Guidelines for Human/ Nonhuman Primate Materials Use in Animals

Scope

Describes the safe handling procedures involving the introduction of human or nonhuman primate (NHP) materials, not known to harbor human pathogens, into live animals. This includes human/NHP tissues, body fluids, primary cells, established cell lines, and cells that have been stably transduced with viral vectors.

This guidance document does not cover:

- Procedures where human/NHP materials are introduced into animals which are susceptible to infection by human pathogens. These are always handled using ABSL2 procedures.
- Introduction of human/NHP materials known to be infected with human pathogens. In these cases, requirements for working with these agents in animals are determined by the IBC, depending on the specific agents used.

Definitions

- **Established Cell Lines**
  An “established”, “immortalized”, or “continuous” cells derived from a primary culture, which may be subcultured indefinitely in vitro.

- **Primary Cells**
  Cells that are cultured directly from a subject are known as “primary” cells.

Procedures for Using Human/NHP Materials in Animals

1. Administration of human/NHP materials may be done either in the animal facility or in the laboratory. ULAR policies regarding the transportation of animals must be followed; for example, rodents removed from a Level A room cannot be returned to a Level A room.

2. Administration of injections, nasal inoculations, necropsies, harvesting tissues or fluids, and similar procedures should be performed in a biosafety cabinet (BSC) using BSL2/ABSL2 procedures. Exceptions can only be made by the Institutional Biosafety Committee (IBC) or the campus Biosafety Officer for reasons including but not limited to the following:
   a. The procedure would be hindered if performed within a BSC (e.g. if a stereotaxic unit may not fit or may interfere with the operation of the BSC).
   b. A BSC cannot be reasonably procured. This includes having the explored possibilities of sharing with other labs and accommodations in the animal facility.

3. When a BSC cannot be used, the IBC and/or Biosafety Officer will determine the safety precautions appropriate for ABSL2 conditions.

4. General anesthesia of the animals is recommended for injections of human/NHP materials.

5. Engineered sharps are recommended for injecting animals with human/NHP materials whenever possible.

6. After injection of human/NHP materials, wipe the site of injection on the animal with an alcohol wipe to remove/disinfect any material that may have leaked onto the skin.
7. After administration of the cells/materials, the animals should be handled using ABSL1 procedures (for animals treated with established human/NHP cell lines) or ABSL2 procedures (for animals treated with primary human/NHP materials). For procedures unlikely to create aerosols (e.g. routine cage changing), a biosafety cabinet is not required.

8. For consultation on specific research plans, please contact the IBC at ibc@uci.edu.

**Labeling and Handling of Animals and Cages**

<table>
<thead>
<tr>
<th>ESTABLISHED HUMAN/NHP CELL LINES (ABSL1 procedures)</th>
<th>PRIMARY HUMAN/NHP CELLS OR OTHER HUMAN/NHP MATERIALS (ABSL2 procedures)</th>
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</thead>
<tbody>
<tr>
<td>10. Regular care and husbandry.</td>
<td>9. ULAR will provide the animal care services.</td>
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<td>11. No extra personal protective equipment (PPE) is required beyond the animal care PPE requirements as posted for the animal holding room.</td>
<td>10. Place dirty cages (with bedding) into red biohazard bags. Place used water bottles (with any remaining water) into a container and then into an autoclave bag.</td>
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<td>11. ULAR staff will autoclave the soiled cages, dispose of the bedding as biohazardous waste, and then wash the cages routinely.</td>
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<tr>
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<td>12. ULAR staff will autoclave the used water bottles, dispose of the autoclaved water into the drain, and then wash the bottles routinely.</td>
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Hazardous Waste Management

1. Leftover aliquot should be decontaminated with a 10% bleach solution for 15 minutes, then discarded in the sink.
2. Dispose of all contaminated animal carcasses as “pathological waste”.
3. Dispose of sharps in a biohazard sharps container.
4. EH&S hazardous waste collection requests and guidelines are available online at http://www.ehs.uci.edu/programs/enviro/.
5. To request hazardous waste containers including hazardous chemical waste, biomedical waste, pathology waste, or sharps containers for campus locations call EH&S at (949) 824-6200.

In Case of Exposure

1. Skin exposure: Remove contaminated clothing and wash skin with soap and water. Avoid rubbing skin or increasing its temperature.
2. Eye exposure: Irrigate immediately with water for 15 minutes. Seek medical attention if irritation persists.
3. Ingestion: Refer to physician.
4. Inhalation: Remove victim to clean air. Contact 911 if he/she having difficulty breathing. Refer to physician.
5. Report all exposures to supervisor within 24 hours.
6. Complete the online incident report form at www.ehs.uci.edu within 24 hours.

Acknowledgment

The Principal Investigator (PI) is responsible for ensuring that all personnel performing these procedures are trained on the safe handling of hazardous materials involved in this study, including completion of the Lab Safety Fundamentals online training, other applicable safety training courses, and hands-on training as needed. This standard operating procedure may be modified (in consultation with EH&S) to fit the needs of the research protocol.

Both the PI and all personnel performing the tasks described herein must sign the following acknowledgement:

_I have read, asked questions, and understand the hazards of and safe working procedures for the activities and materials described herein._

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<tr>
<th>Print Name</th>
<th>Signature</th>
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Examples of Biohazard Cage Cards

<table>
<thead>
<tr>
<th>ESTABLISHED HUMAN/NHP CELL LINES</th>
<th>PRIMARY HUMAN/NHP MATERIALS</th>
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<tbody>
<tr>
<td><strong>(ABSL 1 procedures)</strong></td>
<td><strong>(ABSL 2 procedures)</strong></td>
</tr>
</tbody>
</table>

**BIOHAZARD**

**Established human/NHP cell line (insert details)**

Who will change cages?
- Lab
- ULAR

Handle in Biosafety Cabinet:
- Yes
- No

See below for more details

**PPE required:**
- Surgical mask
- N95 respirator
- Safety glasses
- Goggles
- Gloves
- Face shield

**Bedding**
- Routine disposal
- Biomedical waste (autoclave)
- Other:

**Cages**
- Routine cleaning
- Routine after bedding removed
- Other:

**Carcass**
- Routine disposal
- Pathology waste (incinerate)
- Other:

**Biohazardous Agent: ABSL1**

**Primary Human/NHP cells/materials (insert details)**

Who will change cages?
- Lab
- ULAR

Handle in Biosafety Cabinet:
- Yes
- No

See below for more details

**PPE required:**
- Surgical mask
- N95 respirator
- Safety glasses
- Goggles
- Gloves
- Face shield

**Bedding**
- Routine disposal
- Biomedical waste (autoclave)
- Other:

**Cages**
- Routine cleaning
- Routine after autoclaved bedding removed
- Other:

**Carcass**
- Routine disposal
- Pathology waste (incinerate)
- Other:

EH&S pick-up: x46200
ULAR: x47788

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