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Standard Operating Procedure

1. Purpose

To establish a minimum standard for personal protective equipment (PPE) when working with animals used for research and teaching.

2. Scope

All units providing animal care for research and teaching animals must meet or exceed these minimum requirements for personal protective equipment (PPE) based on the *Guide for the Care and Use of Laboratory Animals*, the *Guide for the Care and Use of Agricultural Animals in Research and Teaching*, and Occupational Health and Safety regulations.

All units must have a local standard operating procedure outlining the protective equipment required. The facility may implement more stringent PPE requirements, if needed, for the species, hazards and other conditions present.

3. Prerequisites

PPE required for use in animal facilities and laboratories in which animals are used should be supplied and laundered by the facility and/or department. PPE will be maintained in a clean and functional condition and should be changed/laundered and replaced as often as necessary to maintain good personal hygiene and an appropriate level of protection.

4. Responsibilities

Department Chairs/Program Directors will ensure that PPE is supplied, laundered, and maintained in a clean and functional condition.

5. Procedure

Animal care workers (to include: husbandry, veterinary, research, support or any other person entering an animal facility or handling or transporting animals) shall wear appropriate and clean outer clothing and closed toed and closed heeled shoes and/or location appropriate foot wear. Additional recommendations or requirements may be made based on individual history and/or safety and occupational health risk assessment.

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The following species and setting specific requirements apply:

Rodents:

A laboratory coat or long sleeved dedicated clothing must be worn and gloves should be worn when handling rodents. Working with rodents also requires appropriate footwear that minimizes exposure to allergens, specifically shoes must be closed and the entire foot covered to prevent allergen exposure. The purpose of these requirements is twofold, one is to minimize the potential for clothing exposed to or contaminated with allergens, pathogens or other fomites from being transmitted outside the facility into clean eating or office areas, the other is to minimize skin exposure to allergens and pathogens. Specific facilities may have additional requirements.

Avian:

Due to the wide variety of species used and facilities in which avian species are housed, each facility should have a policy or standard operating procedure developed for PPE based on species and the bird's health status. At a minimum, laboratory coat and gloves or other suitable covering or dedicated clothing are recommended and must be available. Hearing protection should be made available for use in areas where vocal/loud species are housed.

Aquatics:

Animal care personnel (husbandry, veterinary, research, support or any other person entering an animal facility or handling or transporting animals) should wear closed toed or laboratory appropriate foot wear. Slip resistant soles are recommended. Additional PPE may be required and if required will be provided by the facility.

It is important to note that latex and glove powder can be toxic to some aquatic species and clean hands are preferable to gloves in some situations involving aquatics. Good personal hygiene dictates thoroughly washing hands after handling aquatic animals and/or equipment.

Large/Agricultural Animals:

Clean clothing and closed toe or appropriate foot wear is required. Other situational PPE that is required will be provided by the facility. Biomedical research facilities performing fetal surgery or other in utero manipulations in ruminants (sheep, cattle, goats) shall follow the CDC and occupational health physician recommendations for PPE and human health surveillance for zoonotic diseases in these species.

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Nonhuman Primates:

Persons working with nonhuman primates must wear PPE as designated by the facility and task they are performing. Persons must wear a lab coat or gown, gloves, dedicated shoes or shoe covers, eye protection and a mask.

Scrubs and disposable Tyvek sleeves may be used in lieu of a lab coat or gown. When working with aerosolizing materials or when splashing is likely dedicated scrubs or uniforms and a head cover are also required. Specific situations may dictate more stringent requirements and will be set by the facility or veterinary staff.

Other Biomedical Research and Teaching Animals:

Laboratory coat and gloves or other dedicated clothing are recommended and must be available for traditionally housed laboratory animal species. For example, dogs, cats, rabbits, ferrets and others. Specific facilities may develop their own procedures based on their level of risk.

Field studies:

Due to the wide variety of species used and situations encountered, each project should have a policy or standard operating procedure developed for PPE based on species and risk and level of exposure. N95 respirators or other equivalent respiratory protection must be used in enclosed areas where feral or wild mice are suspected to have been or are currently nesting.

Cage Cleaning Staff:

Cage cleaning staff encounter allergens and all other hazards associated with soiled caging and bedding as well as chemicals and cleansers. Cage cleaning staff shall wear dedicated clothing, long sleeves and closed shoes. Respiratory protection shall be worn by cage cleaning staff when handling hazardous soiled bedding since hazardous materials and allergens can become aerosolized, especially when dumping cages. Respiratory protection shall also be worn when dumping bedding without the benefit of engineering controls such as a ventilated dump station. Gloves and lab coats as well as other required PPE will be worn in accordance with the Safety Data Sheets (SDS) when handling chemicals and cleansers.

Visitors, Students, and Other Personnel:

Escorted visitors, inspectors, students and other personnel entering animal facilities not handling animals may have different personnel protective equipment requirements than those in place for animal care workers and other staff routinely working with and handling animals in animal facilities. These requirements will be explained to the escorted/visitor personnel before

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entry and when accessing the facility. This contingency is due to the lower level of risk or exposure associated with the tasks being performed.

Additional Procedures:

Any protective clothing and equipment should not be worn beyond the boundary of the animal facility or hazardous agent work area. Hands should be thoroughly washed after handling animals and before leaving the animal area. The purpose of these requirements is to keep the potential hazards contained in the work area. This helps prevent the transmission of potential pathogens between facilities and laboratories. Uniforms should similarly not be worn home and must be laundered on site. Additionally, uniforms that have been worn handling animals or in hazardous areas or handling hazardous materials should not be worn off site into public areas.

PPE will be maintained in a clean and functional condition and should be changed/laundered and replaced as often as necessary to maintain good personal hygiene and an appropriate level of protection. Facilities will have local procedures detailing replacement and laundering intervals.

- Animal care units will provide laundry services in the form of dedicated washers and dryers on site or contract with a commercial service that can provide appropriate cleaning of soiled uniforms and washable PPE items.
- Goggles and other re-wearable/reusable PPE should be cleaned as appropriate for the item and discarded when no longer serviceable.

Whenever a zoonotic potential exists, personnel at a minimum will exercise universal precautions to protect themselves. Centers for Disease Control and Prevention guidelines must be followed for zoonotic diseases in a biomedical research setting.

6. References

1. Institute of Laboratory Animal Resources: Guide for the Care and use of Laboratory Animals, National Academy Press, Eighth Edition (http://www.nap.edu/catalog.php?record_id=12910).
2. Animal Welfare Act and Animal Welfare Regulations. United States Department of Agriculture (https://www.aphis.usda.gov/animal_welfare/downloads/Animal%20Care%20Blue%20Book%20-%202013%20-%20FINAL.pdf).
3. National Institutes of Health: Public Health Service Policy on Humane Care and Use of Laboratory Animals (<http://grants.nih.gov/grants/olaw/references/phspol.htm>).



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- The Federation of Animal Science Societies: Guide for the Care and Use of Agricultural Animals in Research and Teaching, 3rd Edition, 2010
http://www.fass.org/docs/agguide3rd/Ag_Guide_3rd_ed.pdf.

7. Definitions

- SOP – Standard Operating Procedure – established or prescribed methods to be followed routinely for the performance of designated operations or in designated situations
- CDC – Centers for Disease Control and Prevention

Revision	Author	Revisions Made	Effective Date	Approval
1	Cindy Elston	• New SOP	11/13/16	Cindy Elston (AV)
2	Cindy Elston	• Changed 'gloves must be worn' to 'gloves should be worn' when handling rodents.	3/16/17	Cindy Elston (AV)