Institutional Animal Care & Use Committee (IACUC)

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Humans and animals have many comparable physiological processes. Genetically modified animals, usually mice, can be bred to increase these similarities with humans.

Basic research (compared to applied research) provides the underpinnings for development of new medical and veterinary treatments.

- **Basic** research seeks to expand our knowledge
- **Applied** research seeks to answer a specific question or need (e.g., create a new device)
Why is there an IACUC?

- New medical treatments are required by law to be tested on animals before entering human clinical trials.
- To regulate the use of animals in research, and ensure that they are afforded humane care and that ethical standards of research are maintained.
- The law requires research institutions to have an IACUC!
  - Mandated by the Health Research Extension Act (HREA), the Animal Welfare Act (AWA), and Public Health Service (PHS) Policy.
  - Regulatory agencies ensure humane care and use of animals in research:
    - The United States Department of Agriculture (USDA)
    - The Office of Laboratory Animal Welfare (OLAW)
COMPONENTS OF AN ANIMAL CARE AND USE PROGRAM

INSTITUTIONAL LEADERSHIP

PI RESPONSIBILITY

Animal Welfare

IACUC

DAILY ANIMAL CARE (CCM)
The IACUC balances the possible harm to an animal against the potential benefit of the research involving each animal.

The IACUC makes recommendations to improve animal welfare. Better standards of animal welfare produce better quality research.
When applicable, the IACUC encourages investigators to discover alternative methods by:

- **Replacing** animals with other research methods
- **Refining** procedures to minimize potential pain/distress
- **Reducing** animal numbers
Key Functions of the IACUC

- Animal Subject Protection
- Program Policy & Training Requirements
- Post Approval Monitoring (PAM)
- Protocol Review
- eIACUC Training & Support
- Assist New Research Personnel
- Facility/Lab Inspections & Satellite Review
## CCM & IACUC

<table>
<thead>
<tr>
<th>Center for Comparative Medicine (CCM)</th>
<th>Institutional Animal Care and Use Committee (IACUC)</th>
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<tbody>
<tr>
<td>• Maintains animal facilities at all NU research sites</td>
<td>• Reviews research protocols for work at all NU research sites</td>
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<tr>
<td>• Manages access to the animal facilities</td>
<td>• Evaluates the animal care program (e.g., PAM, inspections)</td>
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<td>• Provides husbandry and veterinary care to the animals</td>
<td>• Advises on program policy and training requirements</td>
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<tr>
<td>• Provides training to research personnel</td>
<td>• Facilitates online training and occupational health for research personnel</td>
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Before Protocol Approval…

IACUC

http://www.iacuc.northwestern.edu/training.html
Review: How It Works

Protocols receive either Designated Review or Full Committee Review

- **Designated Reviews** are completed by at least two Committee members and a veterinarian

- **Full Committee Review** involves a presentation to the full Committee by two members, assigned to review that protocol in advance of the meeting
IACUC Review Process

PI submits the study application to the IACUC

Application reviewed by IACUC coordinator for completeness

Application is assigned to Designated or Full Committee review

Application may require clarification or modification

Application is approved

If necessary

Application is returned to the PI for revisions and resubmission

Revised application is returned to the IACUC for re-review

Process continues until Reviewers are satisfied

PI Action is Required

IACUC Action

Bubble Color Legend
IACUC Approval

• The IACUC approves protocols for a three year period, even if sponsored funding is for a longer term.

• Protocols involving work with USDA covered species must be submitted for annual re-certification.

• A de novo protocol must be submitted to the IACUC prior to the end of the three year approval period to avoid inactivation.
What Does It Mean to Be Approved?

The project may begin!

- The PI works with OSR to open accounts to spend their grant money

- Project personnel may gain access to the animal facilities (through CCM), following training and individual approval

- The PI may order animals (through CCM)
Federal Funding & IACUC Approval

• If a PI receives federal funding (e.g., an NIH grant), the institution is required to assess the grant application and animal study protocol, ensuring that they are congruent.

• Key points:
  – The full grant application needs to be attached to the electronic protocol in order to facilitate the grant-protocol congruency review.
  – It is strongly recommended that a PI begin work on the protocol when they are notified that their score is fundable.
  – Waiting for confirming from the funding source can result in greater pressure to have IACUC approval more quickly.
Animal Census (w/o Mice)

- Cats
- Dogs
- Gerbils
- Ground Squirrels
- Guinea Pigs
- Macaques
- Pigs
- Rats
- Xenopus
- Zebrafish
- Rabbits
Census

Animal Census (w/ Mice)

- Mice
- Other
A Numerical Summary

- This year the IACUC has approved 149 new protocols.
- Over the past six months, the IACUC has approved 700 amendments (i.e., changes/updates to active protocols).
- Currently 994 protocols are active.

*Metrics?! Yum!*
Questions?

You are also welcome to contact the IACUC Office:

Phone: (312) 503-9339
Email: acuc@northwestern.edu