	This has been addressed. PI was contacted and he has labeled all his supplies. They now have a designated storage box in the AMIF that contains all of his supplies. Also, he is not currently doing animal work, so these supplies are not in use for animals.	complete

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WVU FOIA #21026-014

FALL 2020 FACILITY INSPECTION DEFICIENCIES*

FACILITY	Room Type	Deficiency Type	Deficiency Category	Deficiency	Plan of Correction	Projected completion date
HSC Vivarium	Surgical room	Sanitation	Minor	Dirty equipment	PI was contacted and OLAR assisted with organizing space	complete
HSC Vivarium	Aquatic	Other	Minor	Other	Work order submitted.	4/15/21
HSC Vivarium	Aquatic	Drugs/General Supplies	Minor	Secondary drug containment not appropriately labeled	Drug containment now labeled appropriately	complete
HSC Vivarium	Procedure Room	Area Maintenance	Minor	Leaking faucet	Work order submitted.	4/15/21
HSC Vivarium	Procedure Room	Drugs/General Supplies	Minor	Secondary drug containment not appropriately labeled	Drug containment now labeled appropriately	complete
HSC Vivarium	Cage Wash	Records	Minor	Cage wash records incomplete/missing	OLAR husbandry staff will ensure records are complete and available	complete
HSC Vivarium	Service Area	Sanitation	Minor	Accumulation of dust/debris	OLAR SOPs are in the process of being revised to address this.	complete
HSC Vivarium	Service Area	Sanitation	Minor	Accumulation of dust/debris	Working on developing a plan for cleaning frequency.	complete
HSC Vivarium	Cage Wash	Equipment	Minor	Cage wash safety features not labeled.	OLAR properly labeled safety cables	complete
HSC Vivarium	Cage Wash	Records	Minor	Cage wash records incomplete/missing	OLAR husbandry staff will ensure records are complete and available	complete
HSC Vivarium	Cage Wash	Records	Minor	Cage wash records incomplete/missing	OLAR husbandry staff will ensure records are complete and available	complete
HSC Vivarium	Cage Wash	EHS	Minor	Unable to tell when eyewash station is being checked	The eyewash is flushed and recorded weekly	complete

*Deficiencies are identified as contrary to the requirements of the Guide for Care and Use of Laboratory Animals, eighth edition.
Fall 2020 Semiannual Report

WVU FOIA #21026-015

FALL 2020 FACILITY INSPECTION DEFICIENCIES*

FACILITY	Room Type	Deficiency Type	Deficiency Category	Deficiency	Plan of Correction	Projected completion date
HSC Vivarium	Service Area	Area Maintenance	Minor	Door not properly closing/locking	Work order submitted.	4/15/21
HSC Vivarium	Procedure Room	Area Maintenance	Minor	Uncovered/Broken electrical strip/outlet/cover	Work order submitted	4/15/21
HSC Vivarium	Animal Holding	Environment	Minor	Colder Temperatures being recorded in room	Working with facilities to increase setpoint in room and avoid lower room temperatures.	complete
HSC Vivarium	Procedure Room	Area Maintenance	Minor	Uncovered/Broken electrical strip/outlet/cover	Work order submitted	4/15/21
HSC Vivarium	Animal Holding	Food and Water	Minor	Food without expiration label	Expiration date added	complete
HSC Vivarium	Animal Holding	Environment	Minor	Hot/cold temperatures	Working with facilities to increase room setpoint.	complete
HSC Vivarium	Animal Holding	Records	Minor	Inadequate record keeping (see notes)	OLAR SOPs are in the process of being revised to address this.	4/15/21
HSC Vivarium	Animal Holding	Animal Care	Minor	Single housing not justified	Working with IACUC to develop policy.	4/15/21
HSC Vivarium	Animal Holding	Animal Care	Minor	Single housing not justified	Enrichment IACUC policy and OLAR SOP involving enrichment being addressed. Single housing policy should be evaluated	4/15/21
HSC Vivarium	Animal Holding	Food and Water	Minor	Water bottle not secured on cage	No longer in room.	complete

*Deficiencies are identified as contrary to the requirements of the Guide for Care and Use of Laboratory Animals, eighth edition.
Fall 2020 Semiannual Report

WVU FOIA #21026-016

FALL 2020 FACILITY INSPECTION DEFICIENCIES*

FACILITY	Room Type	Deficiency Type	Deficiency Category	Deficiency	Plan of Correction	Projected completion date
HSC Vivarium	Animal Holding	Environment	Minor	Hot/cold temperatures	Working with facilities to raise room setpoint and avoid low temp. dips.	complete
HSC Vivarium	Animal Holding	Environment	Minor	Hot/cold temperatures	Working with facilities to raise room setpoints to avoid temperature dips.	complete
HSC Vivarium	Animal Holding	Other	Minor	Other	The RBC cart has been removed from this room and unlabeled items have been disposed of.	4/15/21
HSC Vivarium	Animal Holding	Animal Care	Minor	Single housing not justified	Enrichment IACUC policy and OLAR SOP involving enrichment being addressed. Single housing policy should be evaluated	4/15/21
HSC Vivarium	Animal Holding	Animal Care	Minor	Single housing not justified	Enrichment IACUC policy and OLAR SOP involving enrichment being addressed. Single housing policy should be evaluated	4/15/21
HSC Vivarium	Animal Holding	Records	Minor	Husbandry log incomplete	Work with husbandry staff to complete records. Working on updating room records.	complete
HSC Vivarium	Animal Holding	Environment	Minor	Hot/cold temperatures	Working with facilities to raise room setpoint.	complete

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Fall 2020 Semiannual Report

WVU FOIA #21026-017

FALL 2020 FACILITY INSPECTION DEFICIENCIES*

FACILITY	Room Type	Deficiency Type	Deficiency Category	Deficiency	Plan of Correction	Projected completion date
HSC Vivarium	Procedure Room	Environment	Minor	High humidity	Evaluating other spaces. May be able to move food to new section once RNI opens. Otherwise need to draft performance standards.	2/14/21
HSC Vivarium	Animal Holding	Environment	Minor	Hot/cold temperatures	Working with facilities to increase room setpoint.	complete
HSC Vivarium	Animal Holding	Records	Minor	Husbandry log incomplete	OLAR SOPs are in the process of being revised to address this.	complete
HSC Vivarium	Animal Holding	Environment	Minor	Hot/cold temperatures	Working with facilities to raise room setpoint.	complete
HSC Vivarium	Animal Holding	Environment	Minor	Strong odors- no excessively dirty cages	The ventilation/air changes in all rooms will be checked as part of preparation for AAALAC in the spring/summertime frame. Facilities will be contacted to check this room prior to that time.	4/15/21
HSC Vivarium	Animal Holding	Records	Minor	Husbandry log incomplete	OLAR SOPs are in the process of being revised to address this.	complete

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Fall 2020 Semiannual Report

WVU FOIA #21026-018

FALL 2020 FACILITY INSPECTION DEFICIENCIES*

FACILITY	Room Type	Deficiency Type	Deficiency Category	Deficiency	Plan of Correction	Projected completion date
HSC Vivarium	Animal Holding	Environment	Minor	Hot/cold temperatures	The temperature set point in the rooms will be adjusted to ensure guide standards are maintained.	complete
HSC Vivarium	Animal Holding	Animal Care	Minor	Single housing not justified	Enrichment IACUC policy and OLAR SOP involving enrichment being addressed. Single Animal Holding policy should be evaluated	4/15/21
HSC Vivarium	Animal Holding	Animal Care	Minor	Single housing not justified	Enrichment IACUC policy and OLAR SOP involving enrichment being addressed. Single housing policy should be evaluated	4/15/21
HSC Vivarium	Animal Holding	Sanitation	Minor	Accumulation of dust/debris	OLAR is revising husbandry SOPs and this should address cleaning frequency	complete
HSC Vivarium	Animal Holding	Drugs/General Supplies	Minor	Expired drugs have been removed.	This has been addressed.	complete
JW Ruby Research Farm	Procedure Room	Drugs/General Supplies	Minor	Expired supplies/substances - for USE in animals	Expired items discarded during inspection.	complete
Life Sciences Building	Animal Holding	Animal Care	Minor	Enrichment was missing from cages	OLAR will place enrichment here for use.	2/14/21

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Fall 2020 Semiannual Report

WVU FOIA #21026-019

FALL 2020 FACILITY INSPECTION DEFICIENCIES*

FACILITY	Room Type	Deficiency Type	Deficiency Category	Deficiency	Plan of Correction	Projected completion date
Life Sciences Building	common space	Drugs/General Supplies	Minor	Expired anesthetics/analgesics/euthanasia solutions	Drugs discarded	complete
Organic Animal Research Farm	Animal Holding	Area Maintenance	Minor	Light cover broken	Work order submitted.	4/15/21
Potomac State	Animal Holding	Identification	Minor	Incomplete cage cards/animal identification	This has been addressed. Protocols and contact information is posted on all farms.	complete
Potomac State	Barn	Area Maintenance	Minor	Damage to outer/exterior structures (walls, roof, gutter, etc.)	This has been addressed. Exterior holes / wear in the siding under the awning has been repaired. Areas have been re-sided.	complete
Potomac State	Barn	Area Maintenance	Minor	Damage to wall/baseboard	This has been addressed. We have physically re-boarded / re-sided these areas, both on the interior and the exterior	complete

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Fall 2020 Semiannual Report

WVU FOIA #21026-020

FALL 2020 FACILITY INSPECTION DEFICIENCIES*

FACILITY	Room Type	Deficiency Type	Deficiency Category	Deficiency	Plan of Correction	Projected completion date
Potomac State	Barn	Records	Minor	Inadequate record keeping (see notes)	This has been addressed. Malone Farm, Gustafson Farm and Equine Barn now use the same forms, daily logs, and proper information is collected daily.	complete
Stewartstown Animal Science Farm	Barn	Area Maintenance	Minor	Damage to outer/exterior structures (walls, roof, gutter, etc.)	This will be completed in the next few weeks. We are working on acquiring materials now.	2/14/21
Stewartstown Animal Science Farm	Barn	Drugs/General Supplies	Minor	Expired supplies/substances - for USE in animals	Expired substances were disposed of.	complete
Stewartstown Animal Science Farm	Barn	Area Maintenance	Minor	Damaged fencing	Damaged fencing was removed	complete
Stewartstown Animal Science Farm	Barn	Food and Water	Minor	Food not in sealed container	Feed was disposed of.	complete
Stewartstown Animal Science Farm	Barn	Drugs/General Supplies	Minor	Expired supplies/substances - for USE in animals	Expired substances were disposed of.	complete
Stewartstown Animal Science Farm	Barn	Area Maintenance	Minor	Damaged fencing	This is in process and will be addressed before animals are put in the pens with loose rails.	4/15/21

*Deficiencies are identified as contrary to the requirements of the Guide for Care and Use of Laboratory Animals, eighth edition.
Fall 2020 Semiannual Report

WVU FOIA #21026-021

FALL 2020 FACILITY INSPECTION DEFICIENCIES*

FACILITY	Room Type	Deficiency Type	Deficiency Category	Deficiency	Plan of Correction	Projected completion date
Stewartstown Animal Science Farm	Animal Holding	EH&S Issues	Minor	Unlabeled substance (cleaning solution/chemicals)	Chemicals were removed and/or relabeled	complete
Stewartstown Animal Science Farm	Animal Holding	Area Maintenance	Minor	Loose/broken/missing floor drain	There is currently a wooden structure over the drain to protect it. A metal grate is being constructed by a contractor	4/15/21
Stewartstown Animal Science Farm	Exterior Field- Cattle	Area Maintenance	Minor	Damaged fencing	Damaged fencing was removed	complete
Stewartstown Animal Science Farm	Procedure Room	Sanitation	Minor	Dirty procedure room	Work order submitted.	complete
Stewartstown Animal Science Farm	Office	Drugs/General Supplies	Minor	Expired drugs that are not anesthetics/analgesics/euthanasia solutions	Expired substances were disposed of.	complete
Stewartstown Animal Science Farm	Procedure Room	EH&S Issues	Minor	Inappropriate solution/chemical storage	This has been addressed. Expired substances were disposed of.	complete
Stewartstown Animal Science Farm	Procedure Room	Equipment	Minor	Refrigerator/Freezer not working	Work order submitted to remove nonfunctional freezer. Walk in freezer is not an animal use area and has been looked at several times by facilities.	4/15/21

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Fall 2020 Semiannual Report

WVU FOIA #21026-022

FALL 2020 FACILITY INSPECTION DEFICIENCIES*

FACILITY	Room Type	Deficiency Type	Deficiency Category	Deficiency	Plan of Correction	Projected completion date
Stewartstown Animal Science Farm	Animal Holding	Drugs/General Supplies	Minor	Expired anesthetics/analgesics/euthanasia solutions	Expired substances have been disposed of.	complete
Stewartstown Animal Science Farm	Procedure Room	Area Maintenance	Minor	Damage to wall/baseboard	Water infiltration has been stopped, wall damage is cosmetic and will be painted over.	4/15/21
Stewartstown Animal Science Farm	Surgical room	Area Maintenance	Minor	Damage to wall/baseboard	Water infiltration has been stopped, wall damage is cosmetic and will be painted over.	4/15/21
Stewartstown Animal Science Farm	Storage Room	Food and Water	Minor	Food not in sealed container	Food has been placed in sealed containers and/or removed	complete
Stewartstown Animal Science Farm	Maintenance	Area Maintenance	Minor	Damage to outer/exterior structures (walls, roof, gutter, etc.)	We are planning to replace the wall this winter. Will be completed before next inspection.	4/15/21


Additional Information:

- Expired drugs and substances was the most common deficiency cited during this inspection. From a programmatic standpoint the AV will reinforce proper inventory practices with veterinary staff and research staff alike.
- Requirements for the single housing of social species, specifically rodents, were identified as an area where the IACUC could improve direction for the research community. The IACUC is revising the policy for clarity and OLAR has employed new cage cards to indicate when single housing is part of the study setup.

*Deficiencies are identified as contrary to the requirements of the Guide for Care and Use of Laboratory Animals, eighth edition.
Fall 2020 Semiannual Report

IACUC Member Signatures

By signing, I acknowledge that I have reviewed the Fall 2020 Semiannual Report.

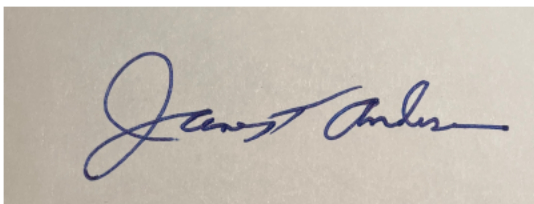


1/8/21

Date

IACUC Member Signatures

By signing, I acknowledge that I have reviewed the Fall 2020 Semiannual Report.

A handwritten signature in blue ink on a light brown background. The signature is cursive and appears to read "Jim Anderson".

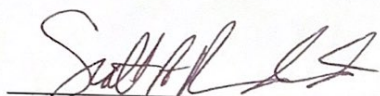
1/6/21

Jim Anderson

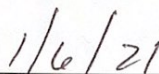
Date

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Scott Bowdridge



Date

IACUC Member Signatures

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Ashley Bredenberg

1-8-21

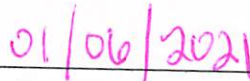
Date

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Robert Brock (alternate)



Date

IACUC Member Signatures

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Kimberly Bryner

1/6/21

Kimberly Bryner

Date

IACUC Member Signatures

By signing, I acknowledge that I have reviewed the Spring 2020 Semiannual Report.



1/11/21

Tara Cotroneo (Attending Veterinarian)

Date

IACUC Member Signatures

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Alexandra Elliott

Alexandra Elliott

1/19/21

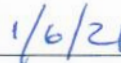
Date

IACUC Member Signatures

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Robert Goodman



Date


IACUC Member Signatures

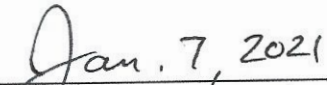
By signing, I acknowledge that I have reviewed the Fall 2020 Semiannual Report.

	1/7/21
Eric Kelley	Date

IACUC Member Signatures

By signing, I acknowledge that I have reviewed the Fall 2020 Semiannual Report.


Peter Mathers (IACUC Chair)


Date

IACUC Member Signatures

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Margaret Minch

1/6/21

Margaret Minch

Date

IACUC Member Signatures

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1/6/21

Michael Perone

Date

IACUC Member Signatures

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V. n. Rajendran

Vazhaikkurichi Rajendran (alternate)

01/06/2021

Date

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1/6/2020

Date

IACUC Member Signatures

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1/11/21

Zachary Weil

Date

IACUC Member Signatures

By signing, I acknowledge that I have reviewed the Fall 2020 Semiannual Report.

Rebecca Welch

1/6/21

Rebecca Welch

Date

IACUC Member Signatures

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Stuart Welsh

1/6/21

Date

IACUC Member Signatures

By signing, I acknowledge that I have reviewed the Fall 2020 Semiannual Report.

Matthew Wilson

1/6/21

Matthew Wilson (IACUC Vice Chair)

Date

Semiannual Program Review and Facility Inspection Checklist

Institutional Policies and Responsibilities

Date:

1. Animal Care and Use Program <small>NEW</small>		A*	M	S	C	NA
• Responsibility for animal well-being is assumed by all members of the program (<i>Guide, p 1</i>) [must]	X					
• IO has authority to allocate needed resources (<i>Guide, p 13</i>)	X					
• Resources necessary to manage program of veterinary care are provided (<i>Guide, p 14</i>) [must]	X					
• Sufficient resources are available to manage the program, including training of personnel in accord with regulations and the <i>Guide</i> (<i>Guide, pp 11, 15</i>)	X					
• Program needs are regularly communicated to IO by AV and/or IACUC (<i>Guide, p 13</i>)	X					
• Responsibilities for daily animal care and facility management are assigned to specific individual(s) when a full-time veterinarian is not available on site (<i>Guide, p 14</i>) [must]	X					
• Inter-institutional collaborations are described in formal written agreements (<i>Guide, p 15</i>)		X				
• Written agreements address responsibilities, animal ownership, and IACUC oversight (<i>Guide, p 15</i>)		X				
2. Disaster Planning and Emergency Preparedness <small>NEW</small>		A*	M	S	C	NA
• Disaster plans for each facility to include satellite locations are in place (<i>Guide, p 35, p 75</i>) [must]	X					
• Plans include provisions for euthanasia (<i>Guide, p 35</i>) [must]	X					
• Plans include triage plans to meet institutional and investigators' needs (<i>Guide, p 35</i>)	X					
• Plans define actions to prevent animal injury or death due to HVAC or other failures (<i>Guide, p 35</i>)	X					
• Plans describe preservation of critical or irreplaceable animals (<i>Guide, p 35</i>)	X					
• Plans include essential personnel and their training (<i>Guide, p 35</i>)		X				
• Animal facility plans are approved by the institution and incorporated into overall response plan (<i>Guide, p 35</i>)	X					
• Law enforcement and emergency personnel are provided a copy and integration with overall plan is in place (<i>Guide, p 35</i>)	X					
3. IACUC <small>NEW</small>		A*	M	S	C	NA
• Meets as necessary to fulfill responsibilities (<i>Guide, p 25</i>) [must]	X					
• IACUC Members named in protocols or with conflicts recuse themselves from protocol decisions (<i>Guide, p 26</i>) [must]	X					
• Continuing IACUC oversight after initial protocol approval is in place (<i>Guide, p 33</i>)	X					
• IACUC evaluates the effectiveness of training programs (<i>Guide, p 15</i>)		X				
4. IACUC Protocol Review - Special Considerations		A*	M	S	C	NA
• Humane endpoints are established for studies that involve tumor models, infectious diseases, vaccine challenge, pain modeling, trauma, production of monoclonal antibodies, assessment of toxicologic effects, organ or system failure, and models of cardiovascular shock (<i>Guide, p 27</i>)	X					
• For pilot studies, a system to communicate with the IACUC is in place (<i>Guide, p 28</i>)	X					
• For genetically modified animals, enhanced monitoring and reporting is in place (<i>Guide, p 28</i>)	X					
• Restraint devices are justified in the animal use protocols (<i>Guide, p 29</i>) [must]	X					
• Alternatives to physical restraint are considered (<i>Guide, p 29</i>)	X					
• Period of restraint is the minimum to meet scientific objectives (<i>Guide, p 29</i>)	X					
• Training of animals to adapt to restraint is provided (<i>Guide, p 29</i>)	X					
• Animals that fail to adapt are removed from study (<i>Guide, p 29</i>)	X					
• Appropriate observation intervals of restrained animals are provided (<i>Guide, p 29</i>)	X					
• Veterinary care is provided if lesions or illness result from restraint (<i>Guide, p 30</i>) [must]	X					
• Explanations of purpose and duration of restraint are provided to study personnel (<i>Guide, p 30</i>)	X					

• Multiple surgical procedures on a single animal are justified and outcomes evaluated (<i>Guide</i> , p 30)	X				
• Major versus minor surgical procedures are evaluated on a case-by-case basis (<i>Guide</i> , p 30)	X				
• Multiple survival procedure justifications in non-regulated species conform to regulated species standards (<i>Guide</i> , p 30)	X				
• Animals on food/fluid restriction are monitored to ensure nutritional needs are met (<i>Guide</i> , p 31)	X				
• Body weights for food/fluid restricted animals are recorded at least weekly (<i>Guide</i> , p 31)	X				
• Daily written records are maintained for food/fluid restricted animals (<i>Guide</i> , p 31)	X				
• Pharmaceutical grade chemicals are used , when available, for animal-related procedures (<i>Guide</i> , p 31)	X				
• Non-pharmaceutical grade chemicals are described, justified, and approved by IACUC (<i>Guide</i> , p 31)	X				
• Investigators conducting field studies know zoonotic diseases, safety issues, laws and regulations applicable in study area (<i>Guide</i> , p 32)	X				
• Disposition plans are considered for species removed from the wild (<i>Guide</i> , p 32)	X				
• Toe-clipping only used when no alternative, performed aseptically and with pain relief (<i>Guide</i> , p 75)	X				

5. IACUC Membership and Functions

	A*	M	S	C	NA
• IACUC is comprised of at least 5 members, appointed by CEO (PHS Policy, IV.A.3.)	X				
• Members include a veterinarian, a scientist, a nonscientist, and a nonaffiliated non-lab animal user (<i>Guide</i> , p 24) ⁱ	X				
• IACUC authority and resources for oversight and evaluation of institution's program are provided (<i>Guide</i> , p 14)	X				
• IACUC conducts semiannual evaluations of institutional animal care and use program (PHS Policy, IV.B.)	X				
• Conducts semiannual inspections of institutional animal facilities (PHS Policy, IV.B.)	X				
• IACUC organizationally reports to the Institutional Official (PHS Policy, IV.A.1.b.)	X				
• Methods for reporting and investigating animal welfare concerns are in place (<i>Guide</i> , p 23) [must]	X				
• Reviews and investigates concerns about animal care and use at institution ⁱⁱ (PHS Policy, IV.B.)	X				
• Procedures are in place for review, approval, and suspension of animal activities ⁱⁱⁱ (PHS Policy, IV.B.)	X				
• Procedures are in place for review and approval of significant changes to approved activities (PHS Policy, IV.B.)	X				
• Policies are in place for special procedures (e.g., genetically modified animals, restraint, multiple survival surgery, food and fluid regulation, field investigations, agricultural animals) (<i>Guide</i> , p 27-32)	X				
• Requests for exemptions from major survival surgical procedure restrictions are made to USDA/APHIS ^{iv} (<i>Guide</i> , p 30) [must]	X				

6. IACUC Training NEW

	A*	M	S	C	NA
• All IACUC members should receive:					
o Formal orientation to institution's program (<i>Guide</i> , p 17)	X				
o Training on legislation, regulations, guidelines, and policies (<i>Guide</i> , p 17)	X				
o Training on how to inspect facilities and labs where animal use or housing occurs (<i>Guide</i> , p 17)	X				
o Training on how to review protocols as well as evaluate the program (<i>Guide</i> , p 17)	X				
o Ongoing training/education (<i>Guide</i> , p 17)	X				

7. IACUC Records and Reporting Requirements^v

	A*	M	S	C	NA
• Semiannual report to the IO (PHS Policy, IV.B.)					
o Submitted to IO every 6 months	X				
o Compiles program review and facility inspection(s) results (includes all program and facility deficiencies)	X				
o Includes minority IACUC views	X				
o Describes IACUC-approved departures from the <i>Guide</i> or PHS Policy and the	X				

reasons for each departure ^{vi}					
o Distinguishes significant from minor deficiencies	X				
o Includes a plan and schedule for correction for each deficiency identified ^{vii}		X			
• Reports to OLAW (PHS Policy, IV.F.)					
o Annual report to OLAW documents program changes, dates of the semiannual program reviews and facility inspections and includes any minority views	X				
o Promptly advises OLAW of serious/ongoing <i>Guide</i> deviations or PHS Policy noncompliance (NOT-OD-05-034)	X				
o Institute must promptly advise OLAW of any suspension of an animal activity by the IACUC (NOT-OD-05-034)	X				
• Reports to U.S. Department of Agriculture (USDA) or Federal funding agency ^{viii}					
o Annual report to USDA contains required information including all exceptions/exemptions	X				
o Reporting mechanism to USDA is in place for IACUC-approved exceptions to the regulations and standards	X				
o Reports are filed within 15 days for failures to adhere to timetable for correction of significant deficiencies	X				
o Promptly reports suspensions of activities by the IACUC to USDA and any Federal funding agency	X				
• Records (PHS Policy, IV.E.)					
o IACUC meeting minutes and semiannual reports to the IO are maintained for 3 years	X				
o Records of IACUC reviews of animal activities include all required information ^{ix}	X				
o Records of IACUC reviews are maintained for 3 years after the completion of the study	X				

8. Veterinary Care (See also next section - Veterinary Care)

	A*	M	S	C	NA
• An arrangement for veterinarian(s) with training or experience in lab animal medicine is in place including backup veterinary care*	X				
• Veterinary access to all animals is provided (<i>Guide</i> , p 14) [must]		X			
• Direct or delegated authority is given to the veterinarian to oversee all aspects of animal care and use (<i>Guide</i> , p 14) [must]	X				
• Veterinarian provides consultation when pain and distress exceeds anticipated level in protocol (<i>Guide</i> , p 5) [must]	X				
• Veterinarian provides consultation when interventional control is not possible (<i>Guide</i> , p 5) [must]	X				
• If part time /consulting veterinarian, visits meet programmatic needs (<i>Guide</i> , p 14)					X
• Regular communication occurs between veterinarian and IACUC (<i>Guide</i> , p 14)	X				
• Veterinarian(s) have experience and training in species used (<i>Guide</i> , p 15) [must]	X				
• Veterinarian(s) have experience in facility administration/management (<i>Guide</i> , p 15)	X				

9. Personnel Qualifications and Training

	A*	M	S	C	NA
• All personnel are adequately educated, trained, and/or qualified in basic principles of laboratory animal science. Personnel included: [must]					
o Veterinary/other professional staff (<i>Guide</i> , p 15-16)	X				
o IACUC members (<i>Guide</i> , p 17)	X				
o Animal care personnel (<i>Guide</i> , p 16)	X				
o Research investigators, instructors, technicians, trainees, and students (<i>Guide</i> , pp 16-17)	X				
• Continuing education for program and research staff provided to ensure high quality care and reinforce training (<i>Guide</i> , pp 16-17)	X				
• Training is available prior to starting animal activity (<i>Guide</i> , p 17)	X				
• Training is documented (<i>Guide</i> , p 15)	X				
• Training program content includes: (<i>Guide</i> , p 17)					
o Methods for reporting concerns (<i>Guide</i> , p 17)	X				
o Humane practices of animal care (e.g., housing, husbandry, handling) ^{xi}	X				
o Humane practices of animal use (e.g., research procedures, use of anesthesia, pre- and post-operative care, aseptic surgical techniques and euthanasia (<i>Guide</i> , p 17) ^{xii}	X				
o Research/testing methods that minimize numbers necessary to obtain valid results	X				

(PHS Policy, IV.A.1.g.)					
o Research/testing methods that minimize animal pain or distress (PHS Policy, IV.A.1.g.)	X				
o Use of hazardous agents, including access to OSHA chemical hazard notices where applicable (Guide, p 20)	X				
o Animal care and use legislation (Guide, p 17)	X				
o IACUC function (Guide, p 17)	X				
o Ethics of animal use and Three R's (Guide, p 17)	X				

10. Occupational Health and Safety of Personnel A* M S C NA

• Program is in place and is consistent with federal, state, and local regulations (Guide, p 17) [must]	X				
• Program covers <i>all</i> personnel who work in laboratory animal facilities (Guide, p 18)	X				
• Changing, washing, and showering facilities are available as appropriate (Guide, p 19)	X				
• Hazardous facilities are separated from other areas and identified as limited access (Guide, p 19)	X				
• Personnel training is provided based on risk (e.g., zoonoses, hazards, personal hygiene, special precautions, animal allergies) (Guide, p 20)	X				
• Personal hygiene procedures are in place (e.g., work clothing, eating/drinking/smoking policies) (Guide, p 20)	X				
• Procedures for use, storage, and disposal of hazardous biologic, chemical, and physical agents are in place (Guide, p 21)	X				
• Personal Protective Equipment for the work area is appropriate and available (Guide, p 21)	X				
• Program for medical evaluation and preventive medicine for personnel includes:					
o Pre-employment evaluation including health history (Guide, p 22)	X				
o Immunizations as appropriate (e.g., rabies, tetanus) and tests as appropriate (Guide, p 22)	X				
o Zoonosis surveillance as appropriate (e.g., Q-fever, tularemia, Hantavirus, plague) (Guide, p 23)	X				
o Procedures for reporting and treating injuries, including accidents, bites, allergies, etc. (Guide, p 23)	X				
o Promotes early diagnosis of allergies including preexisting conditions (Guide, p 22)	X				
o Considers confidentiality and other legal factors as required by federal, state and local regulations (Guide, p 22) [must]	X				
o If serum samples are collected, the purpose is consistent with federal and state laws (Guide, p 22) [must]	X				
• Waste anesthetic gases are scavenged (Guide, p 21)	X				
• Hearing protection is provided in high noise areas (Guide, p 22)	X				
• Respiratory protection is available when performing airborne particulate work (Guide, p 22)	X				
• Special precautions for personnel who work with nonhuman primates, their tissues or body fluids include:					
o Tuberculosis screening provided for all exposed personnel (Guide, p 23)					X
o Training and implementation of procedures for bites, scratches, or injuries associated with macaques (Guide, p 23)					X
o PPE is provided including gloves, arm protection, face masks, face shields, or goggles (Guide, p 21)					X
o Injuries associated with macaques are carefully evaluated and treatment implemented (Guide, p 23)					X
• Occupational safety and health of field studies is reviewed by OSH committee or office (Guide, p 32)	X				

11. Personnel Security NEW A* M S C NA

• Preventive measures in place include pre-employment screening, and physical and IT security (Guide, p 23)	X				
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12. Investigating & Reporting Animal Welfare Concerns NEW A* M S C NA

• Methods for investigating and reporting animal welfare concerns are established (Guide, p 23) [must]	X				
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• Reported concerns and corrective actions are documented (<i>Guide</i> , p 24)	X				
• Mechanisms for reporting concerns are posted in facility and at applicable website with instructions (<i>Guide</i> , p 24)	X				
○ Includes multiple contacts (<i>Guide</i> , p 24)	X				
○ Includes anonymity, whistle blower policy, nondiscrimination and reprisal protection (<i>Guide</i> , p 24)	X				

- * **A** = acceptable
M = minor deficiency
S = significant deficiency (is or may be a threat to animal health or safety)
C = change in program (PHS Policy [IV.A.1.a.-i.](#)) (include in semiannual report to IO and in annual report to OLAW)
NA = not applicable

NOTES:

Veterinary Care

Date:

1. Clinical Care and Management ^{NEW}

	A*	M	S	C	NA
• Veterinary program offers high quality of care and ethical standards (<i>Guide, p 105</i>) [must]	X				
• Veterinarian provides guidance to all personnel to ensure appropriate husbandry, handling, treatment, anesthesia, analgesia, and euthanasia (<i>Guide, p 106</i>)	X				
• Veterinarian provides oversight to surgery and perioperative care (<i>Guide, p 106</i>)	X				
• Veterinary care program is appropriate for program requirements (<i>Guide, pp 113-114</i>)	X				
• Veterinarian(s) is familiar with species and use of animals and has access to medical and experimental treatment records (<i>Guide, p 114</i>)	X				
• Procedures to triage and prioritize incident reports are in place (<i>Guide, p 114</i>)	X				
• Procedures are in place to address:					
o Problems with experiments to determine course of treatment in consultation with investigator(<i>Guide, p 114</i>)	X				
o Recurrent or significant health problems with the IACUC and documentation of treatments and outcomes (<i>Guide, p 114</i>)	X				
o Veterinary review and oversight of medical and animal use records (<i>Guide, p 115</i>)		X			
• Procedures established for timely reporting of animal injury, illness, or disease (<i>Guide, p 114</i>) [must]	X				
• Procedures established for veterinary assessment, treatment, or euthanasia (<i>Guide, p 114</i>) [must]	X				
• Veterinarian is authorized to treat, relieve pain, and/or euthanize (<i>Guide, p 114</i>) [must]	X				

2. Animal Procurement and Transportation/Preventive Medicine

	A*	M	S	C	NA
• Procedures for lawful animal procurement are in place (<i>Guide, p 106</i>) [must]	X				
• Sufficient facilities and expertise are confirmed prior to procurement (<i>Guide, p 106</i>)	X				
• Procurement is linked to IACUC review and approval (<i>Guide, p 106</i>)	X				
• Random source dogs and cats are inspected for identification (<i>Guide, p 106</i>)					X
• Population status of wildlife species is considered prior to procurement (<i>Guide, p 106</i>)		X			
• Appropriate records are maintained on animal acquisition (<i>Guide, p 106</i>)		X			
• Animal vendors are evaluated to meet program needs and quality (<i>Guide, p 106</i>)	X				
• Breeding colonies are based on need and managed to minimize numbers (<i>Guide, p 107</i>)	X				
• Procedures for compliance with animal transportation regulations, including international requirements, are in place (<i>Guide, p 107</i>) [must]	X				
• Transportation is planned to ensure safety, security and minimize risk (<i>Guide, p 107</i>)	X				
• Movement of animals is planned to minimize transit time and deliveries are planned to ensure receiving personnel are available (<i>Guide, pp 107-108</i>)	X				
• Appropriate loading and unloading facilities are available (<i>Guide, p 109</i>)	X				
• Environment at receiving site is appropriate (<i>Guide, p 109</i>)	X				
• Policies in place on separation by species, source, and health status (<i>Guide, pp 109, 111-112</i>)	X				
• Procedures in place for quarantine to include zoonoses prevention (<i>Guide, p 110</i>)	X				
• Quarantined animals from different shipments are handled separately or physically separated (<i>Guide, p 110</i>)	X				
• Procedures in place for stabilization/acclimation (<i>Guide, pp 110-111</i>)	X				
• Policies in place for isolation of sick animals (<i>Guide, p 112</i>)	X				
• Program is in place for surveillance, diagnosis, treatment and control of disease to include daily observation (<i>Guide, p 112</i>)	X				
• Diagnostic resources are available for preventive health program (<i>Guide, p 112</i>)					

3. Surgery

	A*	M	S	C	NA
• Surgical outcomes are assessed and corrective changes instituted (<i>Guide, p 115</i>)	X				
• Researchers have appropriate training to ensure good technique (<i>Guide, p 115</i>) [must]		X			
• Pre-surgical plans are developed and include veterinary input (e.g., location, supplies,	X				

anesthetic and analgesic use, peri-operative care, recordkeeping) (<i>Guide, p 116</i>)					
• Aseptic surgery is conducted in dedicated facilities or spaces, unless exception justified and IACUC approved (<i>Guide, p 116</i>)	X				
• Surgical procedures including laparoscopic procedures are categorized as major or minor (<i>Guide, pp 117-118</i>)	X				
• For nonsurvival surgery, the site is clipped, gloves are worn and instruments and area are clean (<i>Guide, p 118</i>)	X				
• Aseptic technique is followed for survival surgical procedures (<i>Guide, pp 118-119</i>)	X				
• Effective procedures for sterilizing instruments and monitoring expiration dates on sterile packs are in place (<i>Guide, p 119</i>)		X			
• Procedures for monitoring surgical anesthesia and analgesia are in place (<i>Guide, p 119</i>)	X				
• For aquatic species, skin surfaces are kept moist during surgical procedures (<i>Guide, p 119</i>)	X				
• Post-operative monitoring and care are provided by trained personnel and documented (e.g., thermoregulation, physiologic function, analgesia, infection, removal of skin closures) (<i>Guide, pp 119-120</i>)	X				

4. Pain, Distress, Anesthesia and Analgesia A* M S C NA

• Guidelines for assessment and categorization of pain, distress and animal wellbeing are provided during training (<i>Guide, p 121</i>)	X				
• Selection of analgesics and anesthetics is based on professional veterinary judgment (<i>Guide, p 121</i>)	X				
• Painful procedures are monitored to ensure appropriate analgesic management (<i>Guide, p 122</i>)	X				
• Nonpharmacologic control of pain is considered as an element of postprocedural care (<i>Guide, p 122</i>)	X				
• Procedures are in place to assure antinociception before surgery begins (<i>Guide, p 122</i>) [must]	X				
• Guidelines for selection and use of analgesics and anesthetics are in place and regularly reviewed and updated (<i>Guide, p 122</i>)		X			
• Special precautions for the use of paralytics are in place to ensure anesthesia ^{xiii} (<i>Guide, p 123</i>)	X				

5. Euthanasia A* M S C NA

• Methods are consistent with AVMA Guidelines on Euthanasia unless approved by the IACUC (<i>Guide, p 123</i>)	X				
• Standardized methods are developed and approved by the veterinarian and IACUC that avoid distress and consider animal age and species (<i>Guide, pp 123-124</i>)		X			
• Training is provided on appropriate methods for each species and considers psychological stress to personnel (<i>Guide, p 124</i>)		X			
• Procedures and training are in place to ensure death is confirmed (<i>Guide, p 124</i>) [must]		X			

6. Drug Storage and Control A* M S C NA

• Program complies with federal regulations for human and veterinary drugs(<i>Guide, p 115</i>) [must]	X				
• Drug records and storage procedures are reviewed during facility inspections (<i>Guide, p 115</i>)	X				
• Procedures are in place to ensure analgesics and anesthetics are used within expiration date (<i>Guide, p 122</i>) [must]	X				
• Anesthetics and analgesics are acquired, stored, and their use and disposal are recorded legally and safely (<i>Guide, p 122</i>)	X				

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NA = not applicable

NOTES:

I. Agriculture Semiannual Program Review Checklist

PART 1: Institutional Policies and Responsibilities

Date:

1. Animal Care and Use Program	A*	M	S	C	NA
o FASS Guide serves as primary reference document for the needs and requirements of agricultural animals (FASS, preface)-	X				
o Veterinarians, institutional animal care and use committees, and users of agricultural animals must play a critical role in making specific suggestions regarding animal care and use at their institution (FASS preface) [must]	X				
o Institutions must develop policies for animal care and use related to research conducted off site as well as research using privately owned animals on and off site. (FASS, p3) [must]	X				
o Husbandry procedures and production methods at agricultural research facilities are revised as research demonstrates improvements. (FASS p3)	X				
o Written operating procedures for standard agricultural practices that reduce pain, stress, and infection are reviewed and approved by the IACUC (FASS p3)	X				
o Agricultural research or teaching programs using animals that may be slaughtered for human consumption must institute quality assurance programs that are equivalent or superior to those used in the food animal industries (FASS, p13) [must]	X				
2. Disaster Planning and Emergency Preparedness	A*	M	S	C	NA
o A site-specific emergency plan must be developed to care for agricultural animals that are used for research and teaching (FASS p23) [must]		X			
o Emergency plans name employees or positions that are considered essential for providing proper animal management and care (FASS p23)		X			
o Employees understand their role in an emergency response plan (FASS p23)		X			
o Plans include animal evacuation procedures and include actions to be taken if transportation is interrupted. (FASS p23)		X			
o A disaster plan must include procedures for observing animals and providing care during emergency weather or health situations. (FASS p22) [must]		X			
o A disaster plan must include method for rapid communication between animal care staff and emergency personnel (FASS p22) [must]	X				
o Protocols/Procedures for emergency care must be developed and made available to all personnel. (FASS p22) [must]		X			
o The institution must ensure that emergency services can be contacted at any time by staff members (FASS p22) [must]		X			
o Institutions must assure continuity of daily animal care, to encompass weekends, holidays, unexpected absences of assigned personnel, and emergency situations (FASS p23) [must]	X				
o Emergency veterinary care must be readily available after daily work hours, on weekends, and on holidays (FASS p23) [must]-		X			
3. IACUC Membership and Functions	A*	M	S	C	NA
o The IACUC must review and approve all written operating procedures involving the potential to cause pain or distress and should review all written operating procedures pertaining to animal care and husbandry (FASS p2) [must]	X				
o Written procedures must be filed in the appropriate administrative office and in locations accessible to those individuals involved in carrying out the designated procedures and must be monitored regularly by personnel designated by the institution. (FASS p3) [must]	X				

○ Paralytic drugs are only acceptable for use in conjunction with anesthesia and appropriate monitoring for depth of anesthesia is described in protocol (FASS p11) [must]					X
○ IACUC representation includes A scientist who has experience in agricultural research or teaching involving agricultural animals; (FASS p2) -	X				
○ IACUC representation includes an animal, dairy, or poultry scientist who has training and experience in the management of agricultural animals (FASS p2) -	X				
○ IACUC representation includes veterinarian who has training and experience in agricultural animal medicine and who is licensed or eligible to be licensed to practice veterinary medicine; (FASS p2) -	X				
○ IACUC committee should not have fewer than 5 members. (FASS p2) -	X				
○ IACUC has authority and resources for oversight and evaluation of institution's program are provided (FASS p2) -	X				
○ The IACUC reviews and approves all written operating procedures involving the potential to cause pain or distress and should review all written operating procedures pertaining to animal care and husbandry. (FASS p3)	X				
4. IACUC Protocol Review - Special Considerations	A*	M	S	C	NA
○ Multiple major survival surgeries performed for nontherapeutic reasons should be performed only when justified and must be reviewed and approved by the IACUC (FASS p10) [must]					X
○ Painful or distressful experimental procedure must be conducted without the use of an anesthetic or analgesic because such use would prevent collection of useful data, this must be scientifically documented in the animal care and use protocol (FASS p11) [must]	X				
○ Researchers acclimate animals to restraint procedures and equipment (FASS p25)	X				
○ Use of prolonged restraint is justified as essential to research or teaching objectives. (FASS p49)					X
○ Researchers consider appropriate alternatives to metabolism stalls (FASS p25)					X
○ Animals are observed frequently while in metabolism stalls (FASS p25) N/A					X
○ The length of time an animal is held in metabolism stall is approved by the IACUC (FASS 25) N/A					X
○ For genetically modified animals, plan is written to address physiologic and phenotypic changes affecting animal welfare (FASS p14) [must] N/A					X
○ IACUCs assessment of animal care and use protocols reflects differences in various animal technologies. (FASS p5)	X				
○ Animals must be provided with feed and water in a consistent manner. When exceptions are required by an experimental or instructional protocol, these must be justified in the protocol (FASS p21) [must]	X				
○ Aspects of the review should include adequacy of methods to individually identify research animals and assure that the disposition of the research animals meets any federal, state and local government laws and regulations (FASS p5) -	X				
○ Exceptions to the FASS guide (for instance to meet industry standards) are stated explicitly in research and teaching protocols and are reviewed and approved by the IACUC (FASS p3)	X				
○ Protocols that carry a high likelihood of the need for emergency surgery should contain provisions for handling anticipated cases (FASS p11) -					X
○ Any use of tail docking, other than for medical reasons, is reviewed and approved by the IACUC (FASS p82)					X
○ Sheep are not housed alone in intensive research environments unless scientifically justified (FASS p 137)	X				
○ The length of time Sheep/Goats are kept in intensive environments is considered by IACUC (FASS p 137)	X				
• Males must be acclimated to handling and the semen collection process (FASS p117) [must] -	X				

5. Personnel Qualifications and Training		A*	M	S	C	NA
o The attending veterinarian must be familiar with analgesics labeled for use in agricultural animals and must be able to prescribe and establish withdrawal times for extra-label use of analgesics when indicated. Animals with severe or chronic pain that cannot be alleviated must be euthanized (FASS p12) [must]	X					
o Surgical training provided is documented and the competency of personnel assured. (FASS p11) [must]	X					
o Personnel who perform euthanasia must have training and experience with the techniques to be Used to include familiarity with the normal behavior of agricultural animals and how handling and restraint affect their behavior (FASS P14) [must]	X					
o Personnel must be trained on the proper use of the captive bolt per species, and the captive bolt device must be appropriately maintained (FASS P15) [must] –	X					
o Personnel performing stunning must be properly trained, including instruction in assessing insensibility. (FASS P15) [must]	X					
o Personnel caring for agricultural animals used for research or teaching are appropriately qualified or trained. Qualification by experience and (or) training must be documented. (FASS P21) [must]	X					
o Animal care personnel must be trained to recognize signs of illness and injury. (FASS p9) [must]	X					
o Surgical training program must be reviewed by the IACUC and under the direction of the attending veterinarian or his/ her designee (FASS p11) [must]		X				
o All handlers are trained in the natural behavior of the species including their flight zone and in proper handler movement and interaction, and be able to recognize any signs of distress, anxiety, or behaviors that may result in injury or stress to the animals.		X				
o Supervision is provided to personnel until their competency is assured.		X				
o Employees who provide routine animal care participate regularly in in-service education and training relevant to their responsibilities.		X				
o Records of participation in training programs should be maintained and available for review as needed.	X					
6. Health and Safety of Personnel and Public		A*	M	S	C	NA
o An occupational health and safety program must be established for individuals who work with agricultural animals (FASS p4) [must]	X					
o All agricultural animal caretakers are immunized against tetanus every 10 years (FASS p4)	X					
o Immunizations are offered to people (before exposure) who handle animals and risk infection from certain infectious agents (FASS p4)	X					
o Persons with known allergies are provided personal protective equipment including respirators for indoor areas or are able to avoid Exposure to animals (FASS p4)	X					
o Physical injuries constitute health hazards for individuals working with agricultural animals. High-risk areas and tasks are identified, and animal care personnel are educated about methods for reducing risk. This includes the use of hydraulically operated restraint devices. (FASS p4)	X					
o Access to first aid and medical treatment is readily available, and personnel are trained and familiar with access procedures. (FASS p4)	X					
o Cases of animal bites and scratches should be documented, and tetanus prophylaxis should be considered. (FASS p4)	X					
o Zoonotic disease in animal populations should be screened for or monitored regularly as appropriate, and personnel are notified of risks. (FASS p4)		X				
o Work assignments and health records should be a part of an occupational health program. (FASS p4)	X					
o Workers have access to methods to mitigate excessive noise from animals and machinery (FASS p24)	X					
o Workers are trained to recognize signs of aggression in agricultural animals including bull cattle (FASS p51)	X					

o Written policies governing experimentation with hazardous materials are in place and staff members conducting and supporting research projects involving hazardous materials are qualified to assess the dangers to animals and humans and are capable of selecting appropriate safeguards. (FASS p4)				X
o Residues of 3 groups of chemicals must be prevented from occurring in research animals if those animals, or their products, are going into the human food chain. These are 1) approved drugs used according to directions on the label, 2) drugs used in an extra-label fashion, and 3) other chemicals such as herbicides, pesticides, and wood preservatives.) (FASS p12) [must]	X			
o Before animals may be slaughtered for human or animal food purposes, sent to auctions or other markets, a time must be allowed for medications, drugs approved by the Food and Drug Administration (FDA), or substances allowed by the FDA for experimental testing under the Investigational New Animal Drug (INAD) exemption to be	X			
o For Animals destined human or animal food purposes, sent to auctions or other markets, a: A record of the products used, dose, route of administration, duration of treatment, and period of withdrawal must be maintained for substances used in live animals during research (FASS p12) [must]	X			
o Pharmaceuticals intended for use in food-producing animals must be managed responsibly. Storage should be in an area that is clean and dry and that offers protection from changes in temperature, sunlight, dust, moisture, and vermin (FASS p12) [must]	X			
o For animals that are given a new animal drug for investigational purposes, no meat, eggs, or milk from those animals may be processed for human food, unless authorization has been granted by the FDA or the USDA, and an appropriate INAD exemption has been received (FASS p13) [must]				X
o Harmful products are properly labeled and stored, a record of their purchase and expiration dates are kept and personnel are informed of potential hazards and wear appropriate protective equipment (FASS p14) [must]	X			
o Requirements for BSL-3-Ag facilities must be met when any of the listed pathogens are used in animals and the room housing the animals provides the primary containment (i.e., animals are loose housed in the room (FASS p26) [must]				X
o Harmful products are properly labeled and stored, a record of their purchase and expiration dates should be kept, and personnel are informed of potential hazards and wear appropriate protective equipment (FASS p14)	X			
o Records of all potentially harmful products used in the facility, their storage, their use, and their disposal are maintained in a manner similar to the quality assurance programs used by responsible farmers in the food animal industry. (FASS p13)	X			
o Workers do not leave workplace in protective clothing that has been worn in animal areas (FASS p25)	X			
o Personnel are not allowed to eat, drink, apply cosmetics, or use tobacco in animal facilities (FASS p25)	X			
o Procedures to protect visitors to animal facilities are in place (FASS p25)	X			

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1. Clinical Care and Management		A*	M	S	C	NA
o Research and teaching institutions must provide investigators and instructors with access to a veterinarian who has experience in the care of agricultural animals (FASS p9) [must]	X					
o Veterinarian must have authority to ensure that the provisions of the program are met (FASS p9) [must]	X					
o Attending veterinarian has access to all research and teaching animals and to any related documents including healthcare records (FASS p9) [must]	X					
o Veterinarian also must be involved in the development and oversight of the veterinary care program, as well as in other aspects of animal care and use such as protocol review, establishment of anesthetic and analgesic guidelines, study removal criteria, training of animal users, and responsible conduct of research activities (FASS p9) [must]	X					
o Attending veterinarian must communicate with, and oversee veterinary care provided by other veterinarians. (FASS p9) [must]		X				
o Drugs and pharmaceuticals are segregated by type to prevent incorrect use (FASS p13)	X					
o Unexpected deaths are reported to the attending veterinarian (FASS p9)	X					
o A written program for disease prevention, surveillance, diagnostic treatment and endpoint resolution is in place (FASS p9)						X
o Medical record system must be structured so that information is easily collected, gathered, analyzed, summarized, and available to the veterinarian, the principal scientist, and the IACUC (FASS p11) [must]		X				
o Medical Records are maintained in the manner established by the attending veterinarian (FASS p11)		X				
o Manufacturers' recommendations must be followed for chemical sterilant (FASS p11) [must]						X
o Relief of pain must be initiated promptly once it is deemed necessary (FASS p12) [must]	X					
o Extra-Label use for treatment of an animal is done in accordance and conjunction with FDA guidance (FASS P13) [must]	X					
o Medical treatments are not withheld from a sick animal to maintain its organic status. (FASS P13) [must]	X					
o A qualified veterinarian or scientist is consulted to assess appropriate health and biosecurity practices if species are to be co-housed (FASS p22)	X					
o Animals in intensive accommodations should be observed and cared for daily by trained and experienced caretakers. (FASS p22)						X
o Under extensive conditions, such as range or pasture, observations are frequent enough to detect illness or injury in a timely fashion, recognize the need for emergency action, and ensure adequate availability of feed and water. (FASS p22)	X					
o Animal observations are documented, and husbandry or health concerns reported to the animal facility manager or attending veterinarian as appropriate (FASS 22)		X				
o Animals are permanently identified by a method that can easily be read (FASS p23)	X					
o Individual or when appropriate group health records are maintained (FASS p10, p23)	X					
o Herd health and sanitation programs are in place to prevent disease outbreak (FASS p26)		X				
o Methods for Internal Parasite control are in place for Sheep and Goats (FASS p 98)	X					
o Heifers or cows exhibiting signs of a malpresentation, oversized fetus, fetal anomaly, or other obvious complication must be assisted immediately (FASS p67) [must]	X					
o Castration of older, heavier bulls should be performed only by skilled individuals. When it is necessary to castrate these heavier bulls, techniques and procedures to control bleeding must also be used (FASS p67) [must]	X					
o Poultry that are to be housed in aviaries as adults should be reared as pullets in similar aviaries to facilitate adaptation to perches and nests. (FASS p104)						X

o Birds must be rendered insensitive (i.e., no eye blink reflex when poked) in less than 30 s when exsanguination is used (FASS P123) [must]	X				
o Feed should be allocated, and BW routinely monitored to maintain the recommended BW for the particular stocks and ages of poultry. (FASS p106)		X			
o Tail docking procedures are appropriate (not too short) in sheep (FASS p135)		X			
o Cattle are not shouted or yelled at by personnel (FASS p50)	X				
2. Animal Procurement and Transportation/Preventive Medicine	A*	M	S	C	NA
o The attending veterinarian, in conjunction with the principal scientist, should formulate written procedures to assess the health status of a herd or flock obtained from a vendor before acquiring animals. (FASS p8)		X			
o Animals of unknown origin or from stockyards are only used if necessary; (FASS p8)					X
o Newly acquired animals undergo a quarantine and acclimation period, including preventive and clinical treatments as appropriate for their health status (FASS p8)	X				
o The attending veterinarian has established general acclimation guidelines for each species. (FASS p8)	X				
o Exceptions to quarantine practices should be approved by the attending veterinarian in advance of shipment of the animals. (FASS p8)					X
o All animals must be obtained and transported legally (FASS p8) [must]	X				
o Safety and comfort of the animal is the primary consideration of transport procedures (FASS p54)	X				
o Transporters must comply with all county, state, and federal animal health regulations and identification requirements before transporting livestock and poultry (FASS p57) [must]		X			
o After the animals are unloaded from the transport vehicle, large pens are provided. Space must provide sufficient space for all of the animals to lie down at the same time without being on top of each other. (FASS p57) [must]	X				
o Procedures for transport should include methods to mitigate heat and cold stress in affected animals (FASS p 54)	X				
o Loading ramps must provide nonslip footing to prevent slipping and falling or damage to the dew claws (FASS p56) [must]					X
o Debilitated animals must not be loaded or transported unless necessary for medical attention (FASS p54) [must]	X				
o Animals must not be dragged, hoisted, or dropped from transport vehicles (FASS p54) [must]	X				
o Space allowance on the welfare of weaned pigs may differ when for transport durations longer than 112 min. Sufficient bedding must be provided so that it stays dry (FASS p56) [must]					X
o Weak newborns, emaciated animals, animals with severe injuries or animals that have great difficulty walking must never be transported to livestock auctions or markets (FASS p54) [must]	X				
o Weak, ill, or injured poultry are not transported or placed in transport cages (FASS p54)	X				
o Individual care and colostrum should be provided 2 to 3 hours after birth to young or newborn cattle that are to be transported (FASS p54)					X
o Transport trucks and trailers accommodate space needs of animals including height. (FASS p55)	X				
o Trailer and Truck floors have non-slip surfaces. (FASS p49)	X				
o Injured and Ill poultry are not placed in transportation cages (FASS p52)	X				
o Poultry are handled in a way to minimize wind-flapping (PASS 53)	X				
o Poultry methods of handling allow birds to remain in the upright position (FASS p53)	X				
o Turkeys and Ducks are moved by being driven rather than handled when possible (FASS p53)					X

o No agricultural birds are handled by one wing (FASS 53)	X				
o An electric prod is only picked up and used in a specific situation where it is needed and then put away. When animals do not respond to electric prod, its use is immediately discontinued. (FASS p 47)	X				
o Electric prods are not used on new, weak, downed, or emaciated animals (FASS p 47)	X				
o Sheep and goats are moved as a heard when possible (FASS p51)	X				
o For Cattle Pressure Relief Valves of hydraulic restraint are set to avoid excessive pressure. (Bellowing and difficult breeding can be signs of excessive pressure) (FASS p50)					X
o Roping of Cattle is performed by trained personnel (FASS p50)					X
o Nose Tongs Are not used in cattle as the sole method of restraint (FASS p50)	X				X
3. Surgery	A*	M	S	C	NA
o Certain animal husbandry-related procedures (standard agricultural practices) may be conducted without anesthesia after consideration and approval by the IACUC. These procedures are performed early in the life of the animal in accordance with accepted veterinary practices. When surgery is performed on older animals, appropriate anesthesia and sterile instruments should be used, trauma minimized, and hemorrhage controlled (FASS p10)	X				
o Institutions must provide basic surgical training and opportunities to upgrade surgical skills for persons who will conduct or assist with experimental surgery (FASS p11) [must]					X
o Personnel performing surgery have documented training on file (FASS p11)	X				
o Though surgeries may sometimes need to be performed in agricultural settings that are not conducive to rigid asepsis; every effort is made to conduct such surgeries in a sanitary or aseptic manner and to use anesthetics and (or) analgesics commensurate with the risks to the animal's well-being. (FASS p11)	X				
o Appropriate Facilities are available for animals recovering from surgery (FASS p11)	X				
o Postsurgical observation should be provided until the animal is fully recovered from anesthesia, ambulatory, and able to safely return to its original housing location. (FASS p11)	X				
o Multiple major survival surgeries performed for nontherapeutic reasons should be per-formed only when justified and must be reviewed and approved by the IACUC. (FASS p10)					X
o Sterile instruments must be used for surgery (FASS p11) [must]	X				
o Investigators consult attending veterinarian (or designee) about the choice and use of analgesics and/or anesthetics or any other pain- or distress-relieving measure, including recommended times for withholding of food and water. (FASS p11)	X				
4. Pain, Distress, Anesthesia, Analgesia, Euthanasia	A*	M	S	C	NA
o Staff have the ability to segregate sick and injured animals from the main group to protect them and the other animals (FASS p9)	X				
o When animals are separated, a mechanism is in place to communicate to staff the status of the animals and to ensure proper daily, weekend, holiday, and emergency care. (FASS p9)	X				
o When warranted, waste and bedding that have been removed from a site occupied by an animal that has died is moved to an area that is inaccessible to other animals and the site appropriately disinfected. (FASS p9)	X				
o Attending veterinarian is familiar with analgesics used in agricultural animals and is able to prescribe and establish withdrawal times for extra-label use of analgesics as necessary. (FASS p12) [must]	X				
o Assurance of death procedures are included with euthanasia procedures (FASS p15) [must]	X				

o Slaughter of animals entering the human food chain must be accomplished in compliance with regulations promulgated under the federal Humane Methods of Slaughter Act (FASS p15) [must]					X
o All equipment for stunning must be properly maintained, (FASS p15) [must]	X				
o Non-ambulatory animals in research and teaching facilities must be euthanized using approved procedures unless they are receiving medical treatment, (FASS p54) [must]	X				
o Animals are segregated post-surgery until recovered from anesthesia (FASS p11)	X				
o Euthanasia must be carried out by trained personnel using acceptable techniques in accordance with applicable regulations and policies (FASS p14) [must]	X				
o Dead animals are potential sources of infection; they are disposed of promptly by a commercial rendering service or other appropriate means	X				
o Personnel who perform euthanasia of horses must be trained in the appropriate protocols, humane handling and restraint techniques, and knowledgeable about safety concerns associated with each euthanasia method. (FASS p100) [must]					X
o Poultry must be rendered insensible (e.g., stunning or anesthesia) before crushing the cervical vertebral column with a Bortuzzo. (FASS p121) [must]					X
o Following exsanguination, poultry animals must not be breathing when they enter the scalded and must be monitored to ensure they are dead (FASS p123) [must]					X

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