



Institutional Animal Care and Use Committee

February 20, 2008

GUIDELINES FOR THE USE OF HAZARDOUS AGENTS IN LIVE ANIMALS

The IACUC will consider an agent that will be used in animals hazardous if any of the following apply:

1. It is *infectious, genotoxic, carcinogenic, teratogenic, mutagenic* or known to cause *serious organ impairment at low doses*.
2. It is listed as a *biohazard* in “Biosafety in Microbiological and Biomedical Laboratories”, 3rd or subsequent edition. This includes “gene delivery” vectors such as modified viruses that will be injected in animals.
3. It is highly *flammable, corrosive or explosive*.
4. It is a *volatile anesthetic* agent known to be hazardous to humans (halothane, isoflurane, methoxyflurane, nitrous oxide,).
5. It is one of the “*Select Agents*” listed as having Bioterrorism Potential with federal agencies.
6. It is an *investigational drug/compound* on which there is no or very limited information regarding toxicity in animals or humans it should be considered potentially hazardous.
7. It is an agent that the Principal Investigator (PI) states is a hazard, or that one or more members of the IACUC state is a likely hazard to humans. In case of a difference of opinion between the PI and the IACUC, the matter will be presented to the Institutional Biosafety Committee for adjudication.

CHEMICAL AGENTS (examples include):

Acrolein	Doxorubicin	MPTP(methylphenyl tetrahydropyridine)
Acrylonitrile	Etoposide	PAHs (polycyclic aromatic hydrocarbons)
Alloxan	Fludarabine	Sodium Arsenite
Benzo(a)pyrene	Fluoracil	Streptozotocin
BrdU	Ganciclovir	Tamoxifen
Busulfan	Halothane	TPA(tetradecanoylphorbol acetate)
Cuprizone	Isoflurane	Trichloroethylene
Cyclophosphamide	Methoxyflurane	
Cyclosporin	Methylenedianiline	
DMBA (dimethylbenz(a)-anthracene)	Methylmercury	
	Metryapone	

BIOLOGICAL AGENTS (examples include):

Adenoviral vectors	Leishmania
Lentiviral vectors	Herpesviral vectors



Institutional Animal Care and Use Committee

February 20, 2008

BIOTERRORISM POTENTIAL – “Select Agents and Toxins” Regulated By Federal Law

Additional regulations apply to “Select Agents and Toxins” (Check the CDC website for updates of the list of substances (<http://www.cdc.gov/od/sap/docs/salist.pdf>). The Environmental Health & Safety Office (X3420) provides University oversight of Select Agents and Toxins as required by federal law. Consult that office for additional information. If you are planning to work with a Select Agent or Toxin allow *ample time* for processing of the necessary paperwork.

RADIOACTIVITY:

For any type of radioactive material use in animals contact the Radiation Safety Office (part of EHS, X3420) for special instructions and permissions. It is the responsibility of the principal investigator to obtain special approvals in writing. Note that EHS has a special application form required for this purpose.

******What Do You Need In Order To Get IACUC Approval For An Animal Protocol That Involves The Use Of A Hazardous Agent In Live Animals?******

1. The PI must submit an approved SOP (Standard Operating Procedure) for working safely with the specific hazardous agent, signed by the Environmental Health and Safety Office (EHS) to the IACUC.

Example: Isoflurane will be used for anesthesia. Surgery will be done in PI’s lab and the animals will be fully awake before they are returned to their housing area in the BRF. An SOP for isoflurane use is needed.

2. In some cases, the IACUC will require that the PI submit a *Special Animal Safety Protocol (SASP)* application. This document contains information that one would expect in an SOP but ALSO includes more detailed information and instructions about *handling animals as well as their caging and bedding materials after they are dosed with the hazardous material*. This document is meant to ensure the safety of lab personnel and particularly the animal care staff who will be doing the husbandry on the treated animals. The safety protocol document must be approved by the Environmental Health and Safety Office (EHS) and the signed copy must be submitted to the IACUC.

Example: Rats will be treated with experimental drug “XYP32” that induces brain damage and seizures (and that is excreted into the bedding and could present a hazard to the BRF staff doing bedding changes). A detailed SASP will be needed.

If you are unsure about whether or not you will need an SASP, contact the IACUC Chair before submitting your protocol. The safety-related documents can be submitted before, concurrent with, or after you submit your IACUC application. It is to your benefit, however, to attend to this as soon as possible since final IACUC protocol approval will not be granted until you have all safety approvals in hand, in writing.