



NUramp
Animal Care
at
UNL

UNIVERSITY OF NEBRASKA-LINCOLN

University of Nebraska - Lincoln Institutional Animal Care Program (IACP)



Dr. Kelly Heath – Attending Veterinarian and IACP Director

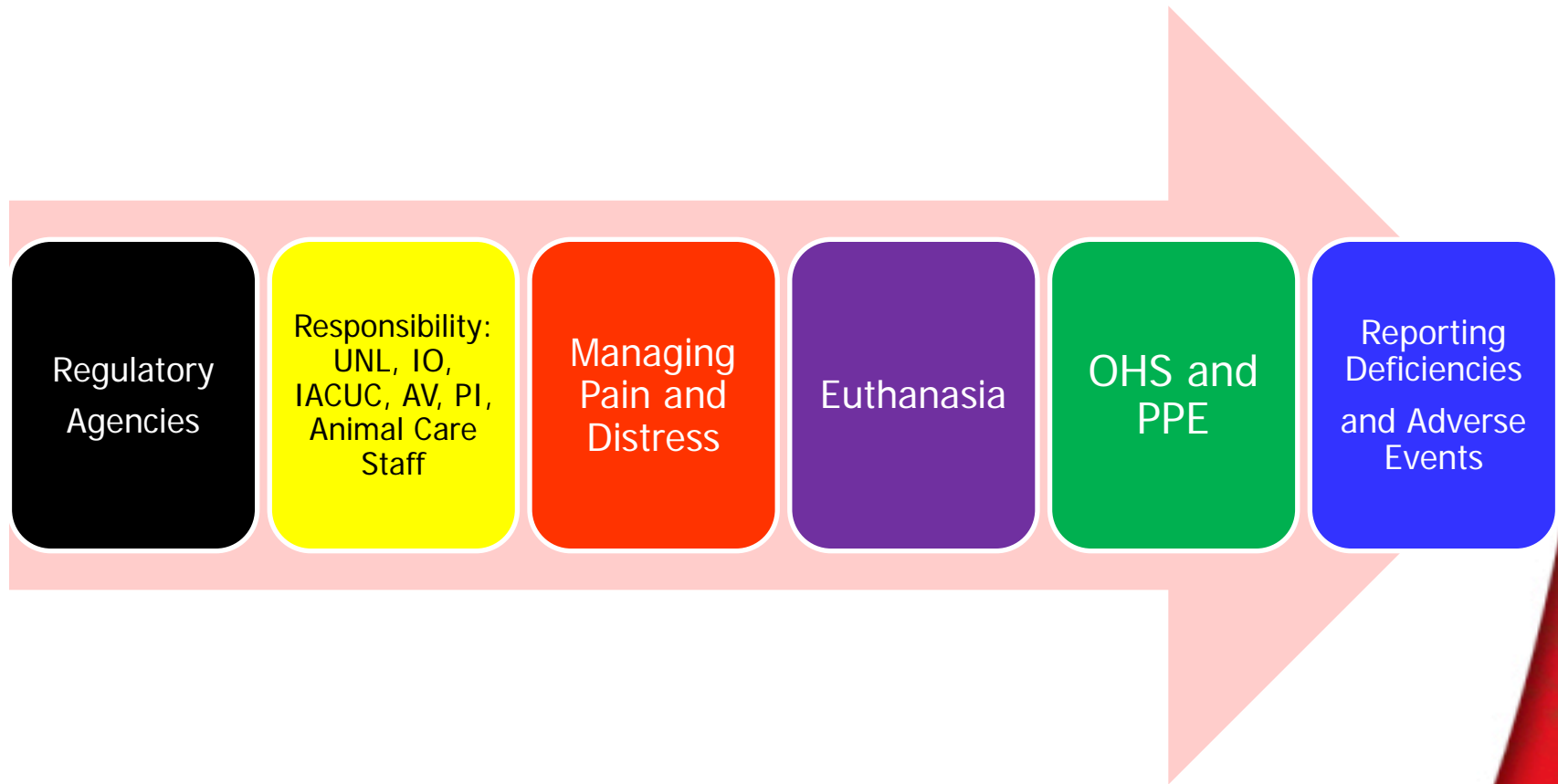
Kathy Pinkerton – Assistant Director, IACP

Dr. Craig Kreikemeier-Bower, Clinical Veterinarian

Vicky Samek – LScA Facility Coordinator

Megan Ebbers – IACUC Project Coordinator





Regulations of Animal Care and Use

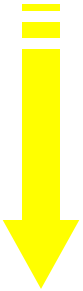
Regulations that are a balance of ethical treatment and the need to allow science to progress.

UNL and nearly all institutions have a Policy and Procedure that describes how we will comply with regulations.



Regulations

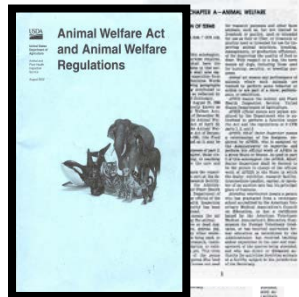
Animal Welfare
Act



Regulatory Branch:

USDA

Animal and Plant
Health Inspection
Service



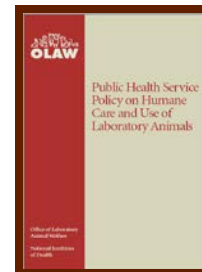
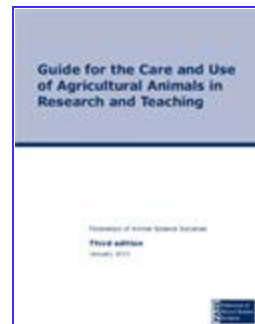
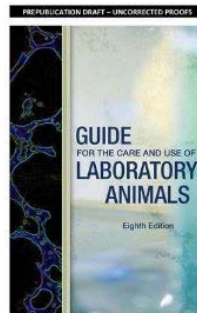
Public Health
Service



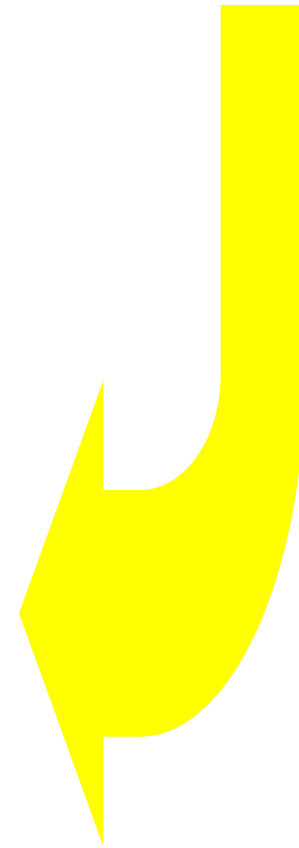
Regulatory Branch:

OLAW

Office of Laboratory
Animal Welfare



University of Nebraska
Policy and Procedures
for the
Use of Animals



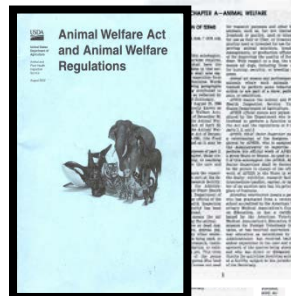
Animal Welfare and Protection Timeline:

1873 "28 Hour Law" animals not be confined for more than 28 consecutive hours without being unloaded for feed, water and rest.

1876 Cruelty to Animals Act;

Article on research facilities appears in the Nov. 1965 issue of Sports Illustrated and Life Magazine. August 24, 1966 AWA signed into law (Pres. Johnson).

1966 ~ The Animal Welfare Act (Laboratory Animal Welfare Act regulated the use of animals in labs. The Act was amended six times (1970, 1976, 1985, 1990, 2002, 2007)

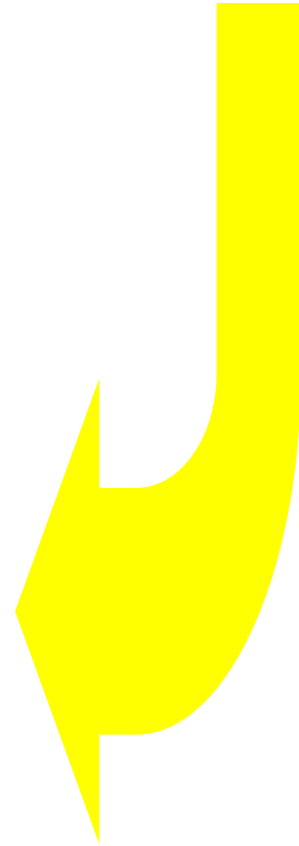


Regulations

Animal Welfare Act

Public Health Service

University of Nebraska Policy and Procedures for the Use of Animals



Regulatory Branch:

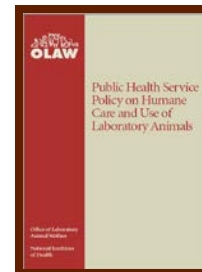
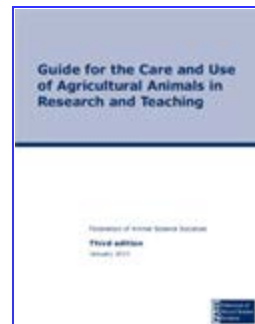
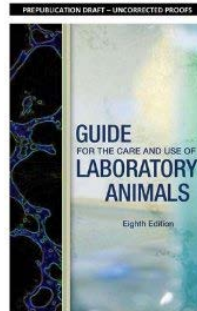
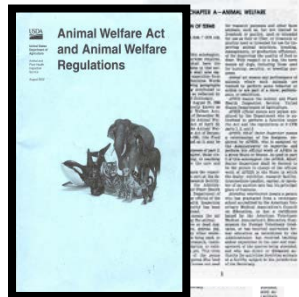
Regulatory Branch:

USDA

OLAW

Animal and Plant Health Inspection Service

Office of Laboratory Animal Welfare



Regulations

Animal Welfare Act (AWA)

USDA - APHIS

Animals Covered:

Any warm-blooded animal, alive or dead, used in research, testing, or education.

Includes many of the commonly used laboratory animals (primates, dogs, cats, guinea pigs, hamsters, rabbits) and **all** wild mammals.

Animals NOT covered:

Poultry, Cold-blooded animals, Horses and other farm animals used or intended for use in agricultural food and fiber research and production

And.....

Rats of the genus *Rattus* bred for use in research

Mice of the genus *Mus* bred for use in research

NOTE: wild mice and rats are COVERED



Regulations

Animal Welfare Act (AWA)

Program of **veterinary care** and IACUC oversight of animal research.

Regulation of multiple survival surgeries.

Alleviation of **pain and distress** in research animals.

Alternatives for painful or distressful procedures.

Psychological well-being of non-human primates (enrichment).

Exercise for dogs.

Training for all personnel handling animals.



Regulations

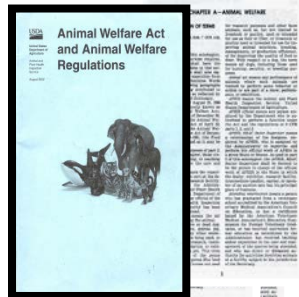
Animal Welfare Act



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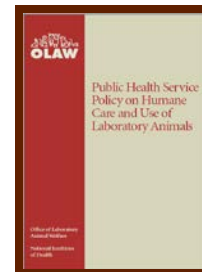
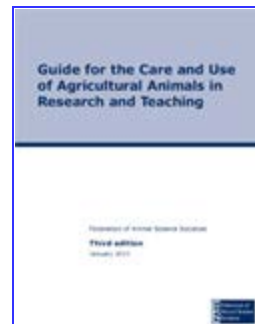
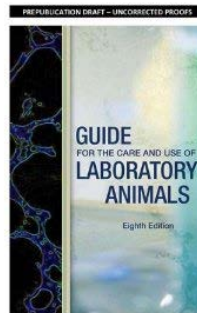
Public Health Service



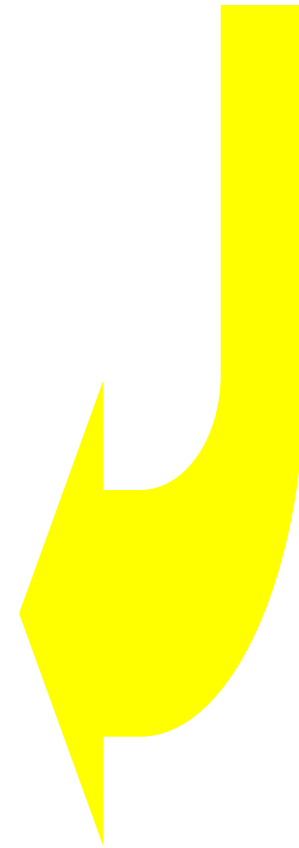
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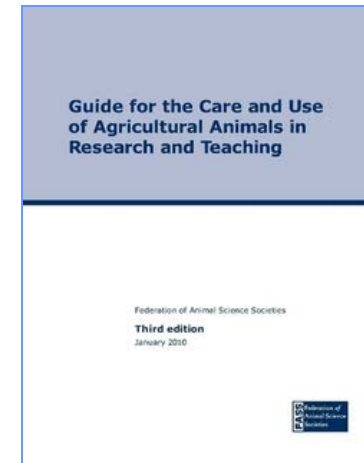
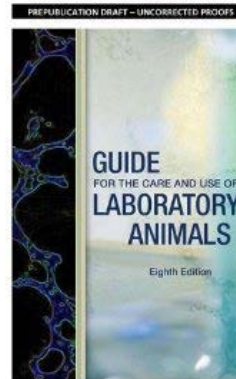
University of Nebraska Policy and Procedures for the Use of Animals



Regulations

Public Health Service (PHS) Policy

Guide for the Care and Use of Laboratory Animals
Guide for the Care and Use of Agriculture Animals



Covered animals:

Any live, vertebrate animal used or intended for use in research, research training, experimentation, or biological testing or for related purposes



meaningful, worthwhile scientific question.

appropriate species

minimizing discomfort, distress, and pain

appropriate sedation, analgesia, or anesthesia

severe or chronic pain or distress be relieved

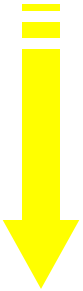
living conditions of animals should be appropriate

appropriately qualified and experienced



Regulations

Animal Welfare Act



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Animal and Plant Health Inspection Service



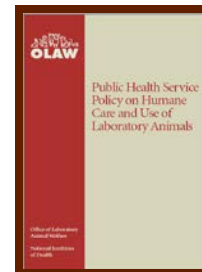
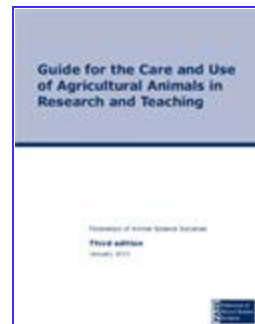
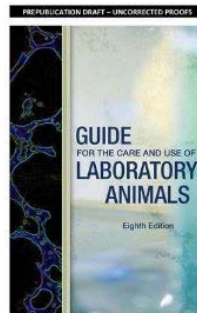
Public Health Service



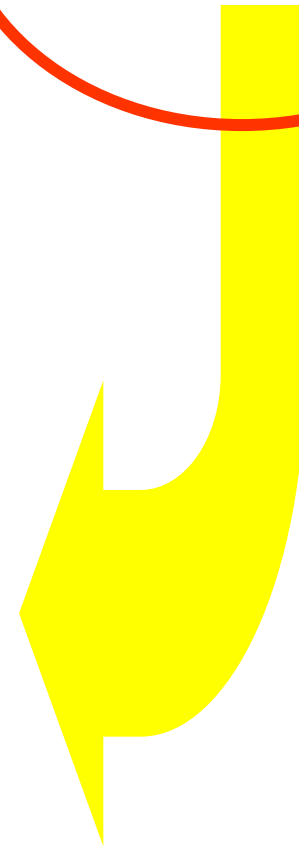
Regulatory Branch:

OLAW

Office of Laboratory Animal Welfare



University of Nebraska Policy and Procedures for the Use of Animals



Regulations

University of Nebraska – Lincoln

PHS Assurance Document states:

“All animals

used for teaching and research on all campuses shall be used and cared for according to the principles stated in the “Guides”

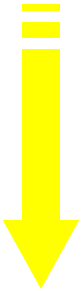
regardless of the species or source of funds

used to conduct teaching or research”.



Regulations

Animal Welfare Act



Regulatory Branch:

USDA

Animal and Plant Health Inspection Service



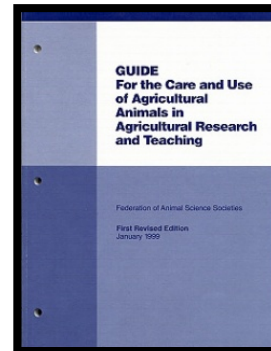
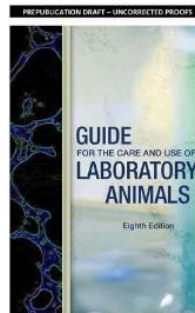
Public Health Service



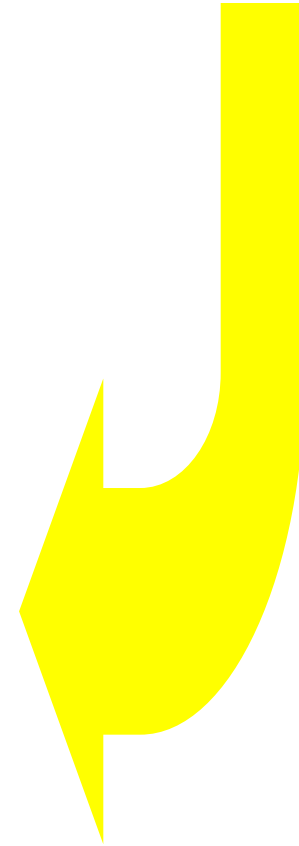
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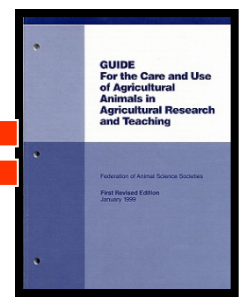
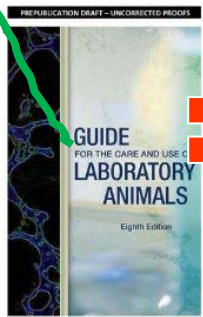
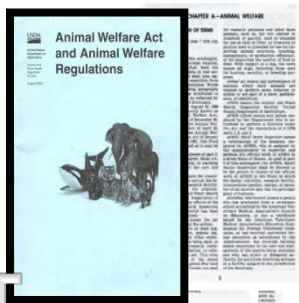
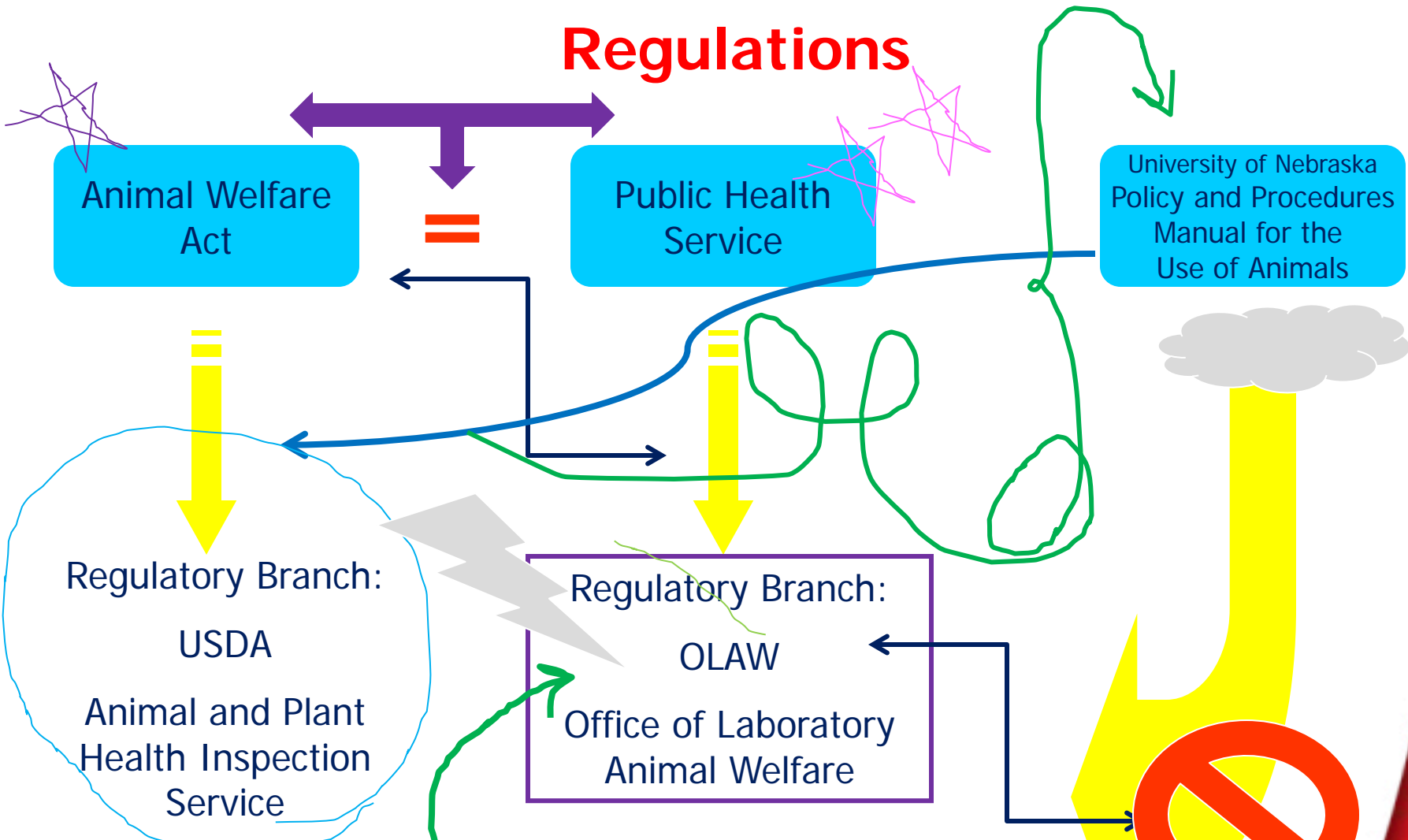
Office of Laboratory Animal Welfare



University of Nebraska Policy and Procedures Manual for the Use of Animals



Regulations



The Web of Compliance



Sources of laws, regulation, policies, and/or guidance

AAALACi

Association for the Assessment and Accreditation of Laboratory Animal Care, International

- ★ Good Housekeeping Seal of Approval
- ★ NOT a regulatory agency
- ★ Site visit every 3 years



Ethics of Animal Research

Ethics of Animal Research

To Conduct Humane Animal Research,
we must be

RESPECTFUL,
COMPASSIONATE,
and
RESPONSIBLE

toward animals at all times.

Ethics of Animal Research

Good science and good animal welfare go hand in hand.

☆ If an animal is suffering stress or pain it could **affect the results** of the research.

☆ Housing animals in the best possible conditions is consistent with good study results

☆ Making sure animals get the best possible care from skilled and experienced caretakers.



Ethics of Animal Research



Animal Rightists



Animal
Exploitation i.e.
fighting
enthusiasts.



General Public tolerance of
experimental animal research
depends upon:



Ethics of Animal Research

- ✓ The potential benefits of the research,
- ✓ The type of animal involved,
- ✓ The level of invasiveness entailed by the experiment.

Ethics of Animal Research

The "3Rs" Principles of Russell and Burch (1959)

Replacement of animals:

Alternatives such as in vitro, cell culture, tissue culture, models, simulations, etc. are examples of replacement.

Reduction of animals:

Keeping the number of animals used to a minimum, obtaining information from fewer animals, or more information from the same number of animals.

Refinement of procedure:

The use of analgesics and analgesia, X-ray, MRI, remote telemetry and humane endpoints for the animals are examples of refinements.



Ethics of Animal Research

The "4th" R:

Respect



Responsibility

Responsibility

The Institution

(University of Nebraska – Lincoln)

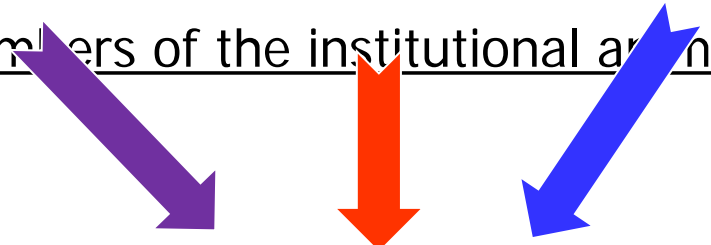
- Establishes lines of **authority and responsibility**
- Ensures that all PI's, research tech's, animal care tech's involved in the care and use of animals are **qualified** to perform their duties.
- Provides **appropriate facilities** for animal housing and care.
- Appoints members of the institutional animal care and use committee.
- Endeavors to build **public confidence** in animal research.



Responsibility

The Institution

(University of Nebraska – Lincoln)

- Establishes lines of **authority and responsibility**
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Responsibility

Institutional Official

Dr. Deb Hamernik
Interim Associate Vice Chancellor for Research
Office of Research
University of Nebraska-Lincoln
303 Canfield Administration Building
Lincoln, NE 68588-0433

Ph: 402.472.2851, Fax: 402.472.3834
email: dhamernik2@unl.edu



University of Nebraska - Lincoln

IACUC

(Institutional Animal Care and Use Committee)

- Reviews animal use protocols.
- Inspects animal facilities and evaluates program of animal care.
- Investigates allegations of non-compliance.
- Makes recommendations to the institutional official.



Responsibility

IACUC

Regulations mandates 3 to 5 members
(USDA vs. PHS)

- Chairperson
- Veterinarian
- Practicing Scientist
- Non-Scientist
- Non-Affiliated or Public Member



Responsibility

IACUC

At least one member must **not** be affiliated with the institution, AKA "Public Member".



This voting member should not be a **laboratory** animal user.

Responsibility

IACUC

At least one member must be a nonscientist, who may be affiliated with the Institution.

At least one member must be a practicing scientist with experience in research involving animals.

Currently, UNL IACUC is comprised of 9 scientists, 2 veterinarians, 1 non-scientist, and 1 public member.



Responsibility

Attending Veterinarian

Responsibility

Attending Veterinarian

Dr. Kelly Heath
110 Mussehl Hall
East Campus
472-6958
kheath3@unl.edu

While it is required that the Attending Veterinarian reviews animal research protocols with the Principle Investigator prior to submission to the IACUC, the intent is to work with investigators on all issues related to animal care and use.

PI's are urge to contact the IACP for assistance in order to meet your research needs and at the same time allow UNL to be compliant with the federal requirement of involving the attending veterinarian in the design of animal use protocols that involve pain or distress.

Consultation with the AV often facilitates approval of your animal use protocol by the Institutional Animal Care and Use Committee.



Responsibility

Attending Veterinarian

In the event that an animal is found to be in severe pain or distress, all attempts will be made to contact the PI for guidance.

However, the Attending Veterinarian or Project Veterinarian has the authority to use appropriate treatment or control measures, including euthanasia if indicated, following diagnosis of an animal disease or injury.

The veterinarian's authority is exercised with the concurrence of the IACUC Chair and the Institutional Official.



Responsibility

Principal Investigator

(PI, Researcher)

Responsibility

Principal Investigator

(PI, Researcher)

- Appropriate species
- The experimental design.
- Considers alternates, and avoids unnecessary duplication of previous experiments.
- Ensures staff qualifications and training.
- Provides for health and safety of lab personnel.
- Endeavors to build public confidence in animal research
- Maintains a scholarly and respectful environment



Responsibility

ANIMAL CARE STAFF AND TECHNICIANS

NEVER UNDER-ESTIMATE THE IMPORTANCE OF
THE ANIMAL CARE GIVER:



Proper Husbandry
And
A Stable Environment



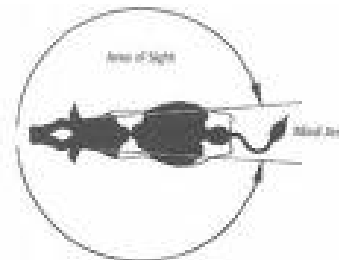
Improves
validity and reliability
of
experimental data.



Responsibility

ANIMAL CARE STAFF AND TECHNICIANS

- Temperature, humidity, lighting, cage size and waste disposal.
- Animal health and husbandry, including feeding, watering, sanitation, staffing and veterinary care.
- Transportation of animals and care while in transit.
- Ventilation inadequacies
- Population density
- Noise (frequency, loudness, sudden onset)
- Type of bedding
- Sanitation
- Handling



**Painful
or
Distressful
Procedures**

Painful or Distressful Procedures

Legal and Ethical obligations to:

Avoid or minimize discomfort, distress and pain.

Consider alternatives to procedures that cause pain or distress.

Use appropriate pain relief for painful procedures.

Euthanize animals when they experience severe or chronic pain or distress that cannot be relieved.

Painful or Distressful Procedures

- Analgesics
- Tranquilizers
- Anesthetics



- Rearranging social groups
- Enrichment programs
- Additional bedding increases comfort
- Petting and gentle handling
- Adaptation techniques prior to start of study



Painful or Distressful Procedures

Survival Surgery and Post-surgical Care

It is the responsibility of the institution and the research team to assure humane care and use of animals on whom surgery is performed

AND

To assure that individuals who perform that surgery are **qualified and trained.**



Painful or Distressful Procedures

Euthanasia

**It is our responsibility....
to ensure that if an animal's life is to be
taken, it is done with the highest degree
of respect, and with emphasis on
making
the death as
painless and distress free as possible.**

Occupational Health and Safety Program

Know what type of PPE is necessary for the duties you perform and use it correctly.

When used properly can protect you from exposure to infectious agents.



Zoonotic diseases are diseases of animals that are communicable to humans.

zoonosis (zəʊˈnəʊsɪs, ,zəʊəˈnəʊsɪs)

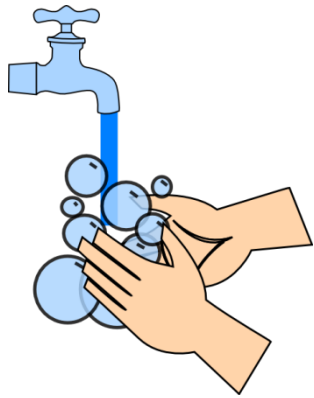
— *n* , *pl* -ses

pathol any infection or disease that is transmitted to man from lower vertebrates OR visa-versa.

[from zoo- + Greek *nosos* disease]



Some common sense steps can be taken to lessen the risk of infection in general, including cleanliness in routine tasks involving animals and washing hands after completion of work with animals.



Frequently!



Easy and available!



Dust and dander free.

Further precaution should be taken by thoroughly cleansing the puncture site if accidentally injected.

- Wash puncture site with a disinfecting soap.
- Scrub area for at least 5 minutes.
- Report injury to supervisor.



Occupational Health and Safety Program

Types of PPE:

- Gloves
- Gowns
- Masks
- Boots
- Eye protection



All facilities must have a detail disaster plan in place by July, 2013!



All facilities must have a detail disaster plan in place by July, 2013!



Reporting Deficiencies

Reporting Concerns on Care and/or Welfare of Animals in Research and Teaching at the University of Nebraska–Lincoln



Notice! Questions, or Concerns About the Care and/or Welfare of Animals in Research or Teaching?

1. You can contact your supervisor or UNL researcher in charge directly:

or

2. You can contact the Chair of the UNL Institutional Animal Care and Use Committee (IACUC):

(402) 472 - 5018 | iacuc@unl.edu

or

3. You can contact one of the Institutional Animal Care Program veterinarians:

(402) 472 - 4486

or

4. You can contact the UNL Institutional Official:

(402) 472 - 2851

or

5. You can contact the Director Employee Relations & Ombudsman:

(402) 472 - 3106

Any individual with questions or concerns related to care and handling of animals in research or teaching at the University of Nebraska–Lincoln is encouraged to contact the above named persons. Reprisal against an individual who has reported concerns or allegations of wrong doing involving the care and welfare of animals is prohibited by law and UNL policy. The above named persons also can be contacted if an individual believes that any personnel action is related to such reporting of animal care and welfare concerns.

The Institutional Animal Care and Use Committee (IACUC) is responsible for maintaining oversight of all animal activities.

The IACUC can be contacted at (402) 472-4486 or iacuc@unl.edu.



The University of Nebraska is an Affirmative Action/Equal Opportunity Institution.

IACUC - 2006



It's the animals you don't see
that really helped her recover.



Recently a surgical technique perfected on animals was used to remove a malignant tumor from a little girl's brain. We lost some lab animals. But look what we saved.

Foundation for Biomedical Research

Foundation for Biomedical Research, 400 University Ave., Suite 311, Durham, NC 27708. (919) 286-0100



While working with animals on this
campus,
we are representing the
UNIVERSITY OF NEBRASKA.

We take pride in
our science, our research
and our job.



Questions?
Comments?

Kathy Pinkerton
Assistant Director
Institutional Animal Care Program
472-4466

katherine.pinkerton@unl.edu

110 Mussehl Hall
East Campus

<http://research.unl.edu/orr/qa.shtml>

